The Measurement of Self-Directed Learning Among Postsecondary Disability Services Administrators

LaKeshia Marche Alexander
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THE MEASUREMENT OF SELF-DIRECTED LEARNING AMONG POSTSECONDARY DISABILITY SERVICES ADMINISTRATORS

by

LaKeshia Marche Alexander

Abstract of a Dissertation Submitted to the Graduate School of The University of Southern Mississippi in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

May 2013
ABSTRACT

THE MEASUREMENT OF SELF-DIRECTED LEARNING AMONG POSTSECONDARY DISABILITY SERVICES ADMINISTRATORS

by LaKeshia Marche Alexander

May 2013

With increasing budget cuts, decreasing funds for training opportunities, and increasing demands for services for students with disabilities, there is a need for researchers to identify how DSAs prepare for and operate in their positions in disability services (Madaus, 1998). The researcher proposes that like many adults, DSAs may be engaging in self-directed study to gain the necessary knowledge and skills needed in order to perform their jobs effectively.

The purpose of this study was to examine whether a relationship existed between self-directed learner readiness and the number of learning projects completed by disability services administrators (DSAs) in the postsecondary setting. The researcher examined the types of learning project planners, as defined by Tough (1979), that disability services administrators used. A self-created instrument based on Tough’s Interview Schedule for Studying Some Basic Characteristics of Learning Projects (1979) was used to measure the number of learning projects and the types of planners used. Guglielmino’s (1977) Self-Directed Learning Readiness Scale (SDLRS) was utilized to measure the DSAs’ readiness for self-direction in learning. A short demographic questionnaire was created in order to gather descriptive data about the participants. A total of 51 DSAs from 15 states across the United States and Hawaii participated in the study.
Results indicated that no significant relationship existed between the number of learning projects completed and the eight factors of the SDLRS. The average SDLRS score for DSAs in the sample was 240.49 which is considered *above average*, and higher than the adult population norm which is 214.00. The DSAs engaged in a total of 391 learning projects of which 269 were reported to be related to the DSA’s career or position as a disability services provider. There was no significant relationship between a DSA’s institution type, or age, and the number of learning projects he or she conducted in the twelve-month period prior to the interview.

There was no significant relationship between a DSA’s level of self-directedness and his or her race/ethnicity, gender, number of years as a DSA, or educational background. Finally, there was no significant difference between DSAs who are *below average, average, and above average* self-directed learners and the type of planner used for learning. Overall, the results of this study indicated that the DSAs sampled were highly self-directed adult learners who engaged in the average number of learning projects (five to seven projects per year), which is comparable to other adult learners. (Tough, 1979).
The University of Southern Mississippi

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CHAPTER I

INTRODUCTION

Background

_Growth in Postsecondary Enrollment of Students with Disabilities_

In 2008, researchers with the United States Government Accountability Office reported that 11% of all postsecondary students identified themselves as having a disability (U.S. GAO, 2009). This is a two percent increase from a report in 2000 conducted by the GAO. Over the years, disability services offices have increased the types of services that they offer because of the different types of disabilities now seen in postsecondary settings. In 2002, individuals with learning disabilities were cited as the largest population of students registered with offices of disabilities services. Just a few years later students with mental health disabilities became the largest sub-group of students reporting a disability. There has been a significant increase in students with diagnoses of autism spectrum disorders as well (U.S. GAO, 2009). The number of students with diverse disabilities and severe impairments will continue to rise (Harbour, 2008).

Enrollment increases in higher education can be attributed to several factors. One reason for the growth in the college enrollment of students with disabilities is students are provided earlier and more comprehensive transition services in the secondary setting. According to Newman, Wagner, Cameto, and Knokey (2009) 80% of students with disabilities have an ambition of receiving a post-secondary education. The expansion of technology and improvements in accommodations and physical access has allowed more individuals with disabilities to attend college and expand their career choices (Bender,
2004). The self-concept of students with disabilities has also improved (Paul, 2000). Students with disabilities have hopes that the attainment of a college education will bring them gainful employment, respect from their counterparts and acceptance from society (Paul, 2000). Finally, public perception and concepts of what it means to have a disability has improved, therefore more doors have opened, and opportunities have developed for individuals with disabilities (Bender, 2004). The passing of federal legislation outlawing discrimination based on disability and mandating inclusion and provision of reasonable accommodations has no doubt had the greatest impact on the growth in postsecondary student enrollments.

Disability Legislative Initiatives

The Education for All Handicapped Children Act (EHA, 1975), now known as The Individuals with Disabilities Education Act (IDEA, 2004) is a historic piece of legislation that changed the nature of educational access for students with disabilities at the secondary level. It mandated that children with disabilities have the right to a free and appropriate public education in the least restrictive environment.

The Rehabilitation Act of 1973, specifically Section 504, extended these rights to qualified students with disabilities enrolled in institutions receiving federal dollars. It states that

No otherwise qualified individual with a disability in the United States… shall, solely by reason of disability, be denied the benefits of, be excluded from participating in, or be subjected to discrimination under any program or activity receiving federal financial assistance (29 U.S.C. 794).
The Americans with Disabilities Act of 1990 (ADA) (P.L. 101-336), amended in 2008, is a civil rights law that also protects individuals with disabilities from discrimination and provides accessibility. It is similar to The Vocational Rehabilitation Act in the way that it defines disability, however, the ADA has a much broader scope in that individuals are covered under public as well as private programs, whether the program receives federal funds or not. The ADA Amendments Act of 2008 became law on January 1, 2009. The ADA amendments broadened the scope of the ADA of 1990 and clarified the definition of disability (Association of Higher Education and Disabilities, 2008). Prior to the amendments the interpretation of the ADA was narrowly defined. This was due in part to court decisions that were very specific but were being generalized across other settings. To this end, fewer people were being protected from discrimination and provided accommodations. This changed with the amendments to the ADA of 2008 (S. 3406--110th Congress, 2008).

Challenges for Students with Disabilities in the Postsecondary Setting

Despite the fact that students with disabilities are granted equal access to education by law, they are not as successful in school as their counterparts. College enrollment for individuals with disabilities is 50% lower than individuals without disabilities (Stodden, Whelley, Chang, & Harding, 2001). Graduation and satisfaction rates for students with disabilities are lower than for students without disabilities. Five years after enrolling, 53% of students with disabilities receive a college degree compared to 64% of students without disabilities (National Center on Education Statistics, 2001). Overall graduation rates indicate that 12% of students with disabilities graduate compared to 23% of students without disabilities (Stodden, 2001).
Generally, students with disabilities enter the college setting with anxiety about their ability to learn and perform, particularly those with learning disabilities (Mercer, 1997). Other reasons for lower retention and graduation rates include instruction that does not consider the needs of students with disabilities (Foley, Ruban, Scott & McGuire, 2000) and poor disability relations on campus (Wilson, Getzel, & Brown, 2000). Twenty-two percent of the 9% of undergraduate students who identified as having a disability during the 1999-2000 school year reported that they did not receive appropriate accommodations at their institutions (National Center for the Study of Postsecondary Educational Supports, 2002).

The Professionalization of Disability Services

In 1978, professionals in the field of disability services gathered and formed a professional organization, the Association on Handicapped Student Service Programs in Postsecondary Education (AHSSPPE), now known as the Association on Higher Education and Disability (AHEAD) (Dukes & Shaw, 1999). The focus of this organization is to lobby for the provision of quality services to students with disabilities in the postsecondary setting. This organization also exists to: assist professionals in properly diagnosing disabilities and providing accommodations that have been suggested as the most effective; provide tools for program evaluation; serve as a resource for those needing information on assistive technology; and to serve as a resource for training and professional development (Sneed, 2006).

In 1997, the AHEAD membership passed its first code of ethics (Price, 1997). Even more importantly the membership adopted 27 Program Standards of Professional Practice (Shaw, McGuire, & Madaus, 1997) which were developed by gathering input
from over 1,000 disability services administrators (Dukes, 2001). The standards are grouped under eight domains: consultation/collaboration; information dissemination; faculty/staff awareness; academic adjustments; counseling and self-determination; policies and procedures; program administration and evaluation; and training and professional development (Shaw & Dukes, 2001). According to Shaw and Dukes (2005) the AHEAD Program Standards represent essential service components that are absolute necessities for providing students with disabilities equal access to higher education. In 2005, AHEAD released 147 Performance Indicators (one to seven indicators per standard) to serve as best practices in the field (Association of Higher Education and Disabilities, 2004b).

Over the years, disability services offices have increased the types of services that they offer because of the different types of disabilities now seen in postsecondary settings. In the early days of service provision, programs mainly focused on students with physical impairments. Now services are being provided for all manners of disabilities including psychiatric and intellectual disabilities (Madaus, 2000). A disability services administrator (DSA) is expected to have some knowledge of the field, or be prepared to quickly learn in the areas of disability law, medicine, technology, counseling, special education, higher education administration, psychology, student development, educational testing and assessment, adult education, and physical accessibility design as related to disability and disability accommodations. Examination of demographic data gathered over a 20-year period reveal a field in which the professionals are relatively inexperienced in disability services and have limited experiences for training and development (AHEAD, 1995; Blosser, 1984; Harbour, 2008; Madaus, 1998; Sneed,
In fact, 60% of disability service providers enter the field without any previous experience in the field of disability services (Dukes & Shaw, 1999).

There is very little research concerning professional preparation and the training needs of disability service administrators. There is also a lack of literature examining DSAs engagement in continuing education and their learning experiences. Their experiences have an impact on the types of and the quality of service that they provide as well as how they train and educate others in the institution.

Statement of the Problem

Although the enrollment levels of postsecondary students with various disabilities continues to grow (U.S. GAO, 2009), individuals with disabilities are not as successful in post-secondary settings as their non-disabled counterparts. It is alarming that many colleges and universities feel unprepared for the new wave of students (Madaus, 2000). Demographic data reveals that in general DSAs are inexperienced and have limited opportunities for training and development (Dukes & Shaw, 1999; Sneed, 2006). A DSA often functions in several roles so they must possess many skills and a breadth of knowledge. There is no specific educational degree or training program for disability service administrators and very few programs prepare personnel to work with students with disabilities at the post-secondary level.

With increasing budget cuts, decreasing funds for training opportunities, and increasing demands for services for students with disabilities, there is a need for researchers to identify how DSAs prepare for and operate in their positions in disability services (Madaus, 1998). Further, there is a need to examine their learning experiences, motivation, needs, and barriers to learning (Sneed, 2006). The researcher proposes that
like many adults, DSAs may be engaging in self-directed study to gain the necessary knowledge and skills needed in order to perform their jobs effectively. Participation in disability services related learning activities may not be captured in the formal sense of continuing education, but in fact may be occurring through self-directed learning. There may be some DSAs who are not engaging in self-directed study, however, these professionals may be functioning at a high level in disability services. On the other hand they may not be faring well in their respective positions. It was suggested that readiness for self-directed learning is dependent on the learner’s values, attitude, and abilities, and that those with higher levels of readiness for self-directed learning tend to engage in more learning projects and perform better in their work environment (Durr, Guglielmino, & Guglielmino, 1996). There is a need to examine these issues more closely.

The purpose of this study was to examine whether a relationship existed between self-directed learner readiness and the number of learning projects completed by disability services administrators. The researcher examined the types of learning project planners, as defined by Tough (1979), that disability services administrators use. A self-created instrument based on Tough’s Interview Schedule for Studying Some Basic Characteristics of Learning Projects (1979) was used to measure the number of learning projects and the types of planners used. Guglielmino’s (1977) Self-Directed Learning Readiness Scale (SDLRS) was utilized to measure the DSAs’ readiness for self-direction in learning. A short demographic questionnaire was added in order to gather descriptive data about the participants.
Justification

Even though qualified students with disabilities are legally entitled to equal access to postsecondary education, when they gain access they are not always as successful as their nondisabled counterparts. Graduation and satisfaction rates for students with disabilities are lower than for students without disabilities (NCES, 2001). Institutional barriers to success for students with disabilities must continue to be studied. Past research has generally focused on identifying the types of accommodations provided to students with disabilities (Beirne-Smith & Deck, 1989), faculty perception of students with disabilities (Baggett, 1994; Cook, 2007; Donato, 2008), and studies of students with learning disabilities (Mercer, 1997; Satcher, 1992). However, more research is needed that focuses on the disability services administrator and his or her personal and professional growth.

This type of research is needed given that researchers have found that participating in training & professional development is a challenge for DSAs (Blosser 1984; Cook, 2007; Dukes & Shaw 1998; Jarrow 1987; Sneed, 2006). Budget cuts in areas such as staff development and travel will push higher education administrators and DSAs to find other means to continue their professional development in order to provide quality student services. Furthermore, findings from this study will add to the body of literature in the interdisciplinary field of adult education as it pertains to self-directed learning and characteristics of self-directed learners. It may assist DSAs in identifying areas of strengths and weakness in their professional development and in their roles as adult learners and adult educators. Identifying the learning experiences of disability services providers and their readiness for self-directed learning may help answer questions related
to employee satisfaction, employment retention, wellness, motivation, barriers to learning, training needs and preferences, institutional commitment, and attitude towards learning.

Findings may also help those responsible for program evaluation and training determine how well DSAs are faring at meeting national program standards by identifying the quantity of learning activities in which they have engaged across the year and may possibly provide more insight concerning how to increase the number and types of learning activities in which DSAs participate. Finally, findings may advance the work of AHEAD by rendering data useful in the development of educational and training programs that may ultimately lead to national certification and accreditation of the field. It is the researcher’s ultimate hope that findings will illustrate the value of on-going evaluation, continuing education, and life-long learning for disability services administrators.

Research Questions

This study examined whether a relationship existed between self-directed learning readiness as measured by the eight domains of the SDLRS and the number of completed learning projects.

The following research questions guided this study:

1. Is there a significant relationship between a disability services administrator’s readiness for self-direction in learning and the number of learning projects he or she conducted in the twelve-month period prior to the interview?
a. Is there a significant relationship between a disability services administrator’s love for learning and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

b. Is there a significant relationship between a disability services administrator’s self-concept and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

c. Is there a significant relationship between a disability services administrator’s tolerance of risk and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

d. Is there a significant relationship between a disability services administrator’s creativity and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

e. Is there a significant relationship between a disability services administrator’s view of learning and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

f. Is there a significant relationship between a disability services administrator’s initiative in learning and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

g. Is there a significant relationship between a disability services administrator’s self-understanding and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

h. Is there a significant relationship between a disability services administrator’s acceptance of responsibility for one’s own learning and the
number of learning projects he or she conducted in the twelve-month period prior to the interview?

2. Is there a significant relationship between DSAs’ institution type and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

3. Is there a correlation between a disability services administrator’s level of self-directedness and his or her age?

4. Is there a correlation between a disability services administrator’s level of self-directedness and his or her race/ethnicity?

5. Is there a correlation between a disability services administrator’s level of self-directedness and his or her gender?

6. Is there a correlation between a disability services administrator’s level of self-directedness and his or her educational background?

7. Is there a correlation between a disability services administrator’s level of self-directedness and his or her number of years as a disability services administrator?

8. Is there a significant difference between disability services administrators who are below average, average or above average self-directed learners and the type of planner used for learning?

Assumptions

The following assumptions guided this study:

1. It is assumed that self-directed learning readiness is an index of one’s potential for self-directed learning.
2. Participants responded honestly to items.

3. Respondents were able to articulate to the interviewer their level of engagement in learning projects during the 12 months prior to the interview.

Definition of Terms

*Adult learning*- in this study adult learning refers to the process of information acquisition during adulthood made by individuals depending on needs, interests, learning skills, and resource availability.

*Andragogy*- “The art and science of helping adults learn” (Knowles, 1980, p. 43).

*Americans with Disabilities Act (ADA) of 1990*- A civil rights act that prohibits discrimination against individuals with disabilities in the areas of employment, public services, transportation, public accommodations, and telecommunications (ADA; PL 101-336)

*Disability*- For the purpose of this study, disability refers to the designation given to a student who has met the eligibility criteria for assistance through postsecondary disability services. Per Section 504 of the Rehabilitation Act (1973) and the Americans with Disabilities Act (1990), disability referred to an individual with a physical or mental impairment that substantially limited one or more major life activities, someone with a record of a substantially limiting impairment, or an individual who was regarded as having such an impairment.

*Disability services*- An office or program at postsecondary institutions specifically designated to verify disability status, develop policies and procedures for requesting and granting accommodations, and to provide and coordinate accommodation
services to individuals with disabilities. The acronym DS or DSS (disability support services) is used throughout this study to describe disability services.

_Disability Services Administrator_- The individual designated by the institution to operate and manage disability support services or programs. For the purposes of this study, the acronym DSA(s) is used throughout this study to describe a disability services provider with the working title of Director, Assistant Director, Associate Director, Dean of Disabilities Services, Counselor, Disability Specialist, or Coordinator.

_Learning_- For the purpose of this study, learning is defined as the acquisition of knowledge, attitudes, or skills and the mastery of behavior in which facts, ideas, or concepts are made available for the individual’s use.

_Learning episode_- “A period of time devoted to a cluster or sequence of similar related activity” (Tough, 1971, p. 7).

_Learning projects_- A series of clearly related learning efforts (learning episodes) adding up to at least seven hours of effort within a six month period. It is a deliberate and sustained effort on the part of the learner to gain and retain knowledge and skills (Tough, 1971).

_Planner_- A person's efforts to learn can be classified according to who was responsible for the day-to-day planning. There are four different types of planners; Group planned learning, one-to-one, material resource planned, and self-planned (Tough, 1971).

_Reasonable Accommodations_- For the purpose of this study, reasonable accommodations referred to the assistance provided to students with disabilities in postsecondary education by disability services. They are changes or adjustments in a school site, program, or task that makes it possible for an otherwise qualified student with
a disability to perform the duties or tasks required. Reasonable accommodations do not lower academic standards, change program requirements, or place excessive strain on the financial resources of the university or college (ADA; P.L. 101-336).

_Rehabilitation Act of 1973, Section 504_- A civil rights law that prohibits discrimination on the basis of disability in programs and activities in public and private institutions that receive federal Title IV Part C financial aid. [PL 93-112]

_Self-directed learning_- For the purpose of this study, self-directed learning describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" (Knowles, 1975, p. 18). Such learning frequently is self-initiated and carried out alone.

_Self-Directed Learning Readiness_- An adult’s preparedness for self-directed learning. Identified by eight factors: (a) openness to learning, (b) self-concept as an effective learner, (c) initiative and independence in learning, (d) informed acceptance of responsibility for one’s own learning, (e) love of learning, (f) creativity, (g) positive orientation to the future, and (h) ability to use basic study skills and problem solving skills (Guglielmino, 1977).

_Self-Directed Learning Readiness Scale_- A 58-question Likert scale developed by Guglielmino in 1977. The scale estimates a person’s perception of preparedness or readiness for self-directed learning (Adenuga, 1989).

_Student(s) with Disabilities_- This term is used to collectively refer to individuals in attendance at postsecondary institutions that have identified themselves as disabled and
presented the proper documentation of disability to the disability support services office or program for verification. The acronym SWD will be used throughout the paper to refer to students with disabilities.

Organization of the Dissertation

This dissertation is organized into five chapters in the traditional format. The first chapter serves as an introduction to the study and includes background of the problem, the purpose, rationale for the study, and the research questions that were addressed. The second chapter contains a review of related literature which includes information pertaining to the growth in postsecondary enrollment of students with disabilities, disability law, disability services in the postsecondary sector and the roles and functions of disability services administrators in the postsecondary setting. Finally, the chapter concludes with a review of the theoretical frameworks that guided this study as well as related research. The third chapter of this paper provides information pertinent to methodology that was utilized including: sampling information, instrumentation, and procedures for collecting and analyzing data. The fourth chapter contains a report of the results of the data analysis and finally, the fifth chapter summarizes and concludes the study. Practical implications based on the results and conclusions are identified and suggestions for future research are offered.
CHAPTER II

REVIEW OF RELATED LITERATURE

Overview

The purpose of this literature review is two-fold. First, it establishes a brief historical perspective of the disability rights movement as related to educational provisions. Secondly, it summarizes the theoretical framework guiding this study. In particular, this chapter contains literature pertaining to disability law; the growth in postsecondary enrollment of students with disabilities; disability services in the postsecondary setting, the disability services profession, and challenges encountered by disability services administrators in the postsecondary setting. Finally, the chapter concludes with related research and a review of the theory of self-directed learning and the concept of andragogy as these frameworks set the foundation for examining the relationship between disability services administrators’ readiness for self-directed learning and their engagement in learning projects.

Growth in Postsecondary Enrollment of Students with Disabilities

Society as a whole is going through rapid technological, economic, and social change. As a result, more people are seeking further and higher education. To this end, there is a more diverse student population with diverse needs. This includes a growing enrollment of those who in the past were marginalized and shut out of higher education such as individuals with disabilities (Dukes, 2001). The Rehabilitation Act of 1973 defines a person with a disability as “any person who has a physical or mental impairment that substantially limits one or more major life activity, has a record of such
impairment, or is regarded as having such impairment” (Section 504 of Vocational Rehabilitation Act, 29 U.S.C. 794).

Findings from the 2000 United States Census estimated that individuals with disabilities represent 19.3% of the general population (U.S. Census Bureau, 2000). Individuals with disabilities are enrolling in postsecondary education in record numbers. According to a study of the profile, preparation, participation, and outcomes of students with disabilities in higher education (NCES, 1998) about 6% of all undergraduates reported having a disability. More recently, 11% of all postsecondary students identified themselves as having a disability (NCES, 2008). This is a 2% increase from a study conducted by the same researchers in 2000 (NCES, 2002).

