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**SUCCESS RATE OF STUDENT ACCESSIBILITY SERVICES DETERMINED BY
STUDENTS CUMULATIVE GRADE POINT AVERAGE**

by

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B.S. University of Central Florida 2016

A thesis submitted in partial fulfillment of the requirements
for the degree of Master of Arts
in the Department of Sociology
in the College of Sciences
at the University of Central Florida
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ABSTRACT

Background: National studies have previously found that those within the disabled population are underserved in regard to healthcare, education, employment and medical access. Historically, the majority of those who are disabled due to this engrained inequality receive government assistance. Multiple laws have been enacted to protect those who fall into this minority such as ADA, section 504 and IDEA. These laws ensure the disabled equal access to employment, public services, education, public accommodations and telecommunications. Federally funded departments called student disability services (SDS) are on college/university campuses to ensure equal access and treatment throughout a student's college career. Under the SDS department, students can request accommodations, advocacy, and support throughout their 4-year degree. The purpose of this study is to explore whether student's who utilize the SDS department at the University of Central Florida are earning equivalent or higher GPA percentages in comparison to student's who do not utilize services from the department.

Method: I worked along with the SDS department on the University of Central Florida's campus to gather data on current students being assisted by the department without any identifying information from the spring 2018 term. The sample total was 2,569 students who were active with the SDS department. In order to assess this question, an OLS regression analysis will be run to regress each of the variables: ethnicity, sex, diagnosis and academic classification.

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CHAPTER ONE: INTRODUCTION

Higher education in the United States has been molded and influenced by a variety of historical forces (Brubacher & Rudy, 1997). Created and centered on the British elitist within American society during the heightened popularity of post-secondary education; higher education serves as a means to advance ones political, economic, and personal agenda. It is the central instrument for the legitimation of a society around the principle of broad (and in principle, equal) opportunities open to all individuals, opportunities to improve themselves, and to make their careers and lives through their own efforts and talents (Trow, 1992).

Due to the structure of the education system within the United States, not all Americans have equal access to higher education. Throughout history, issues have arrived in regard to access in terms of gender, race and/or disability student demographics. These minority populations have needed to fight for their rights at a higher education in order to advance their positions within society. Yet, the issue still stands that our higher education system is forcing these minorities to complete and achieve a higher education degree based on a system created only for elitists—a system against their own kind. Due to the inherent disadvantage that specific groups of student’s experiences, topics, such as affirmative action, have been relevant in current higher education research to prevent further discrimination based upon specific gender, race or ethnicity within higher education (Brown, 2002).

Multiple modifications have been implemented by law in order to create a more just system and to provide more opportunities for people to achieve higher education degrees, such as the Individuals with Disabilities Act and section 504 of 1973. Both of these legislations outline

specific regulations that federally funded education institutions have to abide by in order to maintain funding. The Disability Rights Education and Defense Fund (DREDF), outlines that section 504 is the first disability civil rights law to be enacted into the United States. It prohibits discrimination against people with disabilities in programs that receive federal financial assistance and set the stage for enactment of the Americans with Disabilities Act. Section 504 works together with the ADA and IDEA to protect children and adults with disabilities from exclusion, and unequal treatment in schools, jobs, and the community (Holler & Zirkel, 2008).

Under these federal laws, many minority groups, including the disabled, have seen increased acceptance, accessibility, and assistance when pursuing a higher education degree. Regardless of these services and accommodations however, universities and colleges are reporting that students within these specific populations are taking longer to achieve a four-year degree or are unsuccessful in their completion of a four-year degree.

The main purpose of the present study is to assess the effectiveness of a student accessibility service (SAS) department at a major university within America. With this assessment, insight will be given regarding the success rate of the department and the possible prevalence of inequalities between SAS registered students' GPA's compared to non-registered student GPA's. In order to assess this project, I will be comparing the Spring 2018 semester final GPA's of students who utilize the student accessibility service department to student who are not registered within student accessibility services.

With the lack of insight or research into these departments, the need of insight into student accessibility service departments will help future policies, students, and departments best serve students who require their assistance.

CHAPTER TWO: LITERATURE REVIEW

Disability in America

Within America, it has been documented that those within the disabled population suffer immensely in comparison to non-disabled persons in regards to salary, health, and resource access. As reported by the United States (U.S. Census Bureau, 2012). The Census Bureau considers one disabled under one or more of the following criteria:

1. Cognitive (which includes Blind, Deaf and/or difficulty having their speech understood)
2. Mental (learning, intellectual, developmental, Alzheimer's, mental and/or emotional condition that interferes with everyday activity)
and/or
3. Physical (use of wheelchair, crutches or walker and/or difficulty walking a quarter of a mile, climbing a flight of stairs, lifting something 10lbs or heavier, grasping objects, or getting in or out of bed and/or Arthritis or rheumatism, back or spine problem, broken bone or fracture, cancer, cerebral palsy, diabetes, epilepsy, head or spinal cord injury, heart trouble or atherosclerosis, hernia or rupture, high blood pressure, kidney problems, lung or respiratory problem, missing limbs, paralysis, stiffness or deformity of limbs, stomach/digestive problems, stroke, thyroid problem, or tumor/cyst growth relating to activity limitation (Brault, 2012).

From access to medical attention, employment, to basic civil rights, the disability community has needed to fight for their rights from society. Overall, the World Health Organization (WHO) has

found in past research that those who are limited by disability typically live in poverty, will not go beyond high school for education, hold minimum wage employment (if any), and be more likely to receive government assistance (World Health Organization, 10-12).

According to the CDC, in 2016 the majority of disabled persons live within the southern regions. The highest reported cause of disability is ambulatory, with cognition reasoning being the second highest cause. Within the United States, disability costs the nation 400 billion dollars per year in healthcare expenditures (Center for Disease Control and Prevention, 2016). The CDC calculates that Medicaid paid out 161.1 billion, Medicare paid out 118.9 billion, and private sources paid out 117.8 billion.

