

A CASE STUDY OF AN OFFICE OF DISABILITY SUPPORT SERVICES IN HIGHER  
EDUCATION FOR STUDENTS WITH AUTISM SPECTRUM DISORDER

by

Bunnie L. Claxton

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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APPROVED BY:

Deanna Keith, Ed. D, Committee Chair

Christy Hill, Ed. D, Committee Member

Richard P. Dolan Ed. D, Committee Member

Scott Watson, Ph.D., Associate Dean, Advanced Programs

## ABSTRACT

The purpose of this qualitative case study is to identify the factors that impact learners with autism spectrum disorder (ASD) at a university in central Virginia. The theory guiding this study is disability theory as it seeks to explain the limitations placed on persons with disabilities. The central research question is: What factors of the disability support services impact learning in university students with ASD? The subquestions include: (a) How do students with ASD describe their experiences with the university's disability support service offices? (b) How do university faculty describe their role in supporting students with ASD? (c) What factors of the disability support service offices are perceived by students and faculty as having a positive impact on student learning? (d) What factors of the disability support service offices are perceived by students and faculty as lacking or ineffective? This single case study included six student participants with autism spectrum disorder and four disability support services office faculty members from the university. Data was collected via individual interviews, an online focus group, and documents/archival records. Data analysis consisted of categorical aggregation, development of naturalistic generalizations, and development of themes.

*Keywords:* autism spectrum disorder, ASD, college, disability theory, disability support service offices, university

### **Dedication**

I dedicate this dissertation manuscript to my family. This dissertation would not be possible without the love, support, and encouragement of my husband and kids. My husband, Russ, has supported me throughout this doctoral journey, and I am forever grateful. My children, Emi and Lee, have watched as I spent countless days, nights, and weekends dedicated to this educational endeavor. I pray that this has taught them the importance of life-long learning. For the love and support of my family, I am eternally grateful. I dedicate this dissertation to them.

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I am also grateful to my parents, Butch and Brenda Fisher, for teaching me the value of an education. Thank you for providing the foundation necessary for this doctorate degree.

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### **List of Abbreviations**

Americans with Disabilities Act (ADA)

Advanced Placement (AP)

Alzheimer's and Mental Retardation (AAMR)

Autism and Developmental Disabilities Monitoring Network (ADDM)

Autism Spectrum Disorder (ASD)

Center for Disease Control and Prevention (CDC)

College Level Learner (CLL)

High-Functioning Autism (HFA)

Individuals with Disabilities Education Improvement Act (IDEA)

Individualized Education Plan (IEP)

Institutional Review Board (IRB)

United States Department of Education (USDE)

## **CHAPTER ONE: INTRODUCTION**

### **Overview**

Due to accommodations through the Individuals with Disabilities Act (IDEA, 2004), students with autism spectrum disorder (ASD) have demonstrated achievement at the secondary school level and many have expressed a desire to pursue higher education (Roberts, 2010). Increasing numbers of students with ASD are enrolling in higher education learning programs (Gelbar, Shefcyk, & Reichow, 2015). Since students with ASD are pursuing higher education, it is important for disability support office faculty to understand the support systems necessary for success by this student population; therefore, this study focused on factors that impact learning for students with ASD in higher education.

The purpose of this qualitative case study was to identify factors that impact learners with ASD in a university setting. Exploring the perceptions of students with ASD and support service faculty in the disability support offices is crucial to gaining a comprehensive understanding of what factors impact learners with ASD in higher education. A case study design was utilized because it allowed investigation of a contemporary phenomenon within a real world setting (Yin, 2014).

This chapter introduces and discusses important information pertaining to the proposed study. The subsections of this chapter provide detailed information about the background, situation to self, problem statement, purpose, significance of the study, and research questions. Additionally, the research plan, delimitations, and limitations of the proposed study are discussed regarding the phenomenon: a university's disability support service offices in relation to factors that impact learning for students with ASD.

## **Background**

According to the United States Department of Education (USDE, 2011), enrollment in higher education among students with disabilities has increased considerably. For example, since 1978, the percentage of college freshman reporting disabilities has tripled (USDE, 2011). Additionally, diagnosis of ASD has increased (Gelbar et al., 2015; Gobbo & Shmulsky, 2014; Herbert et al., 2014). In order to gain a better understanding of the scope of ASDs, the Centers for Disease Control and Prevention (CDC) established the Autism and Developmental Disabilities Monitoring (ADDM) network. The latest findings report that one in 68 children are diagnosed with ASD annually (CDC, 2014). Researchers report that an increase in diagnosis will likely lead to an increase in the number of students with ASD enrolled in higher education (Armstrong, 2011; Gelbar et al., 2015; Matthews, Ly, & Goldberg, 2015). However, an understanding of the factors that impact learners with ASD through a university's disability support service offices has not been thoroughly researched. Therefore, further research was warranted and sought to provide insight to better support students with ASD in higher education.

Since economic costs to society associated with ASD are estimated at 236 billion dollars per year (Buescher, Cidav, Knapp, & Mandell, 2014), understanding how to support students with ASD in higher education is necessary to provide successful educational outcomes and help this student population transition into society as contributing members (Matthews et al., 2015). Results from a study conducted by White, Ollendick, and Bray (2011) on the prevalence and problems of college students with ASD indicated that students with ASD experienced high rates of anger and depression. Wei et al. (2014) reported that many variables contribute to the success or failure of obtaining a college degree and further contend that more research is needed to fill this gap. Troiano, Liefeld, and Trachtenberg (2010) surveyed 262 students from a college in the

northeastern United States and they determined that students may not be prepared for the level of self-control, diligence, self-evaluation, decision-making, and goal setting required for success in college. The problem is that learning opportunities are hindered in higher education for students with ASD since students with ASD are characterized by cognitive and social deficits (Matthews et al., 2015; Volkmar, Reichow, & McPartland, 2014; Wehmeyer & Shogren, 2013).

The theoretical framework for this study is disability theory as defined by Barnes (2003) and Denhart (2008). Disability theory applies to this study since it intends to reveal limitations placed on persons with disabilities by non-disabled persons including disabling environments and educational practices (Barnes, 2003). Supplemental to disability theory, facets of the organizational implementation theory as described by Simons (1997) are applicable to whether or not students with ASD in a postsecondary university achieve success. Organizational implementation theory is applicable to this research since the disability support service offices are responsible for making decisions regarding supports for students with ASD.

Lack of preparation, coupled with cognitive and social deficits, decreases the likelihood of success in persons with ASD. Although research has been conducted on supports for students with ASD, most studies focused on students who were lower functioning (Van Bergeijk, Klin, & Volkmar, 2008), students with disabilities in general (Barnes, 2007), or students who were younger (Gobbo & Shmulsky, 2014). Research specifically relating to students with ASD in higher education is limited (Gelbar, Smith, & Reichow, 2014). Future research is needed to specifically address factors that impact learning in higher education for students with ASD. This proposed research sought to extend the existing knowledge regarding students with ASD by identifying factors that led to successful college experiences and graduation rates for students with ASD and thus sought to fill this gap in the research.



### **Situation to Self**

I am motivated to conduct this empirical research to bring much-needed information concerning factors that impact learning for students with ASD in higher education to the disability support offices, parents of students with ASD, students in higher education with ASD, and educators of students with ASD. It is my desire to lend information to the field of research in order to increase awareness of factors that impact learning for students with ASD by the disability support offices.

This research revealed the reality of the disability support service offices as seen through the multiple views of students and faculty; therefore, the philosophical assumptions were ontological (Creswell, 2013). The research paradigm is pragmatism, as I focused on the outcomes of the research rather than antecedent conditions (Creswell, 2013). I hold a Christian worldview and make my decisions based on a biblical perspective and prayer to Jesus Christ, the Son of God. Educating students from a biblical perspective is the most important element of my job as an educator. Currently, I have connections with the university where I conducted the research; therefore, bracketing out this bias will be essential. However, it is important to note that I will not have had any prior relationship with the participants, only the institution. I do not work in the disability support service offices, and I do not currently personally know anyone who is employed in the disability support offices. I hold a Bachelor of Arts in Early Childhood Education, a Master's in Special Education, and an Autism Education Certificate. I have a deep desire to help students with special needs, and this is a central motivating factor for conducting the proposed research.

### **Problem Statement**

The problem is that learning opportunities are hindered in higher education for students with ASD since they are characterized by cognitive and social deficits (Matthews et al., 2015; Volkmar et al., 2014; Wehmeyer & Shogren, 2013). There is a need to investigate factors which impact learning for students with ASD in higher education in order to increase successful outcomes (Gobbo & Shmulsky, 2014; Hart, Grigal, & Weir, 2010).

The overall findings of a study conducted by Gelbar et al. (2014) revealed the “scarcity of research concerning the experiences of college students with ASD” and recommend “interviewing college students with ASD to understand their experiences in postsecondary education” (p. 2599). Herbert et al. (2014) stated that though disability support service offices are created to support students with disabilities, “we know virtually nothing about their effectiveness” (p. 23). Therefore, this research focused specifically on exploring the perceptions of students with ASD and perceptions of faculty of disability support service offices to gain a comprehensive understanding of the factors that impact learning for students with ASD in higher education since the problem is that learning opportunities are hindered in higher education for students with ASD because they are characterized by cognitive and social deficits (Matthews et al., 2015; Volkmar et al., 2014; Wehmeyer & Shogren, 2013).

### **Purpose Statement**

The purpose of this qualitative case study, including 10 participants at Central University’s (pseudonym used to protect participants’ anonymity) disability support service offices was to get an “in-depth description and analysis of a bounded system” (Merriam, 2009, p. 40). This was accomplished by exploring and identifying the factors that impact learners with ASD in higher education through a case study of Central University’s disability support service

offices. The disability support service offices are generally defined as anything of or related to the disability support offices department. Participants included six students with autism spectrum disorder currently or previously enrolled (within the last year) at the university and four faculty members of the disability support service offices or associated departments (Creswell, 2013). The phenomenon of study is the disability support service offices. The theory guiding this study was disability theory as defined by Barnes (2003; 2007) and Denhart (2008).

Disability theory seeks to address three main points as follows: (a) it is an attempt to shift the focus from intellectual (or physical) limitations of impaired individuals to the limitations placed on them by society, (b) it intends to explain specific challenges experienced by persons with disabilities such as disabling environments, (c) it embraces interventions and accommodations (including educational, medical, rehabilitative, or employment) and further emphasizes the limitations imposed by non-disabled people (Barnes, 2003). Utilizing disability theory, this research sought to reveal factors that impacted learning for students with ASD.

Additionally, organizational implementation theory, as described by Simon (1997), was applicable to this study since organizations (such as ODAS) make it possible to make decisions since they limit the set of alternatives to be considered. According to Simon (1997), organizations can be improved by adjusting the way the limits are defined and executed. The disability support offices are responsible for making decisions regarding accommodations and supports for students with disabilities, thus organizational implementation theory is applicable to this research.

### **Significance of the Study**

ASD is defined by two main characteristics: difficulty with social communication and restricted, repetitive behaviors (APA, 2013a). Both of these challenge the learning process

(APA, 2000). The U.S. Department of Education (2012) reported that students with ASD make up the fourth largest population of students receiving support services and a report from the Centers for Disease Control and Prevention (2014) indicated that one in 68 people are on the autism spectrum, and the number will likely increase. Currently, colleges offering specialized support services to the increasing number of students with ASD are limited. With the high demand for support services and the increasing rates of people with ASD, research is necessary to provide a quality higher education for students with ASD.

The research contributes to the body of literature regarding factors that impact learning for students with ASD in higher education. Potential beneficiaries of this research include college students with ASD, high school students with ASD who intend to seek postsecondary education, parents of said students, faculty of disability support offices, educators, and other professionals who work with students with ASD. Though research has been conducted on students with ASD in higher education, Herbert et al. (2014) report that differences in students receiving and not receiving supports had similar results. Additionally, Shattuck et al. (2012) reported that 35% of youths with ASD attended college within six years after high school, however, the literature on the experiences of students with ASD in higher education is limited (Matthews et al., 2015). While the number of students with high-functioning autism is increasing, Gelbar et al. (2015) report that most research is conducted on lower functioning or younger children with ASD. A review of the literature has confirmed this. In a systematic review of the literature by Gelbar et al. (2014) the major finding of the review was “the scarcity of research concerning the experiences of college students with ASD” (p. 2599): this indicated a need for additional research specifically addressing the experiences of students with ASD and factors that impact learning in higher education.

White et al. (2011) conducted a study to investigate the prevalence of ASD in higher education and reported that between 0.7 % and 1.9 % of college students could meet the diagnostic criteria for ASD, yet none of the participating students had been formerly diagnosed indicating the need for supports may be more extensive than currently known. A quantitative study of two and four year universities and colleges indicated that 2% of enrolled students reported having ASD (Raue & Lewis, 2011). In addition, students with ASD are graduating high school and enrolling in higher education at increasing rates (Matthews et al., 2015). Since students with ASD are the fourth largest special needs population to receive support services, and more students with ASD are enrolling in higher education, universities need to be prepared to effectively provide support services for this student population. However, research indicates that support services are often insufficient and uncoordinated (White et al., 2011). Likewise, some universities are uncertain how to most effectively support students with ASD. Evidence also suggests that students with ASD enroll in and graduate from higher education institutions at much lower rates than students with other disabilities (Gobbo & Shmulsky, 2014), further indicating a need for improved supports for this student population. Graduation from higher education institutions typically leads to more employment options and earnings and also increases self-confidence, self-esteem, and self-determination (Hart et al., 2010). Conversely, many students with ASD quit or fail in a university setting and are thus more likely to experience social isolation, depression, and anxiety (Volkmar et al., 2014).

Results from this study offer useful information to parents of high school students with ASD as they seek transition services in secondary education which may include college as a goal on their individual education plan (IEP). College students with ASD may benefit from the results of this study by becoming aware of factors that contribute to success in higher education.

Additionally, faculty of the disability support service offices and other educators and professionals who work with students with ASD may benefit from results of this research on factors that impact learning for students with ASD in higher education as new theoretical or empirical information was revealed.

### **Research Questions**

The purpose of this qualitative case study was to get an in-depth description of the factors that impact learning in students with ASD through a university's disability support service offices. Creswell (2013) states that research should be guided by one central question and sub-questions should clarify and define the central question. Qualitative case study questions need to ask the "how" or "what" concerning the study (Creswell, 2013; Yin, 2014). Additionally, Yin (2014) states that defining the research questions is possibly the most important aspect of the study. The research questions should address the focus of the research and should align with the theoretical framework. The literature supporting the research questions follows the central and sub-questions. The central question and sub-questions for this study are as follows:

#### **Central Question**

What factors of the disability support service offices impact learning in university students with ASD?

#### **Sub-Questions**

1. How do students with ASD describe their experiences with the university's disability support offices?
2. How do university faculty describe their role in supporting students with ASD?
3. What factors of the disability support offices are perceived by students and faculty as having a positive impact on student learning?

4. What factors of the disability support offices are perceived by students and faculty as lacking, ineffective or as limiting to the student with ASD?

### **Research Plan**

A qualitative, case study research plan was utilized for this single case study, as a case study is appropriate when a researcher wants to understand a complex social phenomenon within a university (Yin, 2014). Because students with ASD in higher education face new and unique challenges, it is important to determine the factors that lead to their success. A university's disability support service offices were the focus of this study. Participants included six currently or formerly enrolled students (within the last year) at the university and four disability support service offices faculty members. This number of participants was secured to offer sufficient opportunity to gather ample information to develop and identify themes (Creswell, 2013). Interviews and an online focus group was utilized to collect data. Additionally, relevant documentation was collected and analyzed (e.g. field notes, disability support offices mission statement, application procedures). Data analysis utilized the process of pattern, themes, and content analysis strategies such as memoing, member checking, coding, triangulation, and bracketing (Creswell, 2013; Gall, Gall, & Borg, 2007; Patton, 2002; Yin, 2014). The findings from the study sought to identify factors that impact learning for students with ASD in higher education.

### **Delimitations and Limitations**

Delimitations for this study include the selection of participants, as only students with ASD enrolled or formerly enrolled (within the last year) in the university were selected as student participants. Including only students with ASD narrowed the focus of this study to specific participants in order to gain information pertinent to this student population.

Furthermore, only university faculty associated with the disability support service offices were included as participants. Including only faculties associated with disability support service offices limited participants to only those with specific information relevant to the phenomenon being studied.

This study was conducted at one university; thus transferability is limited. The study was small, which may not represent the general population of students with ASD. Interviews relied solely on participant perspectives, as no observations were made. Additionally, my biblical worldview and bias were addressed using bracketing (Creswell, 2013).

### **Definitions**

1. *Accommodations* – changes made in policies, practices, or procedures to prevent discrimination on the basis of disability (Central University, 2015).
2. *Advanced Placement (AP)* - The Advanced Placement (AP) program is an educational program that permits high school students to take introductory college-level courses and receive college credit by passing a standardized end-of-course exam (Warne, Larsen, Anderson & Odasso, 2015).
3. *Autism* – is classified by the American Psychiatric Association (APA) as a Pervasive Developmental Disorder. It is defined by symptoms appearing before age three with delayed development in language, behavior, and social skills (APA, 1994).
4. *Autism Spectrum Disorder (ASD)* – a group of developmental disabilities that can cause significant social, communication, and behavioral challenges (CDC, 2015).
5. *Disability* – a physical or mental impairment that substantially limits one or more of the major life activities of the individual (Central University, 2015).



6. *Office of Academic Disability Support (ODAS)* –support service provider for students who have a documented disability (Central University, 2015).
7. *Neurotypical* – Development which is considered normal or typical (Goldstein, Naglieri, & Ozonoff, 2009).
8. *Post-Secondary Education* - refers to higher education experiences upon high school graduation (Szidon, Ruppap, & Smith, 2015).
9. *Socialization* – the process of realizing the norms and customs of a community through ongoing interactions and behaving accordingly in order to participate in society, which helps a person to enact different roles in various professional, educational, and casual relationships (Southall & Campbell, 2015, p. 194).
10. *Transition Planning* – a coordinated set of activities intended to assist students with moving from high school to post high school activities such as college and careers (Szidon, Ruppap, & Smith, 2015).

### **Summary**

Chapter one began with an overview and background of the study which focused on factors that impact student learning through a case study of disability support offices. The problem and purpose were disclosed along with the significance of the study. Following the significance of the study are the research questions which lead into the research plan. Delimitations and limitations are exposed and definitions defined.

Students with ASD are graduating high school and seeking higher education opportunities at increasing rates, but the need for supports outweighs provision. Universities are tasked with providing effective supports for students with ASD, but research concerning factors that impact learning in higher education is limited. Prior research is mostly concerned with

influences other than the influence of the disability support service offices for students with ASD in higher education. Limited research has been conducted in university disability support offices concerning factors that impact learning thus indicating the need for this study (Gelbar et al., 2014; Gobbo & Shmulsky, 2014; White et al., 2011).

## CHAPTER TWO: LITERATURE REVIEW

### Overview

Few studies have been conducted on student support services for learners with autism spectrum disorder (ASD) in higher education programs, yet students with ASD are enrolling in universities and colleges at increasing rates due to multiple factors including better identification and diagnostic processes, improved individual educational plans (IEP), and more effective special education practices (CDC, 2012). As diagnosis and higher education enrollment for students with ASD increases, so do the demand for effective support services, yet little empirical research exists. There is a need to investigate the factors that influence successful outcomes for students with ASD in higher education (Hart et al., 2010) in order to increase successful outcomes for this student population.

The purpose of this literature review is to provide an overview of the current literature that pertains to academic supports of students with ASD in higher education. The theoretical framework for this literature is grounded in disability theory as defined by Barnes (2003) and Denhart (2008). Disability theory applies to this study since it seeks to expose limitations placed on persons with disabilities by non-disabled persons including disabling environments and educational practices (Barnes, 2003). Supplemental to disability theory, aspects of the organizational implementation theory (Simon, 1997) are applicable to whether or not students with ASD in a postsecondary university achieve success. Organizational implementation theory is applicable to this research since the disability support offices are responsible for making decisions regarding supports for students with ASD.

To establish legal aspects of higher education and students with disabilities, this review will provide an overview of the laws associated with students with disabilities in higher

education and the applicability of those laws. In addition, this review will introduce the primary characteristics of ASD, especially as related to young adults, and the key factors associated with success in higher education for students with ASD as revealed in the literature. These factors include transitions, academic supports, non-academic supports, and twice-exceptional learners.

### **Theoretical Framework**

The theoretical framework for this study is twofold and includes disability theory (Barnes, 2003; Denhart, 2008) and organizational implementation theory (Simon, 1997). According to Yin (2014), having theoretical propositions help guide the study and will play a key role in advancing analytic generalizations resulting from this study.

#### **Disability Theory**

The social model of disability was developed by Oliver (1990; 1996) and posits that disability is a socially constructed concept and attributes any difficulties and limitations experienced by individuals with disabilities to obstacles placed on individuals by society. Additionally, disability is viewed as being the result of society creating barriers that prohibit individuals with disabilities from accessing a variety of aspects of society (Oliver, 1990; 1996). Disability theory is defined by Barnes (2003) as having three main points. The first is that it is an attempt to shift the focus away from physical or intellectual limitations of impaired individuals to the limitations placed on them by society. Denhart (2008) describes this as being “socially constructed” (p. 493), further stating that disability theory reveals how “social intolerance of human variation creates disability” (p. 493). Students with ASD may choose not to seek higher education opportunities in order to avoid “socially constructed” discrimination. Additionally, students with ASD who seek higher education may choose not to seek academic supports for the same reason, which emphasizes the importance of universities understanding of

student perceptions of disability and how to best meet their academic and social needs without perpetuating further disability upon them. Further research was needed to reveal student and faculty perceptions of disability to try to narrow the gap between students and services.

The second aspect of disability theory is that it intends to explain specific challenges experienced by persons with disabilities such as disabling environments and cultures which may include inaccessible education, working environments, social support services, and more (Barnes, 2003). Since students with ASD may not be prepared for the degree of self-control, diligence, decision-making, and goal setting that is required for success in college (Field, Sarver, & Shaw, 2003), this may lead to poor performance or failure based on disabling factors rather than the presence of ASD. However, with appropriate and effective supports through disability support service office, students may be better able to navigate the challenges and demands associated with college expectations. If the relationship between students with ASD and universities is to be beneficial, then academics and researchers must be actively involved with disabled students and understand their perspectives (Barnes, 2007) in order to avoid disabling environments and increase successful post-secondary outcomes.

The third aspect of disability theory is that it embraces the values of interventions and accommodations (including educational, medical, rehabilitative, or employment) and it further emphasizes the limitations imposed by non-disabled people (Barnes, 2003). Denhart (2008) expands this by stating that it requires a “voice to deconstruct it” (p. 484), emphasizing the need for students with ASD to self-advocate in order to succeed. According to the literature, this does not appear to be the norm for students with ASD, as many students with ASD are unable to act as a self-advocate (Burton & Wolfberg, 2008). Additionally, “disability theory demonstrates how social intolerance of human variation creates disability” (Denhart, 2008, p. 493), which may be

real or perceived, yet both negatively impact academic and social performance. In a study conducted by Denhart (2008), students with disabilities refused to ask for accommodations for fear of the stigma associated with disabilities. Brown, Wolf, and Kroesser (2014) further state that “the majority of students do not seek academic or disability support” (p. 121) indicating a disconnection between student needs and the disability support service offices. In order to eliminate stigma and the negative feelings associated with it, students may choose to circumvent a university setting to avoid negative feelings perpetuated by society. Students must learn to self-advocate and utilize their voice in order to seek the supports necessary for success. Decision-making policies at disability support offices may influence whether or not students feel empowered to become their own advocate.

### **Organizational Implementation Theory**

Supplemental to disability theory, aspects of the organizational implementation theory (Simon, 1997) are applicable to whether or not students with ASD in a university setting achieve success. Simon (1997) states that organizations (such as disability support service offices) make it possible to make decisions since they limit the set of alternatives to be considered. According to Simon (1997), organizations can be improved by adjusting the way the limits are defined and executed. This element of organizational theory posits the importance of decision-making in organizations. These decisions impact student learning, as faculty of disability support offices make decisions regarding which supports to offer and to what degree. For example, students may receive extended time on tests, but how much time should be allowed? Additionally, Brazer, Kruse, and Conley (2014) postulate that “organization theory guides understanding of the complexities of schools and districts and can be a basis for collaborative and effective decision making” (p. 254).