Statistics from the National Postsecondary Student Aid Study (NCES, 2008) show that 42% of students with disabilities who identified themselves to a postsecondary institution as having a disability attended a four-year institution; 46% attended a two-year institution; and 3.4% attended less than two-year institution (NCES, 2008). According to the report, 69% of the students were enrolled in a public school, 11.2% were enrolled in a private not-for- profit school, and 11.6% were enrolled in a proprietary school. Finally, 35.8% were enrolled full-time, full year; 16.1% were enrolled full-time, part year; 22.5% were enrolled part-time, full year; and 25.5% were enrolled part-time, part year (NCES, 2008). Students with disabilities enrolled in institutions of higher education are more likely to be female (57.7%) than male (42.3%); and their average age is 26 years old (NCES, 2008). These reported statistics may not include students who have invisible disabilities, that is, disabilities that are not immediately apparent. Examples include AIDS/HIV, ADHD, cancer, and autism. These reported statistics also may not include
others who choose not to identify their disability out of fear of discrimination, harassment, or embarrassment.

Over the years disability services offices have increased the types of services that they offer because of the different types of disabilities now seen in postsecondary settings. In the early days of service provision, programs mainly focused on students with physical impairments. Services are now provided for all manner of disabilities including psychiatric and intellectual disabilities (Madaus, 2000). Over time the percentages of reported disability type in the post-secondary setting have increased. Researchers at the National Center for the Study of Postsecondary Education Supports found that students receiving services in the post-secondary sector reported the following disability types: learning disability or attention deficit disorder (48.9%); multiple disabilities (13.9%); mobility impairment or orthopedic impairment (8.39%); health impairment (8.2%); psychiatric disability (7.6%); blind or visual impairment (4.1%); deaf or hearing impairment (3.95%); acquired head injury (2.4%); cognitive disability (1.3%); and speech impairment (1.1%) (NCSPES, 2000).

Nationally, individuals with learning disabilities were cited as the largest population of students registered with offices of disabilities services, however, students with attention deficit disorder and psychiatric disabilities were the fastest growing categories of reported disabilities (Brinckerhoff, McGuire, & Shaw, 2002). Based on trends in data, it was speculated that the number of students with diverse disabilities and severe impairments would continue to rise (NCES, 2005). Horn and Nevill (2006) examined the reported disability types of postsecondary students during the 2003-2004 academic year. They found that students identified as having the following disabilities:
orthopedic (25.4%); mental illness (21.9%); health impairment problems (17.3%); attention deficit disorder (11%); learning disability (7.5%); hearing disability (5%); visual impairment (3.8%); speech disability (.4%); and other (7.8%). In 2008, individuals with mental health disabilities became the largest sub-group of students reporting a disability at 24% followed by: attention deficit disorder (19%); orthopedic disorder (15%); other (15%); learning disability (8%); hearing impairment (5%); health impairment (4%); blindness/visual impairment (3.5%); brain injury (2%); speech disability (1%) and developmental disability (1%) (NCES, 2008). There has been a significant increase in student with diagnoses of autism spectrum disorders as well (U.S. GAO, 2009).

The increase in individuals with disabilities enrolling in higher education can be attributed to several factors. One reason for the growth in the college enrollment of students with disabilities is that the students are better prepared and being provided transition services in the secondary setting. The Individuals with Disabilities Education Act (2004) states that postsecondary education must be considered as an option for all students. In fact, 80% of students with disabilities have an ambition of receiving a post-secondary education (Newman et al., 2009). The expansion of technology, improvements in accommodations, and removal of physical barriers, creating better access, have allowed more people to attend college and expand their career choices (Bender, 2004).

The self-concept of students with disabilities has improved. Students with disabilities have hopes that the attainment of a college education will bring them gainful employment, respect from their counterparts and acceptance from society (Paul, 2000). Finally, public perception and concepts of disability has improved, therefore more doors
have opened and opportunities have developed for persons with disabilities. Better opportunities require them to pursue more education and more training (Bender, 2004). Many of these opportunities can be attributed to individuals with disabilities having more access to education due to federal legislation such as the Vocational Rehabilitation Act of 1973 (PL 93-112); The Education of All Handicapped Children Act of 1975 (PL 94-142) now known as The Individuals with Disabilities Education Act (IDEA) (2004); and the Americans with Disabilities Act (ADA) of 1990 (PL 101-336) and their respective amendments. Under these federal laws individuals with disabilities are guaranteed inclusion and equal access. Depending on eligibility and the nature of the need, programs are mandated to provide accommodations and auxiliary aids to individuals with disabilities.

Disability Legislative Initiatives

Education for All Handicapped Children Act

Education for All Handicapped Children Act (P.L. 94-142), now known as the Individuals with Disabilities Education Act (IDEA), is a historic piece of legislation that changed the landscape of the provision of educational access for students with disabilities at the secondary level. It states that children with disabilities have the right to a free and appropriate public education in the least restrictive environment. Under this act students are not only provided services in the secondary setting, but they are prepared for the postsecondary setting as well. Modifications were made to this act in 1991. The scope of individuals covered was broadened to include children with attention deficit disorder, those with traumatic brain injury and individuals with autism (Brinckeroff, Shaw, & McGuire, 1993). Administrators are also required to include a transition plan for each
student that includes goals and objectives for life after high school (Brinckeroff et al., 1993). Although the IDEA only applies to children at the primary or secondary level it has significantly increased the enrollment of students with disabilities in the postsecondary setting.

*The Rehabilitation Act of 1973*

The Rehabilitation Act of 1973, specifically Section 504, extends rights to qualified individuals with disabilities enrolled in institutions, preschool, secondary, and postsecondary institutions receiving federal dollars. It states that

No otherwise qualified individual with a disability in the United States… shall, solely by reason of disability, be denied access to, or the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance…(29 U.S.C. 794).

Individuals seeking protection must meet the legal definition of disability. According to the Vocational Rehabilitation Act, an individual (a) must have a physical or mental impairment that substantially limits one or more major life functions, (b) have a history of such impairment, or (c) be regarded as having such an impairment. Another consideration important to protection under the Vocational Rehabilitation Act is being otherwise qualified. To be deemed otherwise qualified, a person must be able to meet the technical standards and have the essential skills necessary to be admitted to the program or job for which he or she has applied (Brinckerhoff et al., 1993).

*The Americans with Disabilities Act of 1990*

The Americans with Disabilities Act of 1990 (ADA), amended in 2008, is a civil rights law that also protects individuals with disabilities from discrimination and provides
guidelines and specifications to make environments and programs accessible. It is similar to The Vocational Rehabilitation Act in the way that it defines “disability,” however, the ADA has a much broader scope in that individuals are covered under public as well as private programs whether the program receives federal funds or not. The ADA has made a significant impact for students with disabilities in the postsecondary setting. The ADA Amendments Act of 2008 became law on January 1, 2009. The amendments broadened the scope of the ADA of 1990 and restored it back to how it was originally supposed to be interpreted. The amendments also clarified the definition of disability (Association of Higher Education and Disabilities, 2008).

Prior to the amendments, the interpretation of the 1990 Act was becoming more narrowly defined than intended. This was due to court decisions that were very specific to a particular case but erroneously were being generalized across other settings; therefore, fewer people were being protected and provided accommodations. The Americans with Disabilities Act Amendments of 2008 (Public Law 110-325, ADAAA) further explains what is meant by major life activities. It also explains that an individual regarded as having a disability is protected from discrimination but is not necessarily entitled to reasonable accommodations (Public Law 110-325, ADAAA). The ADA contains five “titles” that provide regulations in the areas of government, employment, public accommodations, transportation, and telecommunications. Title II: Public Services; and Title III: Public Accommodations are of great significance in the postsecondary setting (Dukes, 2001). A term frequently used in Title III is “reasonable modification.” A reasonable modification is defined as
Modifications in policies, practices, or procedures, when the modifications are necessary to afford goods, services, facilities, privileges, advantages, or accommodations to individuals with disabilities, unless the public accommodation can demonstrate that making the modifications would fundamentally alter the nature of the goods, services, facilities, privileges, advantages, or accommodations. (ADA, 1990, 36.302a)

Challenges in the Postsecondary Setting for Students with Disabilities

Despite the fact that students with disabilities are legally entitled to equal access to education through federal laws, this does not always happen, and when they gain access they are not always as successful as their counterparts. Graduation and satisfaction rates for students with disabilities are lower than for students without disabilities. Five years after enrolling, 53% of students with disabilities receive a college degree compared to 64% of students without disabilities (NCES, 2000). Students with disabilities also tend to take twice as long to complete their degree (NCSPES, 2000).

Generally, students with disabilities may enter the college setting with anxiety about their ability to learn and perform, particularly those with learning disabilities (Mercer, 1997). In one study respondents reported that they felt that staff and tutors did not communicate effectively with them because of their disability (Lehman, Davies, & Laurin, 2000). Students with disabilities may also have motivational issues because of prior experiences in the educational setting where they experienced discrimination, oppression, or prejudiced attitudes. Many students with “hidden disabilities” choose not to self-identify out of fear of discrimination or social stigma (U.S. GAO, 2009). The fear of identifying and the process of seeking assistance may impede success.
Unlike in the secondary setting, students in the postsecondary setting must self-identify, and provide current supporting documentation of their disability. Further, disability services administrators, the student, and faculty determine what accommodations and auxiliary aids are appropriate and reasonable dependent on the nature of disability and the curriculum requirements. In the secondary setting the student is generally told the types of accommodations that they will receive and are sometimes given supports that are not considered reasonable at the post-secondary level (NJCLD, 1988). While very few empirical studies exists on the impact of actual services provided, studies have focused on student perceptions of the most effective accommodations and services provided.

Kurth and Mellard (2006) found that postsecondary students perceived notetakers and extended time as the most effective accommodations provided to them during their postsecondary education. Elkind, Black, and Murray (1996) examined the effectiveness of using speech synthesis during reading tasks on participants’ reading performance. Their results indicated that the use of the accommodation led to improvements in reading rates, comprehension, and increased the student’s attention span while reading. Skinner (1999) found that course substitutions, when determined to be a reasonable accommodation, were effective in increasing graduation rates among SWDs. Testing accommodations, such as extended time on tests, significantly increased the test scores of SWDs (Weaver, 2000).

Financial concerns may be a challenge for any student, but it is often a challenge for students with disabilities and may affect retention and graduation (U.S. GAO, 2009). Although some students may receive support from a state vocational rehabilitation
service, not all students with disabilities are eligible. Documentation is the fiscal responsibility of the student, not the university, and it must be current as stipulated by the institutions’ documentation guidelines (Gordon & Keiser, 1998). Individuals may incur expenses for several medical visits and evaluations, especially if they have multiple diagnoses. They are also responsible for personal accommodations such as personal attendants, tutors, assistive technology, and transportation (U.S. GAO, 2009). Disability related reasons may prevent students with disabilities from progressing towards degree and therefore lead to academic and financial aid suspension; or they may reach their maximum financial aid limit before they finish their degree requirements (U.S. GAO, 2009).

Other reasons for lower retention and graduation rates include instruction that does not consider the needs of students with disabilities (Foley et al., 2000) and poor disability relations on campus (Wilson, et al., 2000). Although students with disabilities are expected to have learned personal, social skills, and advocacy skills in the secondary setting (Test, Aspel, & Everson, 2006), many come to the post-secondary setting unprepared and are not aware of their role in the process of receiving disability services (National Center for the Study of Postsecondary Education Supports, 2002). Disability services administrators play a pivotal role in helping students learn these skills and how to become more independent.

Disability Support Services: Highlights and Historical Perspectives

The purpose of this section is to briefly highlight the disability support services movement from the 1970s through the 1990s; discuss the formal establishment of
disability services offices in postsecondary education; and the professionalization of disability services.

The 1970s-1990s

During the 1970s both The Rehabilitation Act and the Education For All Handicapped Children Act were passed. As important, in 1978, a group of professionals in the field of disability services gathered and formed the professional organization, the Association on Handicapped Student Service Programs in Postsecondary Education (AHSSPPE), now known as the Association on Higher Education and Disability (AHEAD) (Dukes & Shaw, 1999). Programs and services for students with disabilities in the post-secondary setting grew at a fast pace during the 80s and 90s. In 1978, only 2.6% of full time, first-time freshmen reported having a learning disability. By 1994, this number had increased to 9.2% (Henderson, 1995). During the late 80s and 90s disability literature began to address students in the postsecondary setting and there was an increase in articles and research published and submitted to the Journal of Postsecondary Education and Disability (Brinckerhoff et al., 1993). The highlight of the 90s was the development and adoption of the AHEAD Program Standards and Program Indicators (Shaw et al., 1997) and a code of ethics (Price, 1997).

Disability Support Services Offices

Disability Support Services Offices provide several types of accommodations: personal, educational, and career counseling; information and referral services; disability awareness programming, consultation and in-service training with faculty, education about legal rights; interpreting services; note taking, special equipment loan arrangements; adapted testing procedures; document conversion services and program
evaluation. Services may also include addressing physical access and 504 compliance issues. Researchers at the National Center for the Study of Postsecondary Educational Supports (NCSPES) conducted a national survey administered to 1,500 disability support coordinators working in postsecondary education institutions. Results of the report indicated that the most commonly provided disability supports offered at postsecondary institutions in 2001 were testing accommodations (89%), personal counseling (75.1%), note takers/scribes/readers (72.6%), advocacy (71.6%), tutorials (63.5%), sign language interpreters (61.9%), learning center laboratory (61%), and career/vocational assessment (65%) (Tagayuna, Stodden, Chang, Zeleznik, & Whelley, 2005).

In the past, higher education institutions did not have offices or specific staff that could assist with disability-related issues. Condon (1957) conducted one of the first studies on disability services in post-secondary education. His study revealed that out of 181 colleges and universities 58% had no formal disability services office and 25% had no services at all. The K-12 educational system has led the way in providing disability related services in the field of education. It was not until the 1970s that formal disability-services offices really began to appear in postsecondary institutions in response to federal mandates (Madaus, 1996). Even then very few institutions had comprehensive programs.

During the 1970s the country saw a growth in the need for disability-related services because of returning war veterans who needed vocational rehabilitation services, and federal legislation that improved social services for citizens (Blosser, 1984). Remarkably, even before the Americans with Disabilities Act of 1990, the Kansas State Teachers College was going beyond the role of providing counseling services by also focusing on providing physical access for students with disabilities (Edington & Tucker
as cited in Blosser, 1984). Since then the types of services have evolved from simply providing access, to also providing academic skills help, advocacy skills, tutoring services, document conversion services, reduced course loads, and modified language accommodations (Madaus, 1996). McBee and Cox (1974) were two of the first researchers to describe the different types of disability support services offices. They came up with three types of programs: 1) highly centralized, complete with all direct services provided directly by the staff; 2) loosely coordinated programs where the staff is there to make referrals to outside resources; and finally, 3) highly coordinated and decentralized where there is a mixture of direct services and coordination with other programs.

An office of disability services may be a stand-alone office that falls under a department of academic or student affairs, or it may be a sub-unit within a larger program such as within a federal TRIO program like Student Support Services. Disability services, staffing, policy, practices, and procedures are not universal and vary in each educational institution depending on size of the institution and office, location, and administrative support. Disability research and even enforcement disability law in higher education is often very minimal and often does not provide very much specific guidance for diverse settings (Madaus, 2000). Sandeen (1989) proposed that one reason so much diversity can be observed among disability services offices is that they are influenced by staff competence, institutional characteristics, student characteristics, resources, facilities, and division goals. Budget crises and cuts of personnel across the board make it imperative that DSS providers operate efficiently and effectively with the resources that they have.
Professionalization of Disability Services

In 1978, professionals in the field of disability services gathered and formed the professional organization then titled the Association on Handicapped Student Service Programs in Postsecondary Education (AHSSPPE), now known as the Association on Higher Education and Disability (AHEAD) (Dukes & Shaw, 1999). The focus of this organization is to provide quality services to students with disabilities in the postsecondary setting. This organization also exists to assist professionals in properly diagnosing disabilities and provide accommodations that have been suggested as the most effective, provide tools for program evaluation, serve as a resource for those needing information on assistive technology, and to serve as a resource for training and professional development (Sneed, 2006).

In 1997, the members of AHEAD passed its first code of ethics (Price, 1997). Even more importantly the membership adopted 27 Program Standards of Professional practice (Shaw, et al., 1997). The standards were developed by gathering the input of over 1,000 disability services administrators (Dukes, 2001). The standards are grouped under eight domains: consultation/collaboration, information dissemination, faculty/staff awareness, academic adjustments, counseling and self-determination, policies and procedures, program administration and evaluation, and training and professional development (Shaw & Dukes, 2001). Each domain contains an average of 3.5 standards. According to Shaw and Dukes (2005) the AHEAD Program Standards represent essential service components that are absolute necessities for providing postsecondary students with disabilities equal educational access. In 2005, AHEAD released 147 Performance
Indicators (one to seven indicators per standard) to serve as best practices in the field (Association of Higher Education and Disabilities, 2004b).

Roles and Functions of Disability Services Administrators

This section of the literature review will focus on the roles and functions of the disability services administrator and the challenges they face in their complex and demanding position. The review will also highlight how training and professional development, which is of interest to the researcher, has historically been and continues to be a challenge for DSAs (Blosser 1984; Cook, 2007; Dukes & Shaw 1998; Jarrow 1987; Madaus 1996; Sneed, 2006). The job of a disability services administrator in the post-secondary setting is a very complex one. The DSA often functions in several roles and therefore they must possess many skills and a breadth of knowledge. The DSA is expected to have knowledge of or be prepared to quickly learn the areas of disability law, medicine, technology, counseling, special education, higher education administration, psychology, student development, educational testing and assessment, adult education, and physical accessibility design as related to disability and disability accommodations.

In the earliest day of disability services in the postsecondary setting, Brown (1978) described the disability services administrator as one who identifies students at orientation, provides priority registration, serves as academic advisor, test proctor, group counselor, ombudsman, academic skills specialist, and acts as a liaison with other offices. Today’s DSA functions in many capacities including: developing institutional policies and procedures, reviewing documentation to determine eligibility for accommodations, providing technical assistance to the campus community, being an advocate, providing disability training to the University employees, addressing access complaints and
concerns, serving as a resource to students parents, faculty, staff and the community, overseeing and/or providing exam accommodations, researching new technology as it emerges, and providing document conversion services (McGuire, 2000). With the increasing enrollment of students with diverse disabilities it is suggested that DSAs in the post-secondary setting should be able to identify needs, help develop skills, and provide programs on several student development topics if they want to effectively meet their students’ needs. They must be able to train and supervise others as well (Madaus, 1998).

While most professionals are recognized as such because they have received specialized education or training, DSAs in the postsecondary setting come from various backgrounds that more often than not does not include specialization in disability studies. According to a national demographic survey conducted by Dukes and Shaw (1999) the majority of disability services providers come from counseling backgrounds (26%); followed by social work (17%); law (17%); special education (16%); higher education (14%) and rehabilitation counseling (13%). The fact that DSAs have various backgrounds and do not have a single graduate program in common has been cited for the slow progress in developing certification and accreditation standards (Madaus, 1998). Demographic data gathered over a 20-year period reveals a profession in which the professionals are relatively inexperienced in disability services and have limited experiences for training and development (AHEAD, 1995; Blosser, 1984; Madaus, 1998; Sneed, 2006). In fact, 60% of disability service providers enter the field without any previous experience in the field of disability services (Dukes & Shaw, 1999). Data also reveals that although there have been dramatic changes in the types of students served,
there has been relatively little change in the profiles of the disability services professional (Madaus, 1998).

In 1984, the majority of DSAs were female (62%) (Blosser, 1984) and that proportion has not changed today with females representing (75.5%) of DSAs (Madaus, 1998). According to Blosser (1984), the master degree was the highest degree held, which is similar to what Madaus (1998) found (74.2%) 14 years later. Of greatest significance is that over the 20 plus years of the profession; practitioners still are reported to have five years or less of experience (38%); and have been in their current position less than five years (AHEAD, 1995; Blosser, 1984; Dukes & Shaw, 2004; Madaus, 1996; Madaus, 1998). These statistics provide evidence for the necessity of continuing education for DSAs and on the value of examining their self-directed learning experiences.

There is no specific educational degree or training requirement to become a disability service administrator. Neither is there any mandatory requirement for continuing education. Very few programs prepare personnel to work with students with disabilities at the post-secondary level. In 2012 there were only five universities in the United States with seven graduate level programs that offered degrees in Disability Studies, and 11 universities in the United States that offered a concentration or emphasis in disability studies at the graduate level (Taylor & Zubal-Ruggieri, 2012). The most notable schools are The Ohio State University which has a post-secondary adult counselors program. New York University, Syracuse University, and The University of Connecticut also offer programs at the graduate level. The University of Oregon offers a graduate program in leadership personnel for administrators who would like to work with
the learning-disabled population (Shaw, Brinckerhoff, Kistler, & McGuire, 1991). Very few DSAs have been educated or trained for the field of disability services and may not be prepared nor have the ability to effectively train and educate others to do so. This inconsistency in professional training often results in the service delivery model being significantly different from university to university (Brinckerhoff et al., 2002).