Many researchers are working to understand the barriers of the disabled population within society in an effort to create change (Denhart, 2008). With the identification of need of assistance for those with disabilities in higher education, graduate student R. Black calls attention to the barriers students face and goes into detail as to how those with disabilities can overcome specific issues in relation to completing their higher education degree (Dehart, 2008). However, the ingrained stigma of disability that is carried on throughout the generations feeds this everlasting inequality.

Higher Education as a Social Institution

American higher education is the largest and the most diverse system of postsecondary education in the world (Trow, 1988). In the decades following World War II, nations throughout the world (rich and poor) invested in educational institutions, and educational attainment was defined as the path to opportunity (Breen & Jonsson, 2005). The idea has been widely accepted that higher education produces benefits for individuals in the form of personal development,

economic opportunity, rich satisfactions, and benefits for society in the form of political, economic, and cultural advancement (Bowen, 2011).

Brickman (1972) stated, to the extent that the doors are kept open to those who are capable and ambitious-and now even to individuals who are not, the popularization of higher education is a firm step toward democratization. As higher education enrollment statistics skyrocketed, an activist student movement forced the recognition of new concepts in admission, curriculum, evaluation, and governance in higher education (Brickman, 1972).

American higher education is not a monolithic structure that will respond to external forces and internal calls for change in any uniform way. Parts of the higher education structure in the United States predate the establishment of the nation itself (Dew, 2012). The changes throughout American social structures, which become new policy imperatives that will lead to a transformation of the University, are

1. globalization,
2. immigration,
3. rising social-economic inequality,
4. the knowledge economy, and
5. cultural identity.

All elements of these forces are of critical importance. The university has never stood completely outside society. Rather, it must be understood as a major institution of society (Benjamin, 2003).

C. Kelly identifies that a university “must be sufficiently stable to sustain the ideal which gave it birth and sufficiently responsive to remain relevant to the society which supports it” (1966, pg 3).

Effect of Higher Education in Society

Research has shown that those who complete a four-year degree will outperform their peers within society (Schaeffer, 2010). The Association of Public and Land-Grant Universities published in 2018 that the average graduate is 24% more likely to be employed and average earnings among graduates are \$32,000 higher annually and \$1 million higher over a lifetime in comparison to those who do not complete a four-year college degree. College graduates are less reliant on government programs and services than those with a high school degree including Medicaid, housing subsidies, nutrition assistance, unemployment benefits, and other public assistance. Also, those who are college graduates are 3.5 times less likely to be impoverished and nearly five times less likely to be imprisoned.

Prior findings indicate that although education has indirect benefits for health through socioeconomic status (SES), health behavior and social psychological pathways, it also maintains a direct protective effect over the life course—an effect irreducible to any specific causal mechanism (Miech et al. 2011; Ross and Wu 1995). However, low household SES, limited parental education, disorganization in family structure, traumatic experiences and health problems can stifle educational attainment (Duncan et al. 1998; Sandefur and Wells 1999).

United States College Campus Demographics

In the fall of 2017, the National Center for Education Studies reported that 20.4 million students attend American colleges and universities (National Center for Education Statistics, Back to School Statistics, 2017). Of those 20.4 million, 11.5 million are female and 8.9 million are male, which previous research has supported that this is in conjunction with being steady trend of

females dominating the higher education institutional arena. Also, students are enrolled in full-time programs more often than part-time enrollment. The National Center for Education Statistics reports that more African American and Hispanic students are attending post-secondary educational programs than in past decades. From 2000 to 2015, the percentage of enrolled African American students rose from 11.7 to 14.1 percent. Within the same time frame, the percentage of enrolled Hispanic students rose from 9.9 to 17.3 percent (National Center for Education Statistics, 2017).

Yet, the discrepancy between minority students compared to white students is still evident. Shown in Figure 1, the National Center for Education Statistics measures in millions the number of white students compared to minority students enrolled within U.S. colleges.

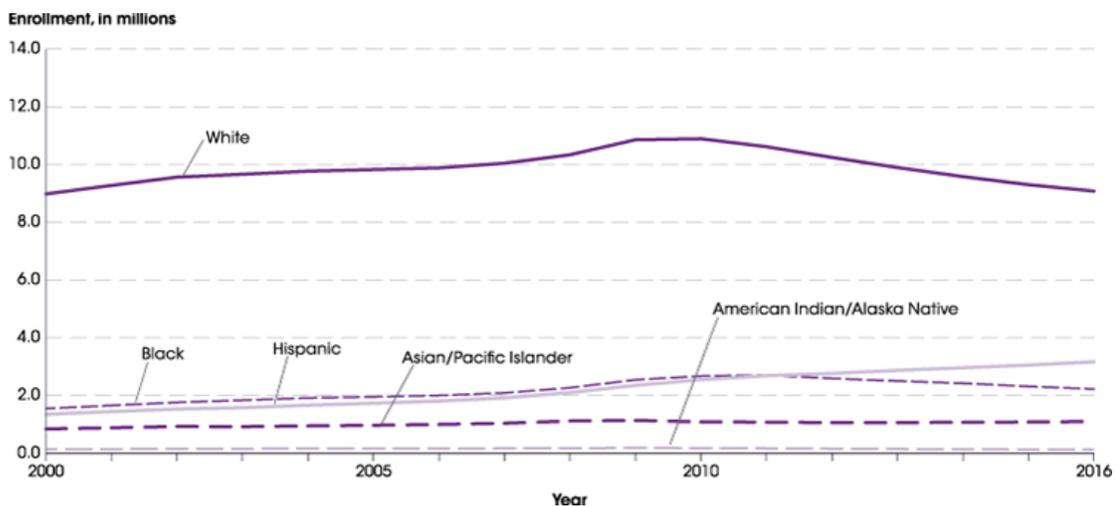


Figure 1. National Center for Education Statistics. 2018.

According to the National Center for Education Statistics, within the academic school year 2013-2014, the majority of four-year degrees awarded were to African American females compared to any other student demographic.

Understanding the foundation of higher education as a social institution, our society is changing its creation of the idealistic college student. A system that was once created for the elite whites, is now being dominated by female minorities; two demographics that struggled for basic social rights within previous decades.

