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College Faculty Preparation and Comfort in
Teaching Students With Disabilities

Douglas A. Polk Jr.

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Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

in the Department of Educational Leadership, Management and Policy

Seton Hall University
2021

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COLLEGE OF EDUCATION & HUMAN SERVICES
DEPARTMENT OF EDUCATION LEADERSHIP MANAGEMENT & POLICY

APPROVAL FOR SUCCESSFUL DEFENSE

Douglas Polk has successfully defended and made the required modifications to the text of the doctoral dissertation for the **Ed.D.** during this **Spring** Semester.

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Abstract

The increase in the number of students with disabilities enrolled in institutions of higher education poses challenges for institutions and their instructional staff. A first step in meeting these challenges is to uncover what professional development support faculty need before teaching students with disabilities. This study examined the instructional support requirements for faculty members teaching students with disabilities. This case study also examined university faculty members' attitudes towards teaching students with disabilities. Prior research has investigated colleges and universities has shown that further investigation into faculty members' knowledge, the institutional support faculty receive to teach students with disabilities, attitudinal favorability, and faculty's comfort level in teaching students with disabilities. This study examined the three constructs (knowledge, institutional support, and attitudinal favorability) that affect faculty's comfort level in teaching students with disabilities. The research questions this study addressed are:

1. How do faculty assess the professional development support offered by their university for teaching students with disabilities?
2. How knowledgeable do faculty feel they are about teaching students with disabilities?
3. How do faculty perceive the potential for success of students with learning disabilities?
4. What is the relationship between institutional professional development support and faculty's reported comfort level in teaching students with disabilities?
5. How is the relationship between institutional support and comfort affected by prior knowledge, attitudinal favorability, and demographic factors?

Seventy-three faculty at a private doctoral university in the Northeast responded to a survey measuring the three independent variables of institutional support, faculty knowledge,

and attitudinal favorability, as well as the outcome variable of self-reported comfort. Qualtrics was used to distribute the surveys to faculty and collect the data. Chi Square was employed to determine if there is a significant difference in the ratings on the three constructs by the demographic variables. Multiple linear regression analysis was used to assess the statistical significance of the contribution of the three independent variables to faculty self-reported comfort.

Keywords: Students with Disabilities (SWD), Student Support Services (SSD), Faculty Perceptions, Faculty Comfort

Acknowledgments

Special thanks to my best friend and colleague, Mr. Clinton Franks, for being there as a true friend and brother. To my dissertation committee: Dr. Martin Finkelstein, words cannot express all the support and knowledge you have poured into me to help me be the best I can be. Dr. Katie Smith for all your guidance, and Dr. Wendiann Sethi for supporting me. To the rest of my family and friends, thank you for opening up a side of life learning that is not given in the classroom.

Dedication

First, I want to thank God who has walked out the footsteps of my life to help me accomplished my goals and dreams. To my parents, the late Mr. Douglas A. Polk Sr. who inspired me to be the man I am today: Daddy, thank you and I wish that you were here to see me reach my achievements. Mrs. Annie C. Polk-Driver: Momma, thank you for encouraging me to continue my education and standing by my side telling me to never give up. To my wife, Diane, I want to thank you for all your support when I did not think it was possible. To my son, Douglas “Aaron” III, I pray that I have been an inspiration to you in achieving your dreams. To my daughter Joy, thank you for keeping me on track to be the example for you to emulate. My granddaughter Kylei, for seeing your Pop-Pop’s dreams come true. A special thank you to my Late Aunt Queen Cannon, for being there for me when it got hard.

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CHAPTER 1

INTRODUCTION

Enrollment of students with disabilities has been increasing in higher education over the past 20 years. In academic year 2015–2016, approximately one fifth (19.4%) of students enrolled in undergraduate programs at higher educational institutions in the United States were students with disabilities (National Center for Education Statistics [NCES], 2019a). Disabilities among college students may include physical impairments (e.g. inability to walk or impaired vision or hearing), cognitive disorders (e.g. Attention Deficit Disorder [ADHD] and dyslexia); and psychological disorders (anxiety, schizophrenia, and stress). Alongside the increase of students with disabilities at the higher education level, the types of disabilities these students report have changed. Approximately 20 years ago, higher education dealt with a large percentage of students who identified as having physical and learning disabilities, ranging from paraplegia to reading comprehension and dyslexia. In recent years, colleges and universities have seen an increase in students with different types of psychological disorders and fewer students with physical disabilities. Mental disorders require unique treatment and counseling. Meeting the educational needs of students with physical, cognitive, and psychological disabilities might require faculty to have special training to support their educational needs. Today's higher educational institutions are facing the challenge of educating students with additional types of cognitive disorders. According to Masters in Special Education (2020), there five types of disabilities that have increased at the higher education level. These disabilities are dyslexia, Attention Deficit/Hyperactivity Disorder (ADHD), dyscalculia, dysgraphia, and processing deficits.

Although the percentage of college students with disabilities has doubled in the past couple of decades, the responsibility and initiative for advocating for services or accommodation has shifted from the institution to the individual in college (Iarovici, 2014, p. 11). To assist students with disabilities during their educational process, two federal laws require testing or assessment of students with disabilities: the Individuals with Disabilities Education Act (IDEA) and Title I of the Elementary and Secondary Education Act (ESEA).

IDEA is a national public education law that governs how states and federal agencies provide early intervention for infants and children between the ages of 3 and 21 who receive special education and related services (IDEA, 2020). Title I of ESEA provides for and protects underperforming students and students with disabilities in order to ensure that high-quality academic assessments, accountability systems, teacher preparation, and training are provided. One part of the assessment process tests K–12 students for learning disabilities. Students assessed as having developmental problems are provided with a curriculum or an Individualized Educational Program (IEP) to assist them. The concept of the IEP is a written plan/program developed by the school’s special education team with input from the parents and specifies the student’s academic goals and the method to achieve these goals. The goal of the IEP is to bring the parent and educators together to assist the student with disabilities in their educational process.

As Kim and Aquino (2017) explained, IEPs do not follow the student with a disability to college/university unless the student or the high school guidance counselor, at the request of the student’s parent, requires that the information be forwarded to the college/university. When students attend college with a known disability, they are responsible for informing disability support services of their disability and for seeking instructional support assistance.

If students with disabilities fail to identify themselves, they do not receive any instructional support (Kim & Aquino, 2017).

There have been improvements in the laws and student support services in higher education to support college students with disabilities. Still, with these improvements, the increasing percentage of students with disabilities entering college poses challenges for institutions of higher education that are just now appropriately adjusting to this significant student population. Colleges and universities have been working on innovative methods for instructors to teach students with disabilities. College and university instructors must be equipped to facilitate learning for students with disabilities in order to increase students' success rate in persistence and degree completion. Because they have an extremely high likelihood of teaching students with disabilities, faculty should be trained in understanding the needs of and teaching students with disabilities before engaging in pedagogy within the classroom. College students with disabilities have particular instructional support needs to help them adapt to the academic and social cultures on the college campus.

Legal Requirements

The Americans with Disabilities Act (ADA) of 1990 outlines requirements for public and private colleges and universities receiving aid in support of students with disabilities. The ADA of 1990 is a comprehensive piece of civil rights legislation that prohibits discrimination and guarantees that people with disabilities have the same opportunities as everyone else to participate in the mainstream of American life (U.S. Department of Labor, 2020). The ADA of 1990 applies to higher education and guarantees that institutions cannot deny any person with a disability participation in or the benefits of services, programs, or activities.

Higher education institutions must make reasonable accommodations to provide assistance to students with disabilities. The ADA of 1990 provides general guidelines regarding the requirements that institutions of higher education must meet when educating students equitably, but the Higher Education Opportunity Act of 2008 more specifically requires colleges and universities to support students with learning disabilities. The disability support resources colleges provide, though, differ from institution to institution (Pierce, 2014). Colleges and universities provide accommodations in accordance with federal laws; however, there are no set standards for them to follow. The ADA provides uniquely for students with disabilities by giving equal opportunities for those with disabilities in higher education. In accordance with Section 1983 of the Civil Rights Act and Section 504 of the ADA, higher education institutions are required to make accommodations for students with disabilities and maintain privacy regarding this disclosure of their disabilities. These accommodations must assist the student with the disability in attending classes and with educational support. Students must first identify themselves as having a disability, the student support services must offer the required learning support, and the student support services must contact the faculty member about the student's needs.

Problem Statement

Colleges and universities have made changes in their educational programs to support the needs of students with disabilities by providing additional time for testing and changing the course curriculum. Higher educational institutions have adapted to the changes in educating students with disabilities by maintaining a model that focuses on "impairment, activity limitations, and participation restrictions" (Kim & Aquino, 2017, p. xi). This model has been modified to incorporate additional resources allocated mental health (Iarovici, 2014, p. 5).

Federal laws do mandate colleges and universities to provide accommodations to students with disabilities (Oliver, 1999, p. 20). However, faculty are not required by federal law to be certified to teach students with disabilities at the college/university level. Approximately one third of students with disabilities graduate from 4-year colleges and universities within 8 years and the graduation rate of students with disabilities is 41%, according to federal data (Mader & Butrymowicz, 2017, p. 1). This is a low percentage compared to that for students with non-disabilities attending 4-year colleges and universities having a graduation rate of 60% within 8 years (Sedmak, 2019, p. 1).

Historically, colleges and universities have resisted—or asked for exemptions from—accommodating students who are already welcome in public school systems (Thelin, 2017, p. 391). However, to comply with federal laws, institutions of higher education have developed departments to assist students with disabilities. College leaders make the campus accessible to traditional students with physical disabilities (e.g., those who use wheelchairs or are hearing impaired). While colleges and universities have made some adaptations for students with physical disabilities, they have been slow to adopt and implement policies that make education truly accessible for students with cognitive and psychological disabilities. Methods that have been implemented in K–12 education have the potential to improve access for all students to higher education, but they have not been uniformly implemented. Special education with an emphasis on *mainstreaming* is an example where policies were pioneered in elementary and high schools and were slow to percolate to colleges and universities (Thelin, 2017, p. 91). Mainstreaming is one method educators at the K–12 level have used to educate students with disabilities. The method consists of providing in-class support to the student with the disability while keeping the student with his/her peers.

Unlike K–12 using the concept of mainstreaming programs for students with disabilities, most colleges and universities provide the platform of *universal design* in higher education classrooms to assist students with disabilities. However, faculty do not always understand the student's disability sufficiently to support them. Universal design is a platform that consists of the modification of the syllabus and implementation of classroom instruction by faculty to teach students with disabilities. Universal design incorporates the physical environment of the classroom and learning communication to make education accessible to all college students, regardless of age or disability (Park et al., 2017, p. 124).

Successful implementation of universal learning design is essential to meeting the criteria set forth in the Equal Protection Clause of the 14th Amendment of the U.S. Constitution. The 14th Amendment Equal Protection Clause prohibits states from denying any person within their jurisdiction the equal protection of the law. People with disabilities must be treated the same as other people in similar conditions and circumstances. The 14th Amendment due process clause set forth the provision of prohibiting states from depriving citizens of life, liberty, or property by arbitrary or fundamentally unfair means. The section of the 14th Amendment that applies to students with disabilities outlines the required entitlements and accommodations, which makes the educational process equal for all. Relying on the same principles but geared more specifically towards the rights of college students, the Rehabilitation Act of 1973, Section 504, protects students with disabilities attending colleges and universities so that they receive equal educational opportunities. This Act states that programs and activities that receive federal financial assistance from the U.S. Department of Education, including public school districts, institutions of higher education, and other state and local education agencies have responsibilities

to all students, including students with disabilities, and must support the needs of their students (U.S. Department of Education, 2020).

During the college and university admissions and enrollment process, students are not required to disclose their disability status; however, if these students later seek assistance for their disabilities, they must have documented proof of their disability in compliance with the law. Research has shown that people with disabilities struggle with choosing the appropriate time to disclose their disability because of the fear of being ostracized by others; however, nondisclosure comes at a cost for the higher education system (Kim & Aquino, 2017, p. 8). When students with disabilities do not disclose their disability, their rates of graduation drop (Hudson, 2013). As the graduation rates of students with disabilities drop, institutional funding for accommodations decreases. Students with disabilities should not feel that their peers or college faculty members are ostracizing them because they need assistance. Researchers have identified the complications faced by students with disabilities, as well as challenges faculty face related to policies and practices regarding educating students with disabilities in institutions of higher education. The issues faced by faculty relate to institutional policies and the practices of disabilities support services in support of faculty in teaching student with disabilities.

Purpose of the Study

The purpose of this study was to identify faculty's preparedness to teach students with disabilities at the undergraduate level. Specifically, this study examined the availability and use of professional development to prepare faculty to teach students with learning disabilities and the factors that affect faculty members' level of comfort.

There are no mandatory requirements or prerequisites for college faculty to teach students with disabilities at the college level. While colleges and universities are required to provide

services for students with disabilities, there are no set standards across the higher education system that that each college or university uses to provide instructional support for faculty.