Decision making impacts support services offered through the disability support offices which impacts student achievement. The relevance of organizational theory has been questioned recently due to its abstract nature and that makes it difficult to connect organizational theory to practice (Brazer et al. 2014). However, when specific aspects of the theory, such as organizational decision-making and reflective practice, are extrapolated, it becomes applicable to this case study. Another challenging aspect of the organizational theory exists due to the multiple theoretical versions (Arrow, 1951; Argyris, 1974; DiMaggio & Powell, 1983; Pfeffer, 1982) which requires the researcher to significantly narrow the scope in order to specify the intent and meaning and its applicability to the research. For the purposes of this study, organizational theory will be applied as described by Brazer et al. (2014) who asserts that, when school leaders help others to frame issues from multiple lenses, ask that concerns and challenges be examined from multiple viewpoints and stances, and probe data for understandings related to teaching and student learning, theory can be substantively employed to catalyze collaborative thinking and test nascent conclusions. (p. 268)

This case study extrapolated information from multiple sources, including student and faculty perspectives, in order to examine supports by disability support service offices for students with ASD. Supports are determined by leadership and implemented through the disability support service offices. Applying organizational theory to this case study may “establish reflective theorizing” and foster “positive change and improved cultural practices and routines” (Brazer et al., 2014, p. 268).

“Organizational theory provides a powerful set of tools that can assist aspiring leaders (and their in-service counterparts) to navigate through the shrouded and changing landscape of

daily educational leadership” (Brazer et al., 2014, p. 268). This leadership, in turn, impacts student achievement. Individuals with ASD are least likely to successfully attend and graduate from higher education institutions and little empirical work is available to guide the development of higher education programs for individuals with ASD (Shattuck, et al. 2012). This study sought to explore how students with ASD perceived support efficacy and how faculty perceived their role in providing such supports. It is the combination of disability theory, as applied to the student with ASDs’ perceptions, and organizational theory, as applied to the disability support service offices’ faculty and staff perceptions that provided the framework for this study.

### **Related Literature**

The purpose of the literature review is to “develop sharper and more insightful questions about the topic” (Yin, 2014, p. 15). Though research has been conducted on students with ASD, most of the research has been conducted on younger students and early interventions. Research conducted specifically on students with ASD in a university setting is scarce, especially in comparison to students with disabilities in general. This literature review was conducted to include historical, legal, and academic aspects of students with ASD in a university setting in relation to supports and accommodations through the disability support service offices.

### **Historical Aspects of ASD**

In 1943, Leo Kanner’s research revealed that rather than children suffering with schizophrenia, as had been previously thought, they were suffering from a different disorder which he termed “early infantile autism” (Bursztyn, 2007, p. 7). This term was used to describe children whose play focused on objects rather than people. In 1944, Hans Asperger labeled a similar disorder as “autistic psychopathy” (Oslund, 2013, p. 48) when he described children who displayed poor communication skills, lacked empathy, and were socially awkward (Boutelle,



2008). Today, we know that autism takes on more forms than first described by Kanner and Asperger. ASD is now considered a neurodevelopmental disorder characterized by distinct impairments in language, communication, and social skills and repetitive and stereotyped behavior patterns (APA, 2013b). Impaired social interaction and repetitive behaviors are considered defining characteristics of ASD which differentiates it from other developmental disorders (Herbrecht et al., 2009; Reichow & Volkmar, 2009). However, despite academic and social deficits, students continue to graduate from high school and enroll in postsecondary education at increasing rates (Gelbar et al., 2015).

### **Legal Aspects of Students with ASD**

In 1973, PL 94-142, the Education of All Handicapped Children Act in 1975 (EAHCA, 1975), made it a law that all school-aged children with disabilities had the right to a free, appropriate education. This legislation established supports for students with disabilities in the K-12 setting. The purposes of PL 94-142 are fourfold and include:

- a) to assure that all children with disabilities have available to them . . . a free appropriate public education which emphasizes special education and related services designed to meet their unique needs
- b) to assure that the rights of children with disabilities and their parents . . . are protected
- c) to assist states and localities to provide for the education of all children with disabilities
- d) to assess and assure the effectiveness of efforts to educate all children with disabilities. (Education for All Handicapped Children Act, 1975)

As a result of PL 94-142, many students with disabilities began to graduate from high school and pursue postsecondary educational opportunities. In the mid-1980s, universities began to see an increase in the number of students with disabilities seeking higher education. This presented a challenge for the students who were accustomed to receiving supports and accommodations through the K-12 public school setting. Universities were unsure how to effectively provide supports to this student population (Pryor, 2007).

Students with ASD, who historically have been considered uneducable, are now pursuing postsecondary education in increasing numbers (Autism Speaks, 2013). These students have been viewed with the same lens as students with disabilities, though these are very differing disabilities requiring different supports. Following PL 94-142, the Individuals with Disabilities Education Improvement Act (IDEA) (1997, 2004) was enacted to ensure that all children with disabilities received a free public education “to meet their unique needs and prepare them for further education, employment, and independent living” (APA, 2015, n.p.).

In 1990, autism was added to IDEA as a stand-alone disability (IDEA, 1990). Since the passage of PL 94-142 and IDEA, students with ASD have received supports and services and have begun to demonstrate increased academic ability which has paved the way for inclusion in postsecondary education (Hart et al., 2010). With the increase in numbers of students with ASD entering the university setting, universities have begun the process of learning how to best meet the needs of this student population (Zager & Alpern, 2010). IDEA (2004) uses 13 disability categories to determine special education services for students with disabilities. According to IDEA, autism is defined as:

(c)(1)(i) a developmental disability significantly affecting verbal and nonverbal communication and social interactions, generally evident before age 3, that

adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or changes in daily routines, and unusual responses to sensory experiences.

(ii) The term does not apply if a child's educational performance is adversely affected primarily because the child has an emotional disturbance, as defined in this section.

(iii) A child who manifests the characteristics of "autism" after age 3 could be diagnosed as having autism if the criteria in paragraph (c)(1)(i) of this section are satisfied. (IDEA, 2004, Section 300.8)

The Centers for Disease Control goes on to say that Autism Spectrum Disorder is "a group of developmental disabilities that can cause significant social communication, and behavioral challenges" (2015, n.p.). Oftentimes individuals with ASD display no visually identifying features, but the way they interact, learn, and communicate may be considerably different from neurotypical individuals. Several conditions comprise ASD including: Asperger syndrome, autistic disorder, and pervasive developmental disorder not otherwise specified (PDD-NOS). Individuals with ASD have a wide range of abilities from severely challenged to exceptionally gifted, and the level of help needed will vary based on severity (CDC, 2015).

Upon entering postsecondary education, the students' rights and responsibilities change considerably from that in the high school setting. IDEA guarantees a free and appropriate education in the K-12 setting in the least restrictive environment and schools are legally accountable for identifying student's needs, determining modification and accommodations, and

implementing a plan via the students IEP. However, the legal aspects of disability shift to the Americans with Disabilities Act (ADA) of 1990, ADA Amendments Act of 2008, and Section 504 of the Rehabilitation Act of 1973, which emphasize educational access. In order to obtain supports and services, students must pursue services by self-identifying as a student with a disability to the disability support service offices. Documentation of the disability is then submitted along with a request for accommodations. As noted in disability theory, barriers may be inadvertently placed on students with disabilities (Barnes, 2007; Denhart, 2008). Universities do not alter coursework or degree requirements, but they enlist the disability support service offices to ensure barriers are removed in order to offer equal opportunity for students with ASD to participate in postsecondary educational opportunities (Thomas, 2000).

Though students may have received certain accommodations through IEPs in high school, this does not necessarily indicate eligibility at the university level. However, students may self-initiate some of these accommodations by serving as a proactive self-advocate. For example, in high school, a student may have received individualized instruction through the special education teacher, but in college the student may be expected to seek out tutoring services offered to the entire student population through academic support services. Additionally, a student whose IEP accommodation included preferential front row seating may be expected to arrive early to secure a preferred seat in a college classroom (Ackles et al., 2014). Many students with ASD require unique and customized accommodations and may have received them throughout high school. However, “while institutions of higher education have developed pathways and supports to meet ADA requirements for students with disabilities, some of the unique supports typically needed by students with ASD are often not addressed within the traditional accommodations or college support services framework” (Ackles et al., 2014, p. 7).

The legality concerning students with disabilities changes from high school to college. Students should see the disability service provider on campus to communicate with regarding eligibility for accommodations and services. Upon approval, the disability support service offices will provide the instructor with required duties, but is not likely to disclose in-depth information about an individual's specific disability. Though it is acceptable for an instructor to "ask the disability service provider, or one's supervisor, for an explanation of how to achieve an accommodation; it is not legal or necessary to know what disability in particular causes a person to require the accommodation they require" (Oslund, 2013, p. 45). It is also no longer legal to demand an explanation for a disability in order for a student to receive accommodations (Oslund, 2013).

The transition from high school to college is not only typically marked by decreased supports academically, but behavioral expectations and consequences are also different for noncompliance. When considering disciplinary action for a student with ASD in high school, administrators are required by IDEA to take into account whether or not the student's disability contributed to the non-compliance (Buron & Woldberg, 2008). This is not the case in a university setting. Students caught violating the school's codes of conduct are held to the same degree of accountability as non-disabled students. For students with ASD, this may be especially problematic since students with ASD oftentimes do not recognize social norms and misunderstand behavioral expectations (Ackles et al., 2014).

### **Characteristics of Autism**

According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) the new ASD diagnosis criteria "represents a new, more accurate, and

medically and scientifically useful way of diagnosing individuals with autism-related disorders” (APA, 2013a, p. 1). The DSM-IV provides the following ASD diagnosis criteria:

a) Qualitative impairments in social interaction, qualitative impairments in communication, restricted repetitive and stereotyped patterns of behavior, interests and activities, b) delays in abnormal functioning in at least one of the following areas, with onset prior to the age of 3: social interaction, language as used in social communication, symbolic or imaginative play, and c) the disturbance is not better accounted for by Rhett’s Disorder or Childhood Disintegrative Disorder. (APA, 2000, 69-70)

This criterion is used as the basis for the DSM-5 (APA, 2013a), but with significant changes.

The definition of ASD has been modified and now includes Asperger’s, which was separate in the DSM-IV. Individuals may continue to refer to themselves as having Asperger’s, as this indicates a high-functioning performance level as compared to others with ASD (Oslund, 2013).

Another example of a change to the DSM-IV in the DSM-5 is that social and communicative impairments were combined into one impairment. Under the repetitive restrictive behaviors (RRB) criterion, sensory responses and stereotyped language were added. Also, the delay in expressive language requirement in the DSM-IV was eliminated in the DSM-5 (Grzadzinski, Huerta, & Lord, 2013). Since meeting the DSM criteria is often a requirement for publication in research journals, researchers prefer to use the DSM for participant recruitment (Dalal & Sivakumar, 2009). The student participants in the research all received an official medical diagnosis of ASD or autism.

Individuals with ASD tend to have communication deficits, such as responding inappropriately in conversations, misreading nonverbal interactions, or having difficulty building

friendships appropriate to their age. In addition, people with ASD may be “overly dependent on routines, highly sensitive to changes in their environment, or intensely focused on inappropriate items” (APA, 2013a, p. 1). Symptoms experienced by people with ASD will vary and are considered on a spectrum with some individuals showing mild symptoms while others symptoms are severe.

ASD is characterized by a life-long qualitative impairment of social interactions, communication, and behavior (Williams, Thomas, Sidebotham & Emond, 2008). According to the APA (2015), autism is the most severe developmental disability. Diagnostic criteria may make it difficult to determine where an individual falls on the ASD spectrum, but students at the university level tend to be at the higher functioning end of the autism spectrum (Oslund, 2013). Recent changes to the DSM-5 are most significant in regards to diagnosing ASD (APA, 2013b).

In order to be considered for an autism diagnosis, the DSM-IV states that a person must exhibit abnormal delays in social interactions, language used in social communication, or symbolic or imaginative play prior to the age of three (APA, 2013a). ASD is also characterized by delays in speech acquisition, stereotyped patterns of behavior, interests, abnormalities related to reciprocal social interaction, and restricted interests (APA, 2000, Sec. 299.00-299.80). These individuals may have above-average, average, or below average IQs (Klin, McPartland, & Volkmar, 2005). To qualify as having ASD, the DSM-IV requires the individual to exhibit at least six impairments in the categories of: social interaction, communication, and restricted repetitive and stereotyped patterns of behavior (APA, 2000, Sec. 299.00-299.80). Deficits in social interaction and communication are considered the hallmark feature of autism (Buron & Wolfburg, 2013) and include: (a) multiple non-verbal behavior impairments, (b) failure to develop peer relationships, (c) lack of desire to interact with others, and (d) lack of social and

emotional reciprocity (APA, 2000, Sec. 299.00-299.80). Repetitive and stereotyped behaviors are also considered a typical characteristic of persons with ASD. Deficits in repetitive and stereotyped behaviors include: (a) extreme intensity or focus that is abnormal, (b) extreme adherence to routine or rituals, (c) repetitive behaviors, and (d) persistent preoccupation of objects or parts of objects (APA, 2000, Sec. 299.00-299.80).

Persons with ASD without an intellectual disability have been described as possessing high-functioning autism spectrum disorder (HFASD). HFASD is defined as meeting diagnostic criteria for ASD and having a full-scale IQ of 70 or higher (Honda, Shimizu, & Rutter, 2005). However, HFASD is not officially recognized by the DSM-IV. Most students in postsecondary education would be considered in this category of ASD, as this diagnosis applies to the highest functioning individuals (Oslund, 2013). However, the DSM-IV carried the diagnosis of Asperger's, which is the typical diagnosis of students with ASD in a university setting. Oslund (2013) points out that it is important to note that being diagnosed with Asperger's is typically not seen as a negative by those carrying the diagnosis since those with this diagnosis are considered high functioning.

Having one overarching diagnosis in DSM-5 may help some individuals with ASD gain additional treatment and supports. In the past, "people with diagnoses such as Asperger's have not always been eligible for certain services" (Glicksman, 2012, p. 59). The concept of a spectrum disorder establishes that although individuals diagnosed with ASD may present many of the common characteristics, considerable variation in the manifestation and severity of the disability exists (Buron & Wolfberg, 2013).

The DSM-IV establishes formal diagnostic criteria for persons with ASD, however, the literature reveals that adolescents and adults with ASD present a variety of characteristics not



necessarily included in a formal diagnosis. For example, in a study conducted by MacDonald, Lord, and Ulrich (2014) deficits in fine and gross motor skills significantly predicted calibrated autism severity, though they are not characteristics required for diagnosis. Additionally, some researchers contend that individuals with ASD exhibit sensory processing issues such as severe sensitivity to touch, sight, sounds, and smells in comparison to most typically developing peers (Buron & Wolfberg, 2013; Cheung & Siu, 2009). Also reported in the literature is an increased degree of behavioral challenges including anger rumination, physical aggression, and outbursts (Pugliese, Fritz, & White, 2015). Characteristics not required for a diagnosis could impact postsecondary transitions.

### **Key Factors for Success in Higher Education**

Though some believe that college is an unattainable goal for students with special needs, Peña and Kocur (2013) affirm that college is not only an attainable goal for students with ASD, but it may also be important to their growth in other ways such as real-world and emotional. Many students with ASD aspire to earn a college degree, however, Gobbo and Shmulsky (2014) state that “attaining a college degree is a formidable challenge for many individuals with disabilities, who enroll in postsecondary institutions at a rate close to that of the general population but earn fewer credits and degrees” (p. 13). It is this challenge that needs to be addressed, as many students with ASD desire a college degree, but are unsure of how to meet the challenges associated with this achievement. Transitioning from a supportive high school environment to the unknown in a university setting presents challenges for all students, but especially for those with ASD who are accustomed to the supports offered through their IEP in the high school setting. The literature reveals that students with ASD struggle to make the transition from high school to the university setting and face both academic and non-academic

challenges (Wehman, 2014; Wei, Wagner, Hudson, Yu, & Javiz, 2015). Though some universities offer support services to assist students with disabilities, oftentimes the support services are insufficient and uncoordinated (White et al., 2011) or are not specific to students with ASD (Mitchell & Beresford, 2014).

### **Transitions**

ASD is a lifelong developmental disability that affects an individual's ability to make sense of the world, process information, and relate to other people (NAS, 2014). Since autism is a spectrum disorder, individual's abilities are impacted in different ways and in varying degrees. Some individuals have significant learning disabilities and require high degrees of support while others are high functioning and require little academic support. Though high-functioning academically, individuals with ASD are still likely to experience communication and social challenges. Transitioning from the supportive environment of high school to the challenging expectations of being an independent learner in post-secondary education can be challenging for the student with ASD (Mitchell & Beresford, 2014; Rydzewska, 2012). "There are expectations of increased independence, greater demands for self-directed learning, self-management of time, and less structured timetables, as well as new peer groups and social situations" (Mitchell & Beresford, 2014, p. 152). Research by Miller-Warren (2016), found that "collaboration among parents, teachers, and post-secondary agency representatives was lacking in both the secondary transition planning process and the postsecondary process of the graduates with disabilities, but more so in the postsecondary process" (p. 34)

These new and increased demands may lead to an overall negative experience in college, which may lead to failure. More research is needed to support effective transition and postsecondary education. Possibilities for this research include "surveying and interviewing

college students with ASD to understand their experiences in postsecondary education in order to inform transition practices” (Gelbar et al., 2014, p. 2599).

As students with ASD served under the IDEA mandates graduate from high school, research indicates that many lack the skills, experiences, and supports necessary to succeed in college and careers (Kucharczyk et al, 2015; Shattuck et al., 2012). According to the IDEA, students 14 and older are encouraged to attend their transition planning meetings and all students are mandated to have a transition plan by age 16. If students express a desire to seek postsecondary education, then the transition plan should include courses of study to best meet those post high school desires (Martin, Marshall, & Bale, 2004). Even though more students are attending IEP meetings, without direct instruction, their participation is minimal (Griffin, Taylor, Urbano, & Hodapp, 2014). Research on transition-related best practices assert that student involvement is important for effective transition plans that lead to successful postsecondary goal attainment (Landmark, Ju, & Zhang, 2010; Roberts, 2010). “Based on a partnership between educators and a youth’s family, student-focused planning should enable student participation in decision-making and goal-setting, particularly if the student expresses goals related to postsecondary education” (Wei et al., 2015, p. 9). In research conducted by Wagner, Newman, Cameto, Levine, and Marder (2007), 84.4% of students with autism reported that they would probably seek post-secondary education. However, only 24.2% of students with ASD had post-secondary education in their transition plan (Cameto, Levine, & Wagner, 2004). This indicates a gap between students’ personal plans, their IEP plans, and the transition process in general.

One estimate states that about 17,500 high school students with ASD go on to attend college within the first six years after high school graduation (Shattuck et al., 2012). However, more recent estimates state that 49,000 students with ASDs will graduate from high school in the

2014-2015 school year (Wei et al., 2015), but only about 15,000 will pursue postsecondary education. This leaves approximately 33,000 students with ASD that may neglect to pursue postsecondary education. Roberts (2010) states that if a student with ASD expresses a desire to attend college it is important for him or her to have an average or higher than average academic standing. This coupled with needing to be high-functioning may deter or eliminate many from pursuing post-secondary education. Transition planning for students with ASD which includes Advanced Placement (AP) or College Level Learning (CLL) can assure students are on the right path upon high school graduation and entry onto a university campus academically. Setting the student up for academic success may enable the university to focus more effort on the social needs of the student with ASD.

According to the U.S. Bureau of Labor Statistics reports (2014), individuals earning a college degree earn significantly more than workers without a college degree. Given the increasing rates of students graduating high school and pursuing postsecondary education, it is essential that students with ASD be provided the supports and services necessary to promote post-secondary goals, including education and employment. A study by Chiang et al. (2012) found that a transition plan goal of pursuing post-secondary education increased the chances of enrollment by 330%. This indicates the importance of advanced planning for students with ASD in order for successful transitions to postsecondary education to occur.

Students transitioning from high school to college need to be prepared for the multitude of changes that occur upon graduation. However, little is known about the types of high school transition policies and interventions that may lead to increased enrollment rates and how universities can use the transition planning process to encourage a successful transition from high school to college. The literature reveals a disconnection between the transition planning

process in high school and the support services offered at universities. Research specifically focusing on the transition from high school to post-secondary education for students with ASD is limited (Schneider & Cajiga, 2015) and thus warrants further investigation. This research is directly related to this study in that the disability support service offices is specifically involved in meeting the transitional needs of students with special needs.

Literature reveals that high school students transitioning to college feel unsupported or inadequately supported (Beardon, Martin & Woosley, 2009; VanBergeijk et al., 2008). Reasons for feeling unsupported vary and may be from a lack of awareness and understanding of ASD by teachers and support services. Additionally, since students viewed visits to college campuses as a key element of a successful transition, this communication becomes imperative (Chown & Beaven, 2010; McConkey, 2010; Zager & Alpern, 2010). Few studies have focused specifically on the disability support offices and the connection between the participation in transition planning and college enrollment which might affect college enrollment rates and success. Reports indicate that approximately 200 colleges and universities support students with disabilities (Blalock, 2014; Grigal & Hart, 2010); however, little research exists concerning student and faculty perceptions of efficacy of the disability support service offices.

Research indicates a need for improved support for students with ASD in the post-secondary setting (Beardon et al., 2009; McConkey, 2010). In a study by Chown and Beavan (2010), high school students feared meeting new people, making friends, navigating the college campus, and college buildings. Students viewed visits to the college before attending as helpful (Zager & Alpern, 2010). Additionally, visiting the campus for extended periods of time was seen as a key aspect in preparing students to transition from high school to college life (Chown & Beaven, 2010, McConkey, 2010). For some, the transition may include a change of location.

A new environment with a new educational experience may become overwhelming to the already academically and socially challenged students with ASD. For some, the social changes can be more challenging than the educational demands of their studies (Chown & Beaven, 2012). These demands may be crippling to students with ASD as they transition from high school to the university setting.

Parents and families may play a key role in the transition from high school to college for the student with ASD, which can be filled with conflicting emotions ranging from anxiety to excitement. Parents help in varying degrees. Mitchell and Beresford (2014) reported that parents help in the transition by organizing meetings and college visits and acting as a liaison between college support services and the students. Two key roles indicated by research on parental involvement include gathering information and being involved in the decision-making process. Students in the study openly acknowledged that they could not have carried out these tasks by themselves (Mitchell & Beresford, 2014) further indicating the need for multiple supports in the transition process. "There was evidence that, for at least some families, the extent of parental involvement had been influenced by a lack of support from statutory services" (Mitchell & Beresford, 2014, p. 158) indicating that support services may not be meeting the needs of this student population.

Parental involvement may be due to a parent's perception that the student may not be able to self-manage the transition and also the lack of support services available (McConkey, 2010). Transitioning to postsecondary education may present challenges to the students with ASD, since federal laws require that students with special needs receive an equal opportunity for education (ADA, 1990). Students entering a university setting may not receive or seek the additional supports necessary to succeed. Students with ASD are characterized as experiencing challenges

in the learning process. These challenges may be academic and/or non-academic. For example, academically, these students may not be prepared for the level of self-control, diligence, decision-making, and goal setting that success in college requires (Troiano et al., 2010). And socially, these students may withdraw or misinterpret social cues (Buron & Wolfburg, 2008). However, through improved transitions, academic and non-academic supports in higher education, chances of success for students with ASD may increase. Research is needed for predictive and positive post-secondary outcomes for students with ASD (Hart et al., 2010). The results of this research offers additional information regarding the disability support service offices to improve educational outcomes in post-secondary education for students with ASD.

### **Academic Support**

The transition into postsecondary education for students with ASD constitutes a unique and oftentimes stressful stage in life. Research on support service offices for students with ASD is needed for the development of adequate supports (Van Hees, Moyson, & Roeyers, 2015). In order to understand academic supports for students with ASD and their efficacy, more research is needed to link past and present supports to future support needs.

**Universal Design.** Universal design is the idea that we plan for the needs of everyone (both with and without disabilities) at the same time (Oslund, 2013). This eliminates the perceived challenges that are only noticed when viewed through the lens of the traditional classroom. Since disability theory advances the idea that society perpetuates disabling environments onto people with disabilities, including universally designed programs and campuses may help to eliminate disabling cultures. For example, college students required to take a test which lasts approximately 50 minutes could be given a two-hour window in which to complete the test. This universally meets the needs of all learners. “By implementing universal

design throughout an institution, both employee and student retention can be increased – saving or generating more income results from increased retention of staff and students” (Oslund, 2013, p. 44).

Though initially implementing a universally designed model will take more time, the end results could be that “employees’ strengths are utilized and students have an opportunity to show what they know” (Oslund, 2013, p. 44). Eliminating disabling environments increases the opportunities for all students, not just those with disabilities.