A few studies have been conducted by researchers who were interested in examining the educational experiences of DSAs. Blosser (1981) found that rehabilitation-counseling programs provide a foundation for the roles and functions of disability services administrators. However, there are specific areas of knowledge and skills that are needed to work in the post-secondary setting they cannot be gained in a rehabilitation program alone. Blosser further proposed that disabilities service administrators need management skills that are not typically offered in rehabilitation counseling programs (1981). Hoyt and Rhatigan (1968) found that college administrators viewed on the job training more favorably than academic training and highly valued practicum and internship experiences. Five general areas have been cited as ideal for college student personnel; counseling administration and management; higher education; social and cultural foundations, research and evaluation. These areas are similar to ideal competencies and areas of expertise suggested by Hoyt and Rhatigan (1968).

There is very little research concerning professional preparation and the training needs of DSAs. Jarrow (1987) conducted a literature review of research focusing on the training needs of DSAs from the years 1975-1985 and could not find a single article that addressed this topic. Blosser (1984) was one of the first to address the role and functions of disabled student services directors in higher education on a large scale. Respondents
rated 92 items across 10 categories based on how important they believed particular job functions should be and how important job functions actually were. He questioned whether roles and functions would vary based on institution type, experience, age, and population served. In addition, he questioned if any of these variables effected the provision of services, and the program’s philosophy (Blosser, 1984).

The significance of Blosser’s study was that he not only determined the actual and ideal perceptions of job roles and functions of DSAs but also based on those findings he determined what professionals in the field felt were the most important areas that needed to be included in a training and educational program at the graduate level. An interesting finding from Blosser’s study was that Instruction and Training and Counseling Services ranked as the lowest categories in his study. His work paved the way for further research to help professionalize the field.

Prior to Blosser’s study, the Association on Handicapped Student Services Programs in Postsecondary Education (AHSSPHE), now known as the Association on Higher Education and Disability (AHEAD), had just formed in 1978 as the first professional organization exclusively for disability services providers in the postsecondary setting (Association of Higher Education and Disabilities, 2004a). Not only had members come from several schools of thought such as counseling, college student personnel, rehabilitation services, and special education, but at the time they did not have any professional standards, professional code of ethics, or any acknowledgement of knowledge or skills needed to work in the profession (Blosser, 1984). At the minimum, professional staff needed a graduate degree in a relevant field or a combination of education and experience, which was the standard set by the Council for
the Advancement of Standards for Student Services/Development Programs (CAS, 1988).

Since Blosser’s study, very little research has been conducted concerning the training needs of DSAs in the postsecondary setting, or their roles and functions (Jarrow, 1987; Madaus, 1996; Madaus, 2000). The majority of research in this area only pertains to the directors of programs for students with learning disabilities as this population has increased greatly in the postsecondary population (Jarrow, 1987). Research regarding the extent to which DSAs participate in continuing education and their training needs is lacking (Sneed, 2006). In 2006, Sneed conducted a study to measure DSAs perceived level of effectiveness in regards to meeting the criteria set forth by AHEAD. The sample was composed of DSAs who were identified as members of AHEAD. Findings that were significant from Sneed’s study that are of particular interest to the researcher pertain to the standard training & professional development. According to Sneed, training & professional development rated as one of the lowest. He suggested that more attention should be given to this specific standard. Another interesting finding from Sneed’s study was that when rating the training & professional development program standards, respondents suggested that their institutions did not support or provide on-going opportunities for professional development and that they accomplished this completely on their own (Sneed, 2006). The present researcher could not find any studies about DSAs’ participation in continuing education, particularly participation in self-directed learning opportunities. Although opportunities for staff development and continuing education in the field of disabilities services has grown since the 1970s, there is not a lot of evidence based data for the effectiveness of practices because of the lack of empirical
research in the field (Brinkerhoff et al., 2002). The format in which professionals in the field prepare and educate themselves is important and has an impact on the types of services and the quality of service that they provide to their students as well as how they train and educate others in the institution who provide direct and indirect services to students with disabilities.

Historically, there has been a deficit in the knowledge and skills base of personnel in the postsecondary setting. The National Joint Committee recognized this need and called on universities to create programs and curricula that focused on disabilities, particularly adults with learning disabilities as early as 1985 (National Joint Committee, 1988). Still today, the federal government is calling for institutions and centers to design programs, disseminate information, and create training opportunities for professionals in the field of disability services to ensure that students with disabilities receive a quality postsecondary education (Higher Education Reauthorization Bill, S.1642). The President’s Commission on Revitalizing Special Education (2002) is another federal mandate that indicates a desire for better training and education for service providers, faculty, and administrators in order to improve the educational outcomes for students with disabilities. It is critical that disability service providers in the postsecondary setting are trained and continually engage in learning experiences to be competent in the dynamic and relatively new field of disability services. Their learning experiences are important because they are resources for students, disability services administrators, higher education administrators, staff, faculty, and off campus agencies. The final section of this literature review will focus on self-directed learning, self-directed readiness, and
andragogy as theoretical frameworks for examining the extent to which individuals engage in learning and how it relates to their professional growth.

**Theoretical Foundations**

This study is guided by the self-directed learning theory (Houle, 1961; Knowles, 1975; Tough, 1979) and the concept of andragogy (Knowles, 1975). Tough’s concept of learning projects (Tough, 1979) was used to measure engagement in self-directed learning and Guglielmino’s *Self-Directed Learning Readiness Scale* (1977) was used to measure readiness to engage in self-directed learning. Self-directed learning theory is an individualistic learning theory that encourages learners to be independent by taking responsibility for the design, implementation, and evaluation of instruction and learning (Knowles, 1975). Other terms often used synonymously with self-directed learning include independent learning, self-planned learning, and self-study (Tough, 1979).

Individuals have been self-educating for centuries as self-directed learning can be traced back to the ancient Greek philosophers Socrates, Plato, and Aristotle (Brockett & Hiemstra, 1991). The concept became a focus of scholarship in the mid-1800s with Craik who investigated the self-education of various groups of people (Hiemstra, 1998). Since then, it has become a major area of research interest in the field of adult education (Houle, 1961; Tough, 1979). Long (2000) and Merriam and Caffarella (1999) reported that there is no one definition of self-directed learning; however, many have attempted to define the concept. One of most well-known definitions was described by Knowles (1975). He described the concept as “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and implementing...
appropriate learning strategies, and evaluating learning outcomes” (Knowles, 1975, p. 18).

Hiemstra (1998) described self-directed learning as: 1) Individual learners can become empowered to take increasingly more responsibility for various decisions associated with the learning process, 2) Self-direction is best viewed as a continuum or characteristic that exists to some degree in every person in every learning situation, 3) Self-direction does not necessarily mean that all learning takes place in isolation from others, 4) Self-directed learners appear able to transfer learning in terms of both knowledge and skill from one setting to another, 5) Self-directed learning can involve various activities such as self-guided reading, participation in study groups, internships and reflective writing activities, and 6) Effective roles for teachers in self-directed learning involve dialogue with learners, securing resources, evaluation of outcomes, and promotion of critical thinking. Guglielmino and Guglielmino (2001) defined self-directed learning as “a process in which the learner is responsible for identifying what is to be learned, when it is to be learned, and how it is to be learned” (p. 37). Most definitions of self-directed learning contain these key elements 1) self-directed learning is a process of learning based on adult educational principles and, 2) there is some element of personal control by the learner over the planning, monitoring and management of the learning (O’Shea, 2003).

Self-directed learning activities can be formal, informal, or non-formal. Over the years, the concept of self-directed learning has evolved. Researchers in the field of adult education have concentrated on several dimensions of self-directed learning in their studies. Caffarella and O’Donnell (1987) classified SDL research into: verification
studies (learning projects); nature of method of SDL (focusing on how questions); nature of the individual learner (who and what questions); nature of philosophical positions (perspectives on the process); and policy questions (roles of educators, institutional and society). Merriam and Caffarella (1999) conducted an analysis of models of self-directed learning and determined that there were three types of models: linear (Knowles, 1975; Tough, 1967) interactive (Brockett & Hiemstra, 1991; Cavaliere, 1992; Danis, 1992; Garrison, 1997; Spear, 1988) or instructive (Grow, 1991; Hammond & Collins, 1991).

Candy (1991) classified self-directed learning studies according to the process of learning, the management of learning, personality, and characteristics of the learner, and social contexts of the learner. Rhee (2003) focused on the “change brought about through autonomous or voluntary actions of an individual who is acting purposefully” (p. 569). Jarvis (1992) focused on the cognitive process of the self-directed learner.

1. Decision to learn: The learner is motivated to respond to a perceived need or want to learn.
2. Type of participation: Learners decide between learning independently, learning through organized activity, or some combination.
3. Aims and objectives: Learners choose between learner control, control by others, or negotiated aims and objectives.
4. Content: Learners make a decision regarding the selection of content.
5. Method: The methodological processes engaged in by the learner.
6. Thought/Language: The mode of speech, thought, perception, and so forth, engaged in by the learner.
7. **Assessment**: The process of evaluating how much they have learned whether their needs or wants have been satisfied, and whether they have achieved their aims and objectives.

8. **Disjuncture**: Acting on a perceived need or want precedes the learner’s learning process.

9. **Action/Outcome**: Learner’s evaluation of the results.

Definitions of self-directed learning can be multi-dimensional but are often grouped under three philosophical orientations: personal growth, transformational learning, and social action. Personal growth focuses on the ability of the learner to make their own choices about what they should learn and how they should learn (Brockett & Hiemstra, 1991). Learners discover and discern knowledge for themselves and are instrumental in the design of instruction by setting objectives, and deciding what is most important and relevant to their lives. The self-directed learner is engaged in thinking and acting creatively and independently during the majority of the learning experience.

The second orientation of self-directed learning is transformational learning which focuses on the changes that take place within the learner in addition to the content that is learned (Mezirow, 1985). Transformative learning is learning that changes one’s frame of reference or understanding of the world. Frames of references are collective experiences that shape one’s thoughts and behaviors (Mezirow, 1991). Often one’s experiences are limited and therefore worldview is biased. A learner who has a transformative learning experience engages in self-reflection, and critical reflection; and his/her learning goals are based on his/her findings (Mezirow, 1991). Learning is only transformative when there is a change in existing frames of reference or point of view.
The third philosophical orientation of self-directed learning is to promote collective action and political and social change in society (Brookfield, 1993). Cultural and social context of adult learning as related to self-directed learning is often ignored in research (Brookfield, 1993). Researchers often study white middle class educated adults when conducting studies on self-directed learning. According to Brookfield, more research on self-directed learning should focus on underrepresented groups. He proposed that many marginalized groups who engage in self-directed learning endeavors actively and sometime unknowingly engage in political and social activity through their struggle to learn and apply new knowledge. Knowledge is power and therefore creates change in political structures and conditions.

Carl Rogers (1969) stated that learning experiences that are self-initiated tend to be the most significant, the most meaningful, and long lasting learning experiences. Historically, researchers have maintained that self-directed learning should for the most part be carried out alone. The learner is mostly responsible for initiating the learning activity, establishing goals, choosing resources, and learning how to learn on his or her own (Hiemstra, 1975; Smith 1976). However, self-directed learning does not necessarily have to be an isolated endeavor. Learners often collaborate with others through discussion and evaluation. Learners may also have the opportunity to receive multiple perspectives and learn about things they may not experience themselves (Brockett & Hiemstra, 1991). Spear and Mocker (1984) suggested that learners may also receive individual and collective feedback from both instructors and peers. Those who engage in self-directed learning may increase their professional development, career satisfaction,
exposure to multicultural experiences, enhancement of skills and talents, development of morals and ethics and their awareness of societal issues.

The typical active adult learner tends to be between the age of 25 and 34; Caucasian; employed full time; formerly educated, and has a high-income level (Merriam & Caffarella, 1999). However, these demographics are often criticized because many researchers conduct their studies within institutions of higher learning and therefore miss other populations of adult learners who study in literacy programs, churches, community centers, etc. (Brookfield, 1995). One of the most well known studies on adult learners and self-directed learners was conducted by Cyril Houle in 1961. Through an in-depth interview of a sample of twenty-two active adult learners, Houle was able to explore the attitudes of adults engaged in several types of learning activities. His findings lead to three typologies of learners. These include: 1) goal oriented learners who are focused on achieving a goal, 2) activity oriented learners who participate in learning activities for the sake of the activity and the social interaction, and 3) learning oriented learners who participate solely for the sake of learning (Houle, 1961).

Johnstone and Rivera (1965) were the first researchers to conduct a systematic national study on the learning activities of adults in the United States. They surveyed adults learning in churches, museums, in job training facilities and other locations outside of formal institutions. They estimated that 20% of the adult population were active learners (Johnstone & Rivera, 1965). Since that time other researchers have conducted studies on adult learning activities (Foley, 2001; Jensen, 2000; Merriam & Caffarella, 1999). It is difficult to accurately estimate the change in participation rates due to the
different definitions of adult learning and self-directed learning and differences in how the studies were conducted (Kim, Collins, Stowe, & Chandler, 1995).

Most studies of participation in self-directed learning have focused on formal programs. In 2001, researchers with the U.S. Department of Education conducted a study where they quantified informal learning related to work. They found that 63% of adults engaged in informal work related learning activities. Kim, Hagedon, Williamson, and Chapman, (2004 as cited in Merriam, Caffarella, & Baumgartner, 2007) defined these activities as “supervised training or mentoring, self-paced study, using books, videotapes or computers, brown bag or informal presentations, conferences, conventions, and reading professional journals or magazines” (p. 60).

Maslow (1968) proposed that more learning took place outside of the classroom than in formal learning environments. Using the foundational work of Houle (1961), Tough (1971) developed a probing technique to examine the nature and frequency of self-directed learning projects conducted by adults. Learning projects as defined by Tough (1971) are a series of clearly related learning efforts or episodes adding up to at least seven hours of effort within a six-month period. It is a deliberate and sustained effort on the part of the learner where the goal is to retain knowledge or learn a skill. Tough (1971) found that about 90% of adults engaged in at least one learning project per year with the average being five projects. An individual spends on average 100 hours per learning activity.

Several researchers have used Tough’s (1971) probing and interview techniques to gather information about various groups and the nature of their learning endeavors. Fair (1973) studied the learning projects of first-year elementary school teachers. He
found that the teachers conducted an average of 8.8 projects and spent an average of 57 hours per project. The teachers reported that the majority of projects (97%) were directed towards the goal of becoming better teachers. McCatty (1974) found that professionals in engineering and medicine who engaged in self-directed learning projects completed an average of 11.1 projects per year, devoted an average of 112 hours per project and ranked job-related activities as the number one type of learning project. Benson (1974) used Tough’s Interview Schedule with 50 college and university administrators in Tennessee. Benson found that during the 12-month period prior to the interview, administrators engaged in an average of 4.5 learning projects of which 84% were job-related. Seventy-five percent (75%) of the sample planned their own projects and 25% were group planned.

Researchers have also studied groups who have traditionally been left out of studies on self-directed learning. Johnson (1973) studied adults who were recent G.E.D. recipients. He found that they completed an average of 14.4 projects, and committed 61 hours to each project. The majority of their projects were related to hobbies, recreation and religious pursuits. Fontaine, (1996) a graduate student conducting his doctoral dissertation, interviewed adults 55 years of age and older. He found that 64% of his sample of ninety participants were involved in an average of 1.6 learning projects per year. In 1998 Russett, also a doctoral student, found that older adults (55 years of age or older) who were participants in a retirement program affiliated with a university participated in an average of 8.7 projects; 3.3 of the projects were affiliated with the university retirement program and 5.5 were non-university affiliated projects. The older adults spent 768 hours per project.
According to Davis, Bailey, Nypaver, Rees, and Brockett (2010) interest in using Tough’s interview techniques and inventory declined around the mid 1980s. Only two studies were published in the 1990s that were based on Tough’s technique (Clardy, 1992; Livingstone, 1999). In an effort to add to the literature on learning projects, Davis et al. (2010) examined the learning efforts of graduate students using Tough’s Interview Schedule. Unlike the two published studies in the 1990s, Davis et al. (2010) used Tough’s Interview Schedule as the instrument for their study and only adapted the Interview Schedule by adding questions related to technology. The researchers added technology related projects in order to examine the impact, if any, technology had in shaping learning projects (Davis et al., 2010). They found that the graduate students in their study conducted 10.9 learning projects per year, and dedicated more than 40 hours to over half the projects. The majority of the projects were conducted for credit towards a degree or certification and participants reported that projects that were undertaken for work/career and personal growth would be of greater values to others than those taken for recreation/hobby or avocation. Forty-one and a half percent of the participants reported that computer technology was the major source of information for them (Davis et al., 2010).

Tough suggested that although learning projects can be accomplished with the help of others, the majority should be planned by the individual learner (Tough, 1971). He further defined four types of planners of learning projects. Self-planned learning is managed by the learner where the learner decides what will be learned and how it will be achieved. Group planned learning is coordinated by members of a group or an expert group leader. Individual planned learning is administered by one person who can be an
instructor or friend. Finally, in material resources planned learning, the learner is guided by non-human means such as books, computer software, or other multimedia formats (Tough, 1971).

According to Tough (1971) over 68% of learning activities were planned, implemented and evaluated by the learners themselves. This statistic was generally supported by most researchers. Fair’s (1973) study of first year elementary school teachers revealed that the teachers self-planned 67% of their projects. Similarly, 76% of projects conducted by engineers and medical professionals were self-planned (McCatty, 1974). Coolican (1973) studied the learning styles of mothers of young children and found that 66% of the projects were self-planned.

Hassan (1981) found that 78% of the adult population that she studied self-planned their learning projects. In the most recent study using Tough’s Interview Schedule researchers found that graduate students only self-planned 47.8% of their learning projects. However, the researchers noted that this statistic may be lower than the historical percentage because of the population sampled. Graduate students unlike other adult students are enrolled in more formal courses and may have several projects planned by others (Davis et al., 2010). The present study will examine the type of planners, as defined by Tough (1979) most used by disability services administrators and determine if there are significant differences in the types of planners used among the different levels (below average, average, above average) of self-directed learners. When examining the adult learner’s motivation for participating in a learning project, Tough found that adults engaged in an activity because of expected use of the knowledge 75% of the time; 20% of the time they engaged in an activity for the sake of learning; and 5% of the time they
were motivated by the receipt of credit towards a degree or certificate (Tough, 1971).

Despite having opportunities to participate in learning opportunities, not all adult learners have the capacity neither are they willing to be self-directed and solely responsible for their learning experiences (Brookfield, 1991; Johnson, 2001; Kerka, 1994). Readiness, as conceptualized by Dalton and Gottlieb (2002) is the recognition of the need to change, and aspiration to change. Literature related to readiness for self-directed learning suggests that adults who are more educated tend to be more self-directed and take more responsibility for planning their learning activities (Confessore & Confessore, 1994; Guglielmino, 1977; Johnstone & Rivera, 1965; Long & Stubblefield, 1994; McCune, Guglielmino, & Garcia, 1990; Oliveira, Silva, Guglielmino, & Guglielmino, 2009; Oliveira & Simões, 2006). There are studies that suggest that differences exist between readiness for self-directed learning and age (Alspach, 1991; Cox, 2002; Long & Agyekum, 1988; Spitzer, 2000), race/ethnicity (Adenuga, 1989; Cohen & Brawer, 1996) and gender (Adenuga, 1989; Reynolds, 1984). Other researchers have found that no significant relationship exist between readiness for self-directed learning and age (Finestone, 1984; Hassan, 1981), gender (Hassan, 1981; Roberts, 1986; Sabbaghian, 1979/1980) and race/ethnicity (Alspach, 1991; Brockett, 1985; Hassan, 1981; Sabbaghian, 1979/1980; Young, 1986). These aforementioned variables were explored in the present study.

Guglielmino (1977) designed the *Self-Directed Learning Readiness Scale* (SDLRS) as an instrument to measure readiness to engage in independent learning. It is useful in predicting readiness for self-directed study, diagnosing areas of weakness, and for predicting performance (Guglielmino, 1977). Guglielmino defines readiness for self-
directed learning by using the following eight factors: openness to learning, self-concept as an effective learner, initiative, and independence in learning, informed acceptance of responsibility for one’s own learning, love of learning, creativity, positive orientation to the future, and ability to use basic study skills and problem solving skills (Guglielmino, 1977). She suggested that self-direction in learning is dependent on the learner’s values, attitude, and abilities in a given situation. She further defines the highly self-directed learner as

One who exhibits initiative, independence, and persistence in learning; one who accepts responsibility for his or her own learning and views problems as challenges, not obstacles; one who is capable of self-discipline and has a high degree of curiosity; one who has a strong desire to learn or change and is self-confident; one who is able to use basic study skills, organize his or her time and set an appropriate pace for learning, and to develop a plan for completing work; one who enjoys learning and has a tendency to be goal-oriented. (Guglielmino, 1977, p. 73)

Researchers have conducted several studies using the SDLRS and the findings have varied. Robinson (2003) found that as the age of a sample of graduate students increased, so did the scores on the SDLRS. Likewise, Cox (2002) found a positive correlation between age and self-directed learning readiness among students enrolled in a community college evening school. Morris (1995) sampled nontraditional graduate business students and found a positive correlation between GPA and SDLRS scores; however, Harriman (1991) did not find a significant relationship between SDLRS and achievement.
Amey (2008) used the SDLRS to examine if there were differences in the pre- and post- scores of senior-level bachelor degree social-work students and master degree social-work students who had both completed their field experiences. Findings indicated that the bachelor degree students had a significant change in SDLRS scores while the master degree students did not. In 1989 Smith, used the SDLRS to investigate the relationship between self-directed learning readiness and success of participants in a highly self-directed, non-traditional higher education degree program. Smith found a significant difference in SDLRS scores among those who graduated and those who withdrew from the program. Those who graduated were more ready for the self-directed nature of the curriculum than those who withdrew.