The Rehabilitation Act of 1973 and the ADA of 1990 mandate that U.S. colleges and universities provide services for students with disabilities. Some colleges and universities offer support for students with disabilities to achieve success while these students seek 2-year or 4-year degrees. Despite the federal policies that mandate the provision of services for students with disabilities, institutions of higher education vary in the resources and support services they provide for students with disabilities. These variations of support provided to students with disabilities could have implications for learning experiences and, ultimately, for their success in higher education.

This study investigated the correlation between the experience and training faculty receive to teach students with disabilities and faculty's comfort level in teaching students with disabilities. Understanding individual students with disabilities may assist in providing the appropriate accommodations for the student. Some laws protect students with disabilities; Section 504 protects individuals with disabilities from disclosing their disabilities and discrimination (U.S. Department of Education, 2020). Eligibility for a 504 plan does not define specific medical conditions, allowing the decision to be determined on an individual basis by the school regarding the eligible conditions of physical and mental impairments (U.S. Department of Education, 2020).

Many researchers such as Kim and Aquino (2017), Aksamit et al. (1987), and Bettencourt et al. (2018) have studied support requirements and faculty's behavior when teaching students with disabilities in higher education. This study investigated how faculty negotiate the instructional process of teaching students with disabilities.

For this case study, the researcher selected one higher education institution in New Jersey that has adopted a curriculum to assist faculty in educating students with disabilities. This higher education institution has a department of disability services that assists students with disabilities. This institution is a 4-year private university in northern New Jersey. This 4-year private university has made their academic environment more accessible to students with an array of disabilities (Sehwani, 2018). If a student does not provide the appropriate documentation, the student risks not receiving assistance prior to entering the college classroom for instruction. The department of disability services at this institution also provides instructional support to faculty to understand and teach students with disabilities.

Significance of the Study

Colleges and universities are dealing with an increase in the number of students with different types of disabilities who require instructional support. The increased need to support students with disabilities impacts the instructional support needed and provided at 2- and 4-year colleges and universities. Colleges and universities are responsible for training faculty to educate students with disabilities, and these institutions must bear the additional monetary cost associated with additional accommodations. Despite these needs, faculty have insufficient knowledge of the type of disabilities when students with disabilities do not self-identify their disabilities before the start of the semester or school year. These instructors also lack prior training about accommodations they may make to maximize the chances for success of students with disabilities.

This study examined the expectations and requirements of faculty to teach students with disabilities. It explored faculty members' perceived levels of preparedness and the extent to which they can draw on institutional resources to provide instructional support for students with

disabilities. This is important because of the need to support students with disabilities in their quest to seek higher education. Support outside the classroom to for students with disabilities in conjunction with academic in-class support can boost chances of student success.

This study is significant in a number of ways. First, it describes the professional development institutions offered to faculty in preparation for teaching students with disabilities. Second, it promotes understanding of the experience and knowledge faculty members possess prior to teaching students with disabilities. Third, it examines faculty members' knowledge, attitudinal favorability, demographics, comfort, and institutional support to find if there is a correlation between these constructs. The breakdown in communication between faculty and student support services in the accommodations needed to support students with disabilities can have a detrimental effect on the students' success in higher education; understanding the relationship among all of these variables can help faculty and institutions provide equal and accessible education to students with disabilities and ultimately aid in these students' success. Last, this study describes how professional development for faculty is the cornerstone for higher education institutions that have been mandated to provide educational accommodations for students with disabilities.

Research Questions

The research questions focus on instructional support provided to faculty who teach students with disabilities at one private 4-year higher educational institution in northern New Jersey:

1. How do faculty assess the professional development support offered by their university for teaching students with disabilities?
2. How knowledgeable do faculty feel they are about teaching students with disabilities?

3. How do faculty perceive the potential for success of students with learning disabilities?
4. What is the relationship between institutional professional development support and faculty's reported comfort level in teaching students with disabilities?
5. How is the relationship between institutional support and comfort affected by prior knowledge, attitudinal favorability, and demographic factors?

Summary

Colleges and universities are required by law to provide accommodations for students with disabilities. These accommodations go beyond the physical structure of the higher education institutions. Each higher education institution establishes its own set of requirements for faculty. Faculty are required to provide educational accommodations for students with disabilities. However, faculty's levels of experience and their knowledge in educating students with disabilities vary.

By examining faculty's experience and knowledge in teaching students with disabilities, this study provided additional information to administrators and educators in higher education.

CHAPTER 2

REVIEW OF LITERATURE

The researcher investigated previous studies and the internet (ERIC, Google Scholar) to formulate the literature search for this study. In this study, the literature is grouped into the following sections. Historical Context Overview explains the history of and adjustments to legislation regarding students with disabilities' equal access to educational resources. Literature about Case Law explains the legal requirements and precedents for providing students with disabilities with the appropriate resources in their education. Students With Disabilities' Perceptions of Colleges and Their Education outlines the difficulties that students with disabilities encounter while attending higher education institutions. Faculty Understanding of Learning Disabilities explores the how faculty perceive and approach students with disabilities in their classrooms. Faculty Training Programs outlines resources provided by higher educational institutions and professional development in support of faculty members' work with students with disabilities. Higher Education for Students With Disabilities in New Jersey explores the challenges students with disabilities face in pursuing higher education in New Jersey, specifically. In exploring Existing Instructional Design Strategies, the best practices in making educational resources accessible to all students become evident. College Website Accessibility underscores the commitment of the institution to communicating with both faculty and students in a transparent manner regarding policies and procedures associated with the education of students with disabilities. Distance Learning and Online Learning presents associated challenges and opportunities that these types of learning present to students with disabilities and the faculty who teach them.

People with disabilities have a difficult time disclosing their disabilities to others, including their employers and those in the educational system (Kim & Aquino, 2017). Many researchers believe that people with disabilities have a hard time disclosing their disabilities due to a lack of social acceptance. As Kim and Aquino (2017) and Olney and Brockelman (2005) indicated in their studies, individuals with disabilities may choose not to self-disclose out of fear of avoidance and about social acceptance. Students with disabilities who attend post-secondary institutions and do not disclose their disabilities are at a higher risk of dropping out (Kim & Aquino, 2017, p. 5). Failing courses and having to repeat these courses increases the cost of their tuition. In accordance with Section 1983 and Section 504 of the Rehabilitation Act of 1973, students with disabilities are required to disclose their disabilities before receiving assistance from colleges and universities. The information that the student provides to the college or university is kept confidential among the student, disabilities support services, and the instructor of the student's course. The requirements to disclose the student's disability are currently inconsistent and lack standardization across higher education. There are no laws mandating standard requirements for colleges and universities to follow when teaching or providing services to students with disabilities.

Each college/university has the option to provide or deny educational support assistance based on the information they receive from the student requesting educational support for their disability if student does not have the correct documentation for their disability. Disability-related knowledge is essential for student support and is the responsibility of the student support (disabilities) services to ensure equal access to the curriculum (Kim & Aquino, 2017, p. 110).

Some colleges and universities accept government federal grants to develop programs to make higher education accessible for students with disabilities; however, they fail to provide the

necessary accommodations for these students. Often new college students with disabilities are unsure how to navigate a complicated bureaucracy in order to receive the institutional support they once received in high school (Grasgreen, 2014, p. 1). Students with disabilities should feel they will receive the support they need to excel in their studies. They should be treated no differently than students without disabilities while attending any college or university, even though they need additional assistance. Some students with disabilities have a difficult time adjusting to college classrooms after having had an IEP to provide instructional support during their elementary and high school education. Transitioning the IEP into a planning process for students with disabilities from high school to a college format is difficult for students to navigate (LD Resources Foundation, Inc., 2020). IDEA forces high school instructors to develop a transition plan for students, including a statement on postsecondary education. With the permission of the student with disabilities attending any institution of higher education, their IEP should be forwarded to student support services to ensure that there are appropriate course modifications for the student.

Historical Context Overview

The ADA, signed into law in 1990, is a part of civil rights legislation that prohibits discrimination and guarantees that people with disabilities have the same opportunities as everyone else to participate in mainstream American life, enjoying employment and educational opportunities (U.S. Department of Labor, 2020). When violations of either Section 504 or the ADA are claimed, plaintiffs first must show that they have a disability, as defined under federal statute, and that they are qualified to receive educational assistance (Thomas, 2000, p. 248). Title II the Department of Justice's regulation implementing Title II, Subtitle A, of the ADA prohibits discrimination based on disability in all services, programs, and activities provided to the public

by state and local governments, except for public transportation services. Title III of the ADA guarantees people with disabilities the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations of any public place. IDEA (previously known as the Education for All Handicapped Children Act, 1975) focuses on the “least restrictive environment” and enabled children with disabilities to participate in regular education classrooms (Horne, 1985). This law also provides college students with disabilities with assistance while learning. Table 1 shows the applicability of selected federal laws related to disability.

Table 1

Applicability of Selected Federal Laws Related to Disability

Federal law	Compliance by public recipient required	Compliance by public non-recipient required	Compliance by private recipient required	Compliance by private non-recipient required
14th Amendment equal protection clause	Yes	Yes	No	No
14th Amendment due process clause	Yes	Yes	No	No
Section 1983	Yes	Yes	No	No
Section 504	Yes	No	Yes	No
ADA Title II	Yes	Yes	No	No
ADA Title III	No	No	Yes	Yes

Note. ADA = Americans with Disabilities Act of 1990; Recipient = Financial assistance specific to support disability services. Reprinted from “College Students and Disability Law,” by S. B. Thomas, 2000, *The Journal of Special Education*, 33, p. 249.

Table 1 lists the requirements that public and private college institutions that receive federal funding must meet with respect to the assistance they provide to students with disabilities. The columns indicate the requirements of public and private colleges and universities receiving federal aid to support disability services.

Case Law

College students with disabilities must receive reasonable accommodations, which include modification of educational requirements and course examinations (Bowman et al., 2002). Although colleges and universities must assist students with disabilities, the assistance provided must not change course requirements. In the case of *Southeastern Community College v. Davis*, Davis, who is deaf, applied to nursing schools and needed assistance. She wanted accommodations related to her disability; however, the court ruled that the accommodations would require modification to the course and the nursing program. The college may deny students with disabilities admission when substantial modifications or fundamental alterations to the program are required (Bowman et al., 2002). In the same court ruling, the court also stated that institutions of higher education may not deny admission to a student with a disability on the basis that some modifications or accommodations are necessary to permit that student to participate in the course (Bowman et al., 2002). In this case, the court denied Davis's complaint because it deemed that the modifications would have changed the course structure. The modification that Davis required was assistance with the clinical portion of the class because of the inability to perform the required task due to her limited hearing.

Classroom accommodations for students with disabilities are an important part of the educational process and necessary for any student with a disability to have a successful education. Typically, students do not receive the same level of support at the college level as

they did in high school; as a result, they are often not adequately prepared to make the transition (Kochhar-Bryant et al., 2009, p. 59). If colleges and universities do not have the required support services, including appropriate instructional design for students with disabilities, it will complicate their educational process, and these students are more likely to fail or leave their institution.

Students With Disabilities' Perceptions of Colleges and Their Education

Students with disabilities can be embarrassed if their learning disabilities are exposed to other students while they are being supported by secondary educational programs that assisted them before attending college. To make matters worse, some of these students do not want to bring attention to themselves by asking for assistance because of their disabilities. This pattern continues in higher education, as thousands of college students with disabilities keep their learning disabilities a secret because they do not want to bring attention to themselves because of their disability (Krupnick, 2015, p. 1). Students with disabilities are considered to be a vulnerable population because of the impact of intrinsic and extrinsic stressors on their impairment. These students experience functional limitations because of their disability that could hinder the timely attainment of developmental milestones critical to adulthood (Kranke et al., 2013, p. 35).

Lightner et al. (2012) noted that students may not seek services from disability services because of their feelings of shame and the fear expressed by faculty members and fellow students (p. 151). When some students with disabilities discuss their condition with a professor and the professor does not know how to provide support, the student may feel shame or embarrassment. For example, as Grasgreen (2014) reported, a student with a disability said: ““I literally had a professor say, “Well, I’ve never had a student of that kind before, so I don’t know

what to do”” (p. 1). With the increasing number of students with psychological disorders attending school, faculty are often unfamiliar with how to support those students.

When students identify themselves as having a psychological disorder to their professors, some professors may avoid interacting with them. Stein (2014) surveyed college students with psychological disorders, and some expressed that some of their professors displayed adverse reactions and avoidance:

Another negative thing is if I were to walk up to a professor and try to get their attention, and they say “go sit down,” and don’t even give me a chance. Also, a lot of professors don’t get there on time, and that’s not good either. (p. 57)

This type of behavior by faculty creates a block for the students with disabilities, and students do not want or are unable to build a relationship with the professor.

Faculty Understanding of Learning Disabilities

Aksamit et al. (1987) outlined the differences among faculty members in attitudes towards and knowledge of teaching students with disabilities. Aksamit et al. investigated faculty members’ experience with teaching students with disabilities and the opinions that the faculty members had while assisting students with disabilities. These differences consist of faculty’s attitudes and experience in teaching students with disabilities in understanding the accommodations. Faculty members who had experience in teaching students with disabilities were less likely to develop a bad attitude towards the students with disabilities (Aksamit et al., 1987, p. 57). Faculty members who had no experience in teaching students with disabilities were more likely to have negative attitudes towards students with disabilities (Aksamit et al., 1987, p. 58). Faculty members may shy away from working with students with learning disabilities because they feel inadequate to teach these students based on their level of experience (Becker et

al., 2002). Other studies have suggested that the lack of training in disabilities and stereotypical viewpoints result in faculty members' misperception that students cannot master coursework (Beilke & Yssel, 1999, p. 2). Faculty members often lack knowledge of students with disabilities and the problems that these students face (Sniatecki et al., 2015, p. 260).