Social Rights in Education

Within the past two hundred years, education has not been accessible to all. Women weren't allowed any rights to education until the mid-1800s. Single-sex academies were created based off the growing economy within colonies creating a need for more literacy (Madigan, 2009). Concurrent with the establishment of the public-school system, the academy movement was initiated. Under this movement, women were allowed education opportunities to assist with their training for positions such as nursing, primary teachers, and care-based positions within the community. By 1806, the Catholic church saw a great need for females to become educators for catholic school girls (Riordan, 1990).

With the establishment of single-gender educational institutions, the emergence of single-gender colleges began in the early 1900s (Madigan, 2009). However, the federal right to an equal education was not written into law until the passage of Title IX of the Education Amendments Act of 1972. Under this law, students are protected from discrimination on the basis of sex in educational programs that receive federal funding. Two years later, in 1974, the Women's Educational Equity Act (WEEA) was enacted to solely protect women due to concern of less participation in classrooms and less feedback from professors (Grossman, 1998).

Sexism wasn't the only issue within education and higher education. Racism has been a highly controversial topic within education as a whole. The first Black American student graduated from Bowdoin College in 1890 (Kenyon College, 2018). However, Black students did not enter predominately white schools in significant numbers until the 1960's (Journal of Blacks in Higher Education, 2003).

Throughout the 1900's, two leaders emerged with philosophies regarding Black education—W.E.B. DuBois and Booker T. Washington. Education for African Americans was largely denied due to the fear of having Black's become superior to whites. Ingrained in this fear mentality, black institutions focused more on education leading to subservient role within society (Journal of Blacks in Higher Education, 2003). Allen Ballard claims in *The Education of the Black Folk*, "In short, white universities felt no special mission, as centers of American culture, to incorporate the former American slaves into that culture" (pg. 173).

On the seventeenth of May 1954, the Supreme Court decided to grant non-discriminating practices within education institutions to Black Americans within the *Brown v. Board of Education* case (Toldson, 2014). This was an instrumental ruling for the African American community to have equal rights to education as every other American. It wasn't until the late 1960's that larger universities started allowing Black students to enroll in higher education at increasing rates. Moreover, toward the end of the decade, more blacks were choosing to attend predominately white institutions than were choosing to attend historically black colleges and universities (Ballard, 2004).

Due to the increased amount of resources given or allotted to predominately white colleges or universities, many Black students have historically opted to attend white universities

and endure racism in return of having the security of educational resources. However, Jacqueline Fleming studies show that black students tend to perform better and exhibit more personal growth at historically black universities and colleges (Fleming, 1985).

In order to protect Black's American rights to equal education, *affirmative action* came about as an outcome from the 1960's Civil Rights Movement—solely intended to provide equal opportunity for members of minority groups and women in education and employment (National Conference of State Legislatures, 2014). In 1961, President Kennedy was the first to use the term “affirmative action”, which is now known as the Equal Employment Opportunity Commission (EEOC) (Messerli, 2010). In 1965, only five percent of undergraduate students, one percent of law students, and two percent of medical students in the country were African American (NCSL, 2014). Many debates have been argued in relation to each side that affirmative action brings to education and employment over the years—yet, legislation stands that any federally funded institution may not discriminate based upon gender, race or religion (EEOC, 2018).

University of Central Florida Setting

According to the University of Central Florida's website, UCF reports to having a diverse demographic of students (University of Central Florida, 2017). The university reports that they educate 56,972 undergraduate and 8,726 graduate students. Of the 56,972 undergraduate students, only 3,747 of those students are First Time in College (FTIC) students.

The largest percentage of the student population has reported themselves as White at 49.2%. The second highest percentage within the student population is Hispanic/Latino at 24.9%; see figure 2.

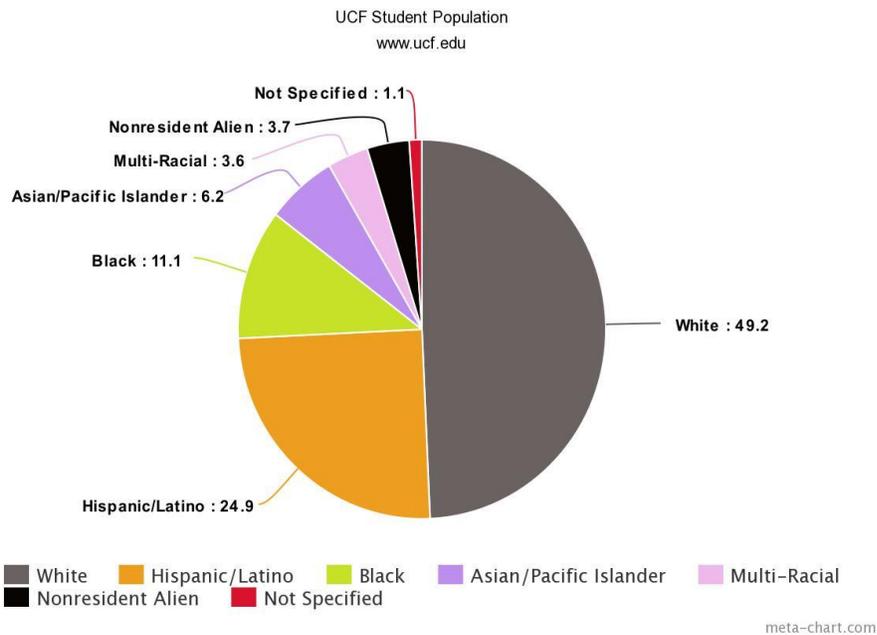


Figure 2. UCF Student Population. University of Central Florida; www.ucf.edu

Also, consistent with previous literature, there are more females (36,324) than males (29,859) enrolled in classes according to the university.

The UCF Student Accessibility Services department does not include any public data in regard to student population percentage or demographics of student's that they specifically serve. Also, no public datasets within the Institutions Knowledge Management system include university data in regard to disability or disabled student's status.