Brockett (1985) studied adults 60 years of age and over and found a significant positive relationship between readiness for self-direction in learning and life satisfaction, yet did not find any significant relationship when examining age and readiness for self-direction in learning. Previous researchers found a significant relationship between readiness for self-direction in learning and gender among the elderly population (Curry, 1983; Finestone, 1984).

While most programs of professional education remain largely instructor-oriented and lack elements of self-directed learning activity, (Alspach, 1991; Diers, 1972; Hassan, 1981), there is an increased demand for employees to be effective self-directed learners (Heimstra & Brockett, 1994). Findings have indicated that relationships exist between readiness and organizational effectiveness, manager attitudes, organizational culture and environment settings (Chien, 2004). According to Noble (2007) leaders of organizations must support learning and personal development of its workforce in order
to keep the organization thriving. Smith (2002) proposed that employees should be encouraged to become self-directed learners because the outcomes would potentially benefit the organization. This is especially critical considering the restrictive nature and demands of some work environments and where access and support for continuing education is not available.

Mayhew (2008) found that the removal of barriers and the inclusion of environments that were supportive of learning were predictive of self-directed learning readiness. These environments were characterized as easily accessible, provide clear decision making, supportive, have policies in place that encourages self-directed learning, support training and development, and finally, provide financial aid (Kops, 1993). Confessore and Long (1993) used concepts of self-directed learning to improve work environments.

Pertinent to the current study, researchers have used the SDLRS to measure self-directed readiness and success in job performance (Durr et al. 1996; Guglielmino, Guglielmino, & Long, 1987; Kops, 1993; Mayhew, 2008; Spear & Mocker, 1984). Durr et al. (1996) found that individuals with higher levels of readiness for self-directed learning tend to engage in more learning projects and perform better in their work environment. Guglielmino et al. (1987) found differences in self-directed learning readiness in the employment setting. Females had higher SDLRS than males. Individuals who had jobs that required creativity, problem-solving skills, and individuals with high levels of educational also had high SDLR scores.

Durr, Guglielmino, and Guglielmino (1994) used the SDLRS to determine readiness among employees at the Motorola Company. Findings indicated differences
among certain categories of workers. For instance, individuals who were employed as managers or as salespersons had higher scores than employees in engineering or clerical positions. Studies such as these and as proposed by the current researcher are useful to employers who are interested in determining self-directed readiness during the hiring process or during employee evaluation and promotion. Self-directed readiness studies conducted with employees are also helpful in determining continuing education, training needs and learning preferences.

A second underlying framework for this study is Andragogy. The term *andragogy*, originally coined by Alexander Kapp in 1833, is a concept based on one of Plato’s theories of learning. It refers to the *teaching of man* which is in contrast to *pedagogy*, the teaching of children (Knowles, Holton, & Swanson, 2005). Eduard Lindeman later revisited the concept in the 1920s and referred to andragogy as the discipline which studies the adult education process or the science of adult education (Smith, 1989). Malcolm Knowles is most famously credited for popularizing the term and for introducing andragogy in practice. He defined andragogy as the “art and science of helping adults learn” (Knowles, 1975). Knowles proposed several assumptions of andragogy: (1) humans are more self-directed as they age; (2) as people age, they gain experiences that may be valuable to learning; (3) readiness to learn and adult development are related; (4) adults have more immediacy for the application of what they learn therefore they are more problem solving oriented; (5) internal motivation is more promising than external motivation; and finally, (6) adults are interested in making meaning of their learning experiences (Knowles, 1980). Knowles believed that adults need more control over their learning experiences and frequent opportunities to apply
what they learn (Bell, 1989). In essence, adult students are independent and need less guidance and structure (Knowles, 1970).

Researchers such as Knowles (1990) and Owen (2002) proposed that self-directed learning was a key component of andragogy. Of particular interest to the researcher is Brookfield’s criticism of this assumption. Brookfield (1991) supported the assumption that adults bring with them more and a different type of experience to the learning environment. However, he found the first assumption, the idea of adults being self-directed, to be overstated in that not all adults have the ability or the desire to be self-directed. Another general criticism of self-directed learning that the researcher of this particular study examined is the lack of research concerning internal factors of the learner (Kasworm, 1983) as well as the context in which the learning takes place (Brookfield, 1988).

According to Tough (1971) adults mostly engage in learning experiences in non-traditional, informal settings, and they often venture to learn individually instead of in groups. Wilcox (1996) suggested that self-directed learning should be encouraged by adult educators. It has also been noted that self-directed learning should be the focus of instructors in the traditional college setting. According to Raidal and Volet (2009), the ability of students “to engage in self-directed learning is viewed as a highly desirable goal of professional education because it is a requisite for continuous learning after graduation” (p. 578). Different methods have been suggested: computer technology (Libberman & Linn, 1991); problem-based learning (Ryan, 1993); and the development of logical reasoning skills (Wilcox, 1996). Self-directed learning readiness is especially
critical as many educational and training methods are delivered in a format that requires individuals to be independent (Hiemstra & Brockett, 1994).

The current study is unique in that there is no research in self-directed learning that studies a sample of disability services administrators. This population is unique given that there are no external accreditation agencies (licensing boards, national board of examiners, certification programs etc.) that would compel this group of professionals to engage in learning activities for the sake of their jobs. There are very few current studies that use Tough’s Interview Schedule to gather data on adults engaged in learning projects (Davis et al., 2010).

Hassan (1981) was the first to use both Tough’s Interview Schedule and the SDLRS for the purpose investigating learning projects and readiness for self-direction in learning. She found that there was a significant positive relationship between readiness and the number of projects completed among the general adult population in Ames, Iowa, however, there was no significant difference between the type of planner chosen among low self-directed learners and high self-directed learners. Respondents reported 63.8% of their learning projects were for enjoyment. Unlike findings from Tough’s (1979) study where participants reported that they engaged in learning projects for credit 5% of the time; Hassan’s respondents reported that 10% of their projects were for credit towards a degree, and 7.9% of their projects were job related.

The researcher of the present study could not find any current studies where both Tough’s Interview Schedule and the SDLRS were both used to determine if there was a relationship between readiness for self-direction in learning and the actual number of projects completed. The most recent study was conducted in 2005. The researchers used
the SDLRS and a modified version of Tough’s Interview to examine the learning projects of fourteen (14) highly self-directed adult learners and the barriers and interrupters they experienced during their pursuit of learning (Guglielmino et al., 2005).

Conclusion

The population of students with diverse disabilities enrolled in the postsecondary education has increased and is expected to continue to increase (NCES, 2008). Institutions at the postsecondary level and disability services administrators must be prepared to meet the needs of students with disabilities in order to increase retention and graduation rates as historically they lag behind their non-disabled counterparts (NCES, 2008). DSAs function in many roles and often enter into the profession with limited experience. DSAs report that they engage in continuing education and learning experiences on their own without the support of their institution (Sneed, 2006).

There is a need to examine more closely the extent to which disability services professionals, who often come from various backgrounds, prepare for their positions, and participate in continuing education (Madaus, 1998). Identifying the learning experiences of DSAs may help answer questions related to employee satisfaction, retention, training needs, institutional commitment, quality of services provided, and student success. SDLRS scores have been significantly associated with performance levels, particularly in jobs involving high degrees of change or requiring creativity and problem solving abilities (Durr, 1992; Guglielmino et al., 1987).

Previous research related to DSAs has often been limited to collecting demographic data (Harbour, 2004; Madaus, 1996); identifying roles and functions (Blosser, 1984); identifying essential job functions (Madaus, 1996), and recently, how
well DSAs fare at meeting the AHEAD program standards (Sneed, 2006). Additionally, there have not been any studies that have applied the self-directed learning theory or andragogy as a framework for examining how disability services administrators engage in learning and personal development and how it relates to their professional growth. In times of budget cuts, a call for program efficiency, and the need for more accountability (Parker, Shaw, & McGuire, 2003), administrators at universities may use these findings to provide more policy and financial support for disability support services, personal development for DSAs and support for training and continuing education of disability services administrators. Findings from this study will help those responsible for training, educating and providing resources for disability services administrators identify areas of strengths and weakness in their educational materials so that they may better meet the DSA’s needs and gain a better understanding of the field of adult learning/education and the concept of self-direction in learning. In particular, programs can be developed that are suitable for learners based on their self-directed readiness levels.

Finally, findings from the study may help DSAs identify areas of strengths and weakness in their professional development and in their roles as trainer and adult educator. The findings will also help disability services administrators take a critical and reflective look at their prior learning experiences, their needs, perceptions concerning learning, their motivation and readiness for independent learning.
CHAPTER III

METHODOLOGY

Overview

This chapter discusses the process by which the study was conducted in order to answer the research questions. The following sections include the purpose of the study, identification of the participants that were involved, an explanation of how the data was collected, a description of the instruments that were used to collect the data, and a discussion of the statistical techniques that were utilized to analyze the data.

The purpose of this study was to determine whether a relationship exists between self-directed learner readiness, and the number of learning projects completed by disability services administrators in the postsecondary setting. The relationships between various demographic and biographic variables and the total number of learning activities completed were examined. Also examined were the types of planners used as defined by Tough (1979) in relation to their level of self-directedness. A self-created instrument based on Tough’s (1979) *Tough’s Interview Schedule for Studying Some Basic Characteristics of Learning Projects* and his definition of “learning projects” was used to measure the DSAs’ learning activities. Guglielmino’s (1977) *Self-Directed Learning Readiness Scale (SDLRS)* was utilized to measure the DSAs’ readiness for self-direction in learning. A short demographic questionnaire was created in order to gather descriptive data about the participants.
Research Questions

The following research questions guided this study:

1. Is there a significant relationship between a disability services administrator’s readiness for self-direction in learning and the number of learning projects that he or she conducted in the twelve-month period prior to the interview?

   a. Is there a significant relationship between a disability services administrator’s love for learning and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

   b. Is there a significant relationship between a disability services administrator’s self-concept and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

   c. Is there a significant relationship between a disability services administrator’s tolerance of risk and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

   d. Is there a significant relationship between a disability services administrator’s creativity and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

   e. Is there a significant relationship between a disability services administrator’s view of learning and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

   f. Is there a significant relationship between a disability services administrator’s initiative in learning and the number of learning projects he or she conducted in the twelve-month period prior to the interview?
g. Is there a significant relationship between a disability services administrator’s self-understanding and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

h. Is there a significant relationship between a disability services administrator’s acceptance of responsibility for one’s own learning and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

2. Is there a significant relationship between DSAs’ institution type and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

3. Is there a correlation between a disability services administrator’s level of self-directedness and his or her age?

4. Is there a correlation between a disability services administrator’s level of self-directedness and his or her race/ethnicity?

5. Is there a correlation between a disability services administrator’s level of self-directedness and his or her gender?

6. Is there a correlation between a disability services administrator’s level of self-directedness and his or her educational background?

7. Is there a correlation between a disability services administrator’s level of self-directedness and his or her number of years as a disability services administrator?
8. Is there a significant difference between disability services administrators who are “below average,” “average” or “above average” self-directed learners and the type of planner used for learning?

Participants

The population that was utilized in this study consisted of a sample of postsecondary disability services administrators (DSAs) who worked at public two-year and four-year institutions in the United States and Hawaii. The sample in this study was drawn using the convenience sampling process. Convenience sampling is the process of collecting data from a group that is readily available (Creswell, 2004). The recommended sample size for this study was fifty or more participants. A total of 51 DSAs responded to the study. For this study, disability services administrators included the working titles of; Director, Assistant Director, Coordinator, Dean of Disability Services, Counselor, Disability Specialist, ADA Compliance Officer, Associate Director, Assistant Vice President, Testing Center Coordinator and Assistant Dean. Initial contact information for DSAs employed at two- year and four-year colleges and universities in the United States and Hawaii was accessed from a list of American institutions of higher education that had been grouped by census region. This contact information was further validated by accessing each college’s website and examining the institution’s particular disability support services information.

Instrumentation

Three instruments were utilized to gather data in this study. A description of each instrument follows.
Demographics Questionnaire

The relationships between demographic/biographic variables and the readiness for self-directed learning were examined. The researcher included a short questionnaire that asked participants to provide information on their (1) age range, (2) race/ethnicity, (3) gender, (4) educational background, (5) job title, (6) type of institution employed, (two-year or four-year institution) (7) number of years as a DSA, (8) number of years in current position, (9) number of years worked in higher education, (10) previous professional work experiences, (11) employment type (full-time or part-time), (12) other duties and positions performed, (13) membership in professional associations, (14) certifications and licensures held. Each variable was coded for SPSS and analyzed.

Appendix A shows the instrument.

Interview (Based on Tough’s Interview Schedule for Studying Some Basic Characteristics of Learning Projects)

Tough’s Interview Schedule (Tough, 1971) has been widely used to determine the extent to which adults engage in self-directed learning activities. The schedule introduces interviewees to the concept of learning projects and uses the probing technique to gather information on the quantity and nature of learning projects. Tough defined a learning project as a series of clearly related learning episodes adding up to at least seven hours of effort within a six-month period. It is a deliberate and sustained effort on the part of the learner whose motivation is to obtain knowledge, learn a skill, or change his or her behavior. The researcher used a modified version of the Interview Schedule and Tough’s definition of a learning project to determine the number of self-directed learning activities in which DSAs have engaged within the past year. This number included both career
related learning projects and projects pursued for other reasons. The researcher included a question to determine who was primarily responsible for planning each of the career/job related projects, also known as the “project planner” as defined by Tough (1979). In addition, the instrument contained a question to determine the resources used by participants while conducting their learning projects. Appendix B shows the instrument.

Guglielmino’s Self-Directed Learning Readiness Scale (1977)

To collect data on current readiness for self-directed learning, a computerized version of Guglielmino’s Self-Directed Learning Readiness Scale (1977) was used. The SDLRS is a self-report instrument containing 58 items. The SDLRS is administered under the title of the Learning Preference Assessment (LPA) so that those taking it are not influenced by the actual title of the instrument. Guglielmino identified eight factors that indicated a highly self-directed learner: (a) openness to learning, (b) self-concept as an effective learner, (c) initiative and independence in learning, (d) informed acceptance of responsibility for one’s own learning, (e) love of learning, (f) creativity, (g) positive orientation to the future, and (h) ability to use basic study skills and problem solving skills (Guglielmino, 1977).

The SDLRS contains a mixture of positively phrased and negatively phrased prompts. Respondents were asked to indicate their level of agreement to a 5-point Likert scale: 1) “Almost never true of me,” 2) “Not often true of me,” 3) “Sometimes true of me,” 4) “Usually true of me,” or 5) “Almost always true of me,” on each item. The scores for self-directed readiness range from “below average,” (58-201) “average,” (202-226) and “above average,” (227-290). The average score is 214 (SD=25.59). Individuals with higher scores prefer to plan and implement their own learning experiences. They are
comfortable learning independently but do not want to be completely responsible for creating and managing their learning experience. Individuals with below average scores are more likely to thrive in very structured learning environments where others plan, implement, and evaluate their learning experiences (Guglielmino & Guglielmino, 2008).

Guglielmino reported the reliability of the SDLRS as .87. Several researchers (Brockett, 1985; Delahaye & Smith 1995; Finestone, 1984; Graeve, 1987; Guglielmino, 1977) have confirmed the instrument’s level of internal consistency which ranges from satisfactory to excellent. In test-retest reliability, values range between 0.79 and 0.82 (Delahaye & Smith, 1995; Finestone, 1984). On average, the SDLRS takes about 15-30 minutes for participants to complete. Total scores on the SDLRS for each participant were input and analyzed using SPSS. Appendix C provides a sample of the SDLRS (items 1-19).

Procedure

Data collection for the study began in May 2012 and concluded in September 2012. A convenience sample of post-secondary Disability Services Administrators (DSAs) employed in public two-year community colleges and public four-year universities in the United States and Hawaii were solicited to participate in this study. Every qualified DSA in the south-eastern states of North Carolina, Mississippi, Virginia, West Virginia, Alabama, Tennessee, Louisiana, South Carolina, and Arkansas were initially contacted via their personal institutional email accounts at least three times. Individuals contacted included AHEAD as well as Non-AHEAD members. Because of a low response rate during the first round of solicitation for participants, a second effort to reach potential participants was made by contacting every National AHEAD member in
the United States via their personal institutional email account at least three times. A third effort to reach potential participants was made by sending several mass emails via the National AHEAD list-serv, and state- affiliated AHEAD list-servs. To ensure a well-rounded sample of AHEAD and non-AHEAD members, several mass emails were sent to the national Disabled Student Services in Higher Education (DSSHE) professional list-serv. These list-serv reaches subscribed DSAs across the United States and Hawaii. Some participants were referred by their colleagues and they made initial contact with the researcher to schedule an appointment for an interview. Opening the study to all DSAs in the United States and Hawaii doubled the response rate.

Potential participants were sent an email that informed them about the general purpose of the study, instrumentation formats, confidentiality, and the potential benefits of the study. The email included the researcher’s background and a brief statement of the significance of the research to the profession. See Appendix D. A total of 55 individuals initially agreed to participate in the study. All 55 individuals scheduled an appointment for an interview; however, for a variety of reasons, four individuals could not complete the study. This led to a final sample of 51 individuals (n=51). The 51 respondents represented DSAs from 15 different states across the United States. The states of North Carolina (28.8%); Mississippi (13.5%); Virginia (11.5%) and New York (9.6%) had the highest participation rates among the states that had individuals who chose to respond to the study.

Potential participants received an informed consent form via email and were asked to return the consent form to the researcher by fax, or emailed in a PDF format before they could begin the study. See Appendix E. Potential participants were given one
week to return the informed consent form. If the consent forms were not returned after one week, a follow-up email was sent followed by a personal phone call to encourage participation and the return of the form. See Appendix F. In order to increase response rates, respondents were be offered the opportunity to win one of four randomly drawn $20.00 Visa gift cards. Incentives such as gift cards have shown to increase participation rates (Gall, Borg, & Gall, 1996).

Individuals who agreed to participate and had returned consent forms received an email and or a phone call to schedule their interview. See Appendix G. Once the interview date and time had been set, the participant received an email of confirmation. See Appendix H. If a planned telephone interview appointment was missed or cancelled, an additional email and or call was made to the potential participant for the purpose of rescheduling; followed by an email confirming the new appointment. Potential participants received a reminder email the day before their scheduled interview. The researcher personally conducted all of the interviews. Before the telephone-based interview, participants were given a brief oral presentation reemphasizing the general purpose of the study and they were assured that their responses would be kept confidential. They were also given the option to withdraw consent and discontinue participation at any time during the study. See Appendix I. The telephone interview consisted of a demographic questionnaire and questions based on Tough’s Interview Schedule for Studying Some Basic Characteristics of Learning Projects (1971) in which respondents were probed using a script about their participation in learning activities during the twelve-month period prior to the time of the interview. Interviewees were first given the definition of a learning project as defined by Tough. During the interview, the
Interviewees provided both personal and career/job related learning activities. At times, interviewees stated that they did not think a particular project was *important* but after further probing the majority of the projects indeed met the criteria for a learning project.

The participants were generally open and excited to talk about their learning activities. Several went into great detail about projects that they were very passionate about. Many participants had never thought about the learning projects that they had completed across the year and were surprised at the significance of their projects and the number of projects completed. Some participants stated that they knew they had participated in more projects but due to lack of time to devote to the study and memory lapse effects they could not recall all of their projects and recalled only major projects. Other researchers experienced the same reaction from participants when using the Interview Schedule (Coolican, 1973; Hassan, 1981; Tough, 1971).

A major purpose of this study was for DSAs to identify the primary planner of each of their career/job related learning project reported. The intention was to determine who was responsible for the day-to-day planning and decision-making pertaining to what was to be learned and how to go about the major learning tasks involved in each project. The DSAs were asked to categorize career/job related projects according to the five types of planners; 1) self-planned; 2) group planned; 3) individual or one to one planner; 4) non-human planner and 5) mixed planner. Finally, the respondents were asked to identify the number of major resources used. A total of eight major resources that were most likely to be used by professionals in the field were listed. Respondents replied “yes” or “no” if they used the resource or not.
The interview took 15-20 minutes to complete. Upon the completion of the interview, the participants were thanked for his or her time and participation. They then received instructions concerning how to notify the researcher if they wished to participate in the gift card drawing, and a password and their User ID via phone and via email along with the link to log onto the self-administered online version of Guglielmino’s *Self-Directed Learning Readiness Scale (SDLRS)*. This instrument was administered under the title of *Learning Preference Assessment* (LPA) so that those taking it were not influenced by the actual title of the instrument. The SDLRS was composed of 58 prompts of which respondents were asked to indicate the degree to which the statement described him or her. The administration of the SDLRS took approximately 15-20 minutes to complete. Participants received their self-directed learning readiness score and feedback about their score immediately after completing the questionnaire. Participants who had been interviewed but have not completed their online questionnaire received follow-up reminders by email and by phone prompting them to complete the online survey.