Colleges and universities need to provide instructional support to faculty in order for students with disabilities to succeed. Faculty members see the need to receive instructional support to assist and teach students with disabilities. However, legal issues, disability-related accommodations, difficulties communicating with students who have disabilities, and a lack of resources have made training complicated (Burgstahler, 2005).

Colleges, universities, and some faculty members understand the importance of assisting students with disabilities; however, students with disabilities may feel that faculty are not interested in helping them (Barnard-Brak et al., 2010, p. 425). In most cases, it is not that the faculty member is not involved in assisting students with disabilities; it is more often the case that that faculty do not know how to approach or understand the students' disability requirements (Bettencourt et al., 2018, p. 20). Studies have shown that faculty attitudes and behaviors contribute to the perceptions of both inadequate support and stigma (Bettencourt et al., 2018, p. 3). Some faculty members are given a set of instructions by student support services, advising them about the student with a disability. Some faculty have never been adequately trained in teaching students with disabilities or have not been exposed to students with disabilities, making them unaware of how to develop curriculum to teach students with disabilities (Gilson & Dymond, 2011). Bettencourt et al. (2018) conducted interviews with college faculty; one of the instructors stated, "I want to help, but they don't give you more information. It's just . . . send the exam here" (p. 14).

In addition to the possible disconnect between college/university student support services and faculty in providing support for students with disabilities, there are growing concerns with faculty not receiving training in understanding the instructional support needs in the classroom for students with disabilities (Bettencourt et al., 2018, p. 14). Faculty attitudes demonstrate widespread problematic beliefs and limited knowledge; the lack of effectiveness of training in educating students with disabilities is also an issue (Izzo et al., 2008, p. 61). Before some college faculty entered the classroom, they received limited training, if any, about how to teach students with disabilities. Additionally, some faculty members have low expectations for students with disabilities in their classrooms. In the 1980s and 1990s, research investigations regarding faculty attitudes and perceptions suggested that faculty may have lower academic expectations for students with disabilities than for those without (Houck et al., 1992).

The lack of training has an impact on faculty and students with disabilities; faculty members struggle to develop support strategies based on variation in learning environments (Gladhart, 2010). According to Sniatecki et al. (2015), one factor that may contribute to a challenging climate is faculty members' lack of knowledge and awareness about issues related to students with disabilities (Sniatecki et al., 2015). The concerns with faculty understanding students with cognitive and psychological disabilities are that cognitive and psychological disabilities are unseen (Sniatecki et al., 2015). Some faculty members understand the physical disabilities of their students; however, they have difficulty understanding the cognitive and psychological disabilities affecting students. Because the disability is not visually or outwardly seen, faculty members may be especially ill-prepared to make decisions about how to effectively implement accommodations in their classrooms for students with psychological disabilities (Sniatecki et al., 2015).

The attitudes that faculty members have about students with disabilities are based on their concerns about not being trained to teach that population. The lack of experience of faculty teaching students with disabilities is often the reason that faculty members avoid students with disabilities.

Other studies have investigated faculty perceptions of teaching students with disabilities and the training needed to understand the needs of students with disabilities. Some faculty have a mix of positive and negative attitudes towards educating students with disabilities because of their experience in teaching students with disabilities (Scott & Gregg, 2000). Although some faculty lack knowledge regarding policies and procedures related to students with disabilities, faculty members have strong beliefs that they are sensitive to the needs of students with disabilities, and they believe that they know where to find support on campus when working with students with disabilities (Sniatecki et al., 2015).

Faculty members do not face these challenges before the graduate phase of their higher education: “In higher education, support for students with disabilities did not come up until one was a lead instructor, often late in a graduate program if at all” (Bettencourt et al., 2018, p. 14). Training potential college faculty members in their graduate programs or professional development programs to teach students with disabilities will enhance their ability to understand the needs of students with disabilities before entering the classroom. Some college faculty members want additional training to understand and support students with disabilities in their classrooms. A study by Sniatecki et al. (2015) bears this out. Sniatecki et al. conducted research on faculty’s attitudes and knowledge concerning students with disabilities. This research included a survey given to full-time and part-time faculty from a public liberal arts university in upstate New York (p. 261). The instrument used for the research was developed by the

University of Oregon in 2009 (Sniatecki et al., 2015, p. 261). The researchers found that “Faculty also expressed a strong interest in professional development opportunities related to working with students with disabilities” (Sniatecki et al., 2015, p. 265).

Faculty Training Programs

Some institutions present non-mandatory programs for faculty members to help them understand the challenges college students with disabilities face. These programs provide insight for faculty and staff to help them support the needs of students with disabilities. Evidence-based faculty development programs exist; however, they remain the exception rather than the rule for faculty members who need to provide accommodations for students with disabilities (Kim & Aquino, 2017, p. 111). Some student support service centers do not support faculty because there are no institution and/or legal requirements for student support services to support faculty. The only requirement after students with disabilities identify their disability is that the college provide classroom support. This requirement is met through the student support services provided by the college/university the student attends. In the study by Bettencourt et al. (2018), it was evident that faculty were not provided with ample training to support students with disabilities:

Participants voiced that they were not trained to support students with disabilities at any point during their academic training. The lone exceptions were those faculty coming from an elementary and secondary teaching background, in which facilitating individualized education plans (IEP) provided exposure to several key ideas. (p. 14)

Salzberg et al. (2002) outlined the complications between student support services and faculty regarding training for teaching and understanding students with disabilities. Salzberg et

al. surveyed college directors of student support services and professors to gain an understanding of their level of expertise and training to teach students with disabilities. In their study, Salzberg et al. asked 10 questions about faculty member training regarding teaching students with disabilities and faculty concerns on how to approach students with disabilities. The researchers found that the majority of Disability Service Officers (DSOs) at colleges and universities throughout the United States were not satisfied with instructors'/professors' attempts at accommodating students with disabilities. Salzberg et al. also indicated that DSOs have difficulties with faculty members attending training classes to educate them on how to teach students with disabilities. Student support services must train faculty so that they understand students with disabilities and can teach without affecting the course material or the educational process for students with disabilities. Training of faculty in teaching students with disabilities is one part of the process of understanding the accommodations of the students' needs.

According to Gladhart (2010), few faculty members had been trained in how to accommodate students with disabilities. Faculty members often fear addressing or supporting students with disabilities because of the disconnection between student support services and faculty. This internal problem with student support services and faculty can be fixed to ensure that colleges and universities meet the needs of students with disabilities. Debrand and Salzberg (2005) conducted a study regarding the time requirements to train college professors to teach students with disabilities. Debrand and Salzberg found that 40% of respondents indicated that a 1-hour workshop is practical, and 45% stated a workshop between 1 and 2 hours is practical. Workshop lengths over 2 hours were thought to be practical by only 3% of the respondents (Debrand & Salzberg, 2005, p. 49).

At the elementary and secondary levels of education, teachers are required to be educated in specialized training to instruct students with disabilities before entering the classroom. The general requirements are federally mandated, as explained by the United States Department of Justice Civil Rights Division (2020):

IDEA requires public school systems to develop appropriate Individualized Education Programs (IEPs) for each child. The specific special education and related services outlined in each IEP reflect the individualized needs of each student. IDEA also mandates that particular procedures be followed in the development of the IEP. Each student's IEP must be developed by a team of knowledgeable persons and must be at least reviewed annually. The team includes the child's teacher; the parents, subject to certain limited exceptions; the child, if determined appropriate; an agency representative who is qualified to provide or supervise the provision of special education; and other individuals at the parents' or agency's discretion. (as cited in LD Resources Foundation, Inc., 2020)

Faculty members in higher education do not have the requirements that are associated with K–12 programs. The mandatory training programs for K–12 teachers vary between school districts.

In court decisions during the 1980s and 1990s, it was found that the standards for postsecondary institutions were not mandated through the Rehabilitation Act of 1973 or the ADA of 1990, which has made it difficult to enforce training for faculty (Brinkerhoff et al., 2002). Student support services thus fill the gap, assisting students with disabilities and informing faculty that they have a student with a disability in their classroom. As noted by Salzberg et al. (2002), faculty members indicated student support services do not always help faculty understand students with disabilities.

There is a separation between student support services, faculty members, and students with disabilities, creating a unidirectional process of faculty members receiving information with minimal follow-up. The disabilities service office has an administrative function rather than serving as a space to dialogue about how to best help students or to navigate the challenges of providing certain accommodations (Bettencourt et al., 2018).

Studies have been conducted concerning student support services and the type of services they provide to students with disabilities. The lack of consensus among postsecondary institutions of what should be considered a standard base service, as well as their inability to offer individualized accommodation plans, impacts the decisions students with disabilities make that affect their postsecondary education (Tagayuna et al., 2005). Bringing students with disabilities, student support services, and faculty together would provide a better service for the students and help faculty understand the needs of the students.

With better coordination, faculty development focusing on the needs of students with disabilities would improve the support for this student population. Researchers have suggested that faculty members who teach future teachers in the subspecialty of special education, in particular, can play a valuable role in offering their institutions guidance in the development and implementation of programs for students with learning disabilities, facilitating career planning for this student population, and overseeing modification of instructional programs for students with disabilities (Scott, 1991, p. 1). College/university student support services play a significant role for faculty and students with disabilities in higher education. Services that student support services provide are vital for faculty to understand as they seek to provide the support students with disabilities need.

Student support services make it possible for students with disabilities to enter the postsecondary setting physically, but only faculty can provide access to knowledge and ways of knowing (Walker, 1980). Faculty development geared towards educating faculty about the needs of students with disabilities—and how they can make appropriate accommodations for these students—will improve the success rate of students with disabilities attending college. It is essential for all teachers and professors entering the classroom to help students learn and develop, regardless of student disability status. Helping students optimize learning through a wealth of activities and resources is one of the most important responsibilities faculty members have in the educational process (Chickering, 1994, p. 52).

At colleges and universities, professors expect students to be capable of understanding and completing assignments with minimal assistance. Professors focus their instruction on traditional college students and their research, leaving little or no time to support the needs of students with disabilities. At 2-year colleges, faculty members have even less time to prepare for classes for many reasons:

Community colleges rely on part-time, “contingent” instructors to teach 58 percent of their courses, according to a new report from the Center for Community College Student Engagement. Part-time faculty teach more than half (53 percent) of students at two-year institutions. (Fain, 2014)

As of 2017, of the 1.5 million faculty in degree-granting postsecondary institutions, 53% were full time and 47% were part time (NCES, 2019b). Faculty include professors, associate professors, assistant professors, instructors, lecturers, assisting professors, adjunct professors, and interim professors.

There are no formal training requirements for faculty teaching students with disabilities in higher education. For years, college faculty relied on institutional resources (i.e., an institutional office for disability services) to provide additional support for students with disabilities (Kim & Aquino, 2017, p. 108). With the increased enrollment of students with disabilities, colleges and universities need to train their instructors to teach this population. Faculty receive minimal to no training before teaching college students. Institutions of higher education should accept ownership in training faculty to teach students with disabilities at a higher educational level, so that the institutions will provide services appropriate to students who have succeeded in the federally-mandated K–12 programs. The Demonstration Projects to Ensure Students with Disabilities Receive A Quality Education Act (CFDA No 84.333 funded by Title VII, Part D, of the Higher Education Amendments of 1988) was developed and implemented for the professional development of and technical assistance for faculty and administrators in higher education, in order to support needs of students with disabilities (Shaw & Scott, 2003, p. 7). The project was to train instructors to be able to assist students with disabilities, including educating them about and explaining compliance requirements for accommodations for students with disabilities. College faculty professional development is a cornerstone of producing the best-qualified instructors at the higher educational level.

Higher Education for Students With Disabilities in New Jersey

The New Jersey Commission on Higher Education conducted surveys on disabilities programs at higher education institutions located in the State of New Jersey. The Commission on Higher Education administers a 1.1 million dollar grant known as the Special Needs Grant Program. For fiscal year 2009, the grant provided funding to support eight regional centers offering direct services for students at their institutions and technical assistance and outreach to

other colleges and universities in the state (New Jersey Commission on Higher Education, 2010, p. 1). These eight regional centers are spearheaded by the College of New Jersey and provide assistance technology, support, and training for college/university faculty throughout the State of New Jersey to help them understand and teach students with disabilities. These centers specialize in a variety of methods of instructional support for college faculty and students with disabilities. Through 2008, the New Jersey Commission on Higher Education conducted a campus program survey for students with disabilities that encapsulated educational support and training for faculty and students with disabilities at all postsecondary institutions in the State of New Jersey.