**Student Engagement through Support Services.** As universities make their campuses more universally designed, students may feel a diminished need for support services. However, this ideal is far from the reality of education today. In high schools, “IDEA (2004) mandates that the Individualized Education Program (IEP) team should begin the transition planning process for students receiving special education services no later than age 16 and, when appropriate, it can begin as early as age 14” (IDEA, 2004), if the student expresses a desire for continuing education, it is essential that plans for postsecondary education be included in the IEP. If students with disabilities, including ASD, voiced interest in attending college, transition planning and support services should be included to specifically plan for and promote their success for their post-secondary goal (Chiang et al. 2012). Roberts (2010) states that it is important for a student with ASD to have an average or higher than average academic achievement record in order to experience success at the postsecondary level. In reviewing the research literature, many argue that when individuals with high functioning autism are provided with effective supports, they have been shown to be successful in postsecondary education (Pinder-Amaker, 2013; Pugliese & White, 2014; VanBergeijk et al., 2008). However, not all researchers agree with this position. Oslund (2013) emphasizes that a students’ disability may present hindrances



that will prevent them from “being successful in the specific field – and that individual may still choose to follow the line of study for reasons of personal development and growth” (p. 40), further stating that students with disabilities have the same right to “make poor choices” as able bodied students. “We are not allowed to unilaterally decide who should be allowed to try – our decisions must be made based on standard policies that are applied evenly to all students” (Oslund, 2013, p. 42). Decision-making at the university level has the potential to include or exclude students based on perceived ability. It is the decision-making process, as viewed through organizational theory, that ultimately decides the standards for admission into the university setting and how and which supports and supporting environments will be included. Previous research has investigated transitions from high school to college (Mitchell & Beresford, 2014; Wehman et al., 2012), but little research exists concerning the role of disability support service offices as perceived by faculty and students with ASD.

Students with ASD are graduating from high school and entering colleges and universities at increasing rates due to many factors, including “heightened awareness of learning differences at all levels of development, better identification and diagnostic processes, improved individual learning plans, and more effective special education practices” (CDC, 2012). Student support services are an integral part of the success of college students with ASD in a university setting. Many students are being accepted into colleges and universities, but often are failing due to lack of appropriate and effective supports (US Autism and Asperger Association, 2013).

Most universities offer tutoring to all students. However, according to Hansen (2011), tutoring may not be enough for the student with ASD who also struggles with organization and remembering to turn in assignments. Some universities offer supports in the form of volunteers, such as peer-tutors, while other universities “offer relatively intense specialized services and

individualized supports not typically available in colleges and universities” (Hendrickson, Carson, Woods-Groves, Mendenhall, & Schneidecker, 2013, p. 171). According to a recent study, the U.S. Department of Education reported that 47% of young adults with ASD had enrolled in a postsecondary educational institution within six years of high school graduation and, of that group, 35% earned a postsecondary degree. By comparison, the general population enrollment was 35% with a completion rate of 51% (Sanford et al., 2011). Lack of effective support services may be responsible for the low completion rates among students with ASD. A review of the literature also revealed that students with ASD often gain college admission without ever identifying themselves as having autism or Asperger’s (Van Hees et al., 2015). These students may have social, emotional, sensory, and learning needs, along with their organizational challenges which may go unnoticed by the instructor resulting in unmet educational needs. Many factors may contribute to the success or failure of students with ASD in post-secondary education, and support services play a vital role in making contributions. Understanding these factors may increase degree completion rates in students with ASD and therefore warrants further investigation.

**Influence of Course and Classroom Design.** In order for students with ASD to succeed at the university level, course and classroom design must be considered. "Knowing how students learn and solve problems informs us how we should organize the learning environment and without such knowledge, the effectiveness of instructional design is likely to be random" (Sweller, 2004, p. 9). Students with disabilities that impact their education tend to be either very well-organized, which has made college a possibility, or they are exceptionally intelligent and have poorly developed organizational skills and little sense of responsibility (Oslund, 2013). Regardless of whether the student is well-organized or not, the impact of course and classroom

design must be considered if students with ASD are to thrive in post-secondary education. Strategies such as universal design and person-centered planning have been effective in facilitating the inclusion of students with ASD in academic settings (Stodden & Mruzek, 2010), but for some students, the course and classroom design may hinder their educational opportunity.

One evidence-based practice for students with ASD which has been suggested to have potential benefits for course design is computer assisted instruction (CAI). CAI refers to the use of computer technology to teach information or assess learner's knowledge (Anohina, 2005). Research indicates CAI might serve to improve social deficits that are key features of ASD (Moore, McGrath, & Thorp, 2000). Other researchers have noted, however, that CAI may contribute to the isolation of students with ASD (Pennington, 2010; Zamani, Kheradmand, Cheshmi, Abedi, & Hedayati, 2010), which may have negative implications since students with ASD have social skills deficits and social skills challenges which have led to failure at the university level for some students (Van Hees et al., 2015). After more than a decade of intense research in this field, technology-based treatments are still perceived as emerging rather than established (National Autism Center, 2009). More recently, the literature tends to emphasize the potential of technology more than its proven effectiveness (Grynszpan, Weiss, Perez-Diaz & Gal., 2014).

Central coherence may be defined as the ability to understand context or the see the big picture (Delrieu, 2015). Weak central coherence may explain some of the social challenges students with ASD face. For example, individuals with ASD can be highly skilled at tasks requiring focus and ability with details (Happe, 2005), which indicates that students with ASD may benefit from a standardized course design. However, "they often do not have a broad cognitive perspective in the classroom and focus solely on the details" which may cause them to

miss the broader picture (Attwood, 2007). On the other hand, recent research states that students with ASD tend to give creative problem solving solutions that deviate from the norm (Best, Arora, Porter, & Doherty, 2015). Though often creative, disorganized and inconsistent course design may inhibit the student with ASD from understanding expectations at the university. It is this dichotomy that presents the need for additional research.

The classroom environment may help or hinder students with ASD. Since students with ASD are characterized by hypo and/or hyper sensitivity the context may handicap the student. For example, social interactions may be hindered in classrooms with “poor ventilation, industrial lighting and odors, where sound often reverberates off walls, or where it is easier to hear the person whispering a few seats over than the professor talking at the front of the lecture hall” (Oslund, 2013, p. 50). The challenge is understanding the needs of the students, as students with ASD are typically weak self-advocates (Barnhill, 2014; Shattuck et al., 2014). A student with ASD may attend a university classroom, but may not be able to function due to the variety of stimuli. They can be handicapped by a “strong emphasis being placed on social interactions that they are not well-equipped to deal with, in environments that they find physically uncomfortable” (Oslund, 2013, p. 50-51). It may be possible for the disability support service offices to intervene, but understanding specific student needs and making accommodations may be nearly impossible for the student who does not self-advocate. Researching student perceptions of disability support service office interventions pertaining to the classroom may reveal hidden needs relevant to the student, teacher, and university. It is this gap in the literature that needed to be addressed.

**Instructor/Faculty Influence.** Just as students in the general education classroom are impacted by a teacher’s presence and teaching style, students with ASD are as well, and perhaps

even more so. Armstrong (2011) contends that when teachers were observed as poor or absent communicators, educational quality was perceived as diminished. Grynspan et al. (2014) furthers this point by stating that the presence of an effective teacher may influence the success of accommodations and interventions, therefore researchers should carefully assess the role of the teacher when determining accommodations and interventions. Research conducted by Borders, Bock, and Szymanski (2015) revealed that “teacher preparation programs may be inadvertently underpreparing teachers for the diverse needs of students” (p. 93). This may especially be true at the university level as teacher preparation programs may be limited. Since the faculty’s role is essential to support, service, and success, determining the faculty’s role in providing accommodations and interventions may clarify students’ expectations, which is seen as a part of the success or failure of a student with ASD (Osland, 2013). Research indicates that most students with ASD want more rules, not fewer, because they want expectations to be clarified to the greatest extent possible, leaving no room for personal interpretation (Osland, 2013).

Students with ASD consistently reported that course information needs to be clear and easy to understand both in the written and verbal format in order to increase comprehension and understanding (Mitchell & Beresford, 2014). Since the instructor is responsible for communicating information, it is essential for these students that the instructor be precise. Osland (2013) furthers this by stating that providing a syllabus with clearly spelled out policies and assignments from the very beginning will save time and effort. Conversely, inadequate or limited information is seen as confusing and could cause students to question the reliability or trustworthiness of the instructor (Mitchell & Beresford, 2014). In one study, students reported that effective teachers were ones that knew them well, especially ones that knew how their ASD

revealed itself in their strengths and weaknesses (Mitchell & Beresford, 2014), indicating a social/emotional need between the student and the teacher. It is also beneficial for faculty and students when instructors understand that students with intellectual disabilities may be efficient in one area of information processing while having a deficit in another, as this is the very hallmark of disability (Oslund, 2013).

Students having a negative experience emphasized the faculty member being unreliable. For example, at the high school level, students with ASD reported that some practitioners promised to provide additional information, arrange meetings, or establish college connections, but did not follow through and did not provide an explanation. This led to students feeling frustrated and uninformed. Since individuals with ASD typically interpret information literally, it is understandable that unreliability would cause feelings of frustration (Mitchell & Beresford, 2014). At the college level, students reported that instructors put too much emphasis on social interaction, such as group work, which left the student feeling frustrated (Wiorkowski, 2015). Students with ASD prefer accurate, factual information and since they do not recognize social appropriateness in the classroom, they may correct a professor in front of the class if a professor makes a mistake (Oslund, 2013). “Teachers have specific roles and leadership is usually respected – unless it appears fuzzy, illogical, poorly organized and thus frustrating and even hard to understand” (Oslund, 2013, p. 53).

Being authentic was considered a strength, as students with ASD valued teachers that had empathy and understanding for their situation, but also appreciated teachers who did not, but were willing to listen and learn. False empathy was rejected, and further indicated a need for increased awareness of ASD in order for teachers to more fully understand the needs of this

student population. An understanding of the general characteristics of ASD needs to be coupled with each unique learner's needs and abilities (Mitchell & Beresford, 2014).

The constructivist theory states that learning occurs in social realms. Thus, it would be assumed that students in the learning environment would benefit from the presence of an effective instructor. For students in the high school transition phase, research indicated that instructor presence made a difference in the success or failure of interventions. This has implications for college students since additional research reveals that students with ASD benefit from additional supports such as tutoring, peer-tutoring, computer-based instruction, and additional instruction, at the college level, all of which require human interaction (Barnhill, 2014; Gelbar et al., 2014; Gobbo & Shmulsky, 2014).

Since students with ASD have expressed a degree of dependency on teacher interactions, professional development training should be provided for advisers and professors within higher education environments in order to best meet the needs of their students (LeBlanc, Richardson, & Burns, 2009). Educators specifically trained to work with students with ASD typically change their perception regarding the student and become more knowledgeable and prepared to teach these students (LeBlanc et al., 2009). Further, research indicates that even a small amount of professional development can have a measureable influence on both the teacher and the student in the integrated classroom (LeBlanc et al., 2009).

Hart et al. (2010) emphasize the need for instructors to maintain the rigor of college level work and courses, and not to minimize what is expected for students with ASD. Rather, they affirm, "if a student requires modifications, the responsibility falls to the student and to those providing assistance to ensure the course material is accessible and the student will be able to successfully participate" (Hart et al., 2010, p. 137).

### **Non-Academic Support**

Some students “experience academic success while struggling with the nonacademic aspects of college such as navigating the social environment and difficulties with executive functioning skills, including study skills and time management” (Gelbar et al. 2015, p. 49).

"According to the United States Government Accountability Office (GAO) analysis of the 2008 National Postsecondary Student Aid Study, students with disabilities are much more likely to attend community colleges than students without disabilities" (Peña & Kocur, 2013, pp. 29-30).

Research indicates “that two-year community college can be an important bridge from high school to employment, as well as a point of entry to four-year universities” (Ponticelli & Russ-Eft, 2009, p. 165). Though a two-year community college may bridge the divide for some students, many students with ASD simply cannot overcome the social demands of a university campus setting. It is this challenge that needed to be researched in order to increase successful outcomes for students with ASD who aspire to earn a degree within a university setting.

**Social Needs.** For students with ASD, “the transition to adulthood can be a tumultuous period of development due to their social communication deficits” (Wehman et al., 2009). Many students with ASD can achieve success in an inclusive environment as long as social needs are recognized and appropriate interventions provided (Friend, 2015). However, in postsecondary education, symptoms are oftentimes recognized by peers and professors, but not specifically addressed with interventions. For the purposes of this study, socialization is defined as “the process of realizing the norms and customs of a community through ongoing interactions and behaving accordingly in order to participate in society, which helps a person to enact different roles in various professional, educational, and casual relationships” (Southall & Campbell, 2015, p. 194). It is this process that contributes to social skills challenges for students



with ASD in a university setting. In order to effectively implement social skills competence, students with ASD must be able to successfully demonstrate appropriate and effective social skills and these actions must be interpreted as such by others. Since students with ASD are characterized as having social skills deficits, which are pervasive throughout the life span, succeeding socially in a university setting may be difficult.

Results of a study by Gelbar et al. (2015), reveal that students with ASD “reported academic success while struggling with the nonacademic aspects of college such as navigating the social environment and difficulties with executive functioning skills, including study skills and time management” (p. 48). The notion that students with ASD are not interested in social relationships is a common misconception (White, Oswald, Ollendick, & Scahill, 2009). In reality, children and young adults do have a desire for friendships similar to that of their typically developing peers, but most do not understand socially accepted behaviors necessary to develop such relationships (Bauminger et al., 2008). White et al. (2009) furthered this by stating that individuals with ASD experience loneliness in the absence of friendships which impairs their self-esteem.

Gillespie-Lynch et al. (2015) report that college students without ASD commonly confuse ASD with other disabilities, which may have a negative impact on their attitude towards students with ASD. Gillespie-Lynch et al. (2015) developed online training to educate students without ASD concerning students with ASD. Results reveal that online training may be an effective and inexpensive way to decrease stigma associated with students with ASD in college. However, though knowledge of students with ASD increased and stigma decreased, students without ASD were relatively unwilling to be involved romantically with individuals with ASD

(Gillespie-Lynch et al., 2015). This suggests that further interventions may be necessary in order to help meet the social needs of students with ASD in a university setting.

In a recent study aimed at improving social leisure activities for students with ASD utilizing the Program for University Supports for People with Autism, 94.8% of participants found *very high* or *quite high* satisfaction with the program suggesting that intervention may help improve social outcomes for students with ASD in a university setting (Neito et al., 2015). However, universities offering such programs are limited. In another study, adolescents with ASD responded to social exclusion similar to that of their non-disabled peers, but with elevated anxiety (Sebastian, Blakemore, & Charman, 2009). These elevated anxiety levels deter from the learning process and may lead to an unsuccessful postsecondary experience. The misconception that students with ASD prefer isolation further exacerbates the social ills faced by students with ASD in the university setting, as many are expected to want to be alone. “When youths with ASD were asked about their perceptions of strengths and interests, they reported much higher [satisfaction rates] in the area of computers (62% very good) and significantly lower in athletics (13.5% very good)” (Wehman, Smith, & Schall, 2009, p. 31). These scores are indicative of diagnostic criteria which dictate students with ASD lack social skills (APA, 2000). Lacking social skills may cause students with ASD to refrain from social activities. The literature reveals a need to further investigate the connection between the social needs of students with ASD and the role of disability support service offices since unfulfilled social needs may impact employment and postsecondary education, thus future research is needed (Wehmeyer & Shogren, 2013, Landmark et al., 2010).

**Emotional Needs.** According to White et al. (2011), isolation and loneliness impact the emotional well-being of students with ASD in college. Based on their research there is a need to

consider “psychiatric comorbidities and academic/life dissatisfaction among the list of potential concerns” (White et al., 2011, p. 697) for students with ASD in college. “If negative perceptions exist among peers, the child's social exchanges, social life, and self-concept might be negatively affected” (Payne & Wood, 2015, p. 1). Furthermore, when students with ASD perceive negative attitudes from family members, educators, or support service personal, educational performance is negatively impacted (Flouri, Midouhas, Charman, & Sarmadi, 2015; Ling, Mak, & Cheng, 2010).

A study by Mazurek (2014) revealed that loneliness, friendships, and emotional functioning satisfaction rates were low among adults with ASD. “Loneliness was associated with increased depression and anxiety and decreased life satisfaction and self-esteem, even after controlling for symptoms of autism spectrum disorder” (p. 223). Billstedt, Gillberg, & Gillberg (2011) reported that few adults with ASD have romantic relationships or friendships. Furthermore, a study conducted by Byers and Nichols (2014) revealed a connection between increased ASD characteristics and decreased relationship satisfaction rates. Relationship satisfaction, loneliness, and social well-being have a strong impact on happiness and quality of life. Despite assumptions, not all persons with ASD prefer isolation; however, for those that do, an online education may be preferable to a residential college education. It is still important, however, to provide social supports for students with ASD in order to prevent feelings of loneliness and depression and promote success.

### **Twice Exceptional (2E)**

Furthering the educational information required to fully educate and equip a student with ASD is the idea of a twice-exceptional learner. The idea was first recognized in 1789 by Dr. Benjamin Rush. He gave an account of Thomas Fuller who had limited cognitive ability but

could correctly calculate how many seconds a man had lived within 90 seconds, adjusting for leap years. In 1887, Dr. Langdon Down coined the term “idiot savant” to describe ten individuals similar to Fuller. Then, in 1978, Dr. Bernard Rimland introduced the term “autistic savant,” but today the term “savant syndrome” and “twice-exceptional” are used to describe this unique population (Treffert, 2013). The lack of an agreed upon term and definition for this population adds to the challenge of providing the supports necessary to equip students with ASD and giftedness with their post-secondary educational goals.

Savant syndrome or twice-exceptional characteristics may be present at birth and revealed in early childhood or may develop later in life. Twice-exceptional skills typically occur in the areas of mathematics, calendar calculating, music, art, or mechanical/visual-spatial skills, but may also occur in language, athletics, or exceptional knowledge in a specific field of study. Massive memory is always associated with 2E (Treffert, 2013). Approximately one in 10 people diagnosed with ASD have savant abilities, thus, “not all autistic persons are savants, and not all savants are autistic” (Treffert, 2013, p. 1).

Traditionally, specialized education for students considered “outliers” has been difficult to identify, provide, and fund (Spielhagen, Brown, & Hughes, 2015). Twice-exceptional students differ from their peers with disabilities. These educational differences are oftentimes not acknowledged or identified, which has been an ongoing struggle for both gifted and special educators (Jolly & Hughes, 2015). In a qualitative study by Willard-Holt, Weber, Morrison, and Horgan (2013), in-depth interviews provided rich descriptions of how 2E participants perceived their overall school experiences. Results revealed that students perceived that schools failed to support their learning potential, even though they were able to use their gifts and talents to circumvent their deficits. “Implications for teachers included allowing twice-exceptional

learners more ownership over their learning and more choice and flexibility in topic, method of learning, assessment, pace, and implementation of group collaboration” (Willard-Holt, 2013, p. 247). However, these are not typically options offered in a university setting. It stands to reasons that further research on support services for this unique student population may reveal unique supports necessary for students with ASD who are considered twice exceptional.

Reis, Baum, and Burke (2014), state that despite the growing information about 2E students, some educators deny the coexistence of a deficit and giftedness in the same individual. Additionally, means of identifying and providing services for this unique population have yet to be fully developed or recognized. The term twice-exceptional is often met with confusion and criticism concerning student’s needs (Lovett & Lewandowski, 2006) especially by educators outside of the field of gifted education (Foley Nicpon, Assouline & Colangelo, 2013).

According to the U. S. Department of State (n.d.) gifted children have special educational and social needs, but the responsibility of educational planning falls upon the individual family. There are allowances in place under the DSSR 270 Education Allowance that provide for supplementary instruction for gifted and talented students to be placed in Advanced Placement (AP) courses at the expense of the public school (DSSR 276.9a), but this support only addresses the gift, not the deficit, as is often the case with twice-exceptional learners.

The National Education Association (2006) estimates that there as many as 360,000 students who are twice exceptional in American Schools. This increasing population is in need of further research in order to determine how colleges can best meet the needs of these students. Supports offered to students with ASD who are considered 2E may be beneficial or barriers, but identifying this population presents challenges. “Recognizing these students may be challenging, as the disability may overshadow the gift, the gift may mask the effect of the

disability, or both” (Baldwin, Omdal, Pereles, 2015, p. 216). Most savants have an IQ between 50 and 70, but some can be as high as 125. This discrepancy in IQ scores means that IQ cannot be used as a means of disqualifying someone from having 2E (Treffert, 2013). One reason savants with ASD may have a low IQ score is that IQ tests include a measure of language/verbal scales which individuals with ASD are characterized as lacking.

Students with disabilities participating in Advanced Placement (AP) or College Level Learning (CLL) may need additional supports that may not yet be offered or identified. Identifying the determinants that assist or prevent 2E students from enrolling and succeeding in such college classes while they are still in high school may lead to disability support service offices making changes to address the unique needs of this student population. Research regarding students identified as 2E reveals that minimal services have been provided to meet their unique needs (Baldwin, Omdal, Pereles, 2015; Jolly & Hughes, 2015). The majority of student’s dual diagnosed as being gifted and having a disability only receive special education services (Brody & Mills, 2015; Howey, 2013). This is a disadvantage to the students as it lowers the expectations of their achievement and fails to recognize and support their gift.

Given the No Child Left Behind mandate and the push for higher standards, it could be assumed that most high-achieving students with ASD would be participating in AP or CLL. Students often times have difficulty adjusting to the pace, curriculum, and workload expected in college classes, thus furthering the need to investigate supports offered through disability support offices. Guidance counselors and parents often advise students with ASD into classes inconsistent with their postsecondary goals or deter them away from careers requiring a college degree, though the student may be fully capable (Schultz, 2012). However, students with ASD and 2E in postsecondary education are largely absent from the literature. There is a strong need

for data that better informs parents and educators on the impact of supports offered through disability support service offices in order to serve students with ASD who are 2E.

### **Summary**

The literature review in Chapter Two provides information regarding the theoretical framework associated with this study revealing that persons with disabilities in higher education may be negatively impacted by limitations imposed on them by society. Additionally, evidence regarding factors that impact learning for students with ASD through a university's disability support service offices was illuminated. These factors include transitions, academic supports and non-academic supports, as revealed by the literature. Research is lacking in regards to factors that impact learning in a university's disability support service offices as perceived by students with ASD and faculty. The literature reveals that taking a proactive stance, rather than a reactive one will yield increased successful outcomes. The question then becomes, what does being proactive look like when it comes to supporting students with ASD at the college level? More research is necessary to understand how the disability support service offices is perceived in order to proactively seek solutions to student challenges. Future research of students with ASD and postsecondary education should continue to "identify evidence-based practices and interventions that increase the likelihood of postsecondary participation among the growing population of young adults with ASDs and extend the analyses to address college completion, through which the benefits of postsecondary education can be realized" (Wei et al, 2015, p. 9). The literature emphasized the importance of future research needed concerning students with ASD in higher education. Therefore, this research study sought to contribute to the field of knowledge and to narrow the gap in the research and literature concerning factors that impact learning in students with ASD in higher education.

## **CHAPTER THREE: METHODS**

### **Overview**

In order to identify factors that impact learning for students with ASD in higher education, a qualitative case study was utilized. A case study was chosen to gain a rich, thick description of the phenomenon. The following sections and subsections present the research design, research procedures, and data analysis for this study.

### **Research Design**

To identify the factors that impact learning in students with ASD in higher education through disability support service offices, a qualitative case study research design was selected. “A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between the phenomenon and context may not be clearly evident” (Yin, 2014, p. 16). The use of a qualitative descriptive design allows a clear, rich, descriptive inquiry of perspectives of students and faculties of disability support offices to identify factors that impact learning (Merriam, 2009). The single case study method was selected to gain insight into a specific phenomenon that occurred in the bounded context of a university (Creswell, 2013; Stake, 1995). In this study the bounded context is the disability support service offices at Central University. Additionally, Yin (2014) states that a valid reason to utilize a case study design is when a unique or extreme phenomenon is the focus of the study. Though many colleges provide services to support students with special needs, services vary from compliance programs that meet lawful requirements to comprehensive programs offering a wide-range of services (Troiano et al., 2010) which makes Central University’s disability support service offices unique.



Qualitative case study research is chosen when researchers are “interested in insight, discovery and interpretation rather than hypothesis” (Merriam, 2009, p. 42). This descriptive case study attempted to depict a phenomenon and conceptualize it (Gall et al., 2007). According to Yin (2014) three items must be considered to decide which method of inquiry to follow. The three conditions include “(a) the type of research questions posed, (b) the extent of control a researcher has over the actual behavioral events, and (c) the degree of focus on contemporary as opposed to entirely historical events” (p. 9). This research attempted to answer the “how” and “why” of the phenomenon, the researcher had no control over the actual behavioral events, and a contemporary phenomenon was studied, thus a descriptive case study research design was implemented.