**Data Analysis Procedures**

The purpose of this study was to: (a) determine whether a relationship exists between self-directed learning readiness and the number of learning projects completed by disability services administrators employed at postsecondary institutions (b) determine the degree to which disability services administrators’ self-readiness to participate in learning projects differ according to the variables of: age, race/ethnicity, gender, educational background, institution type, number of years as a disability services administrator (c) determine whether a relationship exists between the disability services administrators level of self-directed readiness and the type of planner used for learning,
and (d) provide descriptive data relative to the variables of the study. Data were collected using a quantitative correlational design. Correlational research attempts to determine whether and to what degree a relationship exists between two or more quantifiable variables. However, it never establishes a cause-effect relationship (Gay, 1996). Variables are not changed or manipulated. According to Creswell (2004) correlational designs are good for predicting outcomes and explaining complex connections.

Data were analyzed by using the computer program SPSS. Descriptive information including raw scores, means of raw scores, frequency, range, and percentage were analyzed. The Pearson product–moment coefficient (r) was used to examine the correlation between SDLRS scores and the total number of completed learning projects. The t-test of significance was used to determine relationships between self-directedness scores and age; race/ethnicity; gender; number of years as a DSA, and institution type. The one-way analysis of variance statistic (ANOVA) was used to explore relationships between educational background and levels of self-directedness. The chi-square statistic was used to test for significant relationships between the type of planner used for learning projects and the DSA’s level of readiness for self-directed learning.

Summary

This chapter included a discussion on the proposed methods for this study. The section opened with the purpose of the study and a review of the questions that guided this study, followed by the population sampled. The researcher described the instruments and the procedures utilized for collecting data. Finally, the researcher described data analysis procedures. The following chapter presents results from the data collected.
CHAPTER IV

RESULTS

Introduction

The purpose of this study was to determine whether a relationship existed between self-directed learner readiness, and the number of learning projects completed by disability services administrators in the postsecondary setting. The relationships between various demographic and biographic variables and self-directed readiness scores were examined. The researcher also examined the types of planners used by the disability services administrators in relation to DSAs’ level of self-directedness. A self-created instrument based on Tough’s (1979) *Tough’s Interview Schedule for Studying Some Basic Characteristics of Learning Projects* and his definition of “learning projects” was used to measure the DSAs’ learning activities.

Guglielmino’s (1977) *Self-Directed Learning Readiness Scale (SDLRS)* was utilized to measure the DSAs’ readiness for self-direction in learning. A short demographic questionnaire was created in order to gather descriptive data about the participants. SPSS was used to analyze the data and produced distribution and demographic results. Results from the data analysis will be presented in this chapter. Sample characteristics will be described, response rates will be discussed, and other descriptive data will be provided. Finally, results for each of the research questions which guided this study will be presented.

Response to Study

A convenience sample of Post-secondary Disability Services Administrators (DSAs) employed in public two-year community colleges and public four-year
universities in the United States and Hawaii were solicited to participate in this study beginning in the month of May 2012 through the month of September 2012. Every qualified DSA in the states of North Carolina, Mississippi, Virginia, West Virginia, Alabama, Tennessee, Louisiana, South Carolina, and Arkansas was initially contacted via their personal institutional email account at least three times. Individuals contacted included AHEAD as well as Non-AHEAD members. A second effort to reach potential participants was made by contacting every National AHEAD member in the United States via their personal institutional email account at least three times. A third effort to reach potential participants was made by sending several mass emails via the National AHEAD list-serv, and state-affiliated AHEAD list-servs. To ensure a well-rounded sample of AHEAD and non-AHEAD members, several mass emails were sent to the national Disabled Student Services in Higher Education (DSSHE) professional list-serv. Some participants were referred by their colleagues and they made initial contact with the researcher to schedule an appointment for an interview.

A total of 55 individuals agreed to participate in the study. All 55 individuals scheduled an appointment for an interview; however, for a variety of reasons, four individuals could not complete the study. This led to a final sample of 51 individuals (n=51). The 51 respondents represented DSAs from 15 different states across the United States. The states of North Carolina (28.8%); Mississippi (13.5%); Virginia (11.5%), and New York (9.6%) had the highest participation rates of the states that had individuals who chose to respond to the study. Table 1 presents geographical locations of the DSA respondents represented in the study.
Table 1

*Geographical Locations of Respondents Represented In the Study*

<table>
<thead>
<tr>
<th>Location</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>AZ</td>
<td>3</td>
<td>5.8</td>
</tr>
<tr>
<td>AR</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>CO</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>FL</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>HI</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>IL</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>IO</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>MS</td>
<td>7</td>
<td>13.5</td>
</tr>
<tr>
<td>NY</td>
<td>5</td>
<td>9.6</td>
</tr>
<tr>
<td>NC</td>
<td>15</td>
<td>28.6</td>
</tr>
<tr>
<td>PA</td>
<td>4</td>
<td>7.7</td>
</tr>
<tr>
<td>TN</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td>TX</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td>VA</td>
<td>6</td>
<td>11.5</td>
</tr>
</tbody>
</table>

*Practitioner Characteristics*

Participants were asked to respond to several demographic questions. Questions included respondents’ gender, ethnicity, age, highest degree earned, and field of study,
also known as primary academic background. A discussion of the results follows. The majority of respondents were female representing 78.4% of the sample (n=40). Caucasians/Whites represented 73% of this sample (n=38). African Americans/Blacks made up 19.2% of the sample, followed by Multi-Ethnic individuals (3.8%) and Hispanics/Latinos (1.9%). Participants were asked to provide their age range. The most represented age range in this sample was the 56-65 years old age group (n=17), closely followed by 36-45 year olds (n=13). The ranges presented along with the percent of respondents answering were: 25-35 years old, (17.3%); 36-45 years old, (25%); 46-55 years old, (19.2%); 56-65 years old, (32%), and over 65 years old, (3.8%). When asked about their highest degree earned, four (4) individuals reported obtaining a bachelor’s degree (7.7%), 43 individuals reported having earned a master’s degree (82.7%) and four (4) individuals reported that they had obtained a doctoral degree (7.7%). Table 2 presents descriptive data of the variables gender, ethnicity, age, and degree obtained.

Another practitioner characteristic investigated was field of study/primary academic background. The respondents reported 23 academic backgrounds. The majority of the participants (n=10) indicated that their primary academic background was in the field of Rehabilitation Counseling (19.2%). Human Development Counseling, Counseling Psychology, Special Education, and College Student Personnel were (each) reported as primary academic background by 7.7% of the sample respectively. Higher Education Administration and Social work were each reported by 5.8% of the sample. English Education, Counselor Education, and Rehabilitation Social Sciences were each reported as primary academic background by 3.8% of the sample. Table 3 provides descriptive statistics of all primary academic backgrounds reported.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>40</td>
<td>76.9</td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>21.2</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American/Black</td>
<td>10</td>
<td>19.2</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>38</td>
<td>73.1</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Multi Ethnic</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Age Range</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-35</td>
<td>9</td>
<td>17.3</td>
</tr>
<tr>
<td>36-45</td>
<td>13</td>
<td>25.0</td>
</tr>
<tr>
<td>46-55</td>
<td>10</td>
<td>19.2</td>
</tr>
<tr>
<td>56-65</td>
<td>17</td>
<td>33.3</td>
</tr>
<tr>
<td>Over 65</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Degree</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>4</td>
<td>7.7</td>
</tr>
<tr>
<td>Masters degree</td>
<td>43</td>
<td>82.7</td>
</tr>
<tr>
<td>Doctorate degree</td>
<td>4</td>
<td>7.7</td>
</tr>
</tbody>
</table>
Professional Characteristics

Of particular interest to the researcher were the professional characteristics of the participants. Participants were asked questions about their past and current professional experiences in order to determine the profile of DSAs, and their roles and functions in their respective college and universities. Participants were asked to identify their institution type and their employment type. In this sample 53.8% of the respondents reported that they worked in a two-year community college (n=28) and 44.2% reported that they worked in a four-year university (n=23). The majority of respondents reported that they worked at their institution full-time (94.2%). Table 4 presents descriptive data of institution type.

Table 3

Primary Academic Backgrounds Represented in Study

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling, Human Dev.</td>
<td>4</td>
<td>7.7</td>
</tr>
<tr>
<td>Education, Special Ed.</td>
<td>4</td>
<td>7.7</td>
</tr>
<tr>
<td>Education, Leadership</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Education, English</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td>Social Work</td>
<td>3</td>
<td>5.8</td>
</tr>
<tr>
<td>Ed., Curriculum/ Instruction</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Counseling, Rehabilitation</td>
<td>10</td>
<td>19.2</td>
</tr>
<tr>
<td>Counseling, Psychology</td>
<td>4</td>
<td>7.7</td>
</tr>
</tbody>
</table>
Table 3 (continued).

<table>
<thead>
<tr>
<th>Professional Area</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology, School</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Higher Ed., College Student</td>
<td>4</td>
<td>7.7</td>
</tr>
<tr>
<td>Counseling, Counselor Ed.</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td>Rehabilitation, Social Serv.</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td>Higher Ed., Administration</td>
<td>3</td>
<td>5.8</td>
</tr>
<tr>
<td>Education, Language</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Education, Adult Education</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Education, Deaf Education</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Counseling, Community</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Business Administration</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Psychology</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Political Science</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Rehabilitation, Deaf</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Education, Reading</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Computer Engineering/Tech</td>
<td>1</td>
<td>1.9</td>
</tr>
</tbody>
</table>
Table 4

*Institution Type*

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-yr, Community College</td>
<td>28</td>
<td>53.80</td>
</tr>
<tr>
<td>4-yr, University</td>
<td>23</td>
<td>44.20</td>
</tr>
</tbody>
</table>

Table 5

*Descriptive Data for Respondents’ Primary Job*

<table>
<thead>
<tr>
<th>Primary Position</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselor</td>
<td>7</td>
<td>13.50</td>
</tr>
<tr>
<td>Director</td>
<td>18</td>
<td>34.60</td>
</tr>
<tr>
<td>Assistant Director</td>
<td>6</td>
<td>11.50</td>
</tr>
<tr>
<td>Coordinator</td>
<td>14</td>
<td>26.90</td>
</tr>
<tr>
<td>Disability Specialist</td>
<td>3</td>
<td>5.80</td>
</tr>
<tr>
<td>Associate Director</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Assistant Dean</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Asst. Vice President</td>
<td>1</td>
<td>1.90</td>
</tr>
</tbody>
</table>

*Disability services related positions.* Participants were asked to provide the number of disability services related positions they held and their specific disability
services related job title(s). In this sample, 76.9% DSAs reported that they held one disability services related position in their office (n=40). A total of 11 (21.2%) DSAs reported that they held two disability services related positions in their office. Directors represented 34.6% of the sample (n=18); followed by Coordinator (26.9%); Counselor (15.5%); Assistant Director (11.6%); Disability Specialist (5.8%); Associate Director (1.9%); Assistant Dean (1.9%) and Assistant Vice President (1.9%). Of those DSAs who reported that they held two positions within their office (n=11), the most frequently reported second position was Counselor (9.6%); Coordinator (5.8%); ADA Compliance Officer (3.8%) and Test Center Coordinator. Table 5 and Table 6 present descriptive data for the respondents’ primary and secondary job titles.

Table 6

<table>
<thead>
<tr>
<th>Secondary Position</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselor</td>
<td>5</td>
<td>9.60</td>
</tr>
<tr>
<td>Coordinator</td>
<td>3</td>
<td>5.80</td>
</tr>
<tr>
<td>ADA Compliance</td>
<td>2</td>
<td>3.80</td>
</tr>
<tr>
<td>Test Coordinator</td>
<td>1</td>
<td>1.90</td>
</tr>
</tbody>
</table>

Non-disability related duty or position. In order to gather more information about the multiple roles of DSAs within their institutions, respondents were asked to identify the number and titles of any non-disability related duty or position that they performed at their institution. Respondents were asked to include paid, unpaid, volunteer, official, and
un-official duties and positions or duties that were not exclusively related to their primary position as a DSA. Table 7 and Table 8 depict descriptive data of the respondents’ answers to frequency and titles of non-disability services related positions. Of the respondents (46.2%) reported that they worked primarily in disability services and held no other positions or duties and 52.9% of the respondents reported that they held one or more non-disability services related position(s). Of the respondents, 17.3% reported that they held one (1) other position; 19.2% reported that they held two (2) other positions; 9.6% of the respondents reported that they held three (3) other positions and 5.8% of DSAs in this study reported that they held four (4) other positions outside of their primary job in their disability services office. There were a total of 15 different positions reported by the respondents. The most frequently reported “other positions held” were; college instructor (n=8); advising (n=7); academic support (n=7), and working on a university committee (n=5).

Table 7

<table>
<thead>
<tr>
<th>Number of Positions</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>24</td>
<td>46.20</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>17.30</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>19.20</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>9.60</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>5.80</td>
</tr>
</tbody>
</table>
### Table 8

*Descriptive Data of Respondents’ Non-Disability Services Related Positions*

<table>
<thead>
<tr>
<th>Non-Disability Services Positions/Duties</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Services Center</td>
<td>2</td>
<td>3.80</td>
</tr>
<tr>
<td>Veterans Committee</td>
<td>3</td>
<td>5.80</td>
</tr>
<tr>
<td>University Committee</td>
<td>5</td>
<td>9.60</td>
</tr>
<tr>
<td>Academic Support Center</td>
<td>7</td>
<td>13.50</td>
</tr>
<tr>
<td>Instructor</td>
<td>8</td>
<td>15.40</td>
</tr>
<tr>
<td>Advising</td>
<td>7</td>
<td>13.50</td>
</tr>
<tr>
<td>Admissions</td>
<td>2</td>
<td>3.80</td>
</tr>
<tr>
<td>Counseling Center</td>
<td>3</td>
<td>5.80</td>
</tr>
<tr>
<td>Testing Center</td>
<td>3</td>
<td>5.80</td>
</tr>
<tr>
<td>Registrar</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Threat Assessment Team</td>
<td>4</td>
<td>7.70</td>
</tr>
<tr>
<td>Advisor Student Club</td>
<td>3</td>
<td>5.80</td>
</tr>
<tr>
<td>Crisis Team</td>
<td>3</td>
<td>5.80</td>
</tr>
<tr>
<td>Student Services</td>
<td>3</td>
<td>5.80</td>
</tr>
<tr>
<td>Adult Education Center</td>
<td>2</td>
<td>3.80</td>
</tr>
</tbody>
</table>
**Previous professional experiences.** Participants were asked to provide information about their previous professional work experiences. The respondents were provided with ten professional categories and asked to provide the number of years worked in the profession, if any. They were also given an opportunity to respond with any profession not included in the primary ten categories. Table 9 provides statistics for respondents’ previous professional experiences. The ten major categories were: (a) Elementary/primary or secondary education (K-12), (b) elementary/primary or secondary resource or special education (K-12), (c) teaching in higher education, (d) student affairs or academic affairs in higher education, (e) vocational or rehabilitation services, (f) counseling, or psychological services, (g) social work, (h) allied health services and medical professions, (i) business and (j) law or legal services. Respondents added government, non-profit agency, consulting and adult educator to the other category. The additional previous professional positions created a total of 14 categories.

The most reported categories in this sample of DSAs were “student affairs or academic affairs in higher education” with an average of 3.08 years (SD=5.20). This was followed by “teaching in higher education” with an average of 2.82 years (SD=3.75); “business” averaged 2.59 years (SD=4.58) and “vocational or rehabilitation services” averaged 1.90 years (SD=4.03). The least reported categories were “counseling, or psychological services” with an average of 1.02 years (SD=2.81), “law or legal services” averaged .59 years (SD=2.57), “consulting” with an average .39 years (SD=2.80), “government” with an average of .29 years (SD=1.06), “non-profit agency” with an average of .18 years (SD=1.01) and finally, DSAs reported “adult educator” as the least amount of previous professional experience with an average of .10 years (SD=.700). The
total average of years of previous professional work experience for all 51 respondents was 17.92 years (SD=14.31).

Higher education and disability services professional experience. Participants were asked to provide information about their professional experience in the post-secondary setting. Respondents were asked to provide the number of years they had worked in the higher education setting in general. Results for this variable ranged from 1 year to 37 years. The average number of years was 14.37 (SD=8.16). When the DSAs in this study were asked how many years they had worked in a post-secondary disability services office, answers ranged from 1 year to 36 years with an average of 10.82 years (SD=8.77). When asked how long they had worked in their current disability services position, answers ranged from less than 1 year to 33 years with an average of 8.04 years (SD=8.11). Table 10 provides statistics for respondents’ professional experiences in higher education and disability services.

Table 9

Respondents’ Years Worked in Previous Professions

<table>
<thead>
<tr>
<th>PREVIOUS PROFESSION</th>
<th>MIN</th>
<th>MAX</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-12, Education</td>
<td>0</td>
<td>19</td>
<td>1.35</td>
<td>3.19</td>
</tr>
<tr>
<td>K-12, SPECIAL Education</td>
<td>0</td>
<td>20</td>
<td>1.51</td>
<td>4.50</td>
</tr>
<tr>
<td>College Instructor</td>
<td>0</td>
<td>17</td>
<td>2.82</td>
<td>3.75</td>
</tr>
<tr>
<td>Student/Academic Affairs</td>
<td>0</td>
<td>21</td>
<td>3.08</td>
<td>5.20</td>
</tr>
<tr>
<td>Vocational Rehab</td>
<td>0</td>
<td>20</td>
<td>1.90</td>
<td>4.03</td>
</tr>
<tr>
<td>Counseling/ PSY</td>
<td>0</td>
<td>17</td>
<td>1.02</td>
<td>2.81</td>
</tr>
</tbody>
</table>
Table 9 (continued).

<table>
<thead>
<tr>
<th>PREVIOUS PROFESSION</th>
<th>MIN</th>
<th>MAX</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Work</td>
<td>0</td>
<td>25</td>
<td>1.24</td>
<td>4.26</td>
</tr>
<tr>
<td>Medical Professions</td>
<td>0</td>
<td>18</td>
<td>1.16</td>
<td>3.59</td>
</tr>
<tr>
<td>Business</td>
<td>0</td>
<td>18</td>
<td>2.59</td>
<td>4.58</td>
</tr>
<tr>
<td>Law/Legal Services</td>
<td>0</td>
<td>15</td>
<td>.59</td>
<td>2.57</td>
</tr>
<tr>
<td>Government</td>
<td>0</td>
<td>5</td>
<td>.29</td>
<td>1.06</td>
</tr>
<tr>
<td>Non-Profit Agency</td>
<td>0</td>
<td>7</td>
<td>.18</td>
<td>1.01</td>
</tr>
<tr>
<td>Consulting</td>
<td>0</td>
<td>20</td>
<td>.39</td>
<td>2.80</td>
</tr>
<tr>
<td>Adult Education</td>
<td>0</td>
<td>5</td>
<td>.10</td>
<td>.70</td>
</tr>
<tr>
<td>TOTAL YRS PREV WORK</td>
<td>0</td>
<td>78</td>
<td>17.92</td>
<td>14.31</td>
</tr>
</tbody>
</table>

Table 10

Respondents’ Professional Experience in Higher Education and Disability Services

<table>
<thead>
<tr>
<th></th>
<th>MIN</th>
<th>MAX</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years Worked Higher Education</td>
<td>1</td>
<td>37</td>
<td>14.37</td>
<td>8.16</td>
</tr>
<tr>
<td>Years Worked Disability Services</td>
<td>1</td>
<td>36</td>
<td>10.82</td>
<td>8.77</td>
</tr>
<tr>
<td>Years Worked Current Position</td>
<td>0</td>
<td>33</td>
<td>8.04</td>
<td>8.11</td>
</tr>
</tbody>
</table>

Professional affiliations and certifications. DSAs in this study were asked to provide information about their professional memberships, certifications, and licensures.
Participants were asked if they were members of the National AHEAD organization and/or their state affiliate. The majority of respondents (51.9%) reported that they were members of both National AHEAD and their state affiliate. Of the sample, 26% were National AHEAD members only and 15.4% were members of their state affiliate, but not members of National AHEAD.

Participants were asked if they held any certifications and if so, to provide the type of certification they held. The majority of respondents (44.2%) did not have any certifications or licensures in any area. One certification/license was held by 38.5% of DSAs in this study; 13.5% of the DSAs sampled held two (2) certificates or licensures. One (1) DSA reported three (3) certifications/licensures. The most reported certifications/licensures were; certified rehabilitation counselor (n=10); national certified counselor (n=5); licensed professional counselor (n=4); and certified sign language interpreter (n=3). Table 11 and Table 12 depict DSAs certifications and licensures.