Although there are no federal or state preparedness requirements for faculty in higher education to teach students with disabilities, it is imperative that faculty understand the educational requirements to support classroom instruction for students with disabilities. During the years of its administration (biennially until 2008), the New Jersey Commission on Higher Education's survey indicated several points of interest in educating faculty and students with disabilities. The responses from the survey participants (colleges and universities from New Jersey) about the regional centers were predominately positive. The survey was conducted with community colleges, state colleges and universities, public research universities, and independent institutions within the State of New Jersey. Not including the institutions housing the regional centers, almost 83% of the institutions (29 out of 35) had some awareness of one or more of the regional centers. Also, over 71% reported having been assisted in some way by a regional center, and almost 63% had attended a workshop presented by a regional center. On a 5-point scale, where 1 = poor and 5 = excellent, the overall average rating for each center ranged between 3.9 and 4.5. Not including those regional housing centers, all institutions (31) that responded to the question about diagnostic assessments were familiar with services for students

with learning disabilities. Of these institutions, almost 84% had referred students for testing. For institutions that provided a rating for the diagnostic service, almost 76% were highly or very satisfied (New Jersey Commission on Higher Education, 2010).

From 2006 to 2008, the following two issues increased in prevalence and not only ranked the highest as areas of concern but also were cited as concerns by a significantly larger percentage of institutions: unqualified students increased from 36% to 56%, and psychiatric issues increased from 38% to 53%, as cited by the respondents (New Jersey Commission on Higher Education, 2010, p. 3). Unqualified students are students with disabilities who with assistance are still unable to handle college/university-level courses (New Jersey Commission on Higher Education, 2010, p. 3). When students with disabilities do not self-identify as having a disability, they face problems academically. There is no additional information related to the Fall 2009 Survey because this program was developed with a grant, and the grant has not been funded since the fiscal year 2008. However, the trends that were shown in the years during which the survey was conducted point out areas that require further research and practical changes in higher education in New Jersey.

Although there are professional development programs in higher education, faculty currently must take responsibility for keeping pace with the trends of teaching college students with disabilities. Colleges should mandate training or professional development programs for faculty members in order to support the needs of students with disabilities.

Faculty play a pivotal role in ensuring equal educational access for students with disabilities within higher education and in ensuring the success of students with disabilities who use postsecondary disability services (Shaw & Scott, 2003, p. 5). Faculty development initiatives

play a valuable role; faculty support and training must keep pace with the dynamic and evolving context of higher education (Hill, 1996, p. 23).

Existing Instructional Design Strategies

Methods of design are the concepts/programs that are used to assist faculty in teaching students with disabilities. Faculty attitudes towards and perceptions of college students with disabilities can have an adverse effect on classroom learning. Although faculty members want to support students with disabilities in their classrooms, they do not always know how to teach students with special needs (Carney et al., 2007). Many different instructional methods are used at colleges and universities to provide support for students with disabilities. However, the most commonly used program by colleges and universities to train their faculty is universal design.

Universal design is the design and composition of an environment so that it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability, or disability (National Disability Authority, 2020). There are no special requirements for the benefit of a minority of the population. A fundamental condition of good design is that if an environment is accessible, usable, convenient, and a pleasure to use, everyone benefits.

By considering diverse needs and abilities through the design process, universal design creates products, services, and environments that meet people's needs (National Disability Authority, 2020). Universal design's primary focus is on seven principles, which can be incorporated in teaching. These principles are:

1. Equitable use—provides the same or equivalent use for all users.
2. Flexibility—accommodates a wide range of preferences and abilities.

3. Simple and intuitive—easy to understand, regardless of the user’s experience, knowledge, language skills, or concentration level.
4. Perceptible information—communicates necessary information effectively to the user, regardless of ambient conditions or user’s sensory abilities.
5. Tolerance—minimizes hazards and negative consequences of accidental or unintended actions.
6. Low physical capabilities—minimizes fatigue, size, and space.
7. Appropriate size and space provided for approach, reach, and use, regardless of user’s body size, posture, or mobility. (National Disability Authority, 2020)

Some colleges and universities have adopted the use of universal design to help them instruct students with disabilities. Universal design is not an educational fix for all disabilities that faculty encounter; however, its principles help faculty to understand the types of teaching methods needed to support students with disabilities. There is no easy answer and no one-size-fits-all solution, but effective strategies can be applied to support students in their learning performance (Izzo et al., 2008).

The components of universal design applied to higher education represent a cohesive approach to promoting inclusion, on an ongoing basis, in curriculum development, instruction, and assessment to meet the learning needs of a greater number of students without compromising academic rigor (Izzo et al., 2008). The framework of universal design was developed to emphasize the design of products and environments to be usable by as many people as possible to empower the process of learning. According to Bettencourt et al. (2018), universal design is beneficial for faculty and students with disabilities. Universal Design for Learning (UDL) outlines specific strategies, such as extra time for exams, posting notes for classes, and

rearranging course content so that certain content could be completed as homework rather than as a test (Bettencourt et al., 2018). UDL's key focus in the education of students with disabilities is to eliminate unnecessary complexity. Eliminating unnecessary complexity makes learning easier.

College Website Accessibility

Colleges and universities are using websites to communicate and advertise their colleges. These websites also provide vital information about the colleges and the services they provide to students. Gabel et al. (2015) conducted a study on the California Higher Educational System concerning the use of the websites by colleges to advertise their disability support services. College/university advertisements that show diversity did not apply to students with disabilities. California State University (CSU) websites did not advertise welcoming students with disabilities on their home page to recruit them (Gabel et al., 2015). Gabel et al. outlined some difficulties in the operation of websites by students with disabilities. Gabel et al. had a difficult time navigating the websites to find student support services to assist students with disabilities. CSU websites had no disability content within four clicks or fewer (Gabel et al., 2015).

The study by Gabel et al. (2015) pointed to a larger problem: colleges provide inconsistent and inaccessible information regarding their disability support services to their students and faculty, and they do not explain how they follow the standard federal guidance in the provision of providing disability support services. In short, for Gabel et al., and for members of the general public searching on college websites nationwide, it is often difficult to find the disability support services section for each school on each website.

In the case of the study by Gabel et al., the fact that this information was not easily accessible to students also indicated that it was not easily accessible to faculty, showing that the

schools in the CSU system did not provide adequate training and support to faculty who taught students in need of disability support services.

Distance Learning and Online Learning

Distance learning is a method of studying in which lectures are broadcast or classes are conducted by correspondence or over the Internet, without the student needing to physically attend a school or college. Federal law requires accessibility for students with disabilities taking online courses. Section 508 establishes requirements for electronic and information technology to be accessible for people with disabilities, including employees and members of the public (LD Resources Foundation, Inc., 2020). An accessible information technology system is one that can be operated in a variety of ways and does not rely on a single sense or ability of the user. For example, a system that provides output only in visual format may not be accessible to people with visual impairments, and a system that provides output only in audio format may not be accessible to people who are deaf or hard of hearing. Some individuals with disabilities may need accessibility-related software or peripheral devices to use systems that comply with Section 508.

This snapshot reveals the complications faced by students who are searching for disability support services. Professors who teach online courses (via eLearning higher education sites) express difficulties with the instruction of students with disabilities enrolled in their classes (Kim & Aquino, 2017). The high number of reported incidents requesting accommodation indicates that a substantial need exists for instructors to be aware of and able to provide accessible materials and instruction (Kim & Aquino, 2017, p. 157). There is a disconnect between the number of online instructors who have students with documented disabilities and the instructors' training in strategies to improve the accessibility of the course material (Gladhart,

2010, p. 189). eLearning higher education sites may be difficult to use for students with disabilities and for professors teaching online courses.

There are many different eLearning modules that colleges and universities are using as an instructional tool for online courses; however, some professors are unaware that they have a student with disabilities enrolled in their online courses. Gladhart (2010) studied eLearning platforms and found that 51% of faculty reported that their institution had notified them at least once that a student needed accommodations, while 37% reported that a student had contacted them (Gladhart, 2010, p. 188).

One system that colleges and universities use for distance learning/eLearning is Canvas LMS. Canvas LMS is an eLearning program that is accessible for students with disabilities. Canvas LMS has enhanced the capabilities of screen magnifiers, speech to text, and braille (Pendergast, 2015). This program allows faculty using eLearning courses to educate and support students with disabilities if used correctly.

Summary

The increase in the number of students with disabilities entering colleges and universities has placed additional demands on faculty. Faculty should understand students with disabilities and the challenges that they face because of their disabilities. Faculty should be receptive to the emotional needs of students with disabilities in order to build better relationships with them. Building a relationship with students with disabilities has the potential to increase the success rate in those students seeking 2- and 4-year college degrees. There is a significant gap between student support services and faculty regarding the communication of the needs of students with disabilities. The directors of student support services need to provide information related to

students with disabilities to the instructor/professor so that the instructor/professor can assess those students and support their accommodations.

CHAPTER 3

METHODOLOGY

The researcher used surveys to capture information related to the research questions. The research questions provided the focal point for gathering information from the survey, which was distributed to faculty from one higher educational institution to understand the experience of faculty teaching college students with disabilities. The survey questionnaire was distributed to all instructional faculty who teach lower-division courses in their field, maximizing the probability that they have been exposed to students with disabilities. The open-ended response sections allowed faculty members to describe the characteristics and disabilities of the students enrolled in their courses and the challenges these have posed to them. This chapter provides a description of the study sample, the instrument the researcher used to collect data, and the procedures for data analysis.

Research Questions

The five research questions focus on instructional support provided to faculty who teach students with disabilities.

1. How do faculty assess the professional development support offered by their university for teaching students with disabilities?
2. How knowledgeable do faculty feel they are about teaching students with disabilities?
3. How do faculty perceive the potential for success of students with learning disabilities?
4. What is the relationship between institutional professional development support and faculty's reported comfort level in teaching students with disabilities?
5. How is the relationship between institutional support and comfort affected by prior knowledge, attitudinal favorability, and demographic factors?

Rationale for Survey

Prior research related to this topic used surveys to capture faculty's experience in teaching students with disabilities (Becker & Palladino, 2016; Bettencourt, 2018; Sniatecki et al., 2015). Sniatecki et al. (2015) used surveys as their instrument based on questions that were developed by a higher educational institution to evaluate their faculty in teaching students with disabilities. The researcher for this study utilized a survey as the instrument to capture faculty's responses in a timely manner and to compare to previous research studies on this topic.

Description of Instruments

The instrument that was used to collect data was a survey created based on prior survey studies that relate to this topic (Becker & Palladino, 2016; Bettencourt, 2018; Sniatecki, 2015). Survey questions encompassed prior survey questions and original questions developed by the researcher. Questions for this survey offered five response options on a Likert scale: strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. The survey also included open-ended questions for faculty to answer. The survey for faculty members was composed of a 24-item questionnaire concerning their interaction with students with disabilities. The questionnaire gathered data on the following constructs: (a) Institutional Support, (b) Knowledge, (c) Attitudinal Favorability, (d) Demographics, and (e) Comfort. The survey was emailed to 520 faculty members that taught low division undergraduate courses in a variety of disciplines. The 73 faculty members that participated in the survey answered most of the 24 questions. Some faculty members did not answer the question related to faculty attending workshops to teach students with disabilities because they did not attend any workshops. This question was handled as a default question because if a faculty member did not attend a

workshop their answer was counted as a no response, and they were not able to answer the next questions which asked how many workshops they attended.

Individual (Faculty) Analysis

For this study, the faculty survey questions were developed from the research questions and the inquiries of several previous research studies related to faculty professional development classes on inclusive instruction and the laws on disabilities services. A study conducted by Sniatecki et al. (2015) of faculty at a mid-size public liberal arts university in upstate New York developed a survey for faculty to examine faculty's attitudes towards teaching students with disabilities. Another study conducted by Becker and Palladino (2016) linked specific academic disciplines and types of disabilities that faculty members encountered during their teaching experience. Each of these studies developed survey questions for faculty that concentrated on faculty's behaviors in teaching students with disabilities and the understanding of the legal obligations of faculty members. The Sniatecki et al. study reported that faculty had a lack of knowledge on policies and procedures with students with disabilities. This study also focused on faculty's attitudes in teaching students with disabilities (Sniatecki et al., 2015). Research conducted Bettencourt et al. (2018) focused on faculty's awareness of the needs of students with disabilities. Faculty indicated that they are limited in their abilities to assist students with disabilities because of the limitations of the formal system of accommodations at their institutions (Bettencourt et al., 2018).