This case study focused on factors that impact learning in regards to students with ASD. The bounded system is identified as the disability support service offices at Central University. The case study is descriptive in that it provides a thick, rich description of factors that impact learning and it is heuristic in that it sought to illuminate potential new ways to understand the phenomenon (Merriam, 2009).

### **Research Questions**

This study was guided by the following research questions:

#### **Central Question**

What factors of the disability support service offices impact learning in university students with ASD?

#### **Sub-Questions**

1. How do students with ASD describe their experiences with the university’s disability support service offices department?

2. How do university faculties describe their role in supporting students with ASD?
3. What factors of the disability support service offices are perceived by students and faculty as having a positive impact in student learning?
4. What factors of the disability support service offices are perceived by students and faculty as lacking, ineffective or as limiting to the student with ASD?

### **Setting**

The site selection of Central University for this single case study was chosen because of two main factors. First, to examine the factors that impact learning through the university's disability support service offices that support students with ASD. Second, was the accessibility of the disability support service offices. Because I have connections at this university, I am familiar with the university standards. It was my desire to research this university in order to determine factors that impact achievement in students with autism at a university with high standards.

Central University is a major university offering over 545 programs of study in both an online and residential format. Residential enrollment exceeds 14,500 students. Males represent 41% of the student body while females represent 59%. All 50 states and 85 countries are represented at the university. Central University follows a traditional model of leadership for a university that is governed by a president and a board of trustees. The vice presidents and their respective divisions manage school operations. The college is accredited and awards associates, bachelor's master's specialists, and doctoral degrees. The student/professor ratio is 24:1.

### **Participants**

In this single case study, I examined a phenomenon within a bounded system. In this case, the focus was on factors that impact learning for students with ASD at Central University

through the university's disability support service offices. Student participants must have been residential students 18 years of age or older. They must currently attend Central University, may have recently (within the last year) dropped out of Central University, or may have dropped out and returned to the university. Students may have transferred from another university, but must have completed a minimum of one full semester in order to participate. Five student participants were female and one was male. Females were disproportionately represented as compared to diagnosis.

Student participants were determined through purposeful sampling via an emailed questionnaire (Creswell, 2013) sent from the disability support service offices. Respondents were purposefully chosen based on students with ASD currently enrolled in the university or enrolled in the university within the last year. Self-reported ASD candidates were considered for participation in the study; however, a sufficient number of officially diagnosed candidates responded and, therefore, received priority. Faculty participants were chosen based on current employment at Central University in the disability support service offices or in association with the disability support service offices (e.g. employees of assistive technology department, testing center, or hearing or blind services). Current employment was the central criteria for faculty participation in this study. Background and training were not exclusionary requirements. Three faculty participants were male and one was female. Choosing participants purposefully assisted in illuminating pertinent information concerning the research problem and central phenomenon (Creswell, 2013). All participants were Caucasian. Each participant was given a pseudonym to protect their identity.

A total of 10 participants were secured to participate in this research to offer sufficient opportunity to gather ample information to develop and identify themes (Creswell, 2013). For

“purposeful sampling the size of the sample is determined by informational considerations. If the purpose is to maximize information, the sampling is terminated when no new information is forthcoming from new sampled units, thus redundancy is the primary criterion” (Lincoln & Guba, 1985, p. 202). Not all potential participants were included, as one respondent did not qualify based on being exclusively in an online program. It was essential to identify key people (of the available respondents) to provide the best information concerning the case (Stake, 1995).

Student participant solicitation required a faculty member generated email to all potential participants to ensure confidentiality. Respondents then took the online survey at [www.surveymonkey.com](http://www.surveymonkey.com) for purposeful sampling. The public directory of employees at Central University served to identify four faculty participants. Student and faculty participants were limited to those with first hand experiences with the disability support service offices. As with student participants, faculty participants were also interviewed and participated in an online focus group at [www.classchatter.com](http://www.classchatter.com). Interviewing faculty participants provided a different perspective on support services and revealed information unknown to student participants. Faculty interviews and the online focus group also corroborated some student data as themes developed which increased trustworthiness. A concerted effort was made to accommodate participant’s time and schedule since an inquiry can present a burden to a participant (Stake, 1995).

### **Procedures**

Prior to data collection, I secured Institutional Review Board (IRB) approval from Central University (See Appendix A). Once approval was obtained, the process of data collection began. Student participants were secured via an email sent through the university’s disability support service offices (See Appendix B). Specifically, the letter asked for participants

who were 18 or older, have ASD, and sought supports from the disability support service offices while attending residential courses at Central University during the academic year 2015-2016.

Faculty participants were pursued via the disability support service offices and related departments as listed on the university website via an email letter sent by myself (See Appendix C). Specifically, faculty members must have been employed fulltime or part-time and working in the offices of disability support services during part or all of the year 2015. Documents were collected via field notes, papers from participants, text messages, and other electronic means. Student and faculty participants were purposefully selected based on the preset criteria (see participants section).

Once student and faculty consent forms (see Appendix D and E) were confirmed (either paper or electronic copies), face-to-face interviews with all participants were scheduled. Interviews were scheduled at the participant's convenience. Student participants were asked 14 questions (see Appendix F), faculty participants were asked 11 questions (see Appendix G). The online focus group included nine questions (see Appendix H) and was conducted via the online format at Class Chatter ([www.classchatter.com](http://www.classchatter.com)). Semi-formal interviews were conducted in person to the maximum extent possible, but two student requested a phone interview. All interviews were video and audio recorded. Notes were taken during the interviews in order to ensure accuracy during transcription. All interviews were transcribed verbatim. Follow-up interviews were conducted as necessary when clarification was needed and were conducted via email.

Data analysis included identifying and developing patterns, themes, and content analysis. Case study data analysis is emergent which means that what the researcher learns from collecting data is often used to determine subsequent data collection activities (Gall et al., 2007). Data

collection and recording included the use of memoing, bracketing, open coding, enumeration, and member checking to identify themes throughout the data collecting process and to ensure triangulation and trustworthiness of the findings (Creswell, 2013; Stake, 1995; Yin, 2014).

### **The Researcher's Role**

In qualitative research, the researcher is the human instrument. “This means that it is imperative that the qualitative researcher be fully aware of how his/her ontological and epistemological position underpins the research” (Xu & Storr, 2012, p. 3). According to Merriam (2009) the researcher is the main instrument for data collection and analysis, and since qualitative research is interpretive by nature, it is essential for the researcher to be aware of and avoid bias when collecting and reporting data. Yin (2014) further contends that “case study researchers are especially prone to [bias] because they must understand the issues beforehand, and this understanding may sway them toward supportive evidence and away from contrary evidence” (p. 76). As a researcher affiliated with the university in which I conducted my research, I did not seek to pursue or advocate a particular position concerning my research, but willingly reported the data as revealed without bias (Yin, 2014).

As a current employee at Central University teaching online courses in special education and a supervisor of student teachers in the field of special education, students with disabilities are related to my career experiences. However, the students and faculty of the disability support offices are separate from my career, as I exclusively teach online students (as opposed to residential) and my department is not affiliated with the disability support service offices. I have received two emails from the disability support service offices instructing me on specific procedures and accommodation requirements for two online students in two of my courses; however, these students will be excluded from the study since my study is of residential students.

The benefit of close proximity of the human instrument is having access to the disability support service offices. Since I am familiar with the university there may be an added level of trustworthiness (Creswell, 2013).

The site for my study was primarily selected because of interest in the disability support service offices at this university. My career in higher education has presented me with an opportunity to be involved with special education and university students who desire to teach students with special needs. As the Subject Matter Expert (SME) for two online special education courses, I am familiar with general accommodations and supports necessary for students with special needs to succeed in education. This familiarity allowed me to be an informed human instrument in this study. These experiences provided a context for the study that allows identification of potential bias, but also made me an appropriate candidate to conduct the study.

### **Data Collection**

Prior to data collection, IRB approval was obtained from Central University. “Use of multiple methods to collect data about a phenomenon can enhance the validity of case study findings through a process called triangulation” (Gall et al., 2007, p. 460). One of the strengths of case study research is that the researcher collects data from multiple sources, thus this research collected data with the use of: (a) interviews, (b) an online focus group, and (c) documents in order to enhance triangulation of the data (Yin, 2014).

Prior to conducting interviews, a pilot interview was conducted. During this interview, questioning procedures were practiced and adjustments made in order to more effectively ask the interview questions. The pilot study revealed that the word “okay” was used extensively, thus effort was made to refrain from its use during the interviews.

Data collection followed the three principles described by Yin (2014). The first was to use multiple sources of evidence. I did not focus on a single source, but used multiple sources to maximize the data collection methods. These sources included interviews, an online focus group, and data collection. Yin (2014) contends that using multiple sources of data allows for triangulation, which corroborated the findings. The second principle is to properly organize and categorize information related to the case study. I developed a database as described by Yin (2014) since a considerable amount of information was collected. I utilized an effective system for reference and retrieval since data management is an essential skill in qualitative research (Stake, 1995). The third principle of data collection was to maintain a chain of evidence (Yin, 2014). By maintaining a chain of evidence throughout my study from the beginning until its conclusion, the reliability of my findings were improved.

### **Interviews**

Interviewing is a “systematic activity” (Merriam, 2009, p. 87) designed for data collection purposes. Interview questions should be “open-ended, general, and focused on understanding your central phenomenon in the study” (Creswell, 2013, p. 163). Additionally, the interview questions are often “the subquestions in a research study, phrased in a way that interviewees can understand” (Creswell, 2013, p. 164). I utilized semi-structured interviews with students and faculty who were involved with the disability support service offices to gather information pertaining to the phenomenon (Stake, 1995) and to provide details about the human experiences regarding the case (Yin, 2014). The type of interview was practical and chosen to net the most useful information (Creswell, 2013). Based on the preference of the interviewee, a face-to-face or a phone interview was utilized. An interview protocol was utilized (Creswell, 2013). For the purposes of this study, the protocol contained the interview questions with ample



space to take notes. A pilot test helped “refine data collection plans and develop relevant lines of questions” (Creswell, 2013, p. 165). A consent form was signed and collected, either electronically or on paper, before the interviews took place. Interview questions were each grounded in the literature as detailed later in this section.

### **Interview Questions for University Students (See Appendix F)**

1. Please describe your educational high school experience including accommodations and modifications received.
2. Please describe your Individual Education Plan (IEP).
3. Please describe your experience in transitioning to Central University.
4. What have been your favorite subjects while attending Central University?
5. Please describe your association with Central University and how long you have been connected with the school.
6. What specific ways have your professors helped you in class related to your disability?
7. Are/were you comfortable asking for accommodations? Why?
8. Please describe the process you went through to obtain accommodations.
9. What supports are/were most influential for your success?
10. Which supports were missing or deficient?
11. What additional supports would have improved your educational experience? Include both academic and non-academic supports.
12. Describe an ideal disability support offices department.
13. What are your goals after attending Central University?
14. Is there anything else you would like to mention about your experience with the disability support offices?

**Interview Questions for Disability Support Service Office Faculty (See Appendix G)**

1. Please describe your association with Central University and how long you have been connected with the institution?
2. How would you describe your role in supporting students with disabilities?
3. How would you describe your role in specifically supporting students with ASD?
4. What do you see as the strengths of the disability support offices?
5. How would you describe your comfort level in working with students with ASD?
6. In what ways could the disability support offices improve the supports and accommodations offered to students with ASD?
7. What training, if any, is provided to help faculty understand and provide services for students with ASD?
8. What supports do students request from the disability support offices that are not offered?  
Please describe.
9. Describe an ideal disability support office.
10. What future plans are there for adding or altering services for students with ASD?
11. Is there anything else you would like to mention about the disability support offices?

To accurately capture responses of the interviews, recordings and transcripts were made. Interviews were conducted at the interviewee's convenience and occurred based on individual preference as noted previously. The estimated duration for each interview was between 30 minutes and one hour. Interviews were recorded via a video recorder, hand-held recording device, and an iPhone to ensure that recording took place. Following the interviews, transcriptions were made. Notes were taken during the interview as well.

The interview questions were derived from the literature review in order to gain maximum detail concerning the factors of the disability support service offices which impact learning for students with ASD. The purpose of the student questions one, two, and three pertaining to high school experiences, IEPs, and transition experiences is to gain foundational information regarding student success. “Students with ASD face unique academic, social, and institutional barriers to accessing postsecondary education. College readiness and transition services are essential components for positive postsecondary outcomes” (Krell & Perusse, 2012, p. 30). Eliciting this information revealed high school experiences, including supports and accommodations, in order to connect past and present experiences. The first goal of questions four through 11 was to collect the thick, rich data concerning the specific experiences between the student and the disability support offices (Creswell, 2013). Question six is designed to provide information specifically regarding supports, accommodations, and/or perceived teacher attitudes. This information revealed information regarding teacher and/or counselor efficacy (as perceived by the student), which may have had a direct impact on learning (Armstrong, 2011; White et al., 2011). Questions seven and eight were included since students with ASD oftentimes will not disclose their disability due to a perceived “risk” (Stewart & Collins, 2014) or lack of self-advocacy skills (Gelbar et al., 2015). I asked the remaining student questions to gain an overall understanding of the student’s experiences as they directly related to the disability support service offices. The goal of asking these open-ended questions was to “create a rich dialogue with the evidence” (Yin, 2014, p. 73) in order to gain an understanding of the factors that directly influenced learning from the student’s perspective. Obtaining the student’s perspective gave them a “voice” which is the original intent of disability theory through which this case study is viewed (Oliver, 1998).

Disability theory asserts that society places “disabilities” on persons with “impairments” (Barnes, 2003, p. 4). The purpose of faculty questions is to view the disability support offices through the lens of disability theory to gain insight pertaining to factors that impact learning for students with ASD. Questions one and two sought to reveal the specific role of the faculty member in relation to the disability support offices. The goal of questions three through nine was to understand the relationship between the faculty member and the students with a disability. Barnes (2007) notes that “if links between universities and the disabled community are to continue to be mutually beneficial, then academics and researchers must be actively involved with disabled people and their organizations on a continuous basis” (pp. 140-141). These questions were meant to disclose the degree to which faculty and students are mutually involved in the process, strengths, and potential improvements, and ultimately the factors that impact students learning as perceived by faculties of the disability support offices. All student and faculty questions were piloted with a peer check for clarity and wording and adjustments made as necessary (Yin, 2014).

### **Online Focus Group**

One of the strengths of case study research versus other research is the ability to use multiple sources of evidence. To help achieve triangulation, an online focus group was conducted. A focus group is defined as “an interview on a topic with a group of people who have knowledge of the topic” (Merriam, 2009, p. 93). The online focus group consisted of both students and faculty, though their role was not disclosed to one another in the discussion board forum. The goal was to achieve some level of convergence with the data to corroborate the phenomenon (Yin, 2014). A study conducted by Turney and Pockee (2004) revealed that virtual focus groups were “theoretically sound” and “extremely effective in creating ‘authentic learning’

environments for research students” (p. 909). The online focus group contributed positively to this research since it allowed participants to consider alternative views of the same phenomenon while holding their own view. Focus groups differ from interviews since focus group participants get to read each other’s responses but “they need not agree with each other or reach any kind of a consensus” (Patton, 2002, p. 386). The online focus group was conducted using Class Chatter ([www.classchatter.com](http://www.classchatter.com)). Edmunds (1999) states that doing research online helps to speed up the process and provides for anonymity which can lead to greater willingness to share openly. The focus group included seven questions and participants were given seven days to post an initial post for each of the seven questions and to post several replies, based on their own judgment. All student and faculty participants participated. The estimated time allotted for the focus group was a total of approximately 30 minutes for the initial posts and approximately 20-30 minutes for the replies. Focus groups transcriptions were made from all posts. According to Patton (2002) six types of questions are recommended for focus groups:

1. experience and behavior questions,
2. opinion and values questions,
3. feeling questions,
4. knowledge questions,
5. sensor questions,
6. background/demographic questions

As with the interview questions, the online focus group questions were piloted for clarity and wording, and then adjustments were made accordingly (Yin, 2014). Focus group questions were derived from the research questions and the review of the literature.

**Online Focus Group Questions (See Appendix H)**

1. How does the disability support service offices impact student learning at Central University?
2. What factors of the disability support service offices do you believe have the greatest positive impact on learning at Central University? Why?
3. What factors of the disability support service offices do you believe have the greatest negative impact on learning at Central University?
4. How does disability support service offices strive to meet the needs of students with ASD?
5. How would you describe the role of disability support service offices faculty in supporting students with ASD?
6. If you could change three things about the disability support service offices, what would those three be, and why?
7. What else would you like to say about Central University's disability support service offices department or student learning?

The online focus group via Classroom Chatter did not stand alone in my study, but contributed substantial data that contributed to the other two methodologies used.

**Documentation**

“Because of their overall value, documents play an explicit role in any data collection in doing case study research” (Yin, 2014, p. 107). To gain a clear understanding of factors that impact learning in students with ASD at Central University through the disability support service offices, I examined, organized, and analyzed documents that provided insight into the case. Specifically, documentation sought to answer the central research question: What factors of the

disability support service offices impact learning in university students with ASD? In order to recognize these factors, an understanding of the policies, procedures, and accommodations available to students was necessary on the part of the researcher. Documentation was collected after IRB approval and then throughout the research process. Documentation was collected from students and faculty as well as from the university and from the university website. These documents allowed me to examine information without having to observe or obtain assistance from individuals (Merriam, 2009). According to Yin (2014) documents “can take many forms and should be the object of explicit data collection plans” (p. 105). Documents were determined based on need and were chosen throughout the research process. Oftentimes, researchers are not able to realize what should be collected until they are in the field (Bowen, 2009). Document collection included: (a) letters, e-mails, and other personal documents, (b) text messages, (c) administrative documents, (d) notes made by participants, and (e) notes made by the researcher. Documents were used to shed light on factors that impact learning for students with ASD and to triangulate the findings. Concerted effort was made to incorporate primary, as opposed to secondary, sources.

### **Data Analysis**

The purpose of the data analysis was to reveal the answers to the research questions for this case study. One unique aspect of qualitative research is that data analysis and collection are simultaneous processes (Creswell, 2013). This allowed the researcher to make notes and organize data throughout the process and to incorporate the observations into future data collection methods (Merriam, 2009). For the purposes of this study, I collected and coded information into themes as they develop and were identified from the data collection process. This helped provide insight into the next data collection process.

Yin (2014) states the researcher needs to be aware of the analysis strategies before data collection to ensure the data is analyzable. Four strategies include:

1. Rely on theoretical propositions
2. Work data from the ground up
3. Develop a case description
4. Examine rival explanations

Since it is important to be aware of data analysis strategies before data collection, I sought to analyze this case study on a theoretical proposition. Utilizing a theoretical proposition strategy helped keep me focused on the original theoretical propositions guiding this study (including the research questions and data collection strategies).

As a qualitative case study, data collection procedures included interviews, online focus group participation, and documentation. All forms of participant data remained categorized by participant during the data collection process (Creswell, 2013). This was essential for accurate record keeping. Recordings for the interviews were transcribed verbatim. Information was then loaded into a database on the computer and manually analyzed and then organized into codes and themes (Yin, 2014) in light of the research questions. Merriam (2009) states that coding is assigning a shorthand name to data in order to categorize and group the information together. Themes come from the characteristics of the phenomenon being studied, professional definitions in literature reviews, common sense constructs, researcher's values, theoretical orientations, and personal experiences (Ryan & Bernard, 2003). Data was coded and categorized by themes revealed in the analysis process.

Yin (2013) contends that the coding process allows the researcher to interpret and reflect on meaning derived from the data. The coding process may also be referred to as a categorical



aggregation of the frequency of specifically identified patterns (Creswell, 2013; Stake, 1995). When analyzing data, I attempted to do so as it was collected, as it was beneficial to identify themes as they occurred successively (Merriam, 2009). Additionally, the categories need to be broadly analyzed in light of the research questions (i.e., inductively) to prevent the premature exclusion of relevant information. Following this process, the categories were combined (i.e. deductively) to five or six (Creswell, 2013; Yin, 2014).

Documentation data were collected and analyzed, and then compared to the interview and online focus group data. Triangulating the data in this manner confirmed or contradicted previously collected data or offered new information not collected through the interviews or online focus groups. Yin (2014) offers four principles which guided this data analysis process: (a) attend to all of the evidence, (b) address all plausible rival interpretations, (c) address the most significant aspect of my case, and (d) use my own prior, expert knowledge. Adhering to these four principles and handling the data properly helped the researcher to reconstruct the reality of the participants (Lincoln & Guba, 1985) and helped to ensure an accurate analysis of the data.

### **Trustworthiness**

In an effort to provide valid and reliable findings for this case study and provide a rich, thick description of the phenomenon, I collected the data from three different sources to allow for triangulation. The three methods of data collection included: (a) interviews, (b) online focus group participation, and (c) documentation. The combination of these three methods of data collection helped ensure contextual corroboration via triangulation. To provide credible interpretations of the data, five techniques were employed as given by Lincoln and Guba (1985): (a) utilize a method to increase the likelihood of obtaining credible findings (prolonged

engagement, triangulation), (b) include external checks (peer debriefing), (c) refine working hypothesis as more information becomes available, (d) member checking, and (e) check preliminary findings against archived data. The following methods were used to increase the trustworthiness of this study: transferability, confirmability, credibility, and dependability.

### **Transferability**

Qualitative research is discussed in terms of transferability rather than generalizability (Creswell, 2013). Transferability is applying the results of a research study to another situation similar to the one in which the research was done. This case study was conducted on a specific university, thus transferability is limited since it concerns a specific context and phenomenon. I provided thick, rich descriptions, but Lincoln and Guba (1985) state that “it is not the naturalist’s task to provide an index of transferability; it is his or her responsibility to provide the data base that makes transferability judgments possible on the part of potential appliers” (p. 316). In order to determine transferability, a detailed description of the research situation is required (Creswell, 2013).

### **Credibility**

The interviews were recorded and transcribed verbatim. Transcriptions and recordings are archived for future analysis should the need arise (due to critiques or additional information). I used member checking to ensure transcription accuracy, as member checking is “the most crucial technique for establishing credibility” (Lincoln & Guba, 1985, p. 314). Allowing the participants to review the transcription increased the credibility of my research since two participants offered additional information, and the remainder confirmed that the information communicated in the transcription was the information they intended to communicate. To minimize or eliminate potential bias and improve credibility during the interviews, I asked the

respondent “Am I on the right track?” and “Did I understand this the same way you meant it?” (Carlson, 2010, p. 1105). This is an effective method for testing the plausibility of a response (Carlson, 2010). To identify possible errors or researcher bias, my research chair and committee also examined my research (Lincoln & Guba, 1985). The use of interviews, an online focus group, and documentation served to triangulate the data. According to Yin (2009), robust evidence exists when three independent sources are utilized and coincide.

### **Dependability and Confirmability**

Dependability and confirmability offer confidence in the data collection, analysis, and reporting procedures. A timeline of data collection was provided in Chapter 3. Quotes were selected for inclusion to give the participants a voice (Creswell, 2013; Yin, 2014). The number of participants who referenced themes is also disclosed in Chapter 4. I developed an audit trail for independent verification that helped with dependability and confirmability. The audit trail is the documentation of how the study was conducted including what was done, when it was done, and why (Donald, Jacobs, Razaveih, & Sorensen, 2006). Enlisting an external auditor helped with revealing researcher bias and/or error. However, Lincoln and Guba (1985) advised that trustworthiness criteria are not precise and thus can never be fully satisfied.

### **Ethical Considerations**

Prior to conducting research, I secured IRB approval. During the research process, I maintained contact with the IRB and sought a change request approval when my face-to-face focus groups needed to be changed to an online focus group due to many participants leaving town following graduation. I sought approval from my dissertation chair and research consultant before initiating a change request with the IRB. Approval was secured before the change was made. I treated all participants with respect and honesty. I did not deceive participants, and I

revealed the intended reasons and use for the study. Participants were informed that they may opt out of the study at any time. To ensure confidentiality, I used pseudonyms for participants and have secured all information in a secure file cabinet with a lock. Audio files and transcripts are on a password protected computer. Given the location and university description, the identification of the school may be deduced. To reduce the chances of this occurrence, I assigned the university a pseudonym.

Since I have connections at the university, I bracketed myself out of the study to the maximum degree possible. Since the potential for researcher bias existed, I sought counsel in regards to data that may contain bias or that may contradict the mission of the school; doing so decreased the potential for researcher bias (Yin, 2014). Additionally, I submitted the case study report to my dissertation chair and committee for final approval before publication.