Table 11

*Descriptive Data of DSAs’ Certifications and Licensures*

<table>
<thead>
<tr>
<th>NUMBER OF CERTIFICATIONS/LICENSUES</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>23</td>
<td>44.20</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
<td>38.50</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>13.50</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1.90</td>
</tr>
</tbody>
</table>
### Table 12

*DSAs’ Certifications and Licensures*

<table>
<thead>
<tr>
<th>Certification</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified TRIO Director</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>K-12 License</td>
<td>2</td>
<td>3.80</td>
</tr>
<tr>
<td>National Certified Counselor</td>
<td>5</td>
<td>9.60</td>
</tr>
<tr>
<td>Certified Rehabilitation Counselor</td>
<td>10</td>
<td>19.20</td>
</tr>
<tr>
<td>Licensed Minister</td>
<td>1</td>
<td>1.03</td>
</tr>
<tr>
<td>Licensed Professional Counselor</td>
<td>4</td>
<td>7.70</td>
</tr>
<tr>
<td>Certified Sign Language Interpreter</td>
<td>3</td>
<td>5.80</td>
</tr>
<tr>
<td>Certified Life Career Planner</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Certified Test Director</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Licensed Sign Language Interpreter</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Certified Addictions Counselor</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Licensed Social Worker</td>
<td>2</td>
<td>3.80</td>
</tr>
<tr>
<td>Certified Public Manager</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Certified Therapist</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Certified/Learning Disabilities</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Certified K-12 Guidance Counselor</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Licensed Pharmacist</td>
<td>1</td>
<td>1.90</td>
</tr>
</tbody>
</table>
Learning Project Findings

The following represent the major findings related to the number of learning projects engaged in by DSAs who participated in this study. Table 13 provides data on the frequency of learning projects. The 51 DSAs sampled engaged in a total of 391 learning projects during the twelve-month period prior to the time of the interview. The average number of learning projects was 7.67 (SD=4.51). The minimum number of projects was two (2) and the maximum number of projects was twenty-five (25). The most frequent number of projects conducted by DSAs was five (5) projects (23.5%).

Career/Job related learning projects. DSAs were asked to provide the number of learning projects that were specifically related to their career or job. Of the reported 391 learning projects, 269 were reported to be related to their career or position as a disability services provider. The minimum number of career related projects was one project (1) and the maximum number was 20 projects. The average number of career related learning projects was 5.27 (SD=3.72).

Project planners. For each career/job related learning project reported, the DSAs were asked to identify the primary planner of the project. The intention was to determine who was responsible for the day-to-day planning and decision-making regarding what was to be learned and how to go about the major learning tasks involved in each project. Tough (1979) suggested five types of planners; 1) self-planned, 2) group planned, 3) individual or one to one planner, 4) non-human planner, and 5) mixed planner. Of the 269 career/job related projects, 112 were self-planned, 107 were group planned, 19 projects were planned by another individual, 21 projects were planned by non-human resources, and 10 projects were mixed planner projects. The average number of “self-planned”
projects was 2.22 (SD=2.56). The second most reported was “group planned” with an average of 2.10 (SD=1.71). Non-human planners were reported at an average of .41 (SD=.698). The mean for individual planner was .37 (SD=1.03). Table 14 provides data on learning project planners.

*Resources used during learning projects.* A major purpose of this study was to determine the methods or resources used by DSAs while engaging in their career/job related learning projects. The respondents were asked to identify the number of major resources used. A total of eight major resources that were most likely to be used by professionals in the field were listed. Respondents replied “yes” or “no” if they used the resource or not. Of the eight resources listed 34.6% respondents reported that they used seven (7) of the resources; 23.1% reported use of eight (8) of the resources and 23.1% reported that they used six (6) of the resources during their learning projects. The most frequently used resource was using the internet (n=50); attending a local or national conference or training (n=47); conversation with other professionals in the field (n=43); reading professional literature and journal articles (n=41); speaking directly with individuals with a disability (n=39) and consulting with “experts” in the field (n=38). The least used resources were reading books (n=37) and attending a class, correspondence course or web-based course (n=33).
Table 13

Descriptive Data of DSAs’ Learning Projects

<table>
<thead>
<tr>
<th>PROJECT TYPE</th>
<th>MIN</th>
<th>MAX</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Learning Projects</td>
<td>2</td>
<td>25</td>
<td>7.67</td>
<td>4.51</td>
</tr>
<tr>
<td>Career/Job Related Projects</td>
<td>1</td>
<td>20</td>
<td>5.27</td>
<td>3.72</td>
</tr>
</tbody>
</table>

Table 14

Descriptive Data of DSAs’ Career Related Project Planners

<table>
<thead>
<tr>
<th>PROJECT PLANNERS</th>
<th>MIN</th>
<th>MAX</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Planned</td>
<td>0</td>
<td>14</td>
<td>2.22</td>
<td>2.56</td>
</tr>
<tr>
<td>Group Planned</td>
<td>0</td>
<td>10</td>
<td>2.10</td>
<td>1.71</td>
</tr>
<tr>
<td>Individual Planned</td>
<td>0</td>
<td>5</td>
<td>.37</td>
<td>1.03</td>
</tr>
<tr>
<td>Non-Human Planned</td>
<td>0</td>
<td>3</td>
<td>.41</td>
<td>.69</td>
</tr>
</tbody>
</table>

Self-directed Learning Readiness Findings

One of the study’s objectives was to gather data on readiness for self-directed learning among DSAs, as measured by Guglielmino’s Self-Directed Learning Readiness Scale (1977). This scale provided, in addition to an overall score, scores on eight factors; 1) love of learning, 2) self-concept as an effective independent learner, 3) tolerance of risk, ambiguity and complexity in learning, 4) creativity, 5) view of learning as a lifelong beneficial process, 6) initiative in learning, 7) self understanding, and 8) acceptance of
responsibility for one’s own learning. Scores can range from “below average,” (58-201) “average,” (202-226) and “above average,” (227-290). The average score is 214 (SD=25.59). In this sample of DSAs, the average self-directed learning readiness score was 240.49 (SD=17.82). The minimum score was 178 and the maximum score was 272. An analysis of self-directed readiness levels revealed that 3.9% of the respondents scored in the “below average” range (n=2). Of the 51 participants, 21.5% (n=11) scored in the “average” range and 74.6% (n=38) of the participants scored in the “above average” range. Table 15 provides self-directed learning readiness scores.

Table 15

DSAs’ Self-directed Learning Readiness Scores

<table>
<thead>
<tr>
<th>SDLRS SCORE</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>178.00</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>197.00</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>217.00</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>219.00</td>
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<td>1.90</td>
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<td>1.90</td>
</tr>
<tr>
<td>223.00</td>
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<td>3.80</td>
</tr>
<tr>
<td>224.00</td>
<td>2</td>
<td>3.80</td>
</tr>
<tr>
<td>225.00</td>
<td>2</td>
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<tr>
<td>226.00</td>
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<td>1.90</td>
</tr>
<tr>
<td>232.00</td>
<td>1</td>
<td>1.90</td>
</tr>
</tbody>
</table>
Table 15 (continued).

<table>
<thead>
<tr>
<th>SDLRS SCORE</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>236.00</td>
<td>2</td>
<td>3.80</td>
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<td>237.00</td>
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<td>239.00</td>
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<td>245.00</td>
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<td>246.00</td>
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<td>247.00</td>
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<tr>
<td>260.00</td>
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<td>1.90</td>
</tr>
</tbody>
</table>
Research Questions Results

Question 1. This study examined whether a significant relationship existed between a disability services administrator’s readiness for self-direction in learning and the number of learning projects he or she conducted in the twelve-month period prior to the interview as measured by the eight factors of the SDLRS and the number of completed learning projects. Among the 51 participants, the minimum number of projects completed was two (2) and the maximum number of projects completed was twenty-five (25). The average number of projects completed was 7.67 (SD=4.51). The total minimum score for self-directedness was 3.07 and the total maximum score for self-directedness was 4.69. The average score was 4.14 (SD=.307). Pearson correlation coefficient was used to determine if a relationship existed between the eight factors and the dependent variable and to determine the direction and significance of the potential relationship. An alpha level of .05 or 95% confidence level was used. Results indicated that no significant relationship existed between the number of learning projects completed and the eight SDLRS Range: “Below Average,” (58-201) “Average,” (202-226) and “Above Average,” (227-290). The average SDLRS score is 214. In this sample of DSAs, the average SDLRS score was 240.49 (SD=17.82).

Table 15 (continued).

<table>
<thead>
<tr>
<th>SDLRS Score</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>269.00</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>270.00</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>272.00</td>
<td>1</td>
<td>1.90</td>
</tr>
</tbody>
</table>
factors of the SDLRS. Table 16 presents Pearson correlations and significance for each of the eight factors.

**Question 2.** Is there a significant relationship between a DSA’s institution type and the number of learning projects he or she conducted in the twelve-month period prior to the interview? DSAs that worked in a two-year institution completed an average of 7.79 projects (SD=4.54) and DSAs that worked in a four-year institution completed an average of 7.52 projects (SD=4.57). Results indicated that there was no statistically significant difference in the number of learning projects completed among DSAs that worked in two-year institution and DSAs that worked in a four-year institution \( t(49) = .206, \ p = .838 \).

**Question 3.** Is there a correlation between a disability services administrator’s level of self-directedness and his or her age? The age ranges represented in this sample along with the percent of respondents answering were; 25-35 years old, 17.3%; 36-45 years old, 25%; 46-55 years old, 19.2%; 56-65 years old, 32.%, and over 65 years old, 3.8%. Spearman’s rho statistics revealed that there was no significant correlation between a DSA’s level of self-directedness and his or her age \( r = .059, \ p = .680 \).

**Question 4.** Is there a correlation between a disability services administrator’s level of self-directedness and his or her race/ethnicity? Caucasians/Whites represented 73% of this sample (n=38). African Americans/Black made up 19.2% of the sample, followed by Multi-Ethnic individuals (3.8%) and Hispanic/Latino individuals (1.9%). Because of the small sample size of Multi-Ethnic and Hispanic/Latino individuals represented in this sample, they could not be included in the analysis of this research question. The mean scores and standard deviations for self-directedness and
race/ethnicity are presented in Table 17. Results indicated that there was no significant correlation between a DSA’s level of self-directedness and his or her race/ethnicity \[ t (46) = .495, \, p = .623 \].

**Question 5.** Is there a correlation between a disability services administrator’s level of self-directedness and his or her gender? The majority of respondents were female representing 78.4% of the sample (n=40). The mean scores and standard deviations for self-directedness and gender are presented in Table 18. The use of t-tests indicated that there was no significant correlation between a DSA’s level of self-directedness and his or her gender \[ t (49) = 1.701, \, p = .095 \].

**Question 6.** Is there a correlation between a disability services administrator’s level of self-directedness and his or her educational background? The mean and standard deviations for self-directedness and educational background are presented in Table 19. ANOVA results indicated that there was no significant correlation between a DSA’s level of self-directedness and his or her educational background \[ F (2, 48) = .391, \, p = .679 \].

**Question 7.** Is there a correlation between a disability services administrator’s level of self-directedness and his or her number of years as a disability services administrator? DSAs in this study were asked how many years had they worked in a post-secondary disability services office. Answers ranged from 1 year to 36 years with an average of 10.82 years (SD=8.77). Pearson correlation statistics revealed that there was no significant correlation between a DSA’s level of self-directedness and the number of years worked as a DSA \[ r = -.120, \, p = .400 \].
Table 16

*Pearson Correlations and Significance for the Eight Factors of the SDLRS and the Number of Learning Projects Completed by DSAs [N=51]*

<table>
<thead>
<tr>
<th>NUMBER OF LEARNING PROJECTS</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Love of learning</td>
<td>.125</td>
<td>.382</td>
</tr>
<tr>
<td>Self concept</td>
<td>.073</td>
<td>.608</td>
</tr>
<tr>
<td>Creativity</td>
<td>.248</td>
<td>.079</td>
</tr>
<tr>
<td>Initiative</td>
<td>.066</td>
<td>.648</td>
</tr>
<tr>
<td>Self-understanding</td>
<td>-.149</td>
<td>.296</td>
</tr>
<tr>
<td>Acceptance</td>
<td>-.009</td>
<td>.952</td>
</tr>
<tr>
<td>Tolerance</td>
<td>-.002</td>
<td>.988</td>
</tr>
</tbody>
</table>

Table 17

*Means and Standard Deviations for Self-directedness and Race/Ethnicity.*

<table>
<thead>
<tr>
<th>ETHNICITY</th>
<th>n</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-directedness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>10</td>
<td>4.17</td>
<td>.292</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>38</td>
<td>4.12</td>
<td>.309</td>
</tr>
</tbody>
</table>

$t(46) = .495, p = .623$ Non Significant
Table 18

Means and Standard Deviations for Self-directedness and Gender

<table>
<thead>
<tr>
<th>GENDER</th>
<th>N</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-directedness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>40</td>
<td>4.18</td>
<td>.248</td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>4.00</td>
<td>.453</td>
</tr>
</tbody>
</table>

$\text{t}(49) = 1.701, \ p = .095$  Non Significant

Table 19

Descriptive Data for Self-directedness and Educational Background

<table>
<thead>
<tr>
<th>Ed. Background</th>
<th>N</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s</td>
<td>4</td>
<td>4.26</td>
<td>.138</td>
</tr>
<tr>
<td>Master’s</td>
<td>43</td>
<td>4.13</td>
<td>.310</td>
</tr>
<tr>
<td>Doctorate</td>
<td>4</td>
<td>4.19</td>
<td>.422</td>
</tr>
<tr>
<td>Total</td>
<td>51</td>
<td>4.14</td>
<td>.307</td>
</tr>
</tbody>
</table>

$F(2,48) = .391, \ p = .679$  Non Significant

Question 8. Is there a significant difference between disability services administrators who are “below average,” “average,” or “above average,” self-directed learners and the type of planner used for learning? Tough (1979) suggested five types of planners; 1) self-planned; 2) group planned; 3) individual or one to one planner; 4) non-human planner and 5) mixed planner. Self-directedness scores range from “below
average,” (58-201) “average,” (202-226) and “above average,” (227-290). The average score is 214 (SD=25.59).

In this sample of 51 DSAs, results indicated that the average self-directed learning readiness score was 240.49 (SD=17.82). The minimum score was 178 and the maximum score was 272. An analysis of self-directed readiness levels revealed that 3.9% of the respondents scored in the “below average” range (n=2). Of the 51 participants, 21.5% (n=11) scored in the “average” range and the majority of the participants, 74.6% (n=38) scored in the “above average” range.

A cross-tabulation of planner type and level of self-directedness revealed that 50% (n=19) of “above average” self-directed learners preferred “group planned” projects; 34.2% (n=13) preferred “self-planned” projects; 10.5% (n=4) preferred “non-human” planners and 5.3% (n=2) preferred “individual” planners. The majority of “average” self-directed learners, 45.5% (n=5) preferred “self-planned” projects; 36.4% (n=4) preferred “group planned” projects; 9.1% (n=1) preferred “individual” planners and 9.1% (n=1) preferred mixed planners. Among the “below average” self-directed learners 50% (n=1) preferred “self-planned” projects and 50% (n=1) preferred “group planned” projects.

Overall, 47.1% (n=24) of the total DSAs sampled preferred “group planned” projects; 37.3% (n=19) preferred “self-planned” projects; 7.8% (n=4) of the total sample preferred “non-human” planners; 5.9% (n=3) preferred “individual” planners and finally, 2.0% (n=1) indicated that they preferred “mixed planned” projects. A test of Chi-Square revealed that there was no significant difference between disability services administrators who are “below average,” “average,” or “above average,” self-directed learners and the type of planner used for learning [$\chi^2 (N=52, H=8) = 6.061, p = .640$].
Summary

This chapter displayed and described the data which were collected in this study. Demographics of the respondents, including personal and professional characteristics that were pertinent to the study were discussed. Data collected from the SDLRS and the Interview were presented which included an analysis of the characteristics of learning projects completed by the sample; self-directed readiness scores, and the relationships between self-directed learning readiness and several independent variables. A summary of the findings of this study, conclusions, implications, and recommendations for further research are presented in Chapter V.
CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Overview

Chapter V summarizes and concludes the study. Conclusions based on the results are identified, practical implications and recommendations are provided, and suggestions for future research are offered. The chapter is organized into five sections. The first section is a review of the purpose of the study and procedures utilized in the study. The second section summarizes the results and major findings. Conclusions from the findings are discussed in the third part of this chapter. Practical implications and recommendations for further study are presented in the fourth and fifth sections of this chapter.

Purpose and Procedures

The purpose of this study was to determine whether a relationship existed between self-directed learner readiness, and the number of learning projects completed by disability services administrators in the postsecondary setting. The relationships between various demographic and biographic variables and self-directed readiness scores were examined. The researcher also examined the types of planners used by the disability services administrators in relation to DSAs’ level of self-directedness.

The profession of disability services in the post-secondary education setting has only been established over the past 30 years. While a national organization exists to guide the field and guide service providers in the delivery of services, those who work in the field are not required to have any special certification, licensure, training or educational background. They are not required to participate in training and professional development once in the field. Other demands often make continuing education and professional
development the least concentrated effort of a DSA. According to Sneed (2006) training
& professional development rated as one of the lowest standards of interest cited by
DSAs. Another interesting finding from Sneed’s study was that when rating the training
& professional development program standards, respondents suggested that their
institutions did not support or provide on-going opportunities for professional
development and that they accomplished this completely on their own (Sneed, 2006).

Over the years, disability services offices have increased the types of services that
they offer because of the different types of disabilities now seen in postsecondary
settings. DSAs must be prepared to meet these changing needs. There is very little
research concerning professional preparation and the training needs of disability service
administrators. There is also a lack of literature examining DSAs engagement in
continuing education and their learning experiences. With increasing budget cuts,
decreasing funds for training opportunities, and increasing demands for services for
students with disabilities, there is a need for researchers to identify how DSAs prepare for
and operate in their positions in disability services (Madaus, 1998). Further, there is a
need to examine their learning experiences, motivation, needs, and barriers to learning
(Sneed, 2006).

The results from this study add to the body of literature in the interdisciplinary
field of adult education as it pertains to self-directed learning and characteristics of self-
directed learners. It will assist DSAs in identifying areas of strength and weakness in
their professional development and in their roles as adult learners and adult educators.
Findings will potentially help those responsible for program evaluation and training
determine how many learning activities DSAs have engaged in across the year and may
possibly provide more insight concerning how to increase the number and types of learning activities in which DSAs participate. Finally, findings may advance the work of AHEAD by rendering data useful in the development of educational and training programs that may ultimately lead to national accreditation of the field.

Literature related to andragogy, self-directed learning, and learning projects were reviewed, as they were the guiding frameworks of this study. Andragogy is the “art and science of helping adults learn” (Knowles, 1980, p. 43). Knowles proposed several assumptions of andragogy: (1) humans are more self-directed as they age; (2) as people age, they gain experiences that may be valuable to learning; (3) readiness to learn and adult development are related; (4) adults have more immediacy for the application of what they learn therefore they are more problem solving oriented; (5) internal motivation is more promising than external motivation; and finally, (6) adults are interested in making meaning of their learning experiences (Knowles, 1980). Knowles believed that adult students are independent and need less guidance and structure (Knowles, 1970).

This study was also guided by the self-directed learning theory (Houle, 1961; Knowles, 1975; Tough, 1979). Self-directed learning theory is an individualistic learning theory that encourages learners to be independent by taking responsibility for the design, implementation, and evaluation of instruction and learning (Knowles, 1975). Tough’s (1971, 1979) definition of learning project was used in this research. Learning projects as defined by Tough are a series of clearly related learning efforts or episodes adding up to at least seven hours of effort within a six-month period. It is a deliberate and sustained effort on the part of the learner where the goal is to retain knowledge or learn a skill
(Tough, 1979). Tough found that about 90% of adults engaged in at least one learning project per year with the average being five projects.

Three instruments were utilized to gather data in this study. The researcher developed a short questionnaire that asked participants to provide demographic/biographic information. Data from this instrument was used to draw correlations between self-directed readiness and the demographic variables. A modified version of Tough’s Interview Schedule (1971) was used to determine the extent to which adults engage in self-directed learning activities during the twelve-month period prior to the time of the interview. The schedule introduced interviewees to the concept of learning projects, and the probing technique was used to gather information on the quantity and nature of learning projects they undertook.

The final instrument used to collect data was Guglielmino’s *Self-Directed Learning Readiness Scale* (1977). The SDLRS is a self-report instrument containing 58 items that was used to measure readiness for self-directed learning. The SDLRS was administered under the title of the *Learning Preference Assessment* (LPA) so that those taking it are not influenced by the actual title of the instrument. Guglielmino identified eight factors that indicated a highly self-directed learner: (a) openness to learning, (b) self-concept as an effective learner, (c) initiative and independence in learning, (d) informed acceptance of responsibility for one’s own learning, (e) love of learning, (f) creativity, (g) positive orientation to the future, and (h) ability to use basic study skills and problem solving skills (Guglielmino, 1977). An on-line computerized version of the survey was used in this study.
Data pertinent to the focus of the research were collected from a convenience sample of 51 disability services administrators employed in two-year and four-year public colleges and universities in the United States and Hawaii from May 2012-September 2012. The researcher personally conducted all of the interviews which took 15-20 minutes to complete. Upon the completion of the interview, participants received a password and their User ID via phone and via email along with the link to log onto the self-administered online version of Guglielmino’s *Self-Directed Learning Readiness Scale (SDLRS)*.

**Major Study Findings**

Major findings of this study are discussed in the following sections. The first section presents findings on the research questions that guided this study. The second section provides the major findings related to DSAs and self-directed learning. The third section provides major findings related to DSAs and learning project findings. The fourth section provides a discussion of the sample characteristics.

**Limitations**

Caution is recommend in interpreting these findings due to the several limitations of the study, the most critical being the inability to gather a representative sample of DSAs. All DSAs at all four-year and two-year public institutions could not possibly be reached and many elected not to participate in the study for various reasons. The sample size in this study was n= 51 with DSAs representing 15 states in the U.S. and Hawaii. A larger response rate of DSAs from more states would provide a greater confidence in the generalization of results. Another limitation of the study concerns the DSAs self-reporting. DSAs may have underestimated or overestimated the number of learning
projects that they completed due to memory recall effects or desire to impress the interviewer. Finally, the SDLRS measures perception and not actual behavior.