The researcher selected some of the survey questions from the previous studies of Becker and Palladino (2016), Bettencourt et al. (2018), and Sniatecki et al. (2015) based on the research questions for this study. The Sniatecki et al. study focused on faculty's knowledge regarding students this disabilities. This study analyzed faculty's knowledge related to laws in the

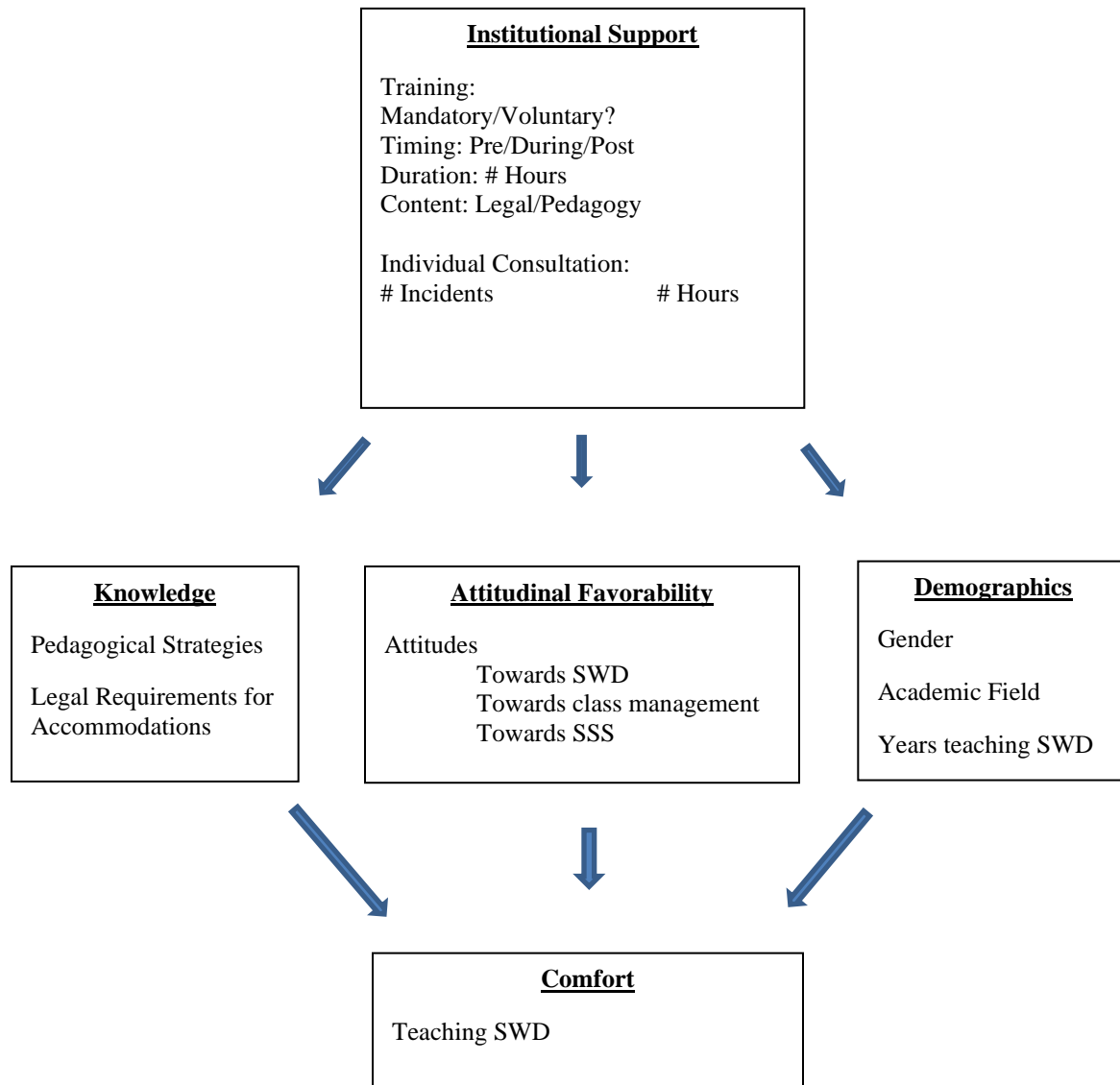
accommodations for students with disabilities. The Bettencourt et al. study investigated the obstacles effecting postsecondary learning with students with disabilities. The Becker and Palladino study assessed faculty's perspectives in teaching students with disabilities. Survey questions was selected from each of these studies because of the prior investigation into this topic. The researcher also developed additional survey questions to enhance the survey questionnaire and make it specific to the issues being explored among faculty in this study.

Listed with the survey questions are the initials of the researcher who developed these questions for previous studies (Sandra Becker – SB, Genia Bettencourt – GB, Jessica Sniatecki – JS).

Figure 1 is a diagram of the five constructs related to the 24 survey questions for this study.

Figure 1

Diagram of Constructs Related to the Survey



Survey Items

Institutional Support Construct Items

1. My university adequately prepares faculty members to provide educational assistance for students with disabilities. (SB)

2. My university offers workshops to faculty members regarding instructional support for students with disabilities. (SB)
3. The workshops provided by my university offer effective instructional practices to use in the classroom with students with disabilities. (JS)
4. Student Support Services at my university advise faculty about the needs of students with disabilities. (JS)

Knowledge Construct Items

1. I have the knowledge and resources to teach students with disabilities. (SB)
2. I understand the legal requirements to make accommodations for students with disabilities. (SB)
3. Students with disabilities are reluctant to disclose their disability to me. (JS)
4. I oftentimes seek additional guidance on methods to assist students with disabilities. (DP)

Comfort Construct Items

1. I have positive experiences working with students with disabilities. (GB)
2. I feel that I am prepared to teach students with disabilities. (SB)
3. I have developed techniques that have a positive impact on teaching students with disabilities. (SB)

Attitudinal Favorability Construct Items

1. I believe that students with disabilities can be successful at the college level. (JS)
2. I believe that students with disabilities are able to compete academically at the college level. (JS)
3. I believe that I am sensitive to the needs and accommodations for students with disabilities who disclose their disabilities to me. (JS)

Demographics Construct Items

1. What is your gender? (Circle one) Male or Female, I prefer not to answer (DP)
2. What is your ethnicity? (Circle one) (DP)
3. White or Caucasian; Black or African American; American Indian or Alaska Native;
Asian; Native Hawaiian or Pacific Islander; Other
4. What is your employment status? (Circle one) Full-Time or Part-time (DP)
5. What is your area of academic concentration/field of study? (DP)
Formal Sciences; Humanities; Natural Sciences; Professions and Applied Sciences;
Social Sciences; Other

Triangulation and Additional Questions—Fill-in-the-Blank Items

1. When was the first time (semester and year), you received an official notification concerning a student with a disability assigned to your classroom? (DP)
2. Have you attended any workshops about teaching students with disabilities? (DP) (**Circle one**) Yes or No

If you answered Yes to question 2 please answer the following questions. If you answered No please skip the following questions.

3. In what semester and year did you first receive the workshop training? (DP)
4. How many workshops have you attended? (DP) (Circle one)
1 – 2
3 – 4
5 – 6
7 – or more

5. In the past two years, how many total hours in workshop training you received about teaching students with disabilities? (DP) (Circle one)
- 1 – 2
- 3 – 4
- 5 – 6
- 7 – or more
6. Did you receive any individualized consultation with professional staff at your current or previous institution to teach students with disabilities? (DP) (Circle one) Yes or No

Reasoning Behind Survey Instrument Items

There are similarities to the survey questions that I developed and the survey questions listed above from prior research which are indicated by the initials (DP). The similarities of the survey questions focused on instructors'/professors' perceived experience, education, and knowledge teaching students with disabilities. The main difference between the prior survey study questions listed above and the survey questions that I developed for my study is that the preceding survey questions concentrated on assisting students with disabilities with accommodations (Classroom focus), while my survey questions concentrated on faculty's comfort level (Faculty focus).

The previous studies focused on the three different dimensions of faculty's experience teaching students with disabilities, including the knowledge and education each participant has in teaching students with disabilities, faculty's perceived knowledge about teaching students with disabilities, and the legal aspects of educating students with disabilities.

Previous studies conducted pre- and post-surveys before and after the faculty members attended professional development classes on teaching students with disabilities. Each of the

studies provided descriptive results outlining the three listed topics: experience, knowledge, and legal requirements (accommodations). The relevance and reliability of the instrument used to collect the data contained some limitations. One study indicated that newly worded items should be validated with a larger sample (Becker & Palladino, 2016). The survey instrument for both studies limited the participants' responses to their experiences and classroom practices. The survey instrument used by Sniatecki et al. (2015) was developed by the University of Oregon. In this study, the items were modified to reflect the characteristics of the institution surveyed. The overall outcomes of both studies' recommendations were that professional development is a viable choice for faculty members to gain knowledge in teaching students with disabilities. However, the researchers indicated that additional research should be conducted because of the limitations of their studies.

Data Collection

Seton Hall University required any researcher or doctoral student who is conducting a study to complete an Institutional Review Board (IRB) packet and receive approval before conducting any research/study. I completed the IRB packet for Seton Hall University and sent the packets to my mentor for review before submitting the IRB packets to the Seton Hall University's IRB. I received IRB approval to conduct this study. I used Qualtrics to conduct the survey. No third party was used to collect any data, and I collected the data from the surveys and gathered all information from participants during this research project.

Research Site

A private 4-year university located in northern New Jersey was selected for this study. The university is known to be a major Catholic university. According to its mission statement, "In a diverse and collaborative environment it focuses on academic and ethical development,"

and its “students are prepared to be leaders in their professional and community lives in a global society and are challenged by outstanding faculty, an evolving technologically advanced setting and values-centered curricula” (Board of Regents, 1996). It offers degrees in a variety of concentrations. This university offers baccalaureate degrees; master’s degrees; and research and professional doctorate degrees, including PhD and EdD programs for educational advancement. This university also has law and medical schools located in northern New Jersey. The undergraduate enrollment is approximately 5,915 students, and graduate enrollment is approximately 3,901 students. The ratio of students to faculty is 13:1. This 4-year private university has been ranked within the top 150 Best Colleges and National Universities and has a very highly ranked health care law program (US News, 2021). The university offers workshop training to faculty to support them in their teaching of students with disabilities. The private 4-year university has approximately 1,065 full-time and part-time faculty. The faculty members selected for the research investigation were faculty members who teach lower-division undergraduate students. The survey questionnaires were emailed to faculty members who teach introductory-level classes at the participating university. From this higher educational institution’s website, the researcher developed email directories of the faculty.

Sample/Participants

The researcher obtained a list of faculty who teach introductory-level courses from the university’s director of disability support services and the registrar’s office. With the assistance of school registrar and the directors of student support services, the researcher confirmed the email directory lists of faculty who taught introductory-level/lower-division courses before distributing the surveys to faculty.

At the 4-year university, the introductory-level/lower-division courses are listed as 1000- and 2000-level courses. The researcher focused on those listed introductory-level courses that were offered in the fall of 2020. Introductory-level courses that are taught by the same faculty member were only used once for this study. The researcher emailed the current lists to the aforementioned listed individuals to confirm the listings of faculty members of each institution. No teacher assistants were surveyed in this study. No faculty members affiliated with this institutions who were teaching abroad were included in this study. Also, no faculty members who were teaching on other campuses outside the primary campus were included in this study. Faculty members who teach on multiple campuses that include the “primary campus” and who teach introductory-level/lower-division courses were included only if they teach the introductory course at the primary campus. Adjunct faculty were included in the study. The survey questionnaire is geared towards instructors’/professors’ perceptions of their experience with and understanding of educating students with disabilities. No student information was collected or used during the administration of this survey questionnaire; personal information was not included in this study. No personal student information of any kind was used during this study. The primary focus of this study was to concentrate on faculty teaching students with disabilities.

Data were analyzed in aggregate, and no name was attached to the data in any way, ensuring the participation of each faculty member remained anonymous. No personal student information of any kind was used during this study. No incentives or stipends were promised or granted to any faculty for participation in this study.

To determine the sample size for this study, the researcher used the G*Power formula as indicated below:

To determine the sample size necessary for the study G*Power was used given a level of significance = 0.05, moderate effect size $f^2 = 0.15$, power of .90, and four predictors in a regression model.

t tests - Linear multiple regression: Fixed model, single regression coefficient

Analysis: A priori: Compute required sample size

Input: Tail(s) = Two

Effect size f^2 = 0.15

α err prob = 0.05

Power ($1-\beta$ err prob) = .90

Number of predictors = 4

Output: Noncentrality parameter δ = 3.3090784

Critical t = 1.9954689

Df = 68

Total sample size = 73

Actual power = 0.9035470

The power analysis determined that a sample size of 73 respondents would be sufficient to determine a significant result in the multiple linear regression.

The data collected were related to the instructional support that is provided to the faculty to teach students with disabilities. Faculty from this 4-year private university who teach lower-division courses in their field were selected to participate in this study because of the probability of them having greater exposure to teaching students with disabilities. The faculty members at this higher educational institution who teach introductory-level courses in a variety of disciplines were emailed a 24-item questionnaire that sought a response from a selection of 5 categories that

best related to their experience of teaching students with disabilities and one category of triangulation questions. This questionnaire was answered on a voluntary basis by faculty who wanted to participate in this study. Questionnaire surveys were emailed to all 520 faculty who taught lower division undergraduate courses at the university being studied. The return of all survey response occurred during a 6-week period starting January 11, 2021, and ending the week of February 15, 2021. During this period, five follow-up reminders were emailed to faculty requesting them to voluntarily participate in the survey. To reach the sample requirement, the survey was open until 73 participants completed the survey. Raw data were downloaded from Qualtrics, which was the website on which the survey was housed and administered, and transferred over to SPSS for the data analysis. The remaining 447 faculty members were given the opportunity to participate in this study; however, there is no information as to why the 447 faculty members did not participate in this study.