United States Disabled Student Statistics

Research has shown growing enrollments of students with disabilities in postsecondary education (Newman et al. 2010; Snyder and Dillow, 2010). Any student who is considered disabled in regard to education accommodations must meet the criteria for being disabled according to the Census Bureau (reference above) or must provide medical documentation for their accommodation need. The Institute of Education Services reports that 707,000 disabled

students are enrolled in all 2-year or 4-year colleges within the United States from the 2008-2009 academic school year (U.S. Department of Education, 2009). Concurrently, the National Center for Education Statistics reported that within the academic school year 2011-2012 only 11.1% of college students were reported disabled.

The highest percentage of disabled students attend two-year, public colleges; followed by four-year, public colleges (National Center for Education Statistics, Disability Graduation Percentages, 2017).

Current disability research emphasizes growth and retention of this specific population (Getzel, 2008). Understanding social structures and influences for this community to allow them to complete a four-year degree has been a topic of importance within academia.

Disability History in Education

Disabled persons are underserved in higher education (Gregg, 2007). In past years, those who were disabled were not granted equal education access, not provided adequate resources to allow for a fair education, and were left to be excluded from education as a whole until the past few decades, eventually being addressed within the Rehabilitation Act of 1973 (Goetz and Jepsen, 2018).

Disability studies in relation to higher education is still a relatively new topic of research in terms of new information is still being collected and determined within this sector of higher education. The lack of accessibility is still being addressed by universities across America, along with a heightened response to on-campus inclusion within classrooms—however, still much needs to be elaborated on within disability policy on higher education campuses.

With an increase of disabled students within higher education over the past several decades, Wolanin and Steele (2004) assert that the field of higher education will directly be impacted as more people with disabilities seek out higher education. Higher education has been noted to be affected by gender, race, and class, however researchers have not routinely taken disability status into account. The importance of also assessing the impact of disability status within completion of a higher education degree is to determine the effectiveness of federally funded departments within university campuses. Currently these departments are not audited or regulated (other than self or university regulation), without any insight into what current accommodations are helping students and what efforts do not have any impact for students. Within disability research, there are two ways to define one disability(s) within education. First, a visible disability (VD) is any disability that is obvious to the eye. For example, one who uses a wheelchair or someone who is blind and uses a cane. The other is known as an invisible disability (ID), which includes a learning disability (LD), mental disease (such as depression or anxiety) or any other type of disability that is not apparent to the eye.

Advocacy for disability law and rights dates back to the early 1800's. However, it was not until the late 1900's that disability laws came into effect. Over time, many with disabilities have been viewed by non-disabled people as inferior to the rest of society due to their dependence upon others to function (Nielson, 2012). However, as Nielson argues, we all depend on each other, disabled or not, for society to function properly. Before federal laws mandated access to education, the majority of disabled students went without a free, public education. Under the Education for All Handicapped Children Act [1. H.R. Rep. No. 94-332, at 4 (1975)], if allowed to

attend schooling, disabled students were either placed in inadequate, segregated classrooms or placed in regular classrooms without any support or assistance.

In order to fund the inclusivity of disabled students, the Education for the Handicap Act (EHA) of 1975 was created. Under this act, disabled students were required to have access to a free, and adequate public education. This specific act removed the financial burden from the state level to the federal level. To date, the Individuals with Disabilities Education Act (IDEA) has taken the place of the EHA when enacted and revised in 1997. The IDEA extends past the EHA allowing a free education to disabled students, within the “least restrictive environment”.

In 1990, the American Disabilities Act (ADA) was enacted and signed into law helping create a barrier of protection for those who are considered disabled within all aspects of society. As defined by the U.S. government, a disabled person is one who “(1) had a physical or mental impairment that substantially limits one or more “major life activities”, (2) has a record of such an impairment, or (3) is regarded as having such an impairment” (United States Department of Labor, 2017). Under this legislation, those with disabilities are protected against discrimination in employment, public services, public accommodations, and telecommunications (Equal Employment Opportunity Commission, 2017).

The Office of Civil Rights (OCR), which is under the U.S. Department of Education, oversees section 504 and the adherence of participants within this realm. Any organization that receives federal aid, in this case colleges and universities, are obligated to abide by the federal law and statues regarding disability. The Department of Education states, that discrimination within higher education is subject of “refusal to implement or inappropriate implementation of academic adjustments in higher education” (U.S. Department of Education, 2017). Thus, students who

attend these institutions must receive equal access to benefits, services, and opportunities on campus.

Disability and Higher Education Percentages in Current Day

According to the 2016 American Community Survey (ACS), 12.8% or 1 in every 5 persons in the United States is disabled (Erickson, 2017). From 2010 to 2017, the disability percentage has increased by .9% in America. Specifically, between the ages of 18-64, the disability rate was 10.3%. When looking at Bachelor degree completion rates within the United States, only 34.6% of the overall population holds a four-year Bachelor degree. In comparison, only 8.5% of the disabled population holds a four-year Bachelor degree.

From 2011-2012, the National Center for Education Statistics reported that 11.1% of college students reported a disability. More females reported have a disability than males, as did those who were 30 or older reported in comparison to a younger age group (National Center for Education Statistics, Students with Disabilities, 2016).

According to the Bureau of Labor Statistics, when compared to non-disabled persons, the majority of the disability community has only attained a high school diploma. With current day disability education laws within the public-school system, there has been an increase over the years regarding disability population high school completion rates, yet those completion rates do not translate into higher education (U.S. Census Bureau, 2016). Thus, leading to the question of what resource(s) are lacking at the higher education level preventing four-year Bachelor graduation rates within the disabled population?

Disability Assistance on College Campuses

As an extension of the IDEA and ADA, universities and community colleges have put in place departments, student accessibility services, which cater to students who need accommodations throughout their college careers. The purpose of these departments is to assist students with communication with their professors, have their accommodations documented, advocating for their needs on campus (Szymanski et al, 1999). Other possible names that the SAS department could be listed as on campus would be the Student Disability Services.

With the advancement and creation of SAS departments comes many tricky aspects for students and university officials to navigate such as documentation fraud, definition of a reasonable accommodation, discrimination, and professor stigmatization. The purpose of these programs is to allow students who require assistance or support, who classify themselves disabled or non-disabled, an equal chance at receiving and completing a college degree. Within the current research regarding SAS departments, there is very little information that pertains to the effectiveness of these departments, issues regarding auditing documentation, determining fair accommodations, and little to no information looking into universities within the United States.