Research questions findings

Question 1: Is there a significant relationship between a disability services administrator’s readiness for self-direction in learning and the number of learning projects that he or she conducted in the twelve-month period prior to the interview?

There was no significant relationship between the total number of learning projects completed by the DSAs in a year and his or her readiness for self-directed learning. This question contained eight sub-questions related to the eight factors of the Self-Directed Learning Readiness Scale. There were no significant correlations between the number of learning projects and the factors of love of learning, self-concept, tolerance of risk ambiguity and complexity in learning, creativity, view of learning as a life-long beneficial process, initiative in learning, self-understanding and acceptance of responsibility for one’s own learning.

Question 2: Is there a significant relationship between DSAs’ institution type and the number of learning projects he or she conducted in the twelve-month period prior to the interview?

There was no significant relationship between a DSA’s institution type and the number of learning projects he or she conducted in the twelve-month period prior to the interview.

Question 3: Is there a correlation between a disability services administrator’s level of self-directedness and his or her age?
There was no significant relationship between a DSA’s age and the number of learning projects he or she conducted in the twelve-month period prior to the interview.

Question 4: Is there a correlation between a disability services administrator’s level of self-directedness and his or her race/ethnicity?

There was no significant relationship between a DSA’s level of self-directedness and his or her race/ethnicity.

Question 5: Is there a correlation between a disability services administrator’s level of self-directedness and his or her gender?

There was no significant relationship between a DSA’s level of self-directedness and his or her gender.

Question 6: Is there a correlation between a disability services administrator’s level of self-directedness and his or her educational background?

There was no significant relationship between a DSA’s level of self-directedness and his or her educational background.

Question 7: Is there a correlation between a disability services administrator’s level of self-directedness and his or her number of years as a disability services administrator?

There was no significant relationship between a DSA’s level of self-directedness and his or her number of years as a disability services administrator.

Question 8: Is there a significant difference between disability services administrators who are “below average,” “average,” or “above average” self-directed learners and the type of planner used for learning?
There was no significant difference between a DSAs who are “below average” “average” and “above average” self-directed learners and the type of planner used for learning.

*Self-directed learning findings*

The following represent the major findings related to DSAs and self-directed learning:

1. In this sample of DSAs, the average self-directed learning readiness score was 240.49. The minimum score was 178 and the maximum score was 272.

2. The majority of the participants scored in the “above average” range.

3. In this sample of DSAs, self-directed readiness levels did not have a significant impact on the number of learning projects completed in the twelve months prior to the study.

*Learning project findings*

The following represent the major findings related to DSAs and learning projects completed during the twelve-month period prior to the interview.

1. The 51 DSAs sampled engaged in a total of 391 learning projects during the twelve-month period prior to the time of the interview. Of the reported 391 learning projects, 269 were reported to be related to the DSA’s career or position as a disability services provider.

2. The majority of DSAs reported that their career/job related learning projects were self-planned.

3. The most frequently mentioned resources used by participants in conducting their learning projects was using the internet, attending a local or national conference or
training; conversation with other professionals in the field, reading professional literature and journal articles (n=41)

4. The least mentioned resource used by participants in conducting their learning projects was attending a class, correspondence course, or web-based course.

5. In this sample, there is no significant difference in the mean number of learning projects conducted and institution type.

6. There is no significant difference in the choice of planners among below average, average, and above average learners. A chi-square value of 6.06 was obtained which is not significant.

Sample characteristics findings pertinent to the study

1. The majority of self-directed learners sampled in this study were Caucasian females between the ages of 56-65 years old.

2. DSAs in this study were most likely to have obtained a Master’s Degree, with a primary academic background in the field of Rehabilitation Counseling.

3. Twenty one percent (21.2%) of DSAs reported that they held two disability services related positions in their office.

4. Of the DSAs that held positions outside of their respective disability services office, 17.3% reported that they held one (1) other position; 19.2% reported that they held two (2) other positions; 9.6% of the respondents reported that they held three (3) other positions and 5.8% of DSAs in this study reported that they held four (4) other position. There were a total of 15 different positions reported by the respondents. The most frequently reported “other positions held” were; college instructor: advising; academic support, and working on a university committee.
5. Prior to their positions as DSAs, the most frequently reported previous professional experiences were in the field of student/academic affairs in a college setting, followed by teaching in a college setting, business, and vocational rehabilitation services.

6. Respondents worked in the higher education setting in general an average of 14.37 years. DSAs worked in a post-secondary disability services office an average of 10.82 years and had worked in their current positions an average of 8.04 years.

7. The majority of respondents reported that they were members of both National AHEAD and their state affiliate.

8. The majority of respondents did not have any certifications or licensures in any area. Of the respondents that held a certificate or license, the most frequently reported certifications/licensures were certified rehabilitation counselor and national certified counselor.

Conclusions

In summary, findings from this study concerning the relationship between self-directed learner readiness and the number of learning projects completed by disability services administrators were not significant yet by no means conclusive. Interpretation of the data must be made in light of the limitations of the scope of the study. The following conclusions drawn from the study are limited to the sample investigated. Overall results of the study suggest that DSAs in this sample have an “above average” readiness for self-directed learning and preferred to self-plan and direct the majority of their learning projects. While not statistically significant, it is interesting to note that the more years worked in the field of disability services negatively impacted self-directedness. There
was no statistically significant difference in the types of planners used among the different types of self-directed learners. The average number of projects completed by DSAs is comparable to the average number of projects (5-7 projects) completed by other adult learners per year (Tough, 1979).

The DSAs in this study engaged in personal self-directed learning projects as well as career/job related learning projects that presumably augmented their knowledge and skills in their profession although they are not required by an accreditation agency to participate in professional development for credit. Further study is needed to study the depth of their learning projects and the effectiveness of the DSAs’ projects as it relates to their respective institutions and impact on the field of disability studies. The DSAs used both human and non-human resources in planning and conducting their learning projects. However, the most used resource was the internet/computer. The DSAs reported the use of classes, correspondence courses, and web-based courses as a primary resource for learning less often. This suggests that these forms of training and learning experiences may be less effective with highly self-directed learners who like to plan and direct what they would like to learn.

Discussion

Demographic variables

There have been conflicting findings when examining relationships between self-directed learning readiness scores and demographic variables such as age, race/ethnicity, and gender. Cox (2002) and Robinson (2003) found a positive correlation between age and self-directed learning readiness scores; while other researchers have found no relationship (Brockett; 1985; Roberts, 1986). In some studies a relationship has been
found between gender and SDLR scores (Brockett; 1985; Curry, 1983; Sabbaghian, 1979/1980) however, other researchers found no significant relationship (Hall-Johnson, 1985; Roberts, 1986). Hassan (1981) who examined self-directed learning readiness and the number of learning projects conducted reported that gender, age, and ethnic background do not have a significant impact in adult learners’ readiness for self-directedness in learning. The current researcher did not find any significant differences between gender, age and ethnic background and readiness for self-directed learning.

Past researchers indicated that level of formal education is the only demographic variable that is significantly associated with readiness for self-directed learning (Brockett, 1985; Hassan, 1981; Sabbaghian, 1979/1980). In this study the researcher did not find any significant difference among DSAs with bachelors, masters, or doctoral degrees as it pertained to self-directed learning scores. Perhaps this was due to small sample size and the homogeneity of the sample.

Profile of DSAs

According to Madaus (1998) and Sneed (2006) though there have been dramatic changes in the types of students served, there has been relatively little change in the profiles of the disability services professional. In this study, the majority of DSAs were Caucasian (73%), female (78%), between the ages of 56-65 years old (32%) and held a master’s degree (82.7%). Dukes (2001) reported a similar percentage of female DSAs working in the college setting (78.9%) as did Sneed in 2006 (79%). The most recent data reported by AHEAD (2010) also supported the findings of this study and indicated that the DSA profile has not changed much since previous demographic studies (Blosser; 1984; Harbour 2008). Females make up 81.2% of the post-secondary disability services
administration population and the field is largely dominated by Caucasians/Whites (85.7%). African Americans (7.0%); Hispanics/Latinos (2.1%) and Multi-Ethnic (.08%) individuals are less likely to be employed in the disability services field (AHEAD, 2010). Institutions and the field of disability services should consider the current profile of the DSA and focus on ways to promote diversity in the field especially among higher-level disability services administrators.

The educational backgrounds and previous professional experiences of the DSAs in this study need to be discussed. As stated in the literature review, DSAs have various educational backgrounds which most often do not include disability studies. Very few graduate programs exist that prepare DSAs for their positions. In previous studies (Dukes & Shaw, 1999) the most frequently reported academic background was counseling (26%); followed by social work (17%); law (17%); special education (16%); higher education (14%) and rehabilitation counseling (13%). In this study, the most frequently reported academic background was rehabilitation counseling (19.2%). To note, the percentages of DSAs with academic backgrounds in special education, counseling, and higher education were lower in this sample than in the previous study mentioned.

In the current study, Rehabilitation Counseling was the most frequently reported academic background. It is interesting to note that Blosser (1984) in his historical research on the roles and functions of disability services directors indicated that while rehabilitation counseling programs provided a framework for the profession, the program lacked the administrative, student development, research and evaluation, instruction and training skills that were essential for DSAs. Findings from his study indicated that no one program could encompass all the skills needed, however, a *model* program of
recommended coursework and internship experiences was designed based on his findings (Blosser, 1984).

Previous studies indicated that DSAs had five years or less experience in disability services and five years or less in their current positions (AHEAD, 1995; Blosser, 1984; Madaus, 1996; Madaus, 1998). Findings from this study indicated that the majority of DSAs in this study have worked in disability services for 10 years or less (60.8%) and have worked in their current position 10 years or less (74.5%) with the average years of experience being 8 years. This is identical to findings of more current studies concerning the experience of DSAs (Dukes & Shaw, 2004; Madaus, 2000; Sneed, 2006). As previously stated, the job of a disability services administrator in the post-secondary setting is a very complex one as the DSA often functions in several roles. DSAs were asked to provide the number of positions held within and outside of their office. In this sample, (21.2%) of the DSAs reported that they held two disability services related positions in their current respective disability services offices.

When asked about positions outside of their office, 17.3% reported that they held one (1) other position; 19.2% reported that they held two (2) other positions; 9.6% of the respondents reported that they held three (3) other positions and 5.8% of DSAs reported that they held four (4) other positions outside of their primary job in their disability services office. It is interesting to note that DSAs working in the two-year community college setting were more likely to report that they worked in more than one position outside of their primary job function. Findings from this question were important because having multiple roles often leads to employee retention issues, problems with service provision, and pertinent to this study, less time to participate in professional development.
opportunities (Harbour, 2008). Because of the vast amount of learning that must take place post hire, more emphasis should be placed on adult learning theory and self-directed learning techniques during orientation, in-service, conferences and trainings. 

**Career and Job Related Projects**

The majority of learning projects that DSAs conducted were career/job related. This high participation rate speaks to the DSAs’ desire to learn and provide quality services at their institutions despite the fact that they are not required by an accreditation agency to engage in professional development. Although the numbers of career/job related learning projects conducted were high in this study, the disability services profession must begin to focus on the DSAs’ motivation for learning, especially among less self-directed learners and DSAs who have worked in the field several years. While not a statistically significant finding, it is interesting to note that the number of years worked in the field had a negative impact on self-directedness on the DSAs in this study.

**Implications**

**Development of Self-Directedness Learning Skills**

Self-directed learning is the approach supported by those in the field of adult education as a way to help adults become more independent and responsible for their own learning (Knowles, 1980). However, most learners are taught to be dependent on a teacher or “other” to plan their learning activities. To keep up with the fast pace of change in the new information and technology age, it is recommended that American workers be educated using adult learning theory and practice in self-directedness so that their potential for self-directed learning be maximized (Wingspread Group on Higher Education, 1993).
Results of this study speak to the complexity of issues and magnitude of dimensions regarding services provision and individual and organizational responsibility in the area of professional development in the field of disability services. The growth of SWDS in the post-secondary educational setting calls for new approaches to service provision. Institutions are legally accountable for providing reasonable accommodations. DSAs must be knowledgeable about the ever-changing disability laws and its various interpretations, advancements in technology, changes in students’ needs and best practices in disability services. They must also be able to articulate what services are needed and work with students, faculty, staff, and administration in ensuring that accommodations and services are provided.

AHEAD issued program standards and performance indicators in 2004 which describe skills and knowledge needed to work in the field of disability services at the postsecondary level. One of the standards pertains to professional development and training. According to Sneed (2006), DSAs were not faring well at meeting this standard neither did they have institutional support to meet this standard adequately. In order to stay relevant and provide quality services DSAs must invest in professional development opportunities. With dwindling budgets for professional development and demands for DSAs’ time, self-directed learning and the ability to be self-directed is a critical skill.

The findings from this study indicate that the Self-Directed Learning Readiness Scale is very useful in that it enables the user to gain insight into his or her weaknesses and strengths in self-directed learning, which includes the eight sub-factors: 1) love of learning; 2) self-concept as an effective independent learner; 3) tolerance of risk, ambiguity and complexity in learning 4) creativity; 5) view of learning as a lifelong
beneficial process; 6) initiative in learning; 7) self understanding and 8) acceptance of responsibility for one’s own learning. It has been noted that DSAs must be knowledgeable in several areas and perform several roles in their institutions. As described in the literature, most DSAs have limited educational background and training in disability studies and administration and base their service provision on past experience and common practice (McGuire, 2000). Past researchers have indicated that DSAs have been in the field for five (5) years (AHEAD, 1995; Blosser, 1984; Dukes & Shaw, 2004; Madaus, 1996; Madaus, 1998). Demographic results of the current research indicated similar findings. Knowing whether a candidate for the position of DSA is a high self-directed learner may be beneficial for human resource directors. The Self-Directed Learning Readiness Scale can also serve as a valuable tool in helping individuals determine areas they need to focus on in order to develop his or her self-directedness skills.

The information obtained from the Self-Directed Learning Readiness Scale and the Interview Schedule revealed that the majority of DSAs in this study were “above average” self-directed learners who conducted several self-planned and group planned learning projects. They preferred these types of learning activities over those planned by other individuals and non-human planners. They also used a wide variety of resources when conducting their projects including the internet/computer, attending conferences, and communicating with other professionals on list-servs. As stated in the literature review, one of Knowles’ (1975) assumptions is that all adults are self-directed. However, not all adults have the same capacity or willingness to take personal responsibility for their own learning (Brookfield, 1991). DSAs need to have the skills to plan and direct
their learning efforts. Therefore, knowledge and understanding of adult learning theory, particularly andragogy and self-directed learning readiness should inform practice and serve as a strategy for intervention.

The few disability studies graduate programs that exist should include courses in adult learning theory and andragogy. Whether learning takes places in a graduate program or in a workshop or conference, adult learners should play an important role in their learning experiences. Those responsible for continuing education and educating adults should be skilled in meeting the needs of self-directed learners and assisting in the development of low self-directed learners. They should first have an understanding of adult learning theory and practice, and secondly, they should assess the learning styles and preferences of their adult learners. With the input of their adult learners, they should develop programs and workshops that teach self-directedness skills and adult learning theory and practice, as well as provide educational and professional development opportunities in various formats so that DSAs can have an array of learning venues. Those who are not as self-directed may choose learning opportunities that allow them to work with facilitators and still have the necessary tools to develop their self-directedness skills.

*Coordinated Approach to Data Collection*

The field of post-secondary disability services is an emerging field with a relatively short history; therefore a coordinated approach to program evaluation is critical. Although program evaluation is an emerging concept in the post secondary disability services field, (Parker et al., 2003), methods are needed to identify, track, and evaluate learning efforts, continuing education, and the professional development of DSAs. Each
disability office is distinct and operates differently, however, the lack of professional consensus on key issues such as data collection, educational credentials, certifications, job descriptions and roles and functions can be a hindrance to furthering the certification of the field and creating more graduate programs distinctly in the area of disability studies and the administration of disability services offices. Lack of consensus and uniformity in the aforementioned areas may also present a major disconnect with DSAs and their professional identity and their specialized roles within their institution.

The literature review documented that there is a need for increased standardization and consistency in the postsecondary disability services setting (Dukes & Shaw, 1998; Dukes & Shaw, 2004; Shaw & Dukes, 2001; Sneed, 2006). The current study highlighted possible gaps in the accessibility of data acquisition and reporting pertaining to DSAs’ continuing education, professional development and training and learning efforts. Standardized methods of data collection and tracking must become a priority if rigorous and frequent research efforts are to be conducted in this area.

Antidotal results of this study indicated that the use of the learning projects interview was useful in helping DSAs with their professional identity. Several of the DSAs interviewed revealed that they had not reflected on the learning projects that they had conducted or the things they had learned over the year prior to the interview. If utilized, not only could the interview schedule serve as a tracking or evaluation tool, but it could help DSAs identify areas that need to be developed. It can also provide more tangible data about the professional development of DSAs that can enhance the identity of the profession on a national scope.
Recommendations

In order to enhance the identity of the DSA and the profession of disability services, the following recommendations are suggested at the institutional and/or program level: 1) DSAs should adopt a program evaluation model that could be implemented within their respective office, 2) DSAs should develop a data collection and input system to allow continual tracking of their professional development activities and learning efforts. These activities would not only help DSAs keep track of and consistently evaluate their learning efforts, but also provide easily accessible data to their institutions and invested outside constitutes. Information may be used to provide evidence that complex disability accommodation issues were thoroughly researched and deficits in learning were addressed. Information may also be used to justify and or request budget increases, justify the need for more staff, the need for more professional development opportunities in particular areas, and serve as evidence of meeting job performance standards, 3) Stake holders should provide funding for professional development training programs concerning adult learning and self-directed learning strategies.

In order to enhance the identity of the DSA and the profession of disability services, the following recommendations are suggested at the national and state program level: 1) Investigate present policies, trends, data collection procedures and management of data, 2) Institute data collection policies and procedures that outline the need for standardization regarding data collection in order to better monitor program standards and performance indicators, 3) National and state appropriation of additional funding towards research that investigates and provides support for DSAs in higher education in order to improve their professional development, training, and develop their self-directed
learning skills. Resources and materials that are easily accessible should be disseminated at the local and state level since many DSAs do not have the means to attend National Conferences.

Recommendations for Further Research

This study was attempted to determine whether a relationship existed between self-directed learner readiness, and the number of learning projects completed by disability services administrators in the postsecondary setting. The relationships between various demographic and biographic variables and the total number of learning activities completed were examined. Also examined were the types of planners used in relation to the DSAs level of self-directedness. The findings from the study provided further support to previous researchers who cited the need for studies regarding the evaluation of disability services providers and their engagement in professional development and training (Dukes & Shaw 1998; Parker, et al., 2003; Sneed, 2006). This particular area is especially important given that engagement in professional development and training is a professional standard required of personnel administering offices of disability services (AHEAD, 2004b).

The rising enrollment of students with diverse and complex disabilities and accommodation needs coupled with increasing demands of accountability and outcomes increases the need for further research and program evaluation in the area of the professional development and continual learning efforts of postsecondary disability services administrators. The following represent further research needed in this area:

1. This study was limited to the 51 DSAs in 15 states including Hawaii. Caution is recommended in the generalization of the findings to a larger population. A similar
study should be conducted on a national level, with the support of AHEAD, to get a larger perspective of the engagement of postsecondary DSAs in formal, non-formal, and informal learning efforts. While data may be collected at national, local and regional conferences, the results of this study indicate that many DSAs are engaging in self-directed learning activities related to their jobs and this information may not be captured in national reports.

2. The researcher of the present study did not gather qualitative data concerning the nature of the DSAs’ career/job related learning projects. A replication of the current study should be conducted with the goal of further exploring the participant’s career related learning projects. Questions should require participants to include a detailed description of a career related learning project, why they chose particular projects, outcomes of the learning projects, and how the projects assisted them in their day-to-day tasks as a DSA. Findings could potentially lead to the dissemination of ‘best practices’ and more research to practice presentations at conferences and workshops.

3. The researcher of the present study used a quantitative method to gather information on DSA’s preferences and use of learning resources and materials. Future studies should focus on why particular resources and materials are chosen for learning projects. Findings may help those responsible for training and development of professional development activities determine what materials and resources best suits individual types of learners and develop new ways of reaching DSAs so that they are more engaged in the learning process.

4. While not a statistically significant finding, results from this study indicated that the number of years worked in the field of disability services had a negative impact
on the level of self-directedness in learning. Future researchers should explore the relationship between self-directedness and the number of years worked in the field. Learning is both emotional and intellectual. Findings may lead to new approaches that help increase engagement in self-directed learning for more seasoned professionals, prevent burnout and increase satisfaction rates, therefore decreasing turnover in the field.

5. While the researcher of the current study did not conduct an in-depth examination of graduate programs that offered disability studies degrees or courses. The literature review indicated that as of 2012, only five (5) schools offered graduate degrees in disability studies or a related area, and only 11 schools offered graduate level certificates, an emphasis, or interdisciplinary coursework in disability studies or a related area. Future researchers should exam disability studies graduate programs. In particular, their approach towards meeting the needs of adult learners and self-directed learning and their emphasis on disability services administration.

6. This study focused on the quantity learning projects conducted by DSAs. Of particular interest to the researcher was the quantity of career/job related learning projects conducted by DSAs. Future researchers should examine the quality of learning projects conducted by “above average” self-directed DSAs in comparison to “below average” self-directed DSAs.