The sample was coded with an identification number to each survey that was emailed to each faculty member using their university email address, as listed in the university email directory. The results from each survey remained confidential with the researcher. The identification number was linked to the survey with an encrypted electronic file and stored on a secured computer with a fire-wall protected server. To ensure that the survey responses are kept confidential, the researcher was the only person to have access to the computer and password for the surveys that was a direct link to the survey responses. The responses will remain in a secured location until 5 years after the study has been completed, and then the responses will be destroyed.

Descriptive statistic and inferential analysis of the survey was conducted and presented as frequencies and means. Table 2 shows faculty's response rate to the survey. Seventy-three participants responded to the survey yielding a 14% response rate.

Table 2

Faculty Response Rate

Number of Potential Participants	Number of Responses	Response Rate
520	73	14%

Demographics

The next discussion is the demographic breakdown of the final sample of 73 full-time and part-time faculty respondents who teach lower division courses at the site institution. Participants were asked a total of 10 demographic questions.

Table 3 shows the demographic information of the participants, which includes gender, ethnicity, current employment status, area of academic concentration/field of study, and details regarding workshops attended. For gender, of the 73 faculty that participated in this study, 46.6% were male ($n = 34$) and 53.4% were female ($n = 39$). For ethnicity, the majority of the 73 faculty that participated in this study were White/Caucasian (58; 79.5%). Other participants were Asian (5; 6.8%) and Hispanic or Latino (4; 5.5%). For current employment status, more than half of the 73 faculty that participated in this study worked full-time (44; 60.3%) as a faculty. There were 28 (38.4%) faculty participants that worked part-time. For area of academic concentration/field of study, more than half (45; 61.6%) of the 73 faculty that participated in this study were in the soft academic field which include humanities and social sciences. There were 28 (38.4%) faculty participants in the hard academic fields which include formal sciences, natural sciences, professions, and applied sciences.

Almost half (32; 43.8%) of the 73 faculty that participated in this study responded that the first time (semester and year) they received an official notification concerning a student with a disability assigned to their classroom was 2015 to 2019. Only 39.7% (n = 29) of the 73 faculty that participated in this study received any individual consultation with professional staff at their current or previous institution to teach students with disabilities. Only 38.4% (n = 28) of the 73 faculty that participated in this study have attended any workshops about teaching students with disabilities. The highest percentage of responses regarding the semester and year did the respondents first receive the workshop training was years 2015–2019; this group comprised of 13.7% (n = 10) of the population. It should be noted that more than half (46; 63%) of the 73 faculty that participated in this study did not provide any response to this question.

In terms of the number of workshops attended, the highest percentage of responses among the 73 faculty that participated in this study was 1 to 2 times only (15; 20.5%). Also, it should be noted that more than half (45; 61.6%) of the 73 faculty that participated in this study did not provide any response to this question. Lastly, highest percentage of responses regarding the number of total hours in workshop training the faculty members received about teaching students with disabilities in the past 2 years was also 1 to 2 times only (21; 28.8%). It should be noted that more than half (46; 63%) of the 73 faculty that participated in this study did not provide any response to this question.

Table 3***Summary of Demographic Characteristics of Respondents (n = 73)***

Demographic Characteristic	n	%
Gender		
Male	34	46.6
Female	39	53.4
Ethnicity		
White or Caucasian	58	79.5
Black or African American	5	6.8
Asian	3	4.1
Hispanic or Latino	4	5.5
Other	2	2.7
Missing	1	1.4
Current Employment status		
Full-Time	44	60.3
Part-Time	28	38.4
Missing	1	1.4
Area of academic concentration/field of study		
Soft Academic Field (Humanities, Social Sciences, and Other)	45	61.6
Hard Academic Field (Formal Sciences, Natural Sciences, and Professions and Applied Sciences)	28	38.4
When was the first time (semester and year) you received an official notification concerning a student with a disability assigned to your classroom?		
1990–1994	3	4.1
1995–1999	3	4.1
2000–2004	4	5.5
2005–2009	6	8.2
2010–2014	11	15.1
2015–2019	32	43.8
Missing	14	19.2

Demographic Characteristic	n	%
Did you receive any individual consultation with professional staff at your current or previous institution to teach students with disabilities?		
Yes	29	39.7
No	44	60.3
Have you attended any workshops about teaching students with disabilities?		
Yes	28	38.4
No	45	61.6
In what semester and year did you first receive the workshop training?		
1990–1994	3	4.1
1995–1999	2	2.7
2000–2004	3	4.1
2005–2009	4	5.5
2010–2014	1	1.4
2015–2019	10	13.7
Cannot Remember	4	5.5
Did Not Answer	46	63.0
How many workshops about teaching students with disabilities have you attended?		
1–2	15	20.5
3–4	6	8.2
5–6	4	5.5
7 or more	3	4.1
Missing	45	61.6
In the past two years, how many total hours in workshop training have you received about teaching students with disabilities?		
1–2	21	28.8
3–4	3	4.1
7 or more	3	4.1
Missing	46	63.0

Data Analysis

A Qualtrics survey questionnaire was used to collect faculty responses related to the 18 questions concerning faculty training, faculty attitudes, faculty experience, faculty interaction with students with disabilities, and faculty comfort level in teaching students with disabilities.

The 18 questions used for this study were closed-ended questions requiring respondents to check the box corresponding to the response that best answers the question according to their belief or the answer that best describes their perceived experience with educating students with disabilities, and six fill-in the blank questions. After the data were collected, the researcher created an additional variable to separate the faculty who have training and experience teaching students with disabilities and faculty with no training or experience teaching students with disabilities. All respondents answered all of the questions in the survey. Therefore, there were no missing data.

The data were coded by the constructs, then transferred from Qualtrics to SPSS for the data analysis phase. During the coding process, like responses were placed together to keep data consistency. The following subsections summarize the data analysis that was processed in four broad phases to address the five research questions.

Phase 1: Laying the Groundwork for Inferential Analysis

Based on the findings of previous research studies, this study was designed around four constructs that are either explicitly identified or inferred in the literature. The constructs identified in the literature are institutional professional development support, faculty perceived knowledge and preparedness, and faculty attitudinal favorability. In addition to these three constructs, the researcher postulated a fourth construct, faculty comfort, which is the primary outcome of interest for this study.

Answering Research Questions 4 and 5 required preliminarily that the researcher test the empirical validity of the four constructs in the current setting with the current population. Validating the constructs allowed the researcher to create “new” composite variables that were entered into the inferential analysis.

In order to test the empirical validity of the constructs, the researcher examined the intercorrelation between the items that the researcher postulated “hang together” as constructs. The researcher computed Cronbach’s alpha for that set of items. If Cronbach’s alpha was $> .6$, the researcher treated the items as valid constructs and add to the data file new variables for the “validated” constructs. The data were collected from the surveys and placed into SPSS to calculate the reliability coefficients. If items in the construct did not show consistency above 0.6 scale, each item was be treated individually and the data were explained according to the faculty’s responses.

Phase 2: Descriptive Only Analysis Addresses Research Questions 1–3

1. How do faculty assess the professional development support offered by their university for teaching students with disabilities?
2. How knowledgeable do faculty feel they are about teaching students with disabilities?
3. How do faculty perceive the potential for success of students with learning disabilities?

Respondent ratings of the four items related to perceived institutional support will be reported in terms of percentage distribution across the 5-point Likert scale categories, from percent strongly agree to percent strongly disagree. The distribution of respondent ratings on the four knowledge items were reported in terms of percentage distribution across the 5-point Likert scale categories, from percent strongly agree to percent strongly disagree.

The distribution of respondent ratings on the three attitudinal favorability items was reported in terms of percentage distribution across the 5-point Likert scale categories, from percent strongly agree to percent strongly disagree. The distribution of respondent ratings on the three comfort items was reported in terms of percentage distribution across 5-point Likert scale categories, from percent strongly agree to percent strongly disagree.

To answer these questions, the distribution of the respondent ratings on the collection of statements about the three constructs, perceived institutional support, knowledge, and attitudinal favorability, was constructed using frequency tables. If there were composite variable (scores) for any of the three constructs determined in Phase 1, the mean, median and standard deviation was calculated and reported to describe the average ratings for the three constructs. There were differences in the distributions of ratings of the three constructs by the demographic variables. To investigate these differences in distribution, contingency tables of the statements for the constructs by each of the demographic variables was constructed and the Chi Square Test was conducted to determine the significant difference in the ratings on the three constructs given the demographic variables.

Phase 3: Inferential Analysis for Research Questions 4 and 5

4. What is the relationship between institutional professional development support and faculty's reported comfort level in teaching students with disabilities?
5. How is the relationship between institutional support and comfort affected by prior knowledge, attitudinal favorability, and demographic factors?

To answer Research Questions 4 and 5, the research also used multiple linear regression to analyze the three independent variables (constructs: Institutional Support, Knowledge, and Attitudinal Favorability). Multiple linear regression is a type of regression that uses several

explanatory variables to predict the outcome of a response variable. The goal of multiple linear regression is to model the linear relationship between the explanatory (independent) variables and response (dependent) variable for predicting multiple variables, i.e., a variable whose value exists on an arbitrary scale where only the relative ordering between different values is significant. Multiple linear regression is one method used to analyze the data from a 5-point Likert scale. After the data were collected, the researcher used SPSS to calculate the results.

Demographics were used as a category of variables to include experience, gender, and academic field, that may affect the dependent variable (Comfort). Gender, teaching experience, and academic discipline were anticipated to be factors that may impact the response of the participants. The regression equation then predicted probability of the dependent variables that will affect the construct Comfort. Pearson correlation analysis and multiple linear regression analysis were conducted to address the research questions of the study. These two statistical analyses are parametric tests that require the normality assumption conducting the test. Normality was tested using the Shapiro-Wilk test. The results of the Shapiro-Wilk tests were recorded for each study variable.

The academic field was consolidated into two fields (hard science/soft science). The researcher determined these two categories based on comparing scientific fields, perceived methodological rigor, and objectivity.

Phase 4: Triangulation

The design introduced an element of triangulation by seeking to cross-validate the findings for perceived institutional support with independent empirical indicators of support received from faculty members' responses from the survey in accordance with the four constructs. The triangulation questions were compared separately to the faculty's responses to

each completed survey. The dichotomous variables tested for the triangulation were individual training, experience, and knowledge. Each of the responses was validated by the faculty who participated in the survey by comparing their previous responses from the survey, which added validity to this study. This was incorporated using multiple linear regression to find the effects of each triangulation item against institutional support, knowledge, and attitudinal favorability with comfort as the outcome variable.

Study Limitations

This study was limited to one 4-year private university setting during a specific period of time to capture current information on faculty's responses to teaching students with disabilities. The study was intentionally limited to one 4-year private university with an emphasis on instructors'/professors' teaching experiences with students with disabilities. The reviewed design process established only relationships among variables of the knowledge of faculty in teaching students with disabilities in accessing their level of experience and the instruction they received to teach students with disabilities. Since this was a case study that used a survey to collect data, the external validity, in terms of generalizing to other colleges and universities, should be carefully considered.

Summary

This chapter summarized the procedures used in the collection and processing of the raw data for this study. To analyze the raw data collected, the researcher used a four-phase process of (a) laying the groundwork for inferential analysis; (b) descriptive only analysis; (c) inferential analysis, and (d) triangulation. The instruments used to interpret the results were Cronbach's alpha, multiple linear regression, Pearson correlation, and Shapiro-Wilk test. SPSS was used to calculate the raw data. The results will be explained in Chapter 4 of this dissertation.

CHAPTER 4

REPORT OF DATA AND ANALYSIS OF DATA

The purpose of this study was to identify factors influencing instructional support for college faculty in teaching students with disabilities. One higher educational institution in northern New Jersey was selected to examine their support in educating faculty to teach students with disabilities. Chapter 4 focuses on the three phases of this study. These include: (a) results of descriptive statistics analysis addressing Research Questions 1 to 3, (b) normality testing, and (c) results of inferential analysis using multiple linear regression analysis for Research Questions 4 and 5.

Research Questions

In line with this, the following research questions and hypotheses guided the analysis for this quantitative study:

1. How do faculty assess the professional development support offered by their university for teaching students with disabilities?
2. How knowledgeable do faculty feel they are about teaching students with disabilities?
3. How do faculty perceive the potential for success of students with learning disabilities?
4. What is the relationship between institutional professional development support and faculty's reported comfort level in teaching students with disabilities?
5. How is the relationship between institutional support and comfort affected by prior knowledge, attitudinal favorability, and demographic factors?

Presentation of Findings

Results of Descriptive Statistics Analysis of Study Variables (Research Questions 1–3)

In this section, descriptive statistics are presented for the independent variables of institutional support, knowledge, attitudinal favorability, and the dependent/outcome variable of comfort. There are a total of 14 questions using a 5-point scale to measure all the study variables. The Likert scale responses ranged from 1–5, strongly agree to strongly disagree. A copy of the survey questions is presented in Appendix A. The specific descriptive statistics used to summarize the data of the study variables are central tendency measures of mean and standard deviation and also frequency and percentage summaries. Table 4 presents the descriptive statistics summaries of the study variables.