### **Summary**

The purpose of this qualitative case study was to identify the factors that impact learners with ASD in higher education through the disability support service offices. Chapter three disclosed the research questions which guided the research. The research design, including the methodology and approach were clearly identified and justified, as was the focus of inquiry. The setting and participants were made known. Procedures were outlined and the researcher's role disclosed. Additionally, data collection procedures and analysis were explained. Trustworthiness and ethical considerations were also addressed. It was the intent of this study to utilize the methodology disclosed in chapter three to identify factors that impact learning in students with ASD at Central University.

## CHAPTER FOUR: FINDINGS

### Overview

The goal of this qualitative case study was to identify the factors that impact learners with ASD at a university in central Virginia. This method of research was chosen to identify factors specific to the disability support service offices that impact learners with ASD from student and faculty perspectives. Chapter Four addresses the findings of this study. The detailed research methodology was provided in Chapter Three where it was noted that three different data collection methods helped determine answers to the research questions including interviews, an online focus group, and documents. According to Miles and Huberman (1994), a qualitative research study is the best way to reveal unanticipated findings or new combinations and relationships. Specifically, qualitative research methods can shed light on factors that impact learning for students with ASD through disability support service offices in a university setting. Chapter Four reveals the findings of the data analysis conducted through coding and identifying emerging themes from the individual interviews (including field notes), transcripts of the online focus group, and documents. Data analysis was sequential and iterative and took place over a two-month period of time. The data collection and analysis revealed five themes including:

1. Factors based on Accommodations
2. Factors based on Accountability
3. Factors based on Compassion and Individuality
4. Factors based on Professors
5. Social Factors

This qualitative case study research was guided by the following research questions:

**Central Question**

What factors of the disability support service offices impact learning in university students with ASD?

**Sub-Questions**

1. How do students with ASD describe their experiences with the university's disability support offices?
2. How do university faculty describe their role in supporting students with ASD?
3. What factors of the disability support service offices are perceived by students and faculty as having a positive impact on student learning?
4. What factors of the disability support service offices are perceived by students and faculty as lacking, ineffective or as limiting to the student with ASD?

**Participants**

This study was conducted with a population of 10 participants. The majority of the respondents were female (60%) and the majority of the respondents were students (60%). The entire participant population was Caucasian. All student participants met the criteria for inclusion in the study. The criteria were that they must be 18 and older, must be residential students and may live on or off campus. Students may currently attend Central University, may have recently (within the last year) dropped out of Central University, or students may have dropped out and returned to the university. Students may have transferred from another university, but must have completed a minimum of one full semester in order to participate. All faculty participants also met the criteria for inclusion in the study which were current employment at Central University in the disability support service offices or in association with the disability support service offices (e.g. employees of assistive technology department, testing

center, or hearing or blind services). Current employment was the central criteria for participation in this study. Background and training were not exclusionary requirements. All participants were assigned a pseudonym to protect their identity.

### **Alex**

Alex is a 25-year-old employee of Central University and has worked in the testing center since 2012. Students with disabilities use the testing center, but it is also available for students who have been sick, missed their class, or were away at an athletic event. Alex states that the testing center is meant to offer students a calming and quiet atmosphere in which to take their tests. His concern and compassion for the students were evident throughout the interview. Though he believes that the disability support office offers students what they need to support them academically, he admits that “on our end here, I don’t really see a lot of that social support.” Ideally, he states that

I think an ideal disability support office gives that one-on-one connection with Students. The main thing we’re going for is support in all areas of their lives. So, it’s not just academics, but, it’s social, it’s home life even if they have struggles with home life we can set them up with different services that they can seek out. The ideal support office would be all about support and compassion.

(Interview, May 12, 2016)

Alex was welcoming of new ideas and change and was genuinely focused on providing the best services possible to meet the needs of each individual student.

### **Lucy**

Lucy is a 66-year-old female employee of the disability support offices. She was a very enthusiastic participant and was happy to share her perspective with me. She has worked at

Central University for 22 years and has held many positions in several departments. She describes her role as multi-faceted including being an instructor, coach, counselor, sounding board, mentor, and advisor. Lucy states that the main accommodation given to students with ASD is extended time on tests and a note-taker. Procedures must be followed in order to receive the services, and the office staff are proactive in reminding students of the procedures as well as deadlines. When asked about the strengths of the department, she replied, “I believe that our strength is that we really do care for the student and the students know that.” She also believes that it is important to be able to point students in the right direction when they have a need not addressed by the disability support office such as counseling, registration, academic advising, etc.

### **Pat**

Pat is a 58-year-old male employee in the disability support services office. He has been working at the university since 1985 and has held multiple roles including learning disabilities resource teacher, establishing a learning disabilities program, and working with students with a variety of disabilities including attention deficit hyperactivity disorder (ADHD), psychiatric disabilities, veterans with post-traumatic stress disorder (PTSD), ASD, traumatic brain injuries, deaf, blind, and chronic illness, etc. In his current position he has even started working with people with temporary disabilities such as broken limbs, pregnancy, parenting issues and such as noted by Title IX. Pat was exceptionally experienced and brought a wealth of information to the interview. His knowledge and compassion for students were evident throughout the interview.

Pat noted that the office of disability support services follows the mandate of section 504 of the Rehabilitation Act of 1973. Transitions are always the biggest issue for students, according to Pat, because “504 is about access, not success” (Interview, May 4, 2016). In high



school, teachers and administrators seek out students that need accommodations. In college, “the students have to seek us out and ask for the accommodations and they have to do so in a timely manner” (Interview, May 4, 2016). Even though students are required to seek services, Pat’s commitment and dedication to the students was evident throughout the interview. He was an active liaison between the student and any need the student had such as with a professor, counselor, friend, or department such as the registrar.

### **Brice**

Brice is a 68-year-old male employee of the university and has worked there since 2004. He has worked in the distance learning program, as the counselor and adviser, and he currently works with student success. “Basically what I do is work with warning, probation, suspension, and dismissal students. To make sure they get on, and keep on track” (Interview, May 12, 2016). His role is critical to student success, and he made it clear that he works with all students, not just students with disabilities. When asked specifically about the success of students with disabilities and whether or not their struggles were based on academic or social issues, he stated,

I would say that it is mostly the social aspect of it. They don’t because they think they don’t. In other words, in some ways they talk themselves out of being academically sound. Because of their whatever, they don’t think they can, when in fact they can. (Interview, May 12, 2016)

Brice seemed to have a thorough understanding of the needs of students with ASD. He stated the uniqueness of each situation and the importance of each individual as being key factors in serving this student population.

**Tory**

Tory is a 22-year-old student diagnosed between her freshman and sophomore year of college with ASD at the age of 19. Since she was not diagnosed until college, she never received an individualized education plan (IEP) in high school. However, in high school, she was in gifted and honors classes, but since she could not handle the workload, she had to be moved to general education classes. Her intellectual quotient tested “off the charts,” but the amount of paperwork kept her from remaining in the honors and gifted classes. When asked if her needs at Central University were more academic or social, her response, without hesitation, was, “social/spiritual definitely,” and “the academic support is great. It is the socio-emotional-spiritual aspect that I feel is lacking,” (Interview, April 29, 2016). She had a positive attitude about her disability and the disability support service offices. She stated that “people are born into situations that they can overcome. That’s the view that I have of my own disability,” (Interview, April 29, 2016).

**Avery**

Avery is a 19-year-old female student from Tennessee who was diagnosed with ASD (formerly Asperger’s). In high school, she attended a school for students with special needs but transitioned to a private Christian school for a more rigorous academic experience. She and her parents had aspirations of her attending college. Avery stated that at the new school, “I had to have a lot of tutors to help me with some of my subjects, and, um, sometimes, I just feel like having a tutor was just not...was just...I just felt like I wasn’t normal,” (Interview, May 5, 2016). She went on to say that receiving the accommodation of having a note-taker or getting a copy of the notes from the professor is what really helped her, but the testing accommodations helped her the most. Her main interest in school is sports management and she is obsessed with

basketball. She is very knowledgeable about basketball statistics and hopes to be involved in basketball at the university-level in some way after she graduates.

Socially, Avery has felt challenged as well. Her most challenging time has been with roommates. In reference to her roommate, she stated that

about two months ago, she moved out. It was really hard on me. You know how you hate somebody not telling you that they are moving out. Oh. That's what happened to me. I was just kind of freaked out when I saw her stuff out the door. (Interview, May 5, 2016)

She went on to state that the good news was that now she had a room to herself. Avery is now looking forward to moving to a different side of the campus beginning next week.

### **Sean**

Sean is a 19-year-old male student who was diagnosed with ASD only after leaving Ireland and moving to the United States two years ago. Like two of the other participants, Sean did not receive a diagnosis until later in life and, therefore, did not have an IEP. In high school, he did state that "they merely gave me the opportunity to take tests in a different environment. Otherwise, I did the same thing as everyone else," (Interview, May 4, 2016). He remembers being obsessed with cars as a young child and arranging them in a specific order, which is characteristic of children with ASD. Sean is currently enrolled at the university and living with a host family. He is the son of a missionary family and he credits his family with his social success. When asked how he felt socially at the university, he stated,

As a student in the ODAS department, there is nothing really there that I was connected to socially. I actually got my social connections through the group for missionary kids on campus, but I'm not aware of anything

specific for me as a student with autism spectrum disorder. (Interview, May 4, 2016)

Sean's goal after graduation are to either be a missionary and enroll in higher education courses. Someday he wants to earn a Masters and a Ph. D.

### **Emily**

Emily is a 31-year-old student diagnosed with ASD, post-traumatic stress disorder (PTSD), and attention deficit hyperactivity disorder (ADHD). Like several other participants, Emily was not diagnosed until later in life with ASD. She was 31-years-old when receiving the diagnosis. Her high school years were riddled with social challenges. She was threatened and bullied, but also participated in inappropriate behaviors such as throwing a chair and hitting. She was misdiagnosed as being bipolar and was institutionalized for a while. After getting out of the institution, she was diagnosed with a personality disorder. With her current diagnosis, she has been able to attend a community college and has received an associates in administrative support technology and graduated with a 2.58 grade point average (GPA). She attended a major university for one semester, but left because of the expense and is now attending Central University. Since transitioning to Central University and seeking support from the student disability support service offices, she states that "they are nice. They actually seem to be a lot more compassionate" (Interview, April 29, 2016). The main accommodation she appreciates is taking tests in the testing center because she has concentration issues. She states, "when I'm in a classroom full of students it distracts me. Even when people do constant coughing or they get up and down and walk around a lot, it's just a distraction thing."

### **Mary**

Mary is a 22-year-old female student diagnosed with ASD and ADHD. Like Tory, Mary was not diagnosed until she was in college at the age of 20, and therefore, she also did not have

an IEP in high school. She was homeschooled throughout most of her educational experience and was involved in a co-op as well. She started dual-enrollment in college at the age of 16 and is currently dual-enrolled in two universities. She has taken both online and residential courses. Mary stressed the importance of having a voice and being heard. She expressed her appreciation of this research and further emphasized that “it is impossible to truly put yourself in someone else’s position and understand where they need help, unless you ask them” (Interview, May 7, 2016). Mary gave several recommendations for helping students with ASD including text messages in lieu of emails, organized social events for students with disabilities, and allowing certified emotional support animals in the dorms.

### **Cody**

Cody is a 23-year-old female student at Central University. Last semester she was a residential student, but due to social challenges, she is now an online student living in Georgia. Cody made it perfectly clear that she was academically capable of succeeding at Central University. She left the university due to loneliness and the anxiety caused by social situations. Cody made multiple positive comments concerning professors and the disability support services office personnel. She stated, “my professors have helped me in my classes related to my disability by coordinating with disability services,” and “disability services are good at accommodating students with disabilities” (Interview, April 25, 2016). When she graduates with her Bachelors, she plans on attending the University of South Carolina to attain a Masters in critical community psychology. She would like to become a clinical psychologist and possibly specialize in helping people with autism.

Table 1

*Participant Demographic Data*

Participant	Gender	Age	Position
Alex	Male	25	Faculty
Lucy	Female	66	Faculty
Pat	Male	58	Faculty
Brice	Male	68	Faculty
Tory	Female	22	Student
Avery	Female	19	Student
Sean	Male	19	Student
Emily	Female	31	Student
Mary	Female	22	Student
Cody	Female	23	Student

## Results

The purpose of this case study was to identify factors that impact learning for students with ASD through disability support service offices at a university in central Virginia. This case study research used three specific data collection methods including interviews, an online focus group, and data collection. Interview and focus group questions (See Appendices F, G and H) were developed to align with the central research question guiding the study. Additionally, specific questions were asked to include the sub-questions. For the purpose of this study, student and faculty participants were purposefully selected based on the criteria given above. A faculty

generated email was sent from both the online and residential disability support service offices to students registered with the disability support service offices in order to generate a student pool of applicants. Seven participants responded to the email solicitation, but one was exclusively an online student, which disqualified him from the study. The remaining six student participants qualified and were included in the study. Faculty participants were sent an email generated by the researcher in order to solicit their participation based on the criteria given above. Faculty information was obtained from the university website. Four faculty participants responded, qualified for the study, and participated. Informed consent was acquired from all participants prior to the collection of any data.

Interviews were semi-structured and were conducted with each participant on an individual basis. The purpose of the questions was to focus on the factors that impact learning through a university's disability support service offices. Participants were given an additional verbal summary of the purpose of the study prior to the interview. Two student interviews were conducted via a phone conversation, two were conducted in the university library, and two were conducted in the School of Education. All were at the student's convenience. The official number of employees listed on the university website was four, however, other departments qualified to participate in the study including the testing center and academic success center. Four faculty participants responded to the email solicitation, qualified for the study, and were included. Faculty interviews were conducted at their convenience and were each conducted in the participant's office.

Initially, a student focus group and a faculty focus group were planned. However, due to the end of the semester, graduation, and many students and faculty participants moving or leaving for vacation, an online focus group was conducted to accommodate the participant's

schedule and distance. IRB approval was obtained prior to the change. Limiting the geographic area of the group would have limited the range of individuals who could have participated. Thus, the ability to communicate electronically became a great asset (Rezabek, 2000). This electronic focus group was conducted asynchronously, meaning that the sessions were completed at the convenience of the participant, and not at the same times as all participants (Murray, 1997). Because the online focus group was conducted using text as the communication medium, participants' responses were accurately and automatically recorded. An online text-based approach eliminated the need for the oral recording and transcription of participants' responses so there was little margin for error (Turney & Poknee, 2004). For the purposes of this study, participants were instructed to answer seven questions (See Appendix H) and then respond to other participants answers to the questions. All ten participants answered the seven questions and responded to others in the group. Participant responses varied in number and no participants revealed their true identity, thus, all participants remained anonymous throughout the entire research process.

Documents were collected from several participants during the interviews and included participant notes prepared prior to the interview, booklets, and documentation. Emails and text messages were also saved, printed, and added to the document collection. Field notes were recorded during and after each interview and during the online focus group which was active for five days. Documents were also printed from the disability support service websites such as applications, faculty job descriptions, and services offered. Documentation offered further supporting evidence of the themes developed. All student and faculty participants remained in the study until its completion. Table 4.2 displays each research question in connection with the interview and focus group questions.



Table 2

*Alignment of Research Questions to Interview and Online Focus Group Questions*

Research Question	Student Interview Questions	Faculty Interview Questions	Focus Group Interview Questions
How do students with ASD describe their experiences with the university's disability support offices?	1-14		1, 5, 7
How do university faculty describe their role in supporting students with ASD?		1-11	1, 5, 7
What factors of the disability support offices are perceived by students and faculty as having a positive impact on student learning?	3, 4, 5, 6, 8, 9, 12	1, 2, 3, 4, 5, 7, 9, 10	2, 4, 5, 6
What factors of the disability support offices are perceived by students and faculty as lacking, ineffective or as limiting to the student with ASD?	7, 8, 10, 11	1, 2, 5, 6, 7, 8,	2, 3, 6

### Triangulation of Data

A hallmark of case study research is that it presents an in-depth understanding of the case (Creswell, 2013). In order to do so, three methods of data collection were utilized including interviews, an online focus group, and documentation. Responses to questions utilizing all three methods of data collection are presented in this section.

#### Question 1

The first sub-question for this research study asked, "How do students with ASD describe their experiences with the university disability support service offices?" Responses were

generally positive in nature and included information pertaining to accommodations, accountability, compassion, professors, and social factors.

**Accommodations.** All students expressed appreciation for the accommodations offered by the disability support service offices at Central University. Though their perspectives for each are very unique. When questioned about the process of seeking accommodations and services, Tory responded that it was pretty easy because she knew the importance of the help. She stated that,

My mentality was, if you break your leg, you go to the doctor. If you go get help from the right people. So for me, it was never a source of shame. It was like a part of who I am, so why not get the help that I need, but also celebrate the parts of who I am that make me more unique.

Sean also noted the importance of the accommodation of extended time and a quiet environment. “if I took one or two tests and realized that I needed more time in other classes, I would have the opportunity to go to the testing center and take it separately.” Having extended time in a quiet environment available to him was an important source of comfort to Sean.

In the online focus group, one participant wrote that the disability support service offices “impacts student learning by supporting students with disabilities with special accommodations such as extended time for testing, mentoring, and interpreters.” Tory’s response was “they apparently have a lot more accommodations than I initially realized! I wish I had been more aware of them before I graduated! I would have succeeded so much more.” She went on to say that, “I would not have failed some classes if I had realized just what accommodations were available besides the testing center. They offer great tools,” but she stated that they “don’t always make it clear what is available.” Tory graduated a few days after our interview.

**Accountability.** Accountability was important to most students but was the least mentioned of the five themes developed. Cody began college as a freshman residentially but was unsuccessful in remaining long-term. Freedom and social anxiety overwhelmed her to the point that she returned home after one full semester. She needed the accountability of being at home with her parents. When questioned about the service she received through the disability support offices, she stated, “I love the customer service,” and “I was comfortable asking for accommodations. One reason is that I wouldn’t make as much progress without the help of disability services.”

When asked if there was anything else that Emily wanted to add about her experiences with the disability support services, her reply was

Have someone like an outreach counselor to help point me in the right direction and give pointers of where to go. Like a 24-hour person I can call in case I need to contact someone. In case I need to see if there is somebody to call for a doctor or if I need help or someone to talk to. Or if I need a different accommodation or I need help with studying or something.

Having one “go-to” person was important to Emily. At times, she felt overwhelmed by the number of support personnel she needed to contact.

Accountability was also important to Tory. After unsuccessfully seeking an accountability partner through the disability support service offices, she placed an advertisement on Facebook asking for an accountability partner. She stated of the respondent,

She became my accountability partner. Like how’s your homework going? And checking on me like that. Because for me, I know I’m smart, I just know I have to get stuff done. Like right now I’m behind like three papers.

Tory was proud of herself for pro-actively seeking an accountability partner, but would have preferred having this service provided for her.

Because it's like I know how to do my homework and I know how to learn.

It's just sometimes sitting down and getting it done and knowing that someone knows and says, 'oh you haven't done this yet.' Not being a mom, but similar.

**Compassion/Individuality.** Students with ASD are all very unique, both in personality and need. One thing they all had in common was the need for compassion and to be treated like an individual. They did not want their accommodations to be based on the general needs of a student with a disability, or even a student with ASD. Each student wanted to have their own unique needs met.

Emily had attended two other colleges before arriving at Central University. She described her experiences as “awful.” When asked how she feels at Central University as compared to the other two universities, she said, “I feel so differently. I like it here. I mean I don't have trash thrown at me. By anyone. People are more compassionate and they seem to generally care.” When asked about her comfort level in seeking accommodations, Emily stated, “I was very comfortable. I knew I needed it. The people in the disability office made me feel wanted.”

Avery was a little annoyed that testing and tutoring were emphasized so much. She stated, “I think I'm all right without tutoring,” and went on to emphasize her need for, “social skills and social graces.”

Mary's emphasis was on individuality and being heard. She said

As much as possible for neurotypical people, it is just so important to listen

to people with disabilities because a lot of times we do know the best ways to accommodate ourselves, and we know the areas we struggle in. A lot of times we figure out our own ways of getting around and adapting and a lot of times we kind of know what strategies will help us, you know? And as much as you try, you just can't fully comprehend what it is going to be like for someone and it also differs from person-to-person.

In the online focus group, Pat stated,

Faculty and staff try to educate themselves in common characteristics of ASD students by attending conferences, workshops, and webinars. The more they know the common characteristics of ASD students, the more patience and understanding they can display when dealing with such a diverse population and their unique characteristics. Patience is a must with the students since one of the defining characteristics is a problem with communication. It can take multiple attempts to find out exactly what is being requested and why.

Likewise, in support of students' needs, Lucy stated in the online focus group that "many departments on campus have students schedule appointments, however, this office has an open door policy for all students with disabilities." Students are welcome in the disability support service offices whenever they have a need.

**Professors.** Professors seemed to be viewed both as a help and a hindrance, but all participants acknowledge the importance of the professor's participation in their educational process. Emily stated that the professors, "are nice. They actually seem to be a lot more compassionate."

Brice stated that employees of the disability support service offices, “can act as a liaison between faculty and students to make sure they are on the right path towards graduation.” Since graduation is the goal of attending college, effective communication between the student, the disability support service offices, and the professors was viewed as imperative.

Mary was frustrated with the amount of communication required between her and the professors. She stated that,

Personally, for me it would be more helpful for me if I didn't have to email my professor each and every time there was an assignment that was going to be late because a lot of my assignments end up being late, so it ends up being kind of a flood of emails.

She went on to state that she thought it would be most practical to only have to communicate the accommodation once and that it should cover every assignment.

**Social Factors.** When describing their experiences with the disability support service offices in terms of social factors, most students expressed disappointment that more supports were not available. In a recent study by Cai and Richdale (2016) it was reported that “most students felt educationally but not socially supported” (p. 31). When asked if her needs were more academic or social, Tory quickly responded, “social, spiritual, definitely.” She elaborated by saying that she had been given the phone number of a female student (with permission) by one of the disability support service office faculty members. Having this one connection was foundational to meeting Tory's social needs. She stated that even though, “we weren't like super close friends, but it was good to be able to just talk to someone.”

Avery referred to her social experiences by stating that “there were some troubles that I had with some of my friends,” and partially blamed herself by stating that “it was hard for me to

understand people because they're different, and I'm different." She stated that "everybody has different stuff, but there's some that don't understand autism." She went on to say the after her sophomore year she really got the hang of things.

Emily stated that her experiences at Central University have mostly been positive, but she goes on to say that, "I don't read people very well. ADHD, PTSD, and Asperger's make it so hard. I talk about the wrong things at the wrong time." She admits to being socially challenged for as long as she can remember and expressed a strong desire for social supports to help her fit in to the residential college atmosphere.

## Question 2

The second sub-question for this research study asked "How do university faculty describe their role in supporting students with ASD?" Most answers were given in terms of offering supports and accommodations for students with ASD. Some faculty expressed the inclination to go above and beyond in order to help students succeed.

**Accommodations.** According to Pat, the role of disability support services faculty is to, level the playing field for students with disabilities by offering academic accommodations that will allow students to learn and be assessed without their disability interfering with their knowledge. We act as a liaison between students and their professors to arrange these accommodations.

He went on to state that while he believes accommodations are essential for many students, "the majority of autistic or Asperger's students don't request accommodations." He followed this by saying that even after seeking and receiving permission to utilize accommodations, some students still do not follow through by taking advantage of them.

Lucy described her role in supporting students as to “communicate with the student. We invite them in, and we let him know what our services are. We notify the professors on their behalf, and we communicate with their professors according to the accommodations, according to the law.”

Most faculty members described their role in accommodating students with ASD in terms of all students with disabilities. For example, Pat disclosed that he began working with students with learning disabilities, but then the job “just evolved into all disabilities.” He noted that the disability support service offices work with approximately 600 residential students and 400 online students with disabilities. Potentially academic arrangements are made for blind students, deaf students, students with ASD, learning disabilities, ADHD, chronic illnesses, psychiatric disabilities, veterans with PTSD, traumatic brain injuries, and even now people with temporary disabilities such as a broken leg, a pregnant woman, or women with parenting issues until the temporary issues are resolved.

Another specific role faculty members described themselves in was adhering to the requirements of section 504 of the Rehabilitation Act of 1973. This act “guarantees the students access, but not success,” according to Pat. The main difference in high school and college, Pat stated, is that the “students have to seek us out and ask for accommodations and they have to do so in a timely manner.” Pat said that, “if the student needs extra time on tests and a quiet environment, they have to fill out the forms, and they have to do so a couple of days before the test starts.” This allows the professor to put the test in the testing center to allow for the accommodation.