Past research has indicated that disabled students often opt not to identify themselves as disabled in order to receive help from peers, professors, or departments on campus due to the stigmatizing effects that the label holds within society (Lam, 2015). Disabled students often perceive that the attitudes of nondisabled persons are the "major barrier facing them" (Penn & Dudley, 1980, p. 156). Many disabled students report social isolation and difficulties in adjusting to the academic setting (Wiseman, et. al., 1988). In order to attract and assist a wider range of students who may not categorize themselves as "disabled," many universities are changing the

name of their support services department from student disability services to student accessibility services. Some universities that have made this transition include the University of Central Florida, Clemson University, Brown and more.

Lamont and Lareau (1988, p. 155) state, “because differences in academic achievement are normally explained by differences in ability rather than by cultural resources transmitted by the family, social transmission of privileges is itself legitimized, for academic standards are not seen as handicapping lower-class children.” Against Lamont and Lareau’s perspective, the purpose of these departments is to create an equal stance within the academic sphere or classroom for students who need assistance to have the same chance or ability to complete their coursework in comparison to a student who does not need assistance.

Theoretical Aspect

Sociology of Education

Sociologists view educational institutions as another arena for hierarchy. The educational institution is involved in the work of reproducing power, domination, oppression, and inequality within society. A key player to understanding the Sociology of Education is Emile Durkheim. Within his literature, he concludes “there is no man who can make a society have, at a given moment, a system of education other than that which is implied in its structure . . . Each people has its own, as it has its own moral, religious, economic system, etc.” (Durkheim, 1956).

Two key aspects that Durkheim identifies within the sociology of education. First, education is different depending on one’s social class or location, giving support to the notion of inequalities within education as seen already implemented throughout our societies. The second

aspect that Durkheim mentions is without certain diversity, there could not be any cooperation between societies, developing the child for the collective life while preparing him for a special role in society.

Parsons takes a step further to define sociology of education while explaining that education “is to cultivate and sustain modern democratic society while simultaneously offering equality of opportunity to all citizens” (Parsons, 1959). Thus, society has deemed formal education as the pathway to becoming a part of the elite community. Formal education will raise one’s chances of securing sought-out jobs, increasing income, and stabilizing one’s contribution to society. Preventing the access or equally opportunity within the higher education realm, the bracket of disabled persons will never surpass those who do not face the same social struggles, securing their stance within society.

Collins

Just as Durkheim touched on the basis that minorities are already predisposed to failure within our societal structure due to hierarchy factors, Patricia Hill Collins explains oppression throughout our society in relation to three key aspects: race, class, and gender. Within her theory, the Matrix of Domination, Collins explains how replacing separate models of oppression with interlocking ones creates possibilities for new paradigms.

Collins gives support to her theory through the foundation of Bell Hooks definition of *politic of domination*:

“Refers to the ideological ground they share, which is a belief in domination, and a belief in the notions of superior and inferior, which are components of all of those systems. For me it’s

like a house, they share a foundation, but the foundation is the ideological beliefs around which notions of domination are constructed”.

She goes on to explain, “domination is also experienced and resisted on the third level of social institutions controlled by the dominant group: namely, schools, churches, the media, and other formal organizations” (Collins, 2000).

Understanding that higher education systems were created and operated by white, male elitists in regards for a social structure, these systems are designed against any minority or female student. Any student who does not fit the dominant population mold is already predisposed to academic failure due to the social system structure.

Tinto

Lastly, Vincent Tinto is a recognized sociologist specializing in higher education. Within his book, *Leaving College: Rethinking the Causes and Cures of Student Attrition*, Tinto explains his concept of student retention theory. He concludes that there are three reasons as to why students depart from higher education institutions. The three major sources he identified in his framework are: academic difficulties, the inability of individuals to resolve their educational and occupational goals, and their failure to become or remain incorporated in the intellectual and social life of the institution (Tinto, 1993).

Tinto acknowledges the unequal circumstances that students could originate from in relation to successful adaptation to a college atmosphere. He explains, “Since it has been demonstrated that individuals from disadvantaged and/or minority origins are much more likely to be found in public schools generally and in the lower quality public schools in particular, it follows that they will be less likely prepared for college (pg. 49)”.

Looking back on the demographics that universities in America have reported in regard to students who are disabled, incorporating Collins and Tinto's theories these students have multiple aspects of the social system working against them. With the combination of these theories, students who fall into the categories of being any ethnicity other than white, female, AND needing assistance from the SAS departments should result in academic failure and/or an unsuccessful completion of a four-year degree.

Therefore, this study will fill this important gap in the literature and will examine the following research question: Is there a difference between students who utilize student accessibility services in regard to GPA for the spring 2018 semester at the University of Central Florida compared to the others registered with student accessibility services?

CHAPTER THREE: METHODOLOGY

Sample

This analysis used data obtained from the University of Central Florida Student Accessibility Services department and Institutional Knowledge Management (IKM) department which includes variables that relate to assessing if disability status has an effect on students Grade Point Average. Upon request, IKM provided data pertaining to important student demographic variables, which included race and gender demographics, GPA, and student admission classification within the university. However, within the IKM data, students were not differentiated as being registered with SAS or not. Thus, students could be cross-counted between the SAS department and the IKM database.

Students selected for this study were enrolled at the university within the spring semester of 2018. The demographics, GPA and student classifications were obtained both departments who are classified under students who actively utilize their specific services within the spring 2018 semester. Each data set did not contain any personal identifying information for each participant. The combined IKM and Student Accessibility Services data set contains information on 8,006 students total.

Measures

Dependent Variable

Grade Point Average. The dependent variable in this analysis is the student's cumulative grade point average for the spring 2018 semester. In order to assess how effective, the student accessibility services department is at the University of Central Florida, the respondents'

demographic information was assessed in relation to their grade point average. Respondents were categorized by gender, race, and diagnosis type within the department during the initial semester registered within the department. Table 2 shows, the students who were registered with the SAS department had a mean GPA of 3.13548 and students who were not registered with the department had a mean GPA of 3.13280.