Table 4

Descriptive Statistics Summaries of Study Variables

Study Variables	N	Minimum	Maximum	<i>M</i>	<i>SD</i>
Scale for Institutional Support	73	1	5	2.66	1.01
Scale for Knowledge	73	1	3.75	2.42	0.56
Scale for Attitudinal Favorability	73	1	4.67	1.26	0.52
Scale for Comfort	73	1	5	1.90	0.83

Independent Variables

Institutional Support (RQ1). This portion discusses the results to address Research Question 1. There were 4 questions on institutional support construct. Table 5 presents the distribution of responses of the participants on institutional support. Almost half of the 73 faculty either somewhat or fully agreed their university adequately prepares faculty members to provide educational assistance for students with disabilities. Almost half or 26 of the 73 faculty either strongly or somewhat agreed their university offers workshops to faculty members regarding

instructional support for student with disabilities. Almost half or 41.1% of the 73 faculty neither agreed nor disagreed that the workshops provided by their university offer effective instructional practices to use in the classroom with students with disabilities. Based on the responses of the participants in this study, it appears that faculty received their training to teach students with disabilities prior to their employment with this higher educational institution. For the final question of this construct, the majority (71.2% or 52) faculty members either somewhat or fully agreed student support services at their university advise faculty about the needs of students with disabilities. Looking at Table 3, the mean score for institutional support was 2.66 ($SD = 1.01$) which indicated that the 73 faculty have above average levels of institutional support with regard to the professional development support offered by their university for teaching students with disabilities. Cronbach's Alpha was 0.84, which indicated that the four measures of institutional support have more than acceptable internal consistency reliability (> 0.6).

Table 5***Frequency and Percentage Distribution of Responses on Institutional Support Items***

Question	Strongly Agree % (n)	Somewhat Agree % (n)	Neither Agree nor Disagree % (n)	Somewhat Disagree % (n)	Strongly Disagree % (n)
My university adequately prepares faculty members to provide educational assistance for students with disabilities.	20.5 (15)	26.0 (19)	15.1 (11)	21.9 (16)	16.4 (12)
My university offers workshops to faculty members regarding instructional support for students with disabilities.	15.1 (11)	28.8 (21)	20.5 (15)	26 (19)	9.6 (7)
The workshops provided by my university offer effective instructional practices to use in the classroom with students with disabilities.	16.4 (12)	19.2 (14)	41.1 (30)	16.4 (12)	6.8 (5)
Student Support Services at my university advise faculty about the needs of students with disabilities.	34.2 (25)	37.0 (27)	13.7 (10)	11.0 (8)	4.1 (3)

Knowledge (RQ2). This portion discusses the results to address Research Question 2.

There were four questions on knowledge concerning students with disabilities. Table 6 presents the distribution to responses of the participants on knowledge. Over half, 69.9% of the 73 faculty strongly or somewhat agreed they have the knowledge and resources to teach students with disabilities. The majority, 86.9% of the 73 faculty, either strongly or somewhat agreed that they understand the legal requirements to make accommodations for students with disabilities. Almost half or 62.9% of the 73 faculty either neither agreed nor disagreed or somewhat disagreed

students with disabilities are reluctant to disclose their disabilities to them. For the final question of this construct, more than half or 60.2% of the 73 faculty either strongly or somewhat agreed they often seek additional guidance on methods to assist students with disabilities. The mean score for knowledge was 2.42 ($SD = 0.56$), which indicated that the 73 faculty have above average levels of knowledge about teaching students with disabilities. Cronbach's alpha was 0.13 which indicated that the four measures of knowledge have very poor or unacceptable internal consistency reliability (< 0.6). This is considered a limitation of this study.

Table 6

Frequency and Percentage Distribution of Responses on Knowledge Items

Question	Strongly Agree % (n)	Somewhat Agree % (n)	Neither Agree nor Disagree % (n)	Somewhat Disagree % (n)	Strongly Disagree % (n)
I have the knowledge and resources to teach students with disabilities.	27.4 (20)	42.5 (31)	13.7 (10)	15.1 (11)	1.4 (1)
I understand the legal requirements to make accommodations for students with disabilities.	57.5 (42)	27.4 (20)	4.1 (3)	6.8 (5)	4.1 (3)
Students with disabilities are reluctant to disclose their disability to me.	4.1 (3)	21.9 (16)	28.8 (21)	30.1 (22)	15.1 (11)
I oftentimes seek additional guidance on methods to assist students with disabilities.	12.3 (9)	47.9 (35)	24.7 (18)	11.0 (8)	4.1 (3)

Attitudinal Favorability (RQ3). This portion discusses the results that address Research Question 3. There were 3 questions on attitudinal favorability. Table 7 presents the distribution to responses of the participants on attitudinal favorability. Almost all or 96.6% of the 73 faculty either strongly or somewhat agreed that they believe that students with disabilities can be successful at the college level. Almost all or 95.9% of the 73 faculty either strongly or somewhat agreed that they believe that students with disabilities are able to compete academically at the college level. For the final question of this construct, almost all or 97.3% of the 73 faculty either strongly or somewhat agreed that they believe that they are sensitive to the needs and accommodations for students with disabilities who disclose their disabilities to them. Looking at Table 3, the mean score for attitudinal favorability was 1.26 ($SD = 0.52$) which indicated that the 73 faculty have positive levels of attitudinal favorability towards the potential for success of students with learning disabilities. Cronbach's alpha was 0.84 which indicated that the three measures of attitudinal favorability have more than acceptable internal consistency reliability (> 0.6).

Table 7***Frequency and Percentage Distribution of Responses on Attitudinal Favorability Items***

Question	Strongly Agree % (n)	Somewhat Agree % (n)	Neither Agree nor Disagree % (n)	Somewhat Disagree % (n)	Strongly Disagree % (n)
I believe that students with disabilities can be successful at the college level.	82.2 (60)	16.4 (12)	0.0 (0)	0 (0)	1.4 (1)
I believe that students with disabilities are able to compete academically at the college level.	76.7 (56)	19.2 (14)	2.7 (2)	0 (0)	1.4 (1)
I believe that I am sensitive to the needs and accommodations for students with disabilities who disclose their disabilities to me.	78.1 (57)	19.2 (14)	1.4 (1)	1.4 (1)	0 (0)

Outcome Variable

Comfort. There were 3 questions on comfort. Table 8 presents the distribution to responses of the participants on comfort. Almost all or 91.8% of the 73 faculty either strongly or somewhat agreed that they have positive experiences working with students with disabilities. The majority or 68.8% of the 73 faculty either strongly or agreed that they feel that they are prepared to teach students with disabilities. For the final question of this construct, the majority or 68.5% of the 73 faculty either strongly or somewhat agreed that they have developed techniques that have a positive impact on teaching students with disabilities. Looking at Table 3, the mean score for comfort was 1.90 ($SD = 0.83$) which indicated that the 73 faculty have high levels of comfort. Cronbach's alpha was 0.79 which indicated that the three measures of comfort have more than acceptable internal consistency reliability (> 0.6).

Table 8***Frequency and Percentage Distribution of Responses on Comfort Items***

Question	Strongly Agree % (n)	Somewhat Agree % (n)	Neither Agree nor Disagree % (n)	Somewhat Disagree % (n)	Strongly Disagree % (n)
I have positive experiences working with students with disabilities.	63.0 (46)	28.8 (21)	5.5 (4)	1.4 (1)	1.4 (1)
I feel that I am prepared to teach students with disabilities.	34.2 (25)	35.6 (26)	16.4 (12)	11.0 (8)	2.7 (2)
I have developed techniques that have a positive impact on teaching students with disabilities.	35.6 (26)	32.9 (24)	23.3 (17)	4.1 (3)	4.1 (3)

Results of Inferential Analysis (Research Questions 4 and 5)***Normality Testing***

As stated, initially Pearson correlation analysis and multiple linear regression analysis were conducted to address the research questions of the study. These two statistical analyses are parametric tests that require the normality assumption conducting the test. The assumption of normality means that the data of the study variables should exhibit normal distribution. Normality was tested using the Shapiro-Wilk test. The results of the Shapiro-Wilk tests for each study variable are shown in Table 9.

Results of the Shapiro-Wilk test showed that only the data of institutional support ($SW(72) = 0.97, p = 0.05$) exhibited normality or normal distribution. Normal distribution was based on the Shapiro-Wilk statistics having a p -value greater than the level of significance, set at 0.05, which was the case in these results.

On the other hand, the data of knowledge ($SW(72) = 0.95, p = 0.004$), attitudinal favorability ($SW(72) = 0.53, p < 0.001$), and the dependent/outcome variable of comfort ($SW(72)$)

= 0.89, $p < 0.001$) did not follow normality or did not exhibit normal distribution. With this result, it should be noted that the assumption of normality was violated based on the results of the Shapiro-Wilk test by most of the study variables. For the correlation analysis, due to the violation of the normality assumption, the non-parametric version of the correlation analysis, Spearman's Rho, is conducted instead. The non-parametric version of the correlation analysis does not require the data to exhibit normal distribution. On the other hand, there is no alternative non-parametric version of the regression analysis. Given this, the multiple linear regression analysis was still conducted to address the research questions.

Table 9

Results of the Shapiro-Wilk Test of Normality of Study Variables

Study Variable	Shapiro-Wilk		
	Statistic	df	<i>P</i>
Scale for Institutional Support	0.97	73	0.05
Scale for Knowledge	0.95	73	0.004
Scale for Attitudinal Favorability	0.53	73	0.000
Scale for Comfort	0.89	73	0.000

Results of Spearman Correlation Analysis (RQ4). Spearman correlation analysis was conducted to address Research Question 4 which aims to determine whether there is a significant correlation between institutional professional development support and faculty's reported comfort level in teaching students with disabilities. A level of significance of 0.05 was used in the Spearman correlation analysis.

Table 10 summarized the results of the Spearman correlation analysis for Research Question 4. Result of the Spearman correlation analysis showed that institutional support was significantly positively correlated with comfort ($r(71) = 0.44$, $p < 0.01$). There was a significant

correlation as the p -value was less than the level of significance value of 0.05. The positive correlation means that the higher institutional professional development support offered by the college or university for teaching students with disabilities, the higher will be the faculty's reported comfort level in teaching students with disabilities. Also, result of the Spearman correlation analysis showed that both knowledge ($r(71) = 0.46, p < 0.01$) and attitudinal favorability ($r(71) = 0.60, p < 0.01$) were significantly positively correlated with comfort. The positive correlation means that the higher the faculty's knowledge about teaching students with disabilities, the higher will be their reported comfort level in teaching students with disabilities. Also, the more positive the faculty's levels of attitudinal favorability towards the potential for success of students with learning disabilities, the higher will be their reported comfort level in teaching students with disabilities. The strengths of all the significant correlations were moderate.

Table 10

Results of Spearman Correlation Analysis of Correlation Among Institutional Support, Knowledge, Attitudinal Favorability, and Comfort

	Scale for Comfort
Scale for Institutional Support	
Spearman's rho Correlation Coefficient	0.44*
<i>p</i> (2-tailed)	0.000
N	73
Scale for Knowledge	
Spearman's rho Correlation Coefficient	0.46*
<i>p</i> (2-tailed)	0.000
N	73
Scale for Attitudinal Favorability	
Spearman's rho Correlation Coefficient	0.60*
<i>p</i> (2-tailed)	0.000
N	73

*. Correlation is significant at the 0.05 level (2-tailed).

Results of Multiple Linear Regression Analysis (RQ5). A multiple linear regression analysis was conducted to address Research Question 5 to determine how much of the variance in faculty's level of comfort could be explained by the predictor variables of institutional support, knowledge, and attitudinal favorability after controlling the impacts of the demographics of experience, gender, and academic field. The regression was used to determine the relationship between institutional support and comfort affected by prior knowledge, attitudinal favorability controlling for the impacts of demographic factors. A level of significance of 0.05 was used in the multiple linear regression. Table 11 summarized the results of the multiple linear regression analysis for Research Question 5. In terms of model fit, the regression

model created was statistically significant ($F(5, 50) = 12.19, p < 0.001$). This indicated that the regression model with institutional support, knowledge, and attitudinal favorability as predictors of comfort of faculty members after controlling the impacts of the demographics of experience, gender, and academic field was significant. The R^2 value of the regression model was 0.66, which indicated a moderate effect size, meaning that the combined influence of institutional support, knowledge, and attitudinal favorability explained 66% in predicting faculty's comfort after controlling the impacts of the demographics of experience, gender, and academic field. The model summary for this regression analysis showed that the overall model can explain 66% of the variance in the outcome variable of comfort.

Investigation of the individual predictive relationship showed that all three study variables of institutional support ($t(58) = 2.07, p = 0.04$), knowledge ($t(58) = 2.25, p = 0.03$), and attitudinal favorability ($t(58) = 5.82, p < 0.001$) significantly influenced or have a significant predictive relationship with faculty's comfort after controlling for the impacts of the demographics of experience, gender, and academic field. The academic field was recoded into a dichotomous variable based on whether faculty were in a hard academic field (formal sciences, natural sciences, and professions and applied sciences) or soft academic field (humanities, social sciences, and other) for the regression. There were significant relationships since the p -values of the t -statistics were less than the level of significance of 0.05.