7. As mentioned in the literature review, self-directed learning fits under three philosophical frameworks, one being ‘transformational learning.’ Transformation learning focuses on the changes that take place within the learner in addition to the content that is learned (Mezirow, 1985). As a result of the learning experience the learner engages in self-reflection, and critical reflection; and his/her learning goals are based on
his/her findings. Further research should focus on the quality of the DSAs self-planned learning projects and how the learning transforms the learner and his or her personal and work environments.
APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

Demographic Survey

This survey asks for demographic information that will be kept strictly confidential. Please answer with the response that best describes your position in each Category.

User ID: _____________________________  Date: ______________

Name of Institution: __________________________  Type of Institution: __________

Location of Institution: _____________________________

What is the job title(s) you use to describe your job? __________________________

What is your gender?  ___Male  ___Female

What is your age range?  □ Under 25  □ 25-35  □ 36-45  □ 46-55  □ 56-65  □ Over 65

What is your ethnicity? Check one:
___ African-American or Black
___ Asian-American, Asian, or from Indian subcontinent
___ Caucasian
___ Hispanic or Latino
___ Mexican or Chicano
___ Multi-ethnic
___ Native American, Alaskan Native, or from indigenous or Aboriginal Group
___ Native Hawaiian or Pacific Islander
___ Haitian or Creole
___ Other

What is the highest (most advanced) degree you have completed at this time? (Do not include degrees in progress)
___ I do not have any degrees at this time.
___ High School Diploma, G.E.D. or other certificate of completion
___ A.A., A.A.S., or other Associate’s degree
___ B.S., B.A., B.I., or other Bachelor’s degree
___ M.A., M.S., M.S.W., M.Ed., or other Master’s degree
___ Ph.D., Ed.D., J.D., or other Doctorate degree
___ Other: (Please specify degree.)________________

What was your field of study? __________________________

How many years of experience do you have working in higher education? Include your years of experience working in any DS offices.  Number of years_____

How many years of experience do you have in your current position?  Number of years____

How many years of experience do you have working in the field of Disability Services at the college level?  Number of years __________
In this part of the survey, you will be asked questions about your current position.

Are you employed full-time or part-time? Please check one.

____ Full-time (100%)—40 hours per week
____ Part-time (75%)—approximately 30 hours per week
____ Part-time (50%)—approximately 20 hours per week
____ Less than half time—less than 20 hours per week

Do you have other duties or positions at your college that are not directly related to disability services? _____Yes _____No
If yes, please list them below:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

The next question pertains to previous work experiences. Besides your current job, do you have other work experience in any of the following fields? If so, how many years?

______ Elementary/primary or secondary (K-12)
______ Elementary/primary or secondary (K-12) Resource or Special Education
______ Teaching in higher education
______ Student affairs or Academic affairs in higher education
______ Vocational or rehabilitation services
______ Counseling, or psychological services
______ Social Work
______ Allied health services and medical professions
______ Business
______ Law or legal services
______ Other field not listed

Are you a member of the National Association on Higher Education and Disability or a state affiliate? _____Yes _____No

Which certifications/special trainings do you currently hold if any? List up to five professional certifications/special trainings for your field.
Certification/Special Training Certifying Agency
1.______________________________________________________________
2.______________________________________________________________
3.______________________________________________________________
4.______________________________________________________________
5.______________________________________________________________
I am conducting research to study the characteristics, learning preferences, and learning efforts of disability services administrators employed at public two-year and four-year colleges and universities. This interview should take 15-20 minutes to complete. In addition to a brief demographic questionnaire, a 4-question interview will examine the things that you have purposefully tried to learn since this time last year. Please feel free to ask me to repeat a question at any time during the interview. Before we begin, I would first like to provide you with your unique User ID number. You should write down your User ID at this time.

This ID number will be used to identify your data for the remainder of this study. Your name will not be connected to your answers in anyway. Your User ID number should be used along with the password that you will receive following this interview to log into the online version of the Learning Preference Assessment (LPA). Following this interview, I will email you a copy of User ID, your password and instructions for logging onto the online assessment. Please be reminded that the online assessment should take only about 15 minutes of your time. Do you have any questions at this time?

I. **Demographic Questionnaire**: We will begin with a brief demographic questionnaire.

II. **Number of Learning Projects**: I will now ask you to think back over the past several months. Think all the way back to this time last year to determine the number of learning projects that you have undertaken.

When I say learning projects, I mean clearly related learning episodes adding up to at least seven hours of effort. In order to be considered a learning project it needs to be a deliberate and sustained effort to gain skills, or to change you in some way. The knowledge should have been retained for at least two days (Tough, 1971).

Learning projects can be something easy, hard, serious, fun, work related, educational, or personal. It can be related to your hobbies, your family life, how to play a sport, learning a language, health, home repairs, self-improvement, your church, or civic engagements. It can be anything, as long as it meets the definition of a learning project.

1. Now that you know the definition of a learning project, please provide the number of all learning projects that that you engaged in since this time last year._______.

2. Because I am also interested in Disability Services Administrators’ engagement in learning projects related to their job/careers; please respond to the following question. Of the number of projects that you just reported, how many of these learning projects were related to your job or career?_______.

Before we move on to the final two questions, have you thought of any additional learning projects that you would like to add?
III. **Types of Project Planners:** I will now ask you to identify the primary planners of the learning projects that you reported were related to your job or career.

When I say project planners, I mean a person's efforts to learn can be classified according to who was responsible for the day-to-day planning. There are four different types of planners; self-planned, group planned learning, individual planned, and material resource planned (Tough, 1971).

Self-planned learning is managed by the learner and the learner decides what will be learned and how it will be achieved. Group planned learning is coordinated by members of a group or an expert group leader. Individual planned learning is administered by one person whom can be an instructor or friend. Finally, in material resources planned learning, the learner is guided by non-human means such as books, computer software, or other multimedia formats (Tough, 1971).

3. Because I am interested in who plans the majority of Disability Services Administrators learning projects related to their careers; please respond to the following question. Of the number of career/job related learning projects that you reported, how many of those learning projects were:

   Self-Planned______.          Group Planned______.
   Individual Planned______.    Material Resource Planned______.
   Mixed______.

IV. **Major Resources Used:** I will now ask you about the major resources that you used to engage in job/career related learning projects.

4. Because I am interested in determining the number of major resources that have been used to gather the content for DSAs’ job/career related learning projects; please respond to the following question. Of the number of career/job related learning projects that you reported, how many of these major resources did you use?

   _____ Reading books
   _____ Attending a national or local conference
   _____ Reading professional literature/journal articles
   _____ Engaging in conversation with other professionals on listservs
   _____ Consulting with a specialist or expert in the field
   _____ Attending a class, correspondence course, or web-based course
   _____ Searching the internet
   _____ Speaking directly with an individual with a disability

You have now completed the Interview Phase of the study. **Your password is_________.** You will receive an e-mail shortly that will contain your User ID, your password and instructions for logging onto the online assessment. Thank you for your participation.
Data Collection Sheet for Interview

User ID: ___________________________ Date of Interview: ________________
Password: __________________________

I. **Number of Learning Projects:** I will now ask you to think back over the past several months. Think all the way back to this time last year to determine the number of learning projects that you have undertaken.

1. Now that you know the definition of a learning project, please provide the number of all learning projects that you engaged in since this time last year.______.

2. Because I am also interested in Disability Services Administrators’ engagement in learning projects related to their job/careers; please respond to the following question. Of the number of projects that you just reported, how many of these learning projects were related to your job or career?______.

Before we move on to the final two questions, have you thought of any additional learning projects that you would like to add?

II. **Types of Project Planners:** I will now ask you to identify the primary planners of the learning projects that you reported were related to your job or career.

3. Because I am interested in who plans the majority of Disability Services Administrators learning projects related to their careers; please respond to the following question. Of the number of career/job related learning projects that you reported, how many of those learning projects were;

   Self-Planned_____.
   Group Planned______.
   Individual Planned______.
   Material Resource Planned______.
   Mixed______.

III. **Major Resources Used:** I will now ask you about the major resources that you used to engage in job/career related learning projects.

4. Because I am interested in determining the number of major resources that have been used to gather the content for DSAs’ job/career related learning projects; please respond to the following question. Of the number of career/job related learning projects that you reported, how many of these major resources did you use?

   ____ Reading books
   ____ Attending a national or local conference
   ____ Reading professional literature/journal articles
   ____ Engaging in conversation with other professionals on listservs
   ____ Consulting with a specialist or expert in the field
   ____ Attending a class, correspondence course, or web-based course
   ____ Searching the internet
   ____ Speaking directly with an individual with a disability
APPENDIX C

SAMPLE ITEMS LEARNING PREFERENCE ASSESSMENT

Learning Preference Assessment
Items 1-19 Only
© Lucy M. Guglielmino, 1977

Instructions: This is a questionnaire designed to gather data on learning preferences and attitudes towards learning. After reading each item, please indicate the degree to which you feel that statement is true of you. There are no right or wrong answers. Please read each choice carefully and choose the response which best expresses your feeling.

There is no time limit for the questionnaire. Try not to spend too much time on any one item; however, your first reaction to the question will usually be the most accurate.

Responses
1 = Almost never true of me; I hardly ever feel this way.
2 = Not often true of me; I feel this way less than half the time.
3 = Sometimes true of me; I feel this way about half the time.
4 = Usually true of me; I feel this way more than half the time.
5 = Almost always true of me; there are very few times when I don't feel this way.

Items
1. I’m looking forward to learning as long as I’m living.
2. I know what I want to learn.
3. When I see something that I don’t understand, I stay away from it.
4. If there is something I want to learn, I can figure out a way to learn it.
5. I love to learn.
6. It takes me a while to get started on new projects.
7. In a classroom situation, I expect the instructor to tell all class members exactly what to do at all times.
8. I believe that thinking about who you are, where you are, and where you are going should be a major part of every person’s education.
9. I don’t work very well on my own.
10. If I discover a need for information that I don’t have, I know where to go to get it.
11. I can learn things on my own better than most people.
12. Even if I have a great idea, I can’t seem to develop a plan for making it work.
13. In a learning experience, I prefer to take part in deciding what will be learned and how.
14. Difficult study doesn’t bother me if I’m interested in something.
15. No one but me is truly responsible for what I learn.
16. I can tell whether I'm learning something well or not.
17. There are so many things I want to learn that I wish there were more hours in a day.
18. If there is something I have decided to learn, I can find time for it, no matter how busy I am.
19. Understanding what I read is a problem for me.
APPENDIX D

PARTICIPANT SOLICITATION EMAIL

Date
Name of University
Dear Disability Services Practitioner:

My name is Lakeshia Alexander and I am a doctoral student in the Department of Educational Studies and Research at The University of Southern Mississippi. I am interested in examining characteristics and learning preferences of disability services administrators employed at public two-year and four-year colleges and universities. I am asking you to participate in my study because you have been identified as a Director, Assistant Director, Coordinator, or Dean of Disability Services at your institution.

Participation in this study will require a phone interview that will last approximately 15 minutes to 20 minutes. You will be asked to provide demographic data and respond to four questions about learning activities that you have participated in over the past year. Following the completion of the interview, you will be asked to complete the Learning Preference Assessment (LPA). This self-administered questionnaire is presented in an online format and will take approximately 15 minutes to complete.

If you wish to participate in this study please sign and return the attached consent form via fax at (336) 334-4412, to the attention of LaKeshia Alexander; or you may return via PDF email attachment. Individuals who desire to return the consent form by U.S. mail should reply to this email or contact me at the number below and I will send a pre-addressed and stamped return envelope. After I have received your signed consent form, you will be called to set up the telephone-based interview appointment. Once the appointment is scheduled, you will receive a confirmation email.

As a token of my appreciation for your time and commitment, participants who complete both the interview and the online survey will have the opportunity to enter a drawing for one of four $20.00 Visa Cards. At the end of the online survey you will be asked to enter your email address if you would like to enter the drawing. Participation in this study is voluntary; however, your assistance would be greatly appreciated. Your participation may provide data that may help answer questions related to employee satisfaction, employment retention, wellness, motivation, barriers to learning, training needs, institutional commitment, and attitude towards learning.

There are no inherent risks involved in this research study. Participants’ identity will be kept confidential and you will be assigned a User ID and password to ensure anonymity. All data reporting for this study will be recorded in aggregate so that individual participants may not be identified or associated with data. You have the right to not answer any question that you do not wish to answer. Participants are free to withdraw consent to participate and may discontinue participation at any time during the study without consequence.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board at 601-266-6820. Any questions about the research should be directed to me, LaKeshia Alexander at 601-927-1318, or you may contact Dr. William Pierce at (601) 467-8475.

I would greatly appreciate your time and assistance.

Attachment: Participant Consent Form
APPENDIX E

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

AUTHORIZATION TO PARTICIPATE IN RESEARCH PROJECT

Participant's Name ________________________________________________

Name of University or College______________________________________

Consent is hereby given to participate in the research project entitled: A Measurement of Characteristics and Learning Preferences of Postsecondary Disability Services Administrators. All procedures and/or investigations to be followed and their purpose, were explained to me by LaKeshia Alexander. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected. The opportunity to ask questions regarding the research and procedures was given.

Participation in the project is completely voluntary and participants are free to withdraw consent to participate at any time without consequence. All personal information is strictly confidential, and no names will be disclosed. All data reporting for this study will be recorded in aggregate so that individual participants may not be identified or associated with data.

Questions concerning the research, at any time during or after the project, should be directed to LaKeshia Alexander at (601) 927-1318 or you may contact Dr. William Pierce at (601) 467-8475. This project and this consent form have been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

____________________________________                           ________________
Signature of Participant                                    Date
APPENDIX F

FOLLOW-UP EMAIL

Date
Name of University
Dear Disability Services Practitioner:

I recently emailed you a request to participate in a doctoral research study that I am conducting examining the characteristics and learning preferences of disability services administrators employed at public two-year and four-year colleges and universities. Your participation was requested because you have been identified as a Director, Assistant Director, Coordinator, or Dean of Disability Services at your institution.

As of this date I have not received your consent to participate in this study. The success of my study depends on your input. Although participation in this study is completely voluntary; your assistance would be greatly appreciated. It is important that each disability services administrator selected for participation in this study provide feedback. Information gained from this study may provide data that may help answer questions related to employee satisfaction, employment retention, wellness, motivation, barriers to learning, training needs, institutional commitment, and attitude towards learning.

Participation in this study will require a phone interview that will last approximately 15 to 20 minutes. You will be asked to provide demographic data and respond to four questions about your recent learning activities. Following the completion of the interview, you will be asked to complete the Learning Preference Assessment (LPA). This self-administered questionnaire is presented in an online format and will take approximately 15 minutes to complete.

For your convenience, an additional consent form is attached to this email. If you wish to participate please sign and return the attached consent form via fax at (336) 334-4412, to the attention of LaKeshia Alexander; or you may return via PDF email attachment. If you desire to return the consent form by U.S. mail please reply to this email or contact me at the number below and I will send a pre-addressed and stamped return envelope.

After I have received your signed consent form, you will be called to set up the telephone-based interview appointment. Once the appointment is scheduled, you will receive a confirmation email. For your time and commitment, participants who complete both the interview and the online questionnaire will have the opportunity to enter a drawing for one of four $20.00 Visa Cards.

Your identity will be kept confidential and you will be assigned a User ID and password to ensure anonymity. All data reporting for this study will be recorded in aggregate so that individual participants may not be identified or associated with data. Participants are free to withdraw consent to participate and may discontinue participation at any time during the study without consequence.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board at 601-266-6820. Any questions about the research should be directed to me, LaKeshia Alexander at 601-927-1318, or you may contact Dr. William Pierce at (601) 467-8475.

I would greatly appreciate your time and assistance.

LaKeshia M Alexander
Attachment: Participant Consent Form
APPENDIX G

TELEPHONE BASED INTERVIEW CONFIRMATION EMAIL

Date

Name of College or University____________________________________________

Name of Participant_____________________________________

Thank you for agreeing to participate in my study about characteristics and learning preferences of disability services administrators employed at public two-year and four-year colleges and universities. Your telephone-based interview is scheduled for____________________________.

At the time of your interview you will be assigned a unique User ID in order to ensure anonymity. Following the interview you will be given a password that should be used along with your User ID to log into the Learning Preference Assessment (LPA) which is located at the following link. http://www.lpasdlrs.com/login.html

Your answers are completely confidential and will be released only as aggregated data in which no individual answers can be identified. Participation in this study is completely voluntary and your willingness to participate is greatly appreciated. As a token of my appreciation for your time and commitment, participants who complete both the interview and the online survey will have the opportunity to enter a drawing for one of four $20.00 Visa Cards. At the end of the online survey you will be asked to enter your email address if you would like to enter the drawing.

If you have any questions or comments about this study, I would be happy to talk with you. You may reply to this email or reach me at (601) 927-1318.

Sincerely,
LaKesha Alexander
Doctoral Candidate & Principal Investigator
The Department of Educational Studies and Research
The University of Southern Mississippi
APPENDIX H

FOLLOW-UP EMAIL: REMINDER TO COMPLETE ONLINE QUESTIONNAIRE

Date
Name of University
Dear Disability Services Practitioner:

Thank you for agreeing to participate in my study about the characteristics and learning preferences of disability services administrators employed at public two-year and four-year colleges and universities. It was a pleasure interviewing you on______________________.

The success of my study depends on your completion of both the interview and the online questionnaire. As of this date, your User ID and password have not appeared in the Learning Preference Assessment database as having completed the online questionnaire. This self-administered questionnaire can be accessed from the website http://www.lpasdhrs.com/login.html and will take approximately 15 minutes to complete. For your convenience, at the end of this email you will find your User ID and password that was given to you following your interview. For your time and commitment, participants who complete both the interview and the online questionnaire will have the opportunity to enter a drawing for one of four $20.00 Visa Cards.

All data reporting for this study will be recorded in aggregate so that individual participants may not be identified or associated with data. Participants are free to withdraw consent to participate and may discontinue participation at any time during the study without consequence.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board at 601-266-6820. Any questions about the research should be directed to me, LaKeshia Alexander at 601-927-1318, or you may contact Dr. William Pierce at (601) 467-8475.

Thank you for your time and commitment to this study.

LaKeshia M. Alexander

User ID:
Password:
APPENDIX I

ORAL PRESENTATION

My name is Lakeshia Alexander and I am a doctoral student in the Department of Educational Studies and Research at The University of Southern Mississippi. I am interested in examining characteristics and learning preferences of disability services administrators employed at public two-year and four-year colleges and universities. I have asked you to participate in my study because you have been identified as a Director, Assistant Director, Coordinator, or Dean of Disability Services.

As a participant in this study you will be asked to participate in a pre-scheduled phone interview (Phase I) and complete an online questionnaire (Phase II). The phone interview will be conducted by me and will last approximately 15 to 20 minutes. During your interview you will be asked to respond to four questions about your recent learning activities. You will also be asked to provide demographic data. Following the completion of the interview you will be directed to a website to complete the Learning Preference Assessment (LPA). This self-administered questionnaire is presented in an online format and will take approximately 15 minutes to complete. Your identity will be kept confidential and you will be assigned a User ID and password to ensure anonymity.

As a token of my appreciation for your time and commitment, participants who complete both the interview and the online questionnaire will have the opportunity to enter a drawing for one of four $20.00 Visa Cards. At the end of the online questionnaire you will be asked to enter your email address if you would like to enter the drawing.

Participation in this study is voluntary; however, your assistance would be greatly appreciated. All data reporting for this study will be recorded in aggregate so that individual participants may not be identified or associated with data. You have the right to not answer any question that you do not wish to answer. You are free to withdraw your consent to participate and may discontinue your participation in either phase of the study, at any time without consequence. Your participation may provide data that may help answer questions related to employee satisfaction, employment retention, wellness, motivation, barriers to learning, training needs, institutional commitment, and attitude towards learning.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board at 601-266-6820. Any questions about the research should be directed to me, LaKeshia Alexander at 601-927-1318, or you may contact Dr. William Pierce at (601) 467-8475.

Thank you very much for participation.
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26.111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 11121901
PROJECT TITLE: Postsecondary Disability Services Administrators: On the Measurement of Self-Directed Learning
PROJECT TYPE: Dissertation
RESEARCHER(S): LaKeshia Alexander
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Educational Studies & Research
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 12/19/2011 to 12/18/2012

Lawrence A. Hosman, Ph.D.
Institutional Review Board
REFERENCES


DOI: 10.1002/j.21644918


Donato, K. (2008). *Bridging the gap between post-secondary students with disabilities and faculty members with their perceptions of access and accommodation*


Education for All Handicapped Children Act (EHA) of 1975, Pub. L. No. 94-142 (1975)


Kerka, S. (1994). *Self-Directed Learning, Myths and Realities*. Columbus: ERIC


*Dissertation Abstracts International: Section A. Humanities and Social Sciences, 35*(323), 324.


In: M. Gordon & S. Keiser (Eds), Accommodations in higher education under the Americans with Disabilities Act (ADA) (pp. 20–45). DeWitt, NY: GSI Publications.


National Center for the Study of Postsecondary Educational Supports. (2002). *Preparation for and support of youth with disabilities in postsecondary education and employment: Implications for policy, priorities and practice*. Proceeding and briefing book for the National Summit on Postsecondary Education for People


variables on the self-directedness of higher education students. *International Journal of Self-Directed Learning, 3*(1), 1-60.