In order to receive accommodations, Pat states that

Accommodations only start when they fill out the form and we get the form



and the professor gets the accommodation request. So that's why students have to be proactive. We email the students, and we send the students the links, and reminder emails and the forms that have to be filled out, but they have to do it.

He goes on to clarify that,

We don't have a program. Students with disabilities don't come into the disability program. All we do is arrange academic accommodations between them and their professors. We are the liaison between the student with a disability and their professors and they are in the same class and have to meet the same academic standards, and have to meet the same attendance standards as those without disabilities.

When it comes to the accommodation that is most frequently offered, Lucy says that "The main accommodation for anyone on our campus is extended time for tests and often times a note-taker." Students tended to agree with this response. Alex stated that it is important to provide "the most calming testing atmosphere" that he can. He said

We try to accommodate as much of their needs as we can within a reasonable basis. The primary way we do so is by providing that quiet testing atmosphere while also remaining secure and helping them through their exams in any way that we can with academic honesty.

Faculty members seemed eager to help and willing to offer as many reasonable accommodations as possible.

**Accountability.** Students expressed the desire for intense accountability, but providing a one-on-one service for each student with special needs is not considered a reasonable accommodation for all students according to faculty member Pat who states that the student is

responsible for filling out the forms in order to get the accommodations, and “we always warn them; accommodations are not retroactive. If you fail the test, you cannot go back and retake the test with the extended time or whatever the accommodation would be.”

Lucy says that she tries to keep parents informed and let them know that “there is nobody that goes with them step-by-step like a counselor.” However, recent research reported that 65% of students with disabilities wanted counseling support for possible frustration, depression, or anxiety (Glennin, 2016). The students expressed the desire for accountability, but this is not an accommodation readily available through the disability support service offices. Lucy reiterates that the open door policy is meant to assist students with their needs, but that students must be proactive in their educational experience.

**Compassion/Individuality.** Faculty members were in agreement that serving the individual in a compassionate manner was an essential part of student success. When asked about the strengths of the disability support office, Lucy stated, “well first of all, because we are a Christian University, I think our own spirit as leaders is that of service. We go above and beyond.” She further states that “I believe our strength is that we really do care for the student and the student knows that.” Other strengths that she noted were, “availability, compassion, and problem-solving.” She stated that the disability support service office serves as a “network with other departments” in order to support the student in their endeavor to be successful at the university.

Brice stated that “the majority of students that I mentor are students with disabilities because they seem to be the ones that struggle the most. Some of it is self-imposed. Some of it is imposed by the situation.” Either way, Brice expressed a willingness and desire to help the

students succeed. He remarked that over time, as he has learned more information concerning ASD, his patience with this student population has improved.

When asked how disability support service offices could improve supports and accommodations for students with ASD, Pat replied that starting a special program for this student population would be a good idea. This could help them “find out where things are, and how colleges run, and how you read the syllabus, and why it’s important.” He goes on to say that, “all those things are absolutely new to all students, but especially Asperger’s students and autistic students that don’t handle new stuff and change very well. Often times, they will just shut down.” When parents asked Pat if he believes that their student will be successful in a university setting, his response is, “every student is different,” which reiterates the individuality of students with ASD.

Lucy tries to support students on an individual basis and describes her role as being a “sounding board” and a “coach.” She also says that “over the years we have worked with them on advising in registration. It just depends on the individual and what they need and how much support they are asking for.” However, as much as Lucy wants to meet every need of the child, she says,

We are an office of disability academic support, but we do answer a lot of things that are not academics, and we are involved, and we meet with student conduct and student affairs and stuff like that. But the whole needs of the child would just be all-encompassing.

Brice says that he supports students and that, “we get what we can, when we can, based on the need of the individual student. But it’s hard to be proactive. You are more reactive. You don’t do something until a student gets here.”

**Professors.** It is the role of the disability support service offices, and not the role of students, parents, or professors, to determine what accommodations are given (Chan, 2016). Faculty members at this university do try to support the individual as much as possible. When asked about the strengths of the disability support service office, Alex's response was, "I really like the individualized focus that students get in our offices." However, in regards to professors, he stated that,

Professors get these lists of students that have disabilities, and they say to the student, "you're going to remind me every time there's a test because I'm not going to remember because I have 300 students." So, it's on the student to study for their test, and they have these obstacles to overcome. And then, not only study, but study effectively, and make an appointment here at the testing center.

According to Alex, the students

have to do a lot of stuff that a student typically doesn't have to do. And then, on top of that, to remind their professor every single time, and if they forget, sometimes it's not here. So, there could be more communication, I think, between our department and professors for the students every time an exam is out, saying, hey, you know, so and so has a test coming up, please remember to take their, send their test to the testing center and things like that.

Remembering to communicate with their professors is perceived as an additional unnecessary obstacle.

When asked about faculty training for professors, Pat replied that there is nothing specific offered to professors in relation to students with ASD. However, if the student "asks the

professor to contact us we will be more than happy to do that, but generally there's nothing specific." Lucy says that some professors will "provide them with a set of notes, either a copy of the PowerPoint or a fellow note-taker in class."

When asked in what ways could the disability support service offices make improvements, Alice's response was, "if there would be a way to effectively communicate to professors for the student every time there was an exam," therefore removing the burden from the student.

According to Brice, when asked about professor training in connection to students with disabilities, he stated, "to be honest, I think none. Zero. I think it should. But then again, I'm running a workshop at the beginning of every semester. . . yes, 50 to 60% of the faculty don't use this." He goes on to say that unless it's mandatory, most professors do not participate in faculty training.

**Social Factors.** Faculty and students alike agreed that social factors impact learning for students with ASD at the university. They are not necessarily in agreement on which accommodations should be provided. Pat admits that there are social problems for these students. He stated that students need help, "working through roommate problems, loneliness, social isolation, having people shun them because of their backwards social awkwardness and I think a lot of counseling techniques with role-playing," are stated as possible improvements. However, it was reiterated that this is an academic support center and not a social support center. As far as social accommodations, Pat says, "the only thing is for the counseling center. Counselors can talk through roommate adjustment problems." He stated that students with ASD, "can't take into consideration your feelings, and so a lot of times the roommate problems are greater than any academic problems they may have."

When it comes to social factors that impact learning, Lucy hopes that, “they are getting support, and I believe that in a Christian university, that we have student development figured out in the dorm life, and spiritual life leader, the RA leader, and the prayer leader.”

Alex stated that it would be a good idea to have a social aspect to the disability support service offices saying, “they need a little hub, I think. A lot of students have hubs.” He mentioned that it would be a good idea to have a go-to person to meet and socialize.

Brice says that students with ASD struggle more socially than academically, “because the people with the malady that we’re talking about really struggle because they have no concept when they say something how it is affecting somebody else.” He goes on to say that they have trouble with roommates because they don’t like change.

### **Question 3**

The third sub-question for this research study asked, “What factors of the disability support service offices are perceived by students and faculty as having a positive impact on student learning?” Interestingly, after performing open coding, and further organizing participant quotes based on the four research sub-questions, neither accountability or social factors were mentioned as positive factors that impacted students with ASD, which indicates that these are lacking. The most frequently mentioned factor was accommodations, but compassion/individuality and professors were also seen as important influential factors.

**Accommodations.** Accommodations, whether ones that are received or ones that are lacking, were mentioned as being extremely influential; even to the point of failing or dropping out of college. Avery stated that extended time on tests was the most important accommodation to her. Having the extra time served as a safety net. She also mentioned note-taking as a positive aspect of her experience, stating “the class that’s kind of easy to take notes in is biblical

worldview because we have booklets. It's really nice," and "my history professor sends his notes to me."

Sean noted that the disability support service offices, "made it easy because it gave me the opportunity to take testing in a quiet environment if I needed to." He felt that taking tests in a quiet environment was the most important accommodation he received since he was so easily distracted in the classroom environment.

Faculty member, Alex, stated, "I believe that a quiet and secure testing facility is paramount," for the students. And faculty member, Lucy, described her supportive role in a positive light by saying that it is important for the department employees to be "aware of the other departments so that you are kind of being as comprehensive a service as you can be." She goes on to say that the disability support service offices cannot take ownership of all of the needs of students with ASD "because it's really not our expertise to know enough about everything, but to be able to filter them to the right department." Providing accommodations was seen as essential, but so was helping the student to help themselves.

**Compassion/Individuality.** Students that had a mostly positive experience with the disability support service offices discussed it in terms of emotions and individuality. Emily stated that "I'm taking tests through the testing center. That's about all I need. I don't need a note-taker or anything else. I just need to take tests in the testing center." She was appreciative that her specific need was being met. She went on to say that, "I have a concentration issue. When I'm in a classroom full of students, it distracts me. Even when people do a constant coughing or they get up and down and walk around a lot, it's just a distraction thing." She appreciated that the disability support service offices provided for her individual needs and let her take her test in a location that was quiet and less distracting than the typical classroom.

Emily stated in the focus group that the workers, “are very caring and committed to helping you succeed.” Most students expressed this same sentiment.

Tory is a student that struggles with anxiety. When answering the online focus group questions pertaining to the positive attributes of the disability support service offices, she replied, “They are all really sweet people. Even the secretary was super understanding when I went into the office seeing if they had a panic type room while I felt a panic attack coming on. They didn’t, but she was really sweet, offered me a seat on the couch, and the other woman - I don’t even know her name - gave me a bottle of water. They are really great people.”

**Professors.** Though some aspects of communication with professors were seen as negative, Tori took a pro-active approach to communicating her needs with her professors. She stated that the emails sent to the professors opened up a window of opportunity for her to elaborate on her ASD. “I don’t just walk up to the professor and say hi ‘I’m autistic,’ but I say, ‘okay, did you get the accommodation request? And would you like a further explanation?’ that opens up the door to communicate.” She went on to say that when she approaches it this way, that most professors respond in an understanding manner.

To Sean, the most beneficial accommodation was that the disability support service offices, “send out the accommodations to my professors each semester once I let them know who they are means I do not have to go to all my professors and talk to them about my diagnosis if I feel uncomfortable about talking about it.” Since students with ASD are socially challenged by definition, this was one less social situation that Sean had to experience.



#### Question 4

The fourth sub-question for this research study asked, “What factors of the disability support offices are perceived by students and faculty as lacking, ineffective, or as limiting to the student with ASD?” Though this section yielded the most number of quotes, students overall experiences with the department of disability services was mostly described as positive.

**Accommodations.** This section reveals that students know what they want, and they know what they need. Some need more than is offered, but not all of their desires are within lawful requirements. An accommodation seen as lacking by Tory is a place of escape. She stated that often times her anxiety caused her to leave the classroom and search for a place to gather her emotions. Finding a place of escape was a challenge for her and she stated that “I end up just usually sitting in the bathrooms or in the stall.” She seemed frustrated that a panic room was missing. She stated, “It was always about test taking and it seems like. And I was like that’s not the accommodation I need. I’m fine with taking tests, so that seems like the accommodations that they really push.” Sean noted that he was not always aware of all of the accommodations available to him. “I see things black and white, so sometimes I find that their descriptions are very vague.” Tory reiterated this sentiment by saying in the online focus group, “they have a mentoring? I never knew about that! I could’ve really used that!”

**Accountability.** Avery stressed the importance of having an accountability partner. She emphasized the importance of having someone to assist with, “things that you need help with. Someone to be there for you.” To her, having the same person to look after her was something she felt was lacking. Tory also mentioned wanting a “study buddy.” To her, it would improve her educational experience. However, according to faculty members, this is not an accommodation that is plausible for students through the disability support service offices.

Tutors and counselors are available for students to assist them with their work, but to have one person to hold each student accountable is not likely an accommodation that will ever be provided.

**Compassion/Individuality.** Being treated with compassion and as an individual was important to all student participants, and it was also important to the staff to try to treat them that same way. Tory stated

Big classes can be so frustrating. Honors students get to go to smaller classes.

I wish students with disabilities had smaller class size options. Because sometimes you just need that more individual attention. Both with your paperwork and in person.

She gladly expressed her need for a place to escape when she felt a panic attack coming on. She said that most of the professors were fine with letting her leave, but,

Just yesterday, I left my class and went to the disability office and sat on the couch for a while because I thought I was going to have a panic attack.

Stuff like that, which I think it would be great if the disability office had an actual room for that sort of thing.

Lucy, a faculty member, stated that the biggest limitation was, “probably just servicing the sheer number of students and limited hours of the day to meet each one’s need. Needless to say, most students have problems and need a sounding board around the same time this semester; exam weeks.”

**Professors.** When asked if her needs were more academic or social at Central University, Mary replied that her needs were more social, but her challenges were in association with her professors, not peers.

Generally, what I have found personally, and also in talking with others with ASD, is that the more authority or power someone has over you, the more pressure there is going to be and that can also go to the number of people you're speaking to if it is a public speaking situation.

She also seemed frustrated with the amount the contact required between her and the professors.

She stated,

I understand speaking to the professor at the beginning of the courses saying "hey this is going on, these are areas that I struggle in, so you should probably expect this from me." But to do it for every single assignment, and sometimes what happens is when there is, you know, you're feeling all that guilt and pressure and you don't email them and then they start emailing you and saying, "hey, where is this paper? I didn't see your assignment," and at that point the pressure just grows to where at that point it's a lot easier to just quit or you just, it just builds on itself.

Alex, a faculty member, stated that when professors forget to send tests to the testing center,

Students can easily feel as if they are forgotten; leaving them embarrassed about their accommodation and frustrated that they need to put in more work than everyone else so that they can take their exams. Professors try to resolve this issue by creating policies that require students to inform the teacher before every exam that they need their exams in the testing center. This puts the burden on the student rather than the professor.

When asked to describe an ideal disability support office, Alex stated that it, "would be all about support and compassion and working. Almost like a web in the university with

different professors and different offices to help these kids so that they, I don't know, have programs for students." He further stated that "It would be nice to feel like there was support throughout the campus and all of these interwoven ways. I think that would make students feel better too.

Professor training was another area seen as lacking by both the students and the faculty. Mary stated, "I'm not sure how much training teachers are given on any kind of mental illness or divergent or what is typical, but they need more training for teachers." She goes on to explain that a professor with a degree in psychology cannot understand all the nuance of certain disorders or mental illnesses and how they specifically impact students. She says these disorders specifically have an impact on students and

the way that they act with their peers, and in the classroom, and turning in their assignments, and also, to take it a step further, to understand comorbidity, and how having certain disorders like autism spectrum disorder can lead to depression and social anxiety and OCD.

When asked about professor training, Alex responded, "that would be fantastic." His hope was that it might, "help to trigger something that would make them understand, even if it just triggers compassion." He stated that "these students are trying, but they are struggling. It's interesting that you bring up compassion, because we will even have some professors who come by, and it's very evident that they don't really have that."

**Social Factors.** The lack of social support was stated the most emphatically by both students and faculty, though there wasn't agreement on what this should look like or how much should be provided. According to Alex, "Academic support is the utmost importance for the students," but not all students would agree. Sean stated a need for social parameters and hoped

for “a clear direction for where to go if you have issues like needs or how to hang out socially with people.”

When asked if her needs at Central University were more academic or social, Emily quickly replied, “socially. They say my social skills suck. My parents, my friends, and teachers.” When asked what the disability support services could do to support Emily socially, her reply was, “I have no idea.” This seems to have been the case with other students. They want help socially, but are not sure what that help would look like.

When asked to describe an ideal disability support office, Mary stated that, “the first thing that comes to mind is like the hierarchy of social pressure that comes with different parts of socialization,” once again reiterating the extreme impact that social factors have on students with ASD. She went on to recommend a system of texting instead of emails and phone calls to alleviate some of the social pressures.

Mary stated that it would be nice to have the disability support services approve certified emotional support animals on campus and in the dorms. “It’s hard being in the dorms alone, especially when people with ASD have difficulty making friends. Animals are a great way to initiate social contact with peers.” An “emotional support/ service animal” is recognized as a reasonable accommodation under Section 504 and the federal Fair Housing Amendments Act of 1988 (FHA). It is defined as a companion animal that provides a therapeutic benefit to its owner through companionship that is not a pet, which makes determining eligibility complicated (Chan, 2016), and to some degree subjective.

Tory stated in the focus group that the greatest negative impact on learning at the university for her was,

**COMMUNICATION!** Communication with the student, with the professors,

as a community. It feels like an academic shell and I so wanted to get to know other students with ASD so we could learn from each other. Yes, they are there for academic success, but I feel if I had some more positive interactions with fellow students with ASD I would have gotten so much more out of my time.

In reference to the disability support services, Tory stated

If they want each student to succeed fully, they need to address spiritual and emotional needs as well as the academic. My academics would suffer because of anxiety/ sensory overload/ panic attack/ muscular tics. But the most I could get out of the accommodations was to sit near the door (if we have assigned seats) in case I had an episode. What if I had to receive services to prevent the emotional stress in the first place to avoid the negative impact on my academics?

Tory said in the focus group that she did not want her words to sound like a rant, and she stated in regards to the faculty of the disability support offices,

They are great people with good resources, but I am realizing now I had so many more accommodations available to me that I never knew about. And it is a little frustrating because I already graduated. And I may not have struggled to graduate like I did had I known more explicitly what options were available.

**Unusual Information.** One fascinating factor was that four out of five of my student participants were not diagnosed with ASD until college. Tory stated, “I was officially diagnosed by my psychiatrist back home, and then within the same semester I was registered with the disability department.”

Sean stated that he grew up in Ireland and the medical community only officially recognizes extreme cases of autism. He was not diagnosed until he moved to the United States.

Emily was required by Central University to submit paperwork documenting her disability. She learned that she “was misdiagnosed the whole entire time. I didn’t find out until last month.” Her new diagnosis was Asperger’s.

Mary was also not diagnosed until she was in college. “I believe I was diagnosed with Asperger’s and ADHD at 20.” Most infants show first signs of autism around the age of three, and most children are diagnosed by three years of age (Reichow & Volkmar, 2009).

### **Data Analysis**

Data analysis included identifying and developing patterns, codes, themes, and content analysis. Case study data analysis is emergent which means that what the researcher learns from collecting data is often used to determine subsequent data collection activities (Gall et al., 2007). This was demonstrated in my data analysis. Upon completing individual interviews, I learned that many participants were leaving town. This caused the face-to-face interviews to change to an online format. Since students with ASD are characterized as being socially challenged, I believe this proved to be the better choice of data collection. Additionally, participants were given the questions ahead of the interview in order to review and think about the answers they wanted to provide. Several students chose to write out the answers and email them to me. Two students wrote out information and gave me the notes at the interview. This documentation proved valuable, as students were able to take time to collect their thoughts and give a thorough and accurate account of their experiences with the disability support service offices. Additionally, data collection and recording included the use of memoing, bracketing, open coding, enumeration, and member checking to identify themes throughout the data collecting process and to ensure triangulation and trustworthiness of the findings (Creswell, 2013; Stake, 1995; Yin, 2014).

Data were analyzed and summarized by instrumentation as individual participant interviews, online focus group data, and documentation were categorized within the specific instances (within case analysis). Data triangulation was used to increase the validity of the study and to merge together the various perspectives of the participants. Identification of emerging themes by me, through coding, allowed for data to be opened up and meaning was explored through the identification of important patterns and themes (Stake, 1995). Categorical aggregation sought to reveal a “collection of instances from the data” to reveal issue relevant meaning (Creswell, 2013). These categories were then grouped into themes. Bracketing was used in an effort to eliminate myself from the research. “The skilled analyst is able to get out of the way of the data to let the data tell their own story” (Patton, 2002, p. 457).

Much of the case study data analysis “depends on a researcher’s own style of the rigorous empirical thinking, along with the sufficient presentation of evidence and careful consideration of alternative interpretations,” (Yin, 2014, p. 133). My research interpretation began as I interviewed participants. I made notes on the question list as participants gave their answers to the questions. This information later proved valuable as theme development began to take place. All interviews were recorded using an iPhone, a camcorder, and a mini-recorder. In one instance, two of the recording devices did not record, so recording on three devices proved to be valuable. Following the interviews, I listened to each recording two times. I transcribed seven of the interviews myself, but due to time constraints, I had three of the interviews transcribed for me. While listening to the interviews the second time, I made notes in the margins of the transcriptions and highlighted relevant terms or sentences. During the formal coding process, different colored highlighters were used to identify themes and quotes related to the factors that impact learning as stated by the participants. During the within case analysis, a list of codes



from each of the participant interviews was created. Keywords or phrases that were supported in previous research (Hattie, 2003) and frequently used words were used as a baseline for identifying information in context.

Code lists included words or phrases representing frequently occurring ideas related to the research questions. A graphic organizer was used to classify individual codes specific to factors that impact learners with ASD. A table representing each research question is below.

Table 3

*Research Question One: How do students with ASD describe their experiences with the university's disability support offices?*

<b>Open Code</b>	<b>Properties</b>	<b>Examples of Participants Words</b>
Accommodations	Need time on tests Unable to keep up with professor	It was a little challenge at first when I went to the testing center, at first. But then, right after I took my first test there, it was good.
Accountability Partner	Procrastinate Outreach Partner	I know how to do my homework and I know how to learn. It's just sometimes sitting down and getting it done and knowing that someone knows and says oh you haven't done this yet. Not being a mom, but similar.
Support System	Counselor	Maybe have someone like an outreach counselor to help point me in the right direction.
Clarification	Need specific information	I see things really black-and-white. So, sometimes I find that their descriptions are very vague.
Compassion	Need to be heard Need understanding	Someone to be there for you. You can't just fully comprehend what it is going to be like for someone and it also differs from person to person.
Professors	Liaison Communication Training	The professors have really helped me coordinate with disability services to make sure that I get the accommodations that I get during the semester. I'm not sure how much training teachers are given on any kind of mental illness or divergent or what is typical, but they need more training for teachers.
Social	Pressure through the office Emotional support animals	Social/ spiritual definitely. In talking with others with ASD, is that the more authority or power someone has over you, the more pressure there is going to be.

Student Preparation Transition	Need/desire more upfront information Challenging Easy based on experience	It's hard being in the dorms alone especially when people with ASD have difficulty making friends, animals are a great way to initiate social contact with peers. I'm still finding my way around. It was pretty challenging. I just kind of had some stress. I did it with my mom the first semester and then I used my experience after the first semester to continue this semester.
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Table 4

*Research Question Two: How do university faculty describe their role in supporting students with ASD?*

<b>Open Code</b>	<b>Properties</b>	<b>Examples of Participants Words</b>
Accommodation	Must seek out Need extended time Quiet environment Student Procrastination Recording device Private room	First of all, the student has to come to us. Extra time on tests Quiet environment Accommodations are not retroactive. Note-taker Processing speed More than welcome to have a recording device
Accountability	Want one-on-one assistance One person to go to for all questions Counseling	Sounding boards, as coaches One-on-one tutoring We do have accountability partners and tutoring here, but it's not full-blown like a full-blown coach she walks around with you
Compassion	Understanding	To understand That's interesting you bring up compassion, because we'll even have some professors who come by, and it's very evident that they don't really have that.
Individualized	Desire for relationship	It just depends on each individual, and what they need.
Multiple Disabilities	Varying needs	We have five or six blind students, two or three deaf, hundreds of students with learning disabilities or ADHD or both, chronic illnesses, psychiatric disabilities, veterans with PTSD or traumatic brain injuries etc. Now even working with people with temporary disabilities like if someone breaks their leg in the middle of the year or something like.
Parents	Involvement	Under-involved

Professor	Liaison Lack of training for professors Requirement	Over-involved Arrange academic accommodations between them and their professors I don't have any specific training in anything in specific learning disabilities. Notify their professors on their behalf
Relational	Strength is spiritual Caring Encouragement	Our own spirits as leaders We go above and beyond We really do care for the student and the students know that. We try to encourage the student.
Social	Social needs not met Counseling services Need for a hub Roommate/dorm issues	On our end here, I don't really see a lot of that social support. Loneliness, social isolation social and relational and organizational. Counselors can talk through roommate adjustments problems. Interaction within the dorms
Summer Bridge Program	Preparing students	Start a summer bridge program

Table 5

*Research Question Three: What factors of the disability support offices are perceived by students and faculty as having a positive impact on student learning?*

<b>Open Code</b>	<b>Properties</b>	<b>Examples of participants words</b>
Accommodations	Testing Extra time Recording devices Note-taker	Quieter environment and extended time We have recorders here We have carbonless paper Professors email PowerPoints Get notes from students. Providing the most calming testing atmosphere that I can
Accountability Co-diagnosed	Advocate Comorbid	Network with other departments Co-diagnosed as having ADHD Asperger's and ADHD
Communication	Professors	Communicate with their professor send emails to them
Compassion	Caring attitude	I think availability, compassion, problem-solving I don't have trash thrown at me. By anyone, people are more compassionate and they seem to generally care.
Individual Attention	One-on-one	Student advocates office

Parents	Advocate	Trying to catch students who would fall between the cracks I really like the individualized focus that students get. A go-to person Parents have already been their advocate.
Professors	Understanding	There are a lot of professors that are okay with my perspective. They actually seem to be a lot more compassionate. A lot of the professors were like that and they understood my accommodation.
Social	Not a positive experience	Just having those friends around me
Student Preparation	Bridge program	Study strategy classes Started a special program Summer school classes

Table 6

*Research Question Four: What factors of the disability support offices are perceived by students and faculty as lacking, ineffective or as limiting to the student with ASD?*

<b>Open Code</b>	<b>Properties</b>	<b>Examples of participants words</b>
Accommodations	Panic Room Counseling Tutoring Transportation	Just yesterday I left my class and went to the disability office and sat on the couch for a little while because I thought I was going to have a panic attack. Stuff like that which I think it would be great if that disability office had an actual room for that sort of thing. Need professional counseling. Tutoring. We don't do that. We don't have the wherewithal to do that type of thing. Academic coaching. Audiobooks Special textbooks would have improved my learning experience.
Accountability	Responsibility	But we always warn them. They have to do it. Someone knows and says oh you haven't done this yet.
Student Preparation	Self-advocate Anxiety	Students have to be pro-active. We send the students the links and reminder emails They never even fill it out, even though they've already come in and have the initial interview with us and this is what you're going to get, all you have to do is fill out

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		the form tonight or tomorrow or whatever and they just never do it.
		The student is very anxious because you know anything new upsets them.
Compassion	Consideration	Students can always procrastinate. Anything out of the routine is very upsetting. So I pointed her in the direction of the counseling center. Just treat them with kindness and understanding and patience.
		These students are trying, but they are struggling.
Professor	Communication	There could be more communication.
	Faculty training	A way to effectively communicate to professors for the students every time that there's an exam.
	Emails to professors	“Not putting the burden on the student, and understanding what they are going through a little more
Social	Social events	It is the Socio-emotional-spiritual aspect that I feel is lacking. I feel like having more social and like university recognition. It would be nice to have someone who doesn't have Asperger's trying to get us together.