Table 1: GPA t-test

| Student Categorization | Mean |
|-----------------------------|---------|
| Non-registered students (0) | 3.13280 |
| Registered students (1) | 3.13548 |

Independent Variables

Admission Type Description. Student classification was broken down into three different sections. First Time in College (FTIC) are students who have never attended another college and/or university (recoded at 0). Readmit are students who have previously attended a college and/or university without completing a degree, returning to the university after a period of time out of school (recoded at 1). Lastly, transfer are students who have previous attended another higher education institution within their undergraduate career yet did not complete a four-year degree was (recoded at 2). Shown in Table 3, transfer students were the highest percentage of student classification at 52.5% within this data set.

Diagnosis Description. Through medical diagnoses, students are categorized by the student accessibility services department based upon their specific medical disabilities. “Non-disabled”

was coded at 0 (71.5%), “Attn Deficit Hyperactivity Dis” was coded at 1 (9.1%), “Autism Spectrum Disorder” was coded at 2 (1.6%), “Deaf/Hear of Hearing” was coded at 3 (.6%), “Manual Dexterity/Impairment” was coded at 4 (.0%), “Orthopedic” was coded at 5 (1.1%), “Other Health Disabilities” was coded at 6 (4.3%), “Psych/Emotional/Behavioral” was coded at 7 (5.0%) and “Specific Learning Disability” was coded at 8 (6.7%). It is important to note that Attention Deficit Hyperactivity Disorder (ADHD), Specific Learning Disability and Psych/Emotional/Behavioral have the highest percentages for students who are registered with student disability services on campus.

Sex. The National Center for Education Statistics concludes, “Although male enrollment increased by a larger percentage than female enrollment between 2005 and 2015, the majority (56 percent) of students in 2015 were female” (NCES, 2018). Shown in Table 3, the data set includes a total number of 2,282 students registered with the Student Accessibility Services department and 5,722 non-registered students. Females were coded 1 (55.3%) and males were coded as 0 (44.7%).

Race. Respondents were asked to identify their ethnicity based upon the eight categories listed in Table 3. American Indian was recoded at 0 (.2%), Asian was recoded at 1 (5.2%), Black was recoded at 2 (10.7%), Hawaiian/Pacific Islander was recoded at 3 (.2%), Hispanic was recoded at 4 (27.1%), Multi-racial was recoded at 5 (4.0%), Not specific was recoded at 6 (.6%), and White was recoded at 7 (51.9%). Black, Hispanic and White hold the highest percentage of students within the university.

Table 2: Descriptive Analysis

| Variable | Frequency | % |
|--|-----------|------|
| Admission Type | | |
| FTIC | 3,662 | 45.7 |
| Readmit | 135 | 1.7 |
| Transfer | 4,206 | 52.5 |
| Diagnosis | | |
| Manual Dexterity | 2 | .0 |
| ADHD | 730 | 9.1 |
| Autism Spectrum Hyperactivity Dis | 127 | 1.6 |
| Deaf/Hard of Hearing | 52 | .6 |
| Orthopedic | 92 | 1.1 |
| Other Health Disabilities | 347 | 4.3 |
| Psych/Emotional/Behavioral | 399 | 5.0 |
| Specific Learning Disability | 533 | 6.7 |
| Non-disabled | 5,722 | 71.5 |
| Sex | | |
| Female | 4,429 | 55.3 |
| Male | 3,575 | 44.7 |
| Race | | |
| American Indian | 14 | .2 |
| Asian | 420 | 5.2 |
| Black | 857 | 10.7 |
| Hawaii/Pacific Islander | 14 | .2 |
| Hispanic | 2,173 | 27.1 |
| Multi-racial | 324 | 4.0 |
| Not Specific | 46 | .6 |
| White | 4,156 | 51.9 |
| Disability | | |
| Not registered with Student Accessibility Services | 5,722 | 71.5 |
| Registered with Student Accessibility Services | 2,282 | 28.5 |
| N | 8,004 | |

Source: UCF Student Accessibility Services and Institutional Knowledge Management

Analytic Strategy

This analysis examines the possible relationship between grade point average and student disability status. Specifically: Is there a difference between students registered with Student Accessibility Services and students who are not registered within the department in relation to one's grade point average within their undergraduate career? Is there a difference within these two categories based upon race?

To assess both of these questions, first descriptive analysis tests were run to determine the demographics within the student disability services department per variable; specifically, to answer the question's regarding what ethnicity, gender, and diagnosis categorization is served most from the department. Next, bivariate tests were run to determine the relationship between individually disability and gender, disability and admission type and disability and race, with disability being the controlled variable. Next, multivariate tests were run to assess the intersection between disability and gender and race and disability and gender and admission type in order to assess the role of one's gender within their educational attainment.

Finally, an ordinary least square (OLS) regression was used to regress the overall grade point average classification using the variables: race, sex, GPA, and medical diagnosis. Followed by a t-test in order to assess the significance of the dependent variable, with assumption of variances by a Levene's test.

CHAPTER FOUR: FINDINGS

Who are the students being served by the University and the Student Accessibility Services department?

Results show that the respondents' being served by the university and student accessibility services are more likely to be female (55.3%) rather than male (44.7%). This data is congruent with more females being enrolled in higher education institutions, specifically the University of Central Florida (NCES, 2018). Next, when asked for the respondent to classify their race, the largest number of students reported themselves as Caucasian, with the second largest category being Hispanic (W=51.9%, B=10.7%, H=27.1%). Shown in Table 4, White females is the largest category served by the university in comparison to any other race or gender.

Next, to understand the significance that admission type plays between males and females. When comparing between male and female, again the data supports more female transfer students (n=1708) than male transfer students (n=1300). As Blekic et. al claims, "While Porter (1999) found a difference between continuing and transfer students in retention, likelihood of graduation and GPA, the author asserted that studies can have different results due to inconsistency of populations included in the studies" (Blekic, Carpenter & Cao, 2017).