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Within case coding continued and was an integral part of the data analysis as it laid the foundation for the interpretation phase when patterns were generated and themes began to clearly emerge, further validating the commonalities of the multiple participant perspectives.

### **From Codes to Identifying Themes**

To confirm the identified themes, codes and phrases from each participant's perspective and each of the three data collection methods, interviews, online focus group, and documentation, were compared. Using categorical aggregation, I further condensed, categorized, and compared data codes and phrases (Stake, 1995). Themes changed as it was determined that some could be combined into broader categories to include all relevant information. For example, compassion and individuality were very closely related and were, therefore combined. I noted recurring words to identify “core consistencies and meaning” (Patton, 2002, p. 453).

Information from the interviews, online focus group, and documentation were all used to validate the themes.

Once data analysis was complete, themes were identified that were validated by the three data collection methods. Triangulation was used to enhance the validity of the study and corroborate the findings. An inductive approach to data analysis occurred through constant comparison. This allowed me to move from specific codes and phrases to more general themes. Table 4.7 displays the number of recurring words or phrases which support the identification of the themes.

Table 7

*Frequency of Codes Across Data Points*

Themes	Code Word	Occurrences Across Data
Accommodations	Accommodations	87
	Study	11
	Tutor	29
	Support	23
	Stress	15
	Quiet Environment	7
	Quizzes/Exam/Test	96
	Request	4
	Notes	17
	Extended Time	22
	Disability Services	63
	Disability	57
	Counseling	14
Accountability	Partner	4
	Parent/Mom	37
	Mentor	8
	Help	8
Compassion/Individuality	Understanding	14
	Student	153
	Self-disclose	4
	Individual	14
	Guilty	5
	Feel	13

	Compassion	18
Professors	Training	15
	Teach	27
	Professor	63
	Email	19
	Communicate	9
Social Factors	Social	34
	Social Anxiety	11
	Spiritual	6
	Dorm/Roommate	28
	Loneliness	8
	Friend	24

### **Triangulation of Data**

Yin (2009) states that the triangulation of data is the most important aspect of qualitative data analysis and is used to determine constant data in carrying contexts. Triangulation was used in this case study research to determine the factors that impact learning through a universities disability support service offices. Triangulation is “mostly a process of repetitious data gathering and critical review of what is being said” (Stake, 1995, p. 34). All three data collection methods, interviews, online focus group, and documentation, were critically reviewed to identify and develop codes, patterns, and themes. Codes were categorically aggregated, and themes were formed based on multiple occurrences of important words and phrases found in the codes. Content analysis included memoing, bracketing, open coding, enumeration, and member checking to identify themes. In triangulating the data from the sources described above, the following themes were identified:

1. Factors based on Accommodations
2. Factors based on Accountability
3. Factors based on Compassion and Individuality
4. Factors based on Professors

## 5. Social Factors

For the analysis, five themes were identified which answered the four sub-questions of this study. The data collected from these sources were used to validate the theme identification and were then used to answer the central research question.

### **Summary**

Data were collected from participants including students and faculty. Semi-structured interviews and an online focus group generated lengthy discussions which provided rich, thick narrative text that was used to identify factors that impact learning for students with ASD. Documentation was used to further validate themes and trends revealed in the interview, online focus group, and documentation. The findings of the study informed five themes related to specific factors that impact learning for students with ASD. Following Chapter Four, Chapter Five will present the discussion, conclusions, and recommendations.

Based on this research, it seems necessary to support students both academically and socially. Without the academic supports, learner success is negatively impacted. Additionally, this research revealed that social factors that impact learning may be just as powerful as academic supports. No social supports are offered at this university. Perhaps the most important element of this research is that students with ASD have a strong need and desire to be supported both academically and socially by the disability support service offices in order to be successful in a residential university setting.



## **CHAPTER FIVE: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS**

### **Overview**

The purpose of this study was to research factors that impact learning for students with ASD through disability support services in a university. This chapter begins by presenting a summary of the research study findings. Following the summary of the findings is a discussion of the study findings in relation to the empirical and theoretical concepts found in the literature review. Additionally, this chapter will present theoretical, empirical, and practical implications based on the research study findings. Limitation of the research and recommendations for future research are also included.

### **Summary of Findings**

Since the purpose of this qualitative case study was to identify factors that impact learners with ASD in a university setting, it was necessary to explore the perceptions of students with ASD and faculty in the disability support offices to gain a comprehensive understanding of what factors impact learners with ASD in higher education. A case study design was utilized because it allowed for the investigation of a contemporary phenomenon within a real world setting (Yin, 2014). Data collected were able to answer each of the four research sub-questions and the central research question. Data were collected from 10 participants. Six of the participants were students with ASD and four of the participants were faculty of the disability support service offices. Data were collected via individual interviews, an online group discussion board, and documents. According to Creswell (2013) a complete findings section of the case study would “involve both a description of the case and themes or issues that the researcher has uncovered in studying the case” (p. 99). Through the process of coding and identifying patterns and themes, I was able to identify five themes concerning the factors that

impact learning for students with ASD in postsecondary education through disability support services. I was able to make sense of these themes by embracing the realities of multiple participant experiences. Viewing the research through the ontological lens and utilizing the tools of themes using the actual words of different individuals allowed me to report different perspectives as the themes developed (Creswell, 2013). As I analyzed and synthesized the data, I identified five themes that are utilized to answer the four research questions.

The five themes that were identified from the findings are factors based on accommodations, factors based on accountability, factors based on compassion and individuality, factors based on professors, and social factors. A summary of each question follows with a description of the findings that help answer the research question.

The first research sub-question sought to discover how students with ASD describe their experiences with the university's disability support service offices. From the analysis of the data, categories emerged that tied directly to student experiences related to the disability support service offices in reference to accommodations, accountability, compassion/individuality, professors, and social experiences. The majority of the participants described social and accommodation factors as having the most impact on their educational experiences. Based on the research, students learning experiences were primarily impacted by the accommodations they received or that were lacking, whether or not they were held accountable, whether they were treated with compassion as an individual or not, how they were treated by their professors, and whether or not they were able to find social acceptance.

The second research sub-question asked university faculty to describe their role in supporting students with ASD. Analysis of the data found that students and faculty had much in common when it came to what they perceived as factors that impact learning for students with

ASD. The most commonly mentioned word was accommodations. Other themes that developed were compassion, professors, social issues, and student preparation. Faculty members reported that the accommodations were an integral part of student success, but that other factors impacted learning as well. Two faculty members stated that students' social success was just as important, if not more important, than academic supports.

The third research sub-question was directed at both students and faculty and sought to determine what factors of the disability support offices were perceived by students and faculty as having a positive impact on student learning. Again, accommodations were noted most often with testing and note-taking accommodations mentioned most repeatedly. Additionally, being treated as an individual and with compassion was frequently mentioned by the students, and was also emphasized by faculty members. Professor interaction was noted as positive in some situations, especially when students were proactive, but not all professor interaction was noted as positive.

The fourth research sub-question sought to identify factors of the disability support offices that were perceived by students and faculty as lacking, ineffective, or as limiting to the student with ASD. Accommodations and social issues were interestingly most repeatedly noted. Students appreciated extra time on tests and having notes, but wanted additional accommodations such as social support, panic/escape room, and an accountability partner. Faculty gave a variety of answers including a one-on-one tutor, private counseling, and social supports indicating awareness of supports seen by students as lacking.

The central research question sought to synthesize the findings of the four research sub-questions. Factors of the disability support offices that impact learning in university students with ASD include accommodations, accountability, compassion/individuality, professors, and

social issues. Specifically, the precise accommodations that are offered or lacking make a difference in the educational success of students with ASD. Having or lacking an accountability partner impacted their learning. Whether or not a student was treated with compassion and as an individual also influenced their learning. Furthermore, interactions with professors and professor knowledge concerning students with ASD affected students' educational experiences in specific courses. Finally, whether or not the student was able to thrive socially influenced their learning in a university setting.

### **Discussion**

This section of chapter five discusses the findings of the research study in relation to the empirical and theoretical review of the literature in the second chapter. Empirical evidence established in the literature review regarding the factors that impact learning for students with ASD in a university setting is linked to the findings of this study. The empirical foundation is followed by a discussion of the connection between the research study findings and the theoretical framework for this study which is disability theory, as described by Barnes (2003) and Denhart (2008), and organizational implementation theory, as described by Simon (2007). Additionally, empirical, theoretical, and practical implications are communicated along with limitations of the research and recommendations for future research.

### **Empirical Foundation**

Limited studies have been conducted on disability support services for learners with ASD in higher education programs (Ackles et al., 2014; Autism Speaks, 2013; Gelbar, Shefcyk, & Reichow, 2015; Hart et al., 2010; Zager & Alpern, 2010). Research studies have been conducted on students with special needs in higher education (Gelbar et al., 2015; Pryor, 2007), but few studies have addressed the needs specific to students with ASD in higher education (Ackles et

al., 2014; VanBergejik et al., 2008; Zager & Alpern, 2010). Wei et al. (2014) reported that a variety of factors contribute to the success or failure of obtaining a college degree, but that more research is needed in order to fill this gap. The problem for students with ASD is that learning opportunities are hindered in postsecondary education since they are characterized by cognitive and social deficits (Matthews et al., 2015; Volkmar, Reichow, & McPartland, 2014; Wehmeyer & Shogren, 2013). This research revealed that student participants did perceive themselves as having cognitive and social deficits and this was echoed by the faculty participants. Findings from this study confirm that cognitive and social factors impact learning. The current research study corroborates the base of current literature while contributing the novel concept of specific factors that impact learners with ASD through disability support service offices in a university setting. These specific factors include accommodations, accountability, compassion/individuality, professors, and social factors.

**Theme one: accommodations.** The current base of literature, as reviewed in chapter two, addresses the two areas of how accommodations impact learning for students with ASD. These two subthemes are academic and social accommodations. The main accommodations given were testing and note-taking. Results from the current research substantiate the empirical evidence demonstrated in the literature review, but the current study furthers the knowledge base to include specific accommodations that are lacking. The main accommodation noted as lacking in this study were social accommodations.

The literature reflects that some students refused to ask for accommodations for fear of the stigma associated with having a disability (Denhart, 2008), but this research indicated that students were strong self-advocates and aggressively sought accommodations. The literature base stated that students who had received supports and accommodations in the K-12 public

school setting found higher education to be a challenge since they were now expected to self-advocate (Pryor, 2007). However, four out of the six student participants interviewed were not diagnosed until they entered college, and the remaining two students were homeschooled prior to college enrollment; therefore, no student participants received high school supports in a public school setting for ASD.

Accommodations definitely impact student learning. According to Orentlicher and Olson, (2010) “difficulty with sensory processing may be exacerbated by the distracting and stimulating atmosphere of campus housing and college classes resulting in difficulties studying in a messy and loud residence hall and difficulty focusing in a large, over-stimulating classroom” (p. 2). Both students and faculty participants expressed the importance of having testing accommodations. Students reported that having a quiet atmosphere, free from distractions was critical to focused thought processes. Only one student reported that testing was not an important accommodation to her, but she also reported that her intelligence quotient (IQ) was “off the charts, literally.” Faculty members in the testing center reiterated this information by stating that students thrived in a calming and quiet atmosphere that met their emotional and academic needs.

Universities do not alter coursework or degree requirements, but they can enlist the disability support service offices to ensure that barriers are removed in order to offer equal opportunity for students with ASD to participate in postsecondary educational options (Thomas, 2000). The findings at this university confirmed this. Accommodations for students with ASD did not include eliminating assignments, changing assignments, altering enrollment policies, or altering graduation requirements.

**Theme two: accountability.** From the current literature base, accountability is reviewed in accordance with deficits in executive functioning. Assignments that are unfamiliar or unpredictable, such as those in a new college environment have higher executive function demands than those from high school situation. Orentlicher and Olson, (2010) report that students with ASD may have decreased self-determination skills such as being aware of one's strengths and limitations, goal setting and attainment, capacity for monitoring performance, and self-advocacy. The results of this research study supported this notion as students preferred one-on-one accountability. Deficits in higher level cognitive skills, called executive functioning, such as planning, organization, judgment, problem-solving, and cognitive flexibility are common for students with ASD (Orentlicher & Olson, 2010) and may cause them to feel the need to be held accountable. Additionally, decreased executive functioning can negatively affect the student's ability to manage time and create routines that are necessary to be successful in a university setting (Geller & Greenberg, 2009). Student participants reported being disorganized and unable to submit assignments in a timely manner. They desired to have someone hold them accountable for organizing their assignments and submitting them on or before the assignment due date. Universities are not as conducive to individualized services as home school parents or high schools, therefore, students are not likely to have the degree of accountability they desire. Results of this research validate the current literature, but add to the base in that students sought creative ways to gain an accountability partner by advertising on Facebook or soliciting a network of friends through the disability support service offices with permission from both participants.

**Theme three: compassion/individuality.** Being treated with compassion and as an individual are certainly not new concepts and are not specific to students with ASD, but both

were deemed important by students and faculty. When questioned about their experiences with the disability support services, all students referred to their experiences as being uniquely their own. And though students with ASD typically have deficits in self-determination skills such as being aware of their own strengths and limitations, all students were aware of the fact that their needs were different from all other students with ASD. Buron and Wolfburg (2013) state that when you have met one individual with autism, you have met one individual with autism. This further emphasizes the uniqueness of each student with ASD. By definition, the concept of a spectrum disorder establishes that although individuals diagnosed with ASD may present many common characteristics, considerable variation in the manifestation and severity of the disability exists (Buron & Wolfberg, 2013). Many individuals with ASD may refer to themselves as having Asperger's, as this indicates a high-functioning performance level as compared to others with ASD (Oslund, 2013), even though the term "Asperger's" is no longer used in the DSM-5.

This research also adds to the current literature base the novel idea that students with ASD expect to be treated as individuals in a compassionate manner and have their unique needs met through the disability support service offices. Since autism is a spectrum disorder, an individual's abilities are impacted in different ways and in varying degrees. Some individuals have significant learning disabilities and require high degrees of support, while others are high functioning and require little academic support. Students with ASD solicit accommodations and supports from the disability support service offices in order to help them succeed in a university setting. Faculty members at this university reiterated this notion. Faculty were keenly aware of the emotional needs of students and sought to support them, oftentimes going above and beyond the lawful requirements.



**Theme four: professors.** Both the current literature and the current research study results support the benefits of effective professors. According to Grynszpan et al. (2014), the presence of an effective teacher may influence the success of accommodations and interventions, therefore researchers should carefully assess the role of the teacher when determining accommodations and interventions. This becomes more difficult at the university level, as many employees of the disability support service offices are not familiar with each professors teaching style, strengths and weaknesses. Faculty of the disability support service offices in this study substantiate this literature by noting the lack of relationship between university professors and employees of the department of disability services. “Teachers have specific roles and leadership is usually respected – unless it appears fuzzy, illogical, poorly organized and thus frustrating and even hard to understand” (Oslund, 2013, p. 53). An additional idea suggested, although less frequently, by faculty and students was professor training.

**Training.** Since students with ASD have expressed a degree of dependency on teacher interactions, professional development training should be provided for advisers and professors within higher education environments in order to best meet the needs of their students (Leblanc, Richardson, & Burns, 2009). Educators specifically trained to work with students with ASD typically change their perception regarding the student and become more knowledgeable and prepared to teach these students (LeBlanc et al., 2009). Gillespie-Lynch et al. (2015) developed online training to educate students without ASD in regard to students with ASD. Results reveal that online training may be an effective and inexpensive way to decrease stigma associated with students with ASD in college. Furthermore, research indicates that even a small amount of professional development can have a measureable influence on both the teacher and the student in the integrated classroom (LeBlanc et al., 2009).

Hart et al. (2010) emphasize the need for instructors to maintain the rigor of college level work and courses, and not to minimize what is expected for students with ASD. They affirm, “if a student requires modifications, the responsibility falls to the student and to those providing assistance to ensure the course material is accessible and the student will be able to successfully participate” (Hart et al., 2010, p. 137). However, success is not guaranteed.

An understanding of the general characteristics of ASD needs to be coupled with each unique learner’s needs and abilities (Mitchell & Beresford, 2014). According to three of the four faculty members, faculty training specifically for students with ASD would increase professor knowledge and efficacy, however, all four faculty members expressed the difficulty in implementing faculty training. One faculty member stated that he offers a workshop at the beginning of every semester and only one or two faculty members attend the training. Another faculty member stated that in order to get professors to participate in training it would need to be a university requirement; otherwise, most will not voluntarily attend. It was further stated that on the one hand, students with ASD would benefit from professors having training specific to students with ASD, but on the other hand, the disability support service offices serve a multitude of students with varying disabilities, so singling out students with ASD eliminates all other disabilities from professor training.

***Faculty’s role.*** Since the faculty’s role is essential to support, service, and success, determining the faculty’s role in providing accommodations and interventions may clarify students’ expectations, which is seen as a part of the success or failure of a student with ASD (Osland, 2013). Faculty in the current research study stated that their role is to act as the liaison between the student and the professor. Professors were reported as needing to be reminded of their role and responsibility toward the student with ASD on multiple occasions. This leaves the

student and faculty member frustrated. Occasionally, one faculty member wondered “who has the disability, the student or the professor?”

**Theme five: social factors.** The final concept from the current literature on factors that impact learners with ASD in higher education through disability support service offices is social factors. Ackles et al. (2014) stated that,

While institutions of higher education have developed pathways and supports to meet ADA requirements for students with disabilities, some of the unique supports typically needed by students with ASD are often not addressed within the traditional accommodations or college support services framework (p. 7)

This holds true for the current research study. This institution closely aligned accommodations to lawful requirements, which limited the accommodations available for students, especially in regards to social issues.

Social challenges for students with ASD involve understanding and affectively using verbal and nonverbal social skills, timing and intensity in conversations, humor, sarcasm, subliminal messages, assertiveness, expressions of intimacy and sexuality, and more (Geller & Greenberg, 2009; Orentlicher & Olson, 2010; Zager & Alpern, 2010). All of these factors make it difficult to communicate and develop and maintain relationships in a university setting. This was substantiated by this current research study. Faculty members expressed that most students with ASD presented themselves as socially awkward. This was further emphasized by the student participants. One student left the university setting as social pressures were too much for her to handle. Another student expressed a desire for more friends and frustration with not knowing how to develop that kind of a relationship. Other students expressed a desire for social

supports in the form of a “study buddy” or social situations arranged specifically by the university for students with ASD and/or students with disabilities.

In postsecondary education, symptoms are oftentimes recognized by peers and professors, but not specifically addressed with interventions. This leaves students feeling socially frustrated. And although many students with ASD can achieve success in an inclusive environment, it is essential that their social needs are recognized and appropriate interventions are provided (Friend, 2015). Since students with ASD are characterized as having social skills deficits, succeeding socially in a university setting may be impossible without appropriate accommodations. This research contends that even though social skills are an essential part of academic success for students, unfortunately, social skills are not recognized as an academic support, and are therefore not accounted for.

Results of a study by Gelbar et al. (2015), revealed that students with ASD reported succeeding academically while failing socially. Five out of the six students from this current research study indicated that their learning had been negatively impacted by social factors. One student was able to connect with a pre-existing missionary group of students through parental contacts, so he did not feel the need for social supports. However, the remaining five student participants expressed a deep emotional longing to feel like they fit in, but admitted that they do not have the social skills necessary to do so. Lacking social relationships had a negative effect on their educational experience.

Three students in this research study expressed frustration with the notion that students with ASD are perceived as not being interested in social relationships. This is corroborated by White, Oswald, Ollendick, and Scahill (2009) who report that this is a common misconception. Two faculty members stated that these students prefer to be alone. However, all student

participants expressed a different opinion. According to Bauminger et al. (2008) young adults do have a desire for friendships similar to that of their typically developing peers, but most do not understand socially accepted behaviors necessary to develop such relationships. The misconception that students with ASD prefer isolation further exacerbates the social problems faced by students with ASD in the university setting, as many are expected to want to be alone, even though this was not the case with the current research study participants. This was supported by all of the students who stated that they do have social challenges, even the student who was part of the pre-existing missionary group.

*With peers.* As noted by most participants, individuals with ASD suffer socially. Individuals with ASD “tend to have communication deficits, such as responding inappropriately in conversations, misreading nonverbal interactions, or having difficulty building friendships appropriate to their age” (APA, 2013b, p. 2). During interviews, students often struggled with finding the best choice of words and oftentimes re-phrased what they first stated. Two students struggled with the back and forth of a typical conversation and spoke over my sentences. This difficulty in communication impacts the ability to build relationships, making it difficult to develop lasting friendships. When students do not have peer relationships, they struggle emotionally, which can impact their learning. White et al. (2009) furthered this by stating that individuals with ASD experience loneliness in the absence of friendships which impairs their self-esteem.

In a study conducted by Gillespie-Lynch et al. (2015), neurotypical students were given online training to understand students with ASD. Results indicated that training did diminish the stigma associated with the disability, however, students without ASD were relatively unwilling to be involved romantically with individuals with ASD. Billstedt, Gillberg, and Gillberg (2011)

reported that few adults with ASD have romantic relationships or friendships. In a recent study aimed at improving social leisure activities for students with ASD utilizing the Program for University Supports for People with Autism, 94.8% of participants found *very high* or *quite high* satisfaction with the program suggesting that intervention may help improve social outcomes for students with ASD in a university setting (Neito et al., 2015). These results indicate that adding a social accommodation or support for students with ASD may increase their learning by decreasing the negative social factors they experience as a result of the stigma associated with ASD. However, social accommodations are not lawfully mandated and are not offered at this university.

Five student participants communicated experiencing social anxiety to the point of either leaving the classroom or leaving the university, and absence from the classroom impacts learning. In a study by Sebastian, Blakemore, and Charman (2009) adolescents with ASD responded to social exclusion similar to that of their non-disabled peers, but with elevated anxiety. These elevated anxiety levels discourage the learning process.

Lacking social skills may cause students with ASD to refrain from social activities. Four of the five student participants expressed a desire or willingness to attend socials that were specifically arranged for students with special needs stating that this would give them a commonality in which to establish a relationship.

According to White et al. (2011), isolation and loneliness impact the emotional well-being of students with ASD in college. Based on their research there is a need to consider “psychiatric comorbidities and academic/life dissatisfaction among the list of potential concerns” (White et al., 2011, p. 697) for students with ASD in college. "If negative perceptions exist among peers, the child's social exchanges, social life, and self-concept might be negatively

affected” (Payne & Wood, 2015, p. 1). Furthermore, when students with ASD perceive negative attitudes from family members, educators, or support service personal, educational performance is negatively impacted (Flouri, Midouhas, Charman, & Sarmadi, 2015; Ling, Mak, & Cheng, 2010). This overlaps with the third theme of compassion/individuality and further emphasizes that social factors negatively impact learning if social needs remain unmet for students with ASD.