Table 3: Multi-variate Cross-tabulation

| Variable | Non-disabled | | | | Disabled | | | |
|---------------------------|--------------|------|-------|-------|----------|------|-------|-------|
| | M | F | Total | % | M | F | Total | % |
| Race | | | | | | | | |
| American Indian | 8 | 5 | 13 | .227 | 1 | 0 | 1 | .043 |
| Asian | 156 | 191 | 347 | 6.06 | 39 | 34 | 73 | 3.198 |
| Black | 238 | 441 | 679 | 11.86 | 84 | 94 | 178 | 7.80 |
| Hawaiian/Pacific Islander | 5 | 6 | 11 | .192 | 0 | 3 | 3 | .131 |
| Hispanic | 698 | 896 | 1594 | 27.85 | 240 | 339 | 579 | 25.37 |
| Multi-racial | 93 | 132 | 225 | 3.932 | 38 | 61 | 99 | 4.338 |
| Not Specific | 18 | 15 | 33 | .576 | 9 | 4 | 13 | .569 |
| White | 1329 | 1491 | 2820 | 49.28 | 619 | 717 | 1336 | 58.54 |
| Total | 2545 | 3177 | 5722 | | 1030 | 1252 | 2282 | |
| Admission Type | | | | | | | | |
| FTIC | 1245 | 1469 | 2714 | 47.43 | 432 | 516 | 948 | 41.54 |
| Transfer | 1300 | 1708 | 3008 | 52.56 | 548 | 650 | 1198 | 52.49 |
| Readmit | 0 | 0 | 0 | | 49 | 86 | 135 | 5.91 |
| Total | 2545 | 3177 | 5722 | | 1030 | 1252 | 2282 | |

Is there a difference in student success rate within an undergraduate program between students registered with Student Accessibility Services and non-registered students defined by grade point average?

To answer this specific question, I used a multiple linear regression to assess the correlation between the two groups in relation to their cumulative GPA. As shown in table 5, according to this data set, those who are non-disabled students is significant (.000, $P < .05$), suggesting that students not registered with the department had .095 less cumulative GPA in comparison to students who are registered.

Next, there is a discrepancy in relation to a specific students' cumulative GPA in relation to their specific diagnosis categorization. Students registered within the student accessibility services department that fall into ADHD (.000, $P < .05$), Orthopedic (.009, $P < .05$), Other Health Disabilities (.001, $P < .05$) and Psych/Emotional/Behavioral (.000, $P < .05$) categories are all significant.

First, when compared to students with specific learning disabilities, those who are registered with Attention Deficit Hyperactivity Disorder have .119 less cumulative GPA on average, when other variables are held constant. Next, students with orthopedic disabilities have .148 less cumulative GPA in comparison to students categorized with specific learning disabilities on average. Students categorized with Other Health Disabilities have .114 less cumulative GPA compared to students categorized with specific learning disabilities on average. Lastly, students who are categorized under Psych/Emotional/Behavioral have .127 less cumulative GPA than students who are categorized with specific learning disabilities on average. This suggests that students who are have a disability categorized under ADHD, Other Health Disabilities, Orthopedic or Psych/Emotional/Behavioral diagnoses either have other outside causalities or

variables that have not been considered in this study which are having an effect of their cumulative GPA percentage.

It is important to note the gap on the table for Manual Dexterity Impairment under diagnosis categorization. Due to only having two respondents fall under that category, SPSS did not include that categorization within the regression.

In regard to gender, the data supports, that females have a higher cumulative overall GPA than males. The variable male (-.097, $P < .05$) was significant, on average, when the other variable is held constant. Thus, males on average have .097 less cumulative GPA than females within the data set.

Next, according to the data set, only students who categorized themselves as “Black” when asked to self-identify their race was significant (.000, $P < .05$). On average, when other variables are held constant, Black respondents earn .168 less cumulative GPA.

Lastly, students who are categorized as First Time in College was significant (.000, $P < .05$). Alternative to the other categories, FTIC students, on average, have a .079 higher cumulative GPA when all other variables are held constant.

Table 4: OLS Regression Results of Grade Point Average

| Parameter | Model 1 | | | | | |
|------------------------------|---------|----------------|------------|---------|-------|-------|
| | B | β | Std. Error | t | Sig. | N |
| Intercept | 3.055 | 3.260 | .023 | 140.177 | .000 | 8,006 |
| Disability Status | -.045 | -.040 | | | | |
| Disabled | | 0 ^a | | | | 2,282 |
| Non-disabled | | -.095 | .023 | -4.219 | .000 | 5,722 |
| Diagnosis Categorization | .009 | .049 | | | | |
| Non-disabled | | 0 ^a | | | | 5,722 |
| ADHD | | -.119 | .028 | -4.190 | .000 | 730 |
| Autism | | -.087 | .049 | -1.761 | .078 | 127 |
| Deaf/Hard of Hearing | | -.098 | .072 | -1.356 | .175 | 52 |
| Manual Dexterity Impairment* | | | | | | 2 |
| Orthopedic | | -.148 | .056 | -2.628 | .009 | 92 |
| Other Health Dis. | | -.114 | .034 | -3.325 | .001 | 347 |
| Psych/Emotional/Behavioral | | -.127 | .033 | -3.826 | .000 | 399 |
| Specific Learning Disability | | 0 ^a | | | | 533 |
| Gender | .090 | .089 | | | | |
| Male | | -.097 | .011 | -8.642 | .000 | 3,575 |
| Female | | 0 ^a | | | | 4,429 |
| Race | .014 | .057 | | | | |
| Am. Ind. | | -.005 | .133 | -.034 | .973 | 14 |
| Asian | | .042 | .026 | 1.650 | .099 | 420 |
| Black | | -.168 | .019 | -8.958 | .000 | 857 |
| Hawaiian/Pac. | | -.221 | .133 | -1.662 | .097 | 14 |
| Hispanic | | -.025 | .013 | -1.888 | .059 | 2,173 |
| Multi-racial | | -.032 | .029 | -1.099 | .272 | 324 |
| Not Specific | | .001 | .074 | .020 | .984 | 46 |
| White | | 0 ^a | | | | 4,156 |
| Admission type | -.041 | -.081 | | | | |
| FTIC | | .079 | .011 | 7.015 | .000 | 3,662 |
| Readmit | | -.056 | .045 | -1.248 | .212 | 135 |
| Transfer | | 0 ^a | | | | 4,206 |
| F | | | | 1.877 | 0.000 | |
| P-test | | | | -.202 | .840 | |

*Due to the minimal number of respondents within this category, SPSS did not compute the output within the regression.