A study by Mazurek (2014) revealed that loneliness, friendships, and emotional functioning satisfaction rates were low among adults with ASD. “Loneliness was associated with increased depression and anxiety and decreased life satisfaction and self-esteem, even after controlling for symptoms of autism spectrum disorder” (p. 223). Furthermore, a study conducted by Byers and Nichols (2014) revealed a connection between increased ASD characteristics and decreased relationship satisfaction rates. Relationship satisfaction, loneliness, and social well-being have a strong impact on happiness and quality of life. Despite assumptions, not all persons with ASD prefer isolation; however, for those that do, an online education may be preferable to a residential college education, as was the case with one participant in this study. It is still important, however, to provide social supports for students with ASD in order to prevent feelings of loneliness and depression and promote success.

***With professors.*** As noted by Wiorkowski (2015), at the college level, students reported that instructors put too much emphasis on social interaction, such as group work, which left the student feeling frustrated. Several students agreed stating that they found group work especially frustrating since they lacked the social skills necessary to feel confident to work in a group situation. Furthermore, students emphasized that presentations were especially traumatic and suggested allowing the student to present exclusively to the professor to avoid the extreme

anxiety caused by such social pressure. Oftentimes underlying sensory processing deficits manifests itself in anxiety (Orentlicher & Olson, 2010) which can result in panic attacks. Several students reported having panic attacks while in class. One reported having to “escape” class and go to a private location. For this student, it was the bathroom stall, since no panic room was available on campus in which to retreat.

The current research study noted earlier that both faculty and students suggested more professor training. This is also reiterated in the literature. LeBlanc et al. (2009) states that educators specifically trained to work with students with ASD typically change their perception regarding the student and become more knowledgeable and prepared to teach these students.

Although accommodations, accountability, compassion/individuality, professors, and social factors were described above separately, these areas often overlap in academic and social settings and can be overwhelming for a student with ASD, resulting in an unsuccessful university experience. Individuals with ASD have many strengths, and their strengths in conjunction with appropriate supports have the potential to make higher educational opportunities possible for the students. However, there is a lack of literature on the connection between the social needs of students with ASD and the role of disability support offices. Unfulfilled social needs may impact employment and postsecondary education. This research study adds to the literature by exposing a greater depth of impact for students with ASD whose social needs remain unmet.

### **Implications**

The implications of this research stem from the central research question: what factors of the disability support offices impact learning in university students with ASD? According to (Creswell, 2014, p. 99) “case studies often end with conclusions formed by the researcher about the overall meaning derived from the case.” Stake (1995) calls these assertions. Yin (2009) calls



them building patterns or explanations. For the purposes of this study, the overall meaning derived from the case are called implications. These will be discussed in terms of the guiding theoretical frameworks and the empirical and practical implications.

### **Theoretical**

I chose to include two theoretical frameworks to provide the foundation for this study because of the focus on student and faculty perceptions. The disability theory (Barnes, 2003; Denhart, 2008) posits that disability is socially constructed and attributes any difficulties and limitations experienced by individuals with disabilities to obstacles placed on the individual by society. Parts of the organizational implementation theory postulates that organizations can be improved by adjusting the way the limits are defined and executed (Simon, 1997). Using both frameworks provides dual structures for understanding the factors that impact learning for students with ASD through a university's disability support service offices.

The theoretical frameworks for this study provided a systematic guide for better understanding factors that impact learning for students with ASD through a university's disability support services. In identifying factors that impact learning for students with ASD, the theoretical analysis of the findings suggest a connection exists between factors that impact learning as perceived by students and decision-making by the faculty. All six student participants disclosed factors of the disability support services that they felt impacted their learning. Additionally, faculty revealed factors of the decision-making process, such as adhering to the lawful requirements that led to factors that impacted learning for students with ASD. Utilizing both theoretical frameworks provided dual structures for understanding the phenomena.

### **Empirical and Practical**

The application of the empirical and practical results of this study may affect parents of

high school students with ASD that desire a college education and college students with ASD since the results reveal factors that contribute to success in higher education. Additionally, faculty of the disability support offices and other educators and professionals who work with students with ASD may benefit from results of this research on factors that impact learning for students with ASD in higher education as new empirical information was revealed.

**Parents of students with ASD.** For parents, the information revealed pertaining to all five themes is important for the success and contentment of their college-age child with ASD. Understanding the accommodations that are available, and which accommodations are essential for their child, may inform the decision-making process when choosing a university. Additionally, either choosing to serve as an accountability partner or securing one for their child may impact the students' success. The research revealed that being treated as an individual and with compassion were essential for success. Each student with ASD is unique (Buron & Wolfburg, 2013) and most do not adjust well to change (Barnhill, 2014). Parents who apply this information to their college-bound student may be encouraging a successful attitude by supporting their need for individuality and compassion. Professors were also deemed as a high priority for students with ASD. Though parents do not have the option of choosing professors in most universities, parents who are aware of this dynamic may make better-informed decisions for their child. Social factors were revealed by the majority of participants to be the most influential factor impacting success. Since this is not an accommodation enforceable by lawful means, parents who are aware of this factor may take steps necessary to support their child's social needs independent of the disability support service offices.

**Students with ASD.** Since students are expected to self-advocate at the college-level, it is essential that they are aware of factors that impact their learning through the disability support

service offices including which accommodations are available. Some students were not aware of every accommodation that was available to them, which had an overall negative impact on their educational experience. Not all students had a strong desire for an accountability partner, but five of the six student participants deemed it an influential factor. Professors also make a difference for students with ASD. The research revealed that communication was a key factor and students who initiated the communication with the professor seemed to benefit most. Since social factors were deemed the most influential factor in student success, students need to anticipate this deficiency and plan accordingly. Understanding that this is one of the most influential factors for students with ASD may help them to devise a plan to build relationships.

**Faculty of disability support service offices.** The results of this research reveal that faculty of the disability support services are highly influential in the decision-making process for which accommodations are offered and which are not. This directly aligns with the organizational implementation theory (Simon, 1997). Faculty input revealed that the most sought after accommodations were extended time on tests and a note-taker. Though students desired one-on-one accountability, this was an accommodation not offered. A counselor was available, as was a tutor, but not one specific person per student with ASD. Faculty who understand that this may be a need for some students may look for creative ways of implementing this such as student or community volunteers. Another accommodation requested that was not offered is a “panic room.” For these students, a place of escape, other than the bathroom stall, was important. Again, this may be an accommodation that faculty of disability support services may look into providing in a creative way such as a small private office or large closet. Faculty noted their role as acting as a liaison between the student and the professor. Students noted communicating with the professors as stressful. Since this was revealed as a need

for students, and it is an admitted role of faculty, perhaps there is a way to improve communication efforts for all parties involved. Students, professors, and disability support staff may all improve performance if communication is more effective. Finally, most faculty stressed the influence of social skills deficits and the challenges that students with ASD face when trying to establish friendships. Though social supports are not required by law, perhaps supporting the whole student, including social needs, may increase student success through the disability support service offices. Students requested social events specifically for students with special needs and compared this to the university organized blind and deaf social events, as well as the foreign students' socials.

**Professors, other educators and professionals.** Since the results of the study reveal factors that impact learning for students with ASD through disability support service offices, other educators and professionals may benefit from this research as well. For example, high school administrators and teachers who are responsible for students with ASD may take these five factors into consideration when developing the goals and objectives for the student's transition plans. Additionally, high school and university counselors and advisors may find this information useful when advising students with ASD or assisting them in registering for courses. Finally, health care providers may benefit from understanding the factors that influence successful outcomes for students with ASD through a university's disability support service offices.

### **Limitations**

Qualitative research comes with limitations due to the naturally occurring reduced sample size, participant self-reporting, and researcher bias (Blomberg & Volpe, 2012; Creswell, 2013). Small sample size and lack of participant diversity are limitations of this study. Among the 10

participants, all were Caucasian and from the United States with the exception of one student who was born and raised in Ireland. It did not appear that race was a concerning factor in this study, but lack of diversity is certainly a limitation.

Delimitations to the study include such predetermined restrictions as participant criteria, geographic location, and a single university selection. Participants in this study were limited to students with ASD enrolled or formerly enrolled (within the last year) in the university. Including only students with ASD narrowed the focus of this study to specific participants in order to gain information pertinent to this student population. Therefore, results cannot be transferred to students without ASD or students not attending a university. Students were self-reporting and may have misrepresented their experiences with the disability support service offices, diagnosis, or demographic information. Yin (2014) states that researchers cannot expect exact recollections of life experiences from participants. Furthermore, only university faculty associated with the disability support service offices were included as participants. Including only faculties associated with disability support service offices limited participants to only those with specific information relevant to the phenomenon being studied. Therefore, results cannot be transferred to universities without disability support service offices. All participants were volunteers, which could indicate a predetermined agenda. Additionally, focusing on a Christian university naturally delimits the study, however, Christianity was not the focus of this study. Such limitations and delimitations might affect replication of the research with different participants in a different geographic location.

Another limitation of the study is researcher bias. I am currently associated with the university, but do not work in any capacity in the disability support service offices and I do not work with the students with ASD. In addition, I currently teach courses on autism and am fairly

knowledgeable about students with ASD and accommodations. I took careful measures to eliminate this bias from interfering with participant interviews by remaining as neutral as possible during all interactions with participants. I also took careful measures to remain unbiased by not communicating approval or disapproval of responses during interviews as participants answered the questions. I also presented myself in a friendly manner to create an atmosphere where participants felt comfortable sharing their honest opinions. Withholding my opinion and remaining friendly was highly effective in eliciting honest, open responses from participants during interviews.

Finally, the research model is not specifically transferrable to all university settings, but it should be adaptable to virtually any university by simply adapting the participant criteria and geographic location. However, all noted limitations and delimitations may result in a lack of generalizability common to all case studies (Yin, 2014).

### **Recommendations for Future Research**

The current research study provided a path for new educational research. Factors that impact learning for students with ASD in a university setting should be conducted in greater depth in regards to limiting the participants to only students. Conducting a study without faculty participants may yield more in-depth information concerning student views pertaining to learning needs associated with ASD. A review of the literature revealed a gap that could be filled by duplicating this study utilizing only student participants.

Replicating this study to include students and parents may also yield important information. Parents are typically the advocate for the student until the student enters college. Parents' insight may reveal factors unknown to faculty and may therefore provide valuable insight into factors that impact student learning for their child.

Future research is also necessary to include a more diverse population. All participants in this study were Caucasian. Conducting a study with a more diverse population may reveal different results and thus illuminate other factors that impact learning for students with ASD through disability support service offices.

Based on data collected from both students and faculty, it was noted that most students who have ASD do not seek accommodations, therefore, future research on the student population that does not seek services are recommended.

Future quantitative research is also recommended. It is recommended that the relationship between accommodation factors and student achievement should be studied. Are students who seek and utilize accommodations more likely to demonstrate greater student achievement? This line of study could also apply to social factors that impact learning for students with ASD, as students felt very strongly about this factor.

### **Summary**

The goal of this study was to explore the factors that impact learning for students with ASD through a university's disability support service offices. Identifying these factors is important as an increasing numbers of students with ASD are enrolling in post-secondary educational institutions (Gelbar, Shefcyk, & Reichow, 2015). Since students with ASD are pursuing higher education, it is important to understand the support systems necessary for success by this student population through the disability support service offices.

The findings of this study provided five themes to assist in identifying these factors. Of the five themes, accommodations and social supports were most notable. Accommodations, whether provided or lacking, had the power to determine outcomes in the form of grades, even to the point of failure. Recognizing that all students with ASD have unique accommodation needs

is critical for success, as it is only the provision of supports that meet the need that will enhance outcomes.

Social supports, which are almost non-existent, caused one student to drop out of college and pursue an online degree. Other students felt exceptional degrees of loneliness and depression as a result of lacking social supports. Parents, students with ASD, and educators and professionals who work with students with ASD alike can use the information gleaned from this research to make informed decisions regarding educational opportunities. Knowing what factors impact learning, whether positively or negatively, will help parents, students, university faculty, and other professionals working with students with ASD to make informed decisions. Being able to identify factors that impact learning may potentially be the difference between the success or failure for the student with ASD.



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## APPENDICES

APPENDIX A  
IRB Approval Letter**LIBERTY UNIVERSITY**  
INSTITUTIONAL REVIEW BOARD

April 18, 2016

Bunnie Claxton

IRB Approval 2500.041816: A Case Study of an Office of Disability Academic Support Services in Higher Education for Students with Autism Spectrum Disorder

Dear Bunnie,

We are pleased to inform you that your study has been approved by the Liberty IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,



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APPENDIX B  
Student Participant Email

Dear Student:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for an Ed. D in Curriculum and Instruction. The purpose of my research is to identify factors of the Office of Disability Academic Support (ODAS) services that impact learners with autism spectrum disorder (ASD) in a university setting, and I am writing to invite you to participate in my study.

Participants must be 18 or older, currently enrolled at Liberty University, must have ASD, must have sought services from ODAS, and be willing to participate. You will be asked to participate in an individual interview and in a focus group interview. It should take approximately 45 minutes to one hour for each interview. Interviews will be scheduled at your convenience and may be face-to-face, a phone interview, or an electronic interview such as Skype or WebEx, whichever you are most comfortable with. Your participation will be completely confidential, and no personal, identifying information will be revealed to anyone except the researcher. Interviews will be audio and/or video recorded.

To participate, click on this Survey Monkey link: <https://www.surveymonkey.com/r/737XRQM> and complete the 8-item questionnaire. I will contact qualifying participants via the email address provided on the survey.

A consent document will be emailed prior to participation in the interview and focus group. The consent document contains additional information about my research. It will need to be signed electronically and returned to the researcher via email prior to participation.

If you choose to participate in both the interview and the focus group, you will receive a \$25.00 Visa gift card.

Sincerely,

Bunnie Claxton  
Liberty University

APPENDIX C  
Faculty Participant Email

Dear Faculty:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for an Ed. D in Curriculum and Instruction. The purpose of my research is to identify factors of the Office of Disability Academic Support (ODAS) services that impact learners with autism spectrum disorder (ASD) in a university setting, and I am writing to invite you to participate in my study.

Participants must be currently employed at Liberty University in either the Office of Disability Academic Support (ODAS) services or an office in association with ODAS. You will be asked to participate in an individual interview and in a focus group interview. It should take approximately 45 minutes to one hour for each interview. Interviews will be scheduled at your convenience and may be face-to-face, a phone interview, or an electronic interview such as Skype or WebEx, whichever you are most comfortable with. Your participation in the interview will be completely confidential, and no personal, identifying information will be revealed to anyone except the researcher. Participation in the focus group will not be anonymous. Interviews will be audio and/or video recorded.

To participate, click on this Survey Monkey link: <https://www.surveymonkey.com/r/738VVJZ> and complete the 5-item questionnaire. I will contact qualifying participants via the email address provided on the survey.

A consent document will be emailed prior to participation in the interview and focus group. The consent document contains additional information about my research. It will need to be signed electronically and returned to the researcher via email prior to participation.

If you choose to participate in both the interview and the focus group, you will receive a \$25.00 Visa gift card.

Sincerely,

Bunnie Claxton  
Liberty University

APPENDIX D  
Student Consent Form

Review Board has approved  
This document for use from  
4/18/16 to 4/17/17  
Protocol # 2500.041816

A Case Study of Disability Support Services in Higher Education for Students with Autism  
Spectrum Disorder

*Bunnie L. Claxton*  
School of Education

Bunnie Claxton, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

**What the study is about:**

The purpose of this study is to investigate and identify the factors that impact learners with ASD at the college level through a single case study of Liberty University's ODAS.

**Procedures:**

If you agree to participate in the study you agree to participate in a 60-minute interview with the researcher either via WebEx, Skype, phone, or face-to-face. The interview will be recorded. Questions will pertain to your experience with ODAS. If needed, a 30 minute follow up interview with the researcher may be requested, which will also be recorded. Further, you will be asked to read the researcher's findings of your interview, which may take approximately an hour. You will have an opportunity to discuss the findings with the researcher.

**Risks and Benefits of being in the Study:**

Being involved in this type of study involves some minor discomfort risks that may be encountered in discussing information of a personal nature such as experiences with a disability. This study will not pose a risk to your safety or wellbeing. Through participation in the research, you may reflect on your experiences with ODAS. In addition, your participation, access to the study results, and personal reflection may allow you to improve performance in future endeavors.

Additionally, a greater understanding of factors affecting college performance for students with ASD can lead to developing informed institutional policies designed to improve academic performance and degree completion rates. Students who are successful in achieving their academic goals or degrees may find greater success in the job market.

**Compensation:**



If you choose to participate in both the interview and the focus group, you will receive a \$25.00 Visa gift card.

**Confidentiality:**

Any information you provide will be kept confidential. The researcher will not use your personal information for any purpose outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. In signing this form, you consent to audio recording of the interview, which will contain no reference to your identity. Your name will not be associated with the transcribed interviews or analysis because identifying information will be removed prior to the onset of the interviews.

**Taking part is Voluntary:**

You are not obligated to participate in the study. You may refrain from answering any interview question you do not want to answer. Failure to participate in this study will not affect your standing at Liberty University.

**Withdraw from the Study:**

You may withdraw from the study at any time by emailing the researcher at [blclaxton@liberty.edu](mailto:blclaxton@liberty.edu). Information collected prior to withdrawal will not be included in the study and will be destroyed.

**Contacts and Questions:**

You may ask any questions you have now. If you have questions later, you may contact the researcher via email at [blclaxton@liberty.edu](mailto:blclaxton@liberty.edu) or by phone at 434-229-0003. You may also contact the researcher's advisor, Dr. Deanna Keith, at [dlkeith@liberty.edu](mailto:dlkeith@liberty.edu).

If you have questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Institutional Review Board, 1971 University Blvd., Carter 134, Lynchburg, VA 24515 or email at [irb@liberty.edu](mailto:irb@liberty.edu).

You will be given a copy of this to keep for your records.

**Statement of Consent:**

I have read the above information and I feel I understand the study well enough to make a decision about my involvement.

By signing below, I agree to participate in the study AND consent to having the interview audio-recorded.

The researcher has my permission to audio-record and video-record me as part of my participation in this study.

Participant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Participant Name (Printed): \_\_\_\_\_

APPENDIX E  
Faculty Consent Form

A Case Study of Disability Support Services in Higher Education for Students with Autism Spectrum Disorder

*Bunnie L. Claxton*

██████████  
School of Education

Bunnie Claxton, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

**What the study is about:**

The purpose of this study is to investigate and identify the factors that impact learners with ASD at the college level through a single case study of ██████████ University's Office of Disability Academic Support (ODAS).

**Procedures:**

If you agree to participate in the study you agree to participate in a 60-minute interview with the researcher either via WebEx, Skype, phone, or face-to-face. The interview will be recorded. Questions will pertain to your experience with ODAS. If needed, a 30 minute follow up interview with the researcher may be requested, which will also be recorded. Further, you will be asked to read the researcher's findings of your interview, which may take approximately an hour. You will have an opportunity to discuss the findings with the researcher.

**Risks and Benefits of Being in the Study:**

I do not anticipate any risks to you participating in this study other than those encountered in day-to-day life. This study will not pose a risk to your safety or wellbeing. Through participation in the research, you may reflect on your experiences with ODAS. In addition, your participation, access to the study results, and personal reflection may allow you to improve performance in future endeavors.

Additionally, a greater understanding of factors affecting college performance for students with autism can lead to developing informed institutional policies designed to improve academic performance and degree completion rates. Students who are successful in achieving their academic goals or degrees may find greater success in the job market.

**Compensation:**

If you choose to participate in both the interview and the focus group, you will receive a \$25.00 Visa gift card.

**Confidentiality:**

Any information you provide will be kept confidential. The researcher will not use your personal information for any purpose outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. In signing this form, you consent to audio recording of the interview, which will contain no reference to

your identity. Your name will not be associated with the transcribed interviews or analysis because identifying information will be removed prior to the onset of the interviews.

**Taking part is voluntary:**

You are not obligated to participate in the study. You may refrain from answering any interview question you do not want to answer. Failure to participate in this study will not affect your standing at [REDACTED] University.

**Withdraw from the Study:**

You may withdraw from the study at any time by emailing the researcher at [blclaxton@liberty.edu](mailto:blclaxton@liberty.edu). Information collected prior to withdrawal will not be included in the study and will be destroyed.

**Contacts and Questions:**

You may ask any questions you have now. If you have questions later, you may contact the researcher via email at [blclaxton@liberty.edu](mailto:blclaxton@liberty.edu) or by phone at 434-343-5454. You may also contact the researcher's advisor, Dr. Deanna Keith, at [dlkeith@liberty.edu](mailto:dlkeith@liberty.edu).

If you have questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Institutional Review Board, 1971 University Blvd., Carter 134, Lynchburg, VA 24515 or email at [irb@liberty.edu](mailto:irb@liberty.edu).

You will be given a copy of this to keep for your records.

**To Participate in the Study:**

Please contact the researcher, Bunnie L. Claxton. Please use the following information to ask questions concerning the study: [blclaxton@liberty.edu](mailto:blclaxton@liberty.edu)

**Statement of Consent:**

By signing below, I agree to participate in the study AND consent to having the interview audio-recorded.

The researcher has my permission to audio-record and video-record me as part of my participation in this study.

Participant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Participant Name (Printed): \_\_\_\_\_

APPENDIX F  
Demographic and Interview Questions  
For Students

**Demographic Questions:**

Name: \_\_\_\_\_

Gender: (circle one) Male Female

Age: \_\_\_\_\_ Birthdate: \_\_\_\_\_

Race/Ethnicity: (circle one) Caucasian African America Hispanic  
Asian/Pacific Islander Native America Other \_\_\_\_\_

Native Language: \_\_\_\_\_

Parental Employment: \_\_\_\_\_

Family Income: \_\_\_\_\_

Type of Disability: \_\_\_\_\_

Level of Disability: (circle one) Mild Moderate Severe

**Interview Questions:**

1. Please describe your educational high school experience including accommodations and modifications received.
2. Please describe your Individual Education Plan (IEP).
3. Please describe your experience in transitioning to [REDACTED] University.
4. What have been your favorite subjects while attending [REDACTED] University?
5. Please describe your association with [REDACTED] University and how long you have been connected with the school.
6. What specific ways have your professors helped you in class related to your disability?
7. Are/were you comfortable asking for accommodations? Why?

8. Please describe the process you went through to obtain accommodations.
9. What supports are/were most influential for your success?
10. Which supports were missing or deficient?
11. What additional supports would have improved your educational experience? Include both academic and non-academic supports.
12. Describe an ideal disability support office.
13. What are your goals after attending [REDACTED] University?
14. Is there anything else you would like to mention about your experience with the disability support service offices?

APPENDIX G  
Demographic and Interview Questions  
For Faculty

**Demographic Questions:**

Name: \_\_\_\_\_

Gender: (circle one) Male Female

Age: \_\_\_\_\_ Birthdate: \_\_\_\_\_

Race/Ethnicity: (circle one) Caucasian African America Hispanic

Asian/Pacific Islander Native America Other \_\_\_\_\_

Native Language: \_\_\_\_\_

Parental Employment: \_\_\_\_\_

Family Income: \_\_\_\_\_

Type of Disability: \_\_\_\_\_

Level of Disability: (circle one) Mild Moderate Severe

1. Please describe your association with █████ University and how long you have been connected with the institution?
2. How would you describe your role in supporting students with disabilities?
3. How would you describe your role in specifically supporting students with ASD?
4. What do you see as the strengths of the disability support offices?
5. How would you describe your comfort level in working with students with ASD?
6. In what ways could the disability support offices improve the supports and accommodations offered to students with ASD?

7. What training, if any, is provided to help faculty understand and provide services for students with ASD?
8. What supports do students request from the disability support offices that are not offered?  
Please describe.
9. Describe an ideal disability support office.
10. What future plans are there for adding or alternating services for students with ASD?
11. Is there anything else you would like to mention about the disability support offices?

APPENDIX H  
Online Focus Group Interview Questions

1. How does the disability support service offices impact student learning at [REDACTED] University?
2. What factors of the disability support service offices do you believe have the greatest impact on learning at [REDACTED] University? Why?
3. What factors of the disability support service offices do you believe have the greatest negative impact on learning at [REDACTED] University?
4. How do disability support service offices strive to meet the needs of students with ASD?
5. How would you describe the role of disability support service offices faculty in supporting students with ASD?
6. If you could change three things about disability support service offices, what would those three be, and why?
7. What else would you like to say about [REDACTED] University's disability support service offices department or student learning?