To understand the effectiveness of the present study, multiple tests were run to assess the relationships between variables. First, as shown on table 6, this model is significant with $F=1.877$, $P<.05$. Thus, the relationship assumed in the model is not reasonable. According to this data set, there is no direct correlation of disability status on one's undergraduate GPA. Second, shown on table 7, the value of $R^2 = .029$, meaning that the model explains 2.9% of the observed variation in student cumulative GPA. The value of adjusted $R^2 = .027$, meaning that the model explains 2.7% of the observed variation in student cumulative GPA. Third, to assess the validity of the entire data set a t-test was run. As shown in table 8, the sig. was .840 ($P<.05$), meaning that according to this data set there is no difference in means and one cannot reject the null hypothesis.

CHAPTER FOUR: DISCUSSION AND CONCLUSION

Once again, this analysis is attempting to fill the gaps in the literature surrounding the effectiveness of student accessibility services for undergraduate students in terms of student cumulative grade point average. More specifically, is there a difference between students who are registered with the student accessibility services department and non-registered students in terms of cumulative grade point average? If so, what discrepancies are there based upon demographics? This analysis contained multiple surprising results.

First, the model is not significant. The R^2 is low and we reject the null hypothesis for the lack of fit test. There is no sufficient evidence to say that the average GPA is different between students registered with SAS and students not registered with SAS. While the difference in the GPA is not significant, the variation of GPA due to student minority status intersection is pertinent.

Second, the results for demographics for students registered with the student accessibility services department is aligned with prior research for undergraduate student demographics. The data supports that a greater percentage of White, female, transfer students register for services than students of other demographics. As Laanan, Starobin and Eggleston state (2011), “for millions of students, especially women and ethnic minorities, the pathway to the baccalaureate degree can be achieved by starting at a community college and transferring to a 4-year college or university” (pg. 175). Previous research has stated that females take up a higher percentage of university demographics, which this data supports, however contradictory to previous literature, when it comes to admission categorization those who are FTIC have a higher cumulative GPA than transfer students.

Next, assessing the success rate of the student accessibility services department based upon student cumulative grade point average. Surprisingly, as shown on table 2, students who are registered with the department have .00268 greater cumulative grade point average than students who are not registered with the department. Thus, if prior research still is finding that students registered with student accessibility service departments are behind pace for graduation time frames, the overall disabled population has a significantly lower four-year degree completion rate, and less yearly earnings on average compared to non-disabled peers' due to educational attainment then it is not the department itself that is hindering these aspects of student's completion.

It was interesting that when considering the independent variable race, only respondents who categorized themselves as Black was significant in comparison to variables which are held constant in comparison to White and Hispanic students. Also, only Asian students had a higher cumulative GPA than White students.

Possible limitations of this study include the minimal number of independent variables included in this study, other factors that would be considered in future research could be student campus integration, stigma, and/or accessibility due to resources. This specific model explains ~1% of the variability of the students' GPA's, yet limitations which affect the disabled population from completion of degree or educational attainment that was not explored within this specific study could include, but not limited to, are percentage of use of accommodation, employment hours worked per week, family requirements and/or outside responsibilities in relation to GPA variability.

Lastly, due to not assessing a longitudinal study, this study could not accurately assess the barriers that students who are registered with the student accessibility services department face over the maximum eight-year time frame for one to complete a four-year Bachelor's degree allowed by the University of Central Florida.

Even with the rejection of the null hypothesis for this study, this study is beneficial due to understanding that the department is positively assisting those registered and in need of assistance or accommodation. The specific contributions from the department are helping registered students not only maintain a passing cumulative GPA, but surpass by a fraction of a hundredth the regular University of Central Florida student population when it comes to cumulative grade point average.

Understanding that the effect of the student accessibility services department in fact does help increase cumulative GPA for students who are registered, future research could assess how effective current advocacy and accommodation's benefit the population who is registered within a student accessibility services department. Also, assess which accommodations offered by a student accessibility services department are most beneficial—honing in on what accommodations may not best utilize current efforts on behalf of the department. Lastly, understanding that student accessibility service departments are positively impacting registered students in relation to their grade point average, factoring in other variables that do not have a direct impact from the department such as parent educational attainment, access to college or university, and/or ability of integration with peers. From past government statistics, it is known that there is a gap within this population in relation to education attainment which has a direct effect on yearly earnings, quality of life and much more. Further research is needed to better

understand these questions. And, if future research can assess what specific variables are affecting the disabled populations educational attainment, we as a society can move forward to work for a more adequate and fairer educational arena to help assist this specific community within our society.

To summarize, Tinto's and Collin's theories pertaining to minorities and success rates within higher educational institutions have no effect on one's disability status. These theories have been supported in terms of race, gender and disability status as a social construct. This social construct is seen and proven successful in terms of race, gender, and ethnicity within the higher education institution. However, in terms of disability status playing a role in the success rate of a four-year degree, one cannot conclude that disability itself is a significant enough factor to prevent one from obtaining their four-year Bachelor's degree or a higher education.

As Tinto concluded in his research on higher education regarding retention rates and reasoning's, "Distinguishing between the academic and social domains of the college further suggests that a person may be able to achieve integration in one area without doing so in the other. Thus, a person can conceivably be integrated into the social sphere of the college and still drop out because of insufficient integration into the academic domain of the college (e.g., through poor grade performance)" (Tinto, 1975, pg. 92). We need to assess future research based on a social structure, rather than the institutional accommodations according to this data set. What other aspects of social integration is this specific population not being exposed to or integrating with efficiently or substantially enough to complete four-year Bachelor degrees across America?

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