Moreover, examination of the unstandardized beta coefficient (β) showed that institutional support ($\beta = 0.20$), knowledge ($\beta = 0.37$), and attitudinal favorability ($\beta = 0.81$) all have significant positive impacts or have positive predictive relationships with faculty's comfort. This means that the higher the institutional professional development support offered by the college or

university for teaching students with disabilities, the higher will be the faculty's reported comfort level in teaching students with disabilities.

The higher the faculty's knowledge about teaching students with disabilities, the higher will be their reported comfort level in teaching students with disabilities. The more positive the faculty's levels of attitudinal favorability towards the potential for success of students with learning disabilities, the higher will be their reported comfort level in teaching students with disabilities. Specifically, when the score of institutional support increases by one unit, the score of faculty's comfort increases by 0.20. Also, when the score of knowledge increases by one unit, the score of faculty's comfort increases by 0.37. Lastly, when the score of attitudinal favorability increases by one unit, the score of faculty's comfort increases by 0.81. Comparison of the beta coefficient (β) showed that attitudinal favorability is the strongest predictor of faculty's comfort. As a summary, the different results of the regression analysis specifically showed institutional support, knowledge, and attitudinal favorability significant relationships with comfort.

Table 11

Results of Multiple Linear Regression of Significance of Predictive Relationships of Institutional Support, Knowledge, and Attitudinal Favorability With Comfort, Controlling for Demographic Factors

Model	Predictor	Unstandardized Coefficients		Standardized Coefficients	T	p
		B	SE	Beta		
1	(Constant)	0.35	0.58		0.59	0.56
	Gender	0.00	0.21	0.00	-0.01	0.99
	Area of academic concentration/field of study	0.30	0.22	0.18	1.37	0.18
	When was the first time (semester and year) you received an official notification concerning a students with a disability assigned to your classroom? (Experience)	0.06	0.07	0.10	0.78	0.44
	Did you received any individual consultation with professional staff at your current or previous institution to teach students with disabilities? (Experience)	0.30	0.24	0.18	1.28	0.21
	Have you attended any workshops about teaching students with disabilities? (Experience)	0.44	0.26	0.26	1.67	0.10
2	(Constant)	-1.26	0.50		-2.52	0.02*
	Gender	0.24	0.15	0.15	1.63	0.11
	Area of academic concentration/field of study	-0.01	0.16	0.00	-0.05	0.96
	When was the first time (semester and year) you received an official notification concerning a students with a disability assigned to your classroom? (Experience)	0.05	0.05	0.08	0.91	0.37
	Did you received any individual consultation with professional staff at your current or previous institution to teach students with disabilities? (Experience)	-0.16	0.18	-0.09	-0.89	0.38

Model	Predictor	Unstandardized Coefficients		Standardized Coefficients	T	p
		B	SE	Beta		
	Have you attended any workshops about teaching students with disabilities? (Experience)	0.22	0.19	0.13	1.16	0.25
	Scale for Institutional Support	0.20	0.10	0.24	2.07	0.04*
	Scale for Knowledge	0.37	0.16	0.24	2.25	0.03*
	Scale for Attitudinal Favorability	0.81	0.14	0.55	5.82	0.00*

Note. $F(8, 50) = 12.19, p < 0.001; R^2 = 0.66, N = 59, \text{Durbin-Watson} = 1.66$

a. Dependent Variable: Scale for Comfort

b. Predictors: (Constant), Have you attended any workshops about teaching students with disabilities?, Area of academic concentration/field of study, Gender, When was the first time (semester and year) you received an official notification concerning a students with a disability assigned to your classroom?, Did you received any individual consultation with professional staff at your current or previous institution to teach students with disabilities?, Scale for Attitudinal Favorability, Scale for Knowledge, Scale for Institutional Support

*Significant at level of significance of 0.05

Summary of Statistical Findings

This chapter presented the statistical findings to answer the five research questions outlined in Chapters 1 and 3. A comprehensive summary of the statistical tests was used as well as an organized presentation of the generated data included for both descriptive and inferential analyses. The purpose of this study was to identify factors influencing instructional support for college faculty teaching students with disabilities. As stated, descriptive statistics analysis, correlation analysis, and multiple linear regression analysis were conducted to address the research questions of this study.

For Research Question 1, results of the descriptive statistics analysis showed that faculty member respondents at the research site have above average levels of institutional support with regard to the professional development support offered by their university for teaching students with disabilities. For Research Question 2, results of the descriptive statistics analysis showed

that faculty members have above average levels of knowledge about teaching students with disabilities. For Research Question 3, results of the descriptive statistics analysis showed that faculty members have positive levels of attitudinal favorability towards the potential for success of students with learning disabilities. For Research Question 4, results of the Spearman correlation analysis showed that institutional professional development support offered by the college or university for teaching students with disabilities was significantly positively correlated with faculty's reported comfort level in teaching students with disabilities. For Research Question 5, results of the multiple linear regression analysis showed that the all the independent variables of institutional support, knowledge about teaching students with disabilities, and attitudinal favorability towards the potential for success of students with learning disabilities have significant positive impacts or have positive predictive relationships with faculty's reported comfort level in teaching students with disabilities after controlling for the impacts of the demographics of experience, gender, and academic field.

Chapter 5, concludes the study. Chapter 5 will explain the interpretation of the findings and discuss how the findings relate to this study. Suggestions on how the findings may be applied in an organizational setting and a summary of recommendations for future research are also discussed in Chapter 5.

CHAPTER 5

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Federal laws mandate that colleges and universities provide accommodations to students with disabilities (Oliver, 1999). However, faculty are not required by federal law to be certified to teach students with disabilities at the college/university level. Research suggests that faculty struggle to meet the needs of students with disabilities (e.g., Becker et al., 2002; Sniatecki et al., 2015). To understand how to address this issue, research is needed to understand faculty's preparedness to teach students with disabilities. Therefore, the purpose of this study was to identify faculty's preparedness to teach students with disabilities at the undergraduate level. Specifically, this study examined the availability and use of professional development to prepare faculty to teach students with learning disabilities and the factors that affect faculty members' level of comfort.

The current study surveyed 73 faculty from a 4-year private university who teach lower-division undergraduate courses in their field. The survey consisted of a instrument designed around four constructs of teaching students with disabilities (i.e., level of institutional support, knowledge, attitudes, and comfort). Data analysis was conducted at the descriptive and inferential level. Findings of the current study suggest that the availability and use of professional development is associated with faculty's level of comfort teaching students with disabilities. The findings of the current study can be utilized to inform policies and practices at higher education institutions to better support students with disabilities.

This chapter will provide a discussion of the results in the context of the current literature, limitations of the current study, as well as recommendations for future research and implications for policy and practice.

Interpretation of the Findings

The findings of the current study are inconsistent with previous literature. Faculty in the current study report that they feel supported by their university in teaching students with disabilities, feel knowledgeable and comfortable teaching student with disabilities, and have favorable attitudes regarding students with disabilities. Previous research suggests that faculty are less skillful in these areas than they reported in the current study (e.g., Aksamit et al., 1987). Most importantly, research examining the perspectives of students with disabilities find that students with disabilities report that faculty lack the knowledge to work with students with disabilities and are unsupportive (e.g., Grasgreen, 2014). This finding adds to the current literature by showcasing the potential disconnect between how well faculty perceive their skills in teaching students with disabilities versus students' perceptions of their interactions with faculty.

The current study also found that faculty perception of institutional support for teaching students with disabilities was associated with their comfort teaching students with disabilities. Therefore, it is possible that institutions could increase faculty comfort teaching students with disabilities if they provide adequate support. The association persists when controlling for faculty's attitude towards students with disabilities, their knowledge of teaching students with disabilities, and demographic factors.

It may be that providing faculty with support to teach students with disabilities is an important factor in improving the post-secondary academic experiences of students with disabilities. The following sections will discuss the findings of the current study in the context of the current literature.

R1: How Do Faculty Assess the Professional Development Support Offered by Their University for Teaching Students With Disabilities?

On average, faculty felt that their university had adequate supports for students with disabilities. A majority of the faculty in the current study (71.2%) felt that the university student support services advised faculty about the needs of students with disabilities. However, less than half of the faculty in the current study reported that their institution prepared faculty to provide educational assistance to students with disabilities (46.5%), offered workshops regarding instructing students with disabilities (43.9%), and provided workshops for effective instructional practices for students with disabilities (35.6%).

This finding is consistent with previous literature that shows that faculty are frustrated by the lack of support they receive from their institution (Bettencourt et al., 2018). Faculty feel as if they are not given the support that they need in order to work effectively with students with disabilities (Bettencourt et al., 2018). Many faculty do not understand best practices for teaching students with disabilities, do not know the requirements for working with students with disabilities, and struggle to interact in respectful ways with students with disabilities (Barnard-Brak et al., 2010; Bettencourt et al., 2018; Stein, 2014). It appears that faculty need more support from students services and their institution in order to effectively work with students with disabilities.

Though faculty reported not feeling supported by the institution in three out of four of the questions in the current study, a majority of faculty reported that they felt student services advised students regarding the needs of students with disabilities. Much of the support offered to students with disabilities in higher education is legally mandated (Thomas, 2000). Student services is the department responsible for offering these legal protections to students with

disabilities (Kim & Aquino, 2017). It is possible that faculty feel supported by the institution when it comes to legal protections or requirement for students with disabilities. Given the institutions' requirements to follow these legal requirements, the institution may broadly advertise the need to follow these regulations and who to ask if the faculty have any questions or concerns regarding these accommodations. Previous research supports this suggestion as researchers have found that the support student services provides to faculty in regards to students with disabilities is largely based around these legal requirements (Salzberg et al., 2002). However, outside of those legal requirements, faculty may feel unsupported. For example, faculty may not know who to contact regarding a question about language use when communicating with students with disabilities but do know who to ask about procedures for providing students with extended exam time. Future research may consider asking faculty about more specific supports they receive from their institution in order to discover areas in which they feel most supported or least supported by the institution.

R2: How Knowledgeable Do Faculty Feel They Are About Teaching Students With Disabilities?

Faculty in the current study felt that they were knowledgeable about teaching students with disabilities. A majority felt that they had the knowledge and resources to teaching students with disabilities (69.9%), understood the legal requirements for teaching students with disabilities (84.9%), and sought additional guidance on methods to assist students with disabilities (60.2%). Faculty also felt that students were comfortable sharing their diagnosis of a disability with them.

The findings of the current study in this area are inconsistent with the previous literature. Previous literature largely finds that faculty are unsure of how to best teach students with

disabilities (Bettencourt et al., 2018). Moreover, students with disabilities report that they do not feel as if faculty have the knowledge or skills to support them academically (Barnard-Brak et al., 2010; Grasgreen, 2014; Stein, 2014). It is possible that the faculty in the current study—or faculty in general—are poor reporters of their own knowledge regarding students with disabilities. They may overestimate their abilities to teach students with disabilities because they may perceive that following the legal requirements is all that is required when teaching students with disabilities. Given the emphasis on the legal requirement institutions have regarding teaching students with disabilities, faculty may perceive following these requirements as effective teaching. However these legal requirements may not be the only types of supports that students with disabilities require; thus, faculty are not as effective in teaching students with disabilities as they believe.

R3: How Do Faculty Perceive the Potential for Success of Students With Learning Disabilities?

Faculty in the current study had strong favorable responses regarding their attitudes towards students with disabilities. Faculty overwhelmingly strongly agreed that students with disabilities could be successful at the college level (82.2%) and are able to compete academically (76.7%). Faculty also reported that they felt they are sensitive to the needs of students with disabilities (78.1%), that they had positive experiences teaching students with disabilities (91.8%), felt prepared to teach students with disabilities (69.8%), and had developed techniques that had a positive impact on teaching students with disabilities (68.5%).

As with the findings regarding faculty's perceptions of their knowledge of working with students with disabilities, the findings regarding faculty's attitude and comfort working with students with disabilities is inconsistent with previous literature. Though faculty may report

positive attitudes towards students with disabilities and comfort interacting with them, students with disabilities do not find that faculty are supportive or affirming (Barnard-Brak et al., 2010; Grasgreen, 2014; Stein, 2014). Usually, this lack of support causes students to not want to build a relationship with faculty and to fear disclosing their disability (Lightner et al., 2012; Stein, 2014).

It is possible that faculty in the current study have more exposure to students with disabilities than do average faculty members or that they are generally more knowledgeable about students with disabilities compared to average faculty members. It may also be that the efforts of the institution to improve supports for students with disabilities resulted in faculty that are better equipped to work with students with disabilities. Additionally, it may be the case that faculty are poor judges of their own ability to work with students with disabilities or that the findings were impacted by some response bias. Despite assurances of their anonymity, faculty in the current study may have felt pressure to report that they felt more positively regarding students with disabilities because of the university's push to improve support for students with disabilities. Future research may consider comparing faculty's reports or their effectiveness in teaching students with disabilities against observed behavior or student reports to understand if any discrepancies exist.

R4: What Is the Relationship Between Institutional Professional Development Support and Faculty's Reported Comfort Level in Teaching Students With Disabilities?

Faculty's level of comfort teaching students with disabilities was positively associated with institutional support. The more institutional support perceived by the faculty, the more comfortable they reported feeling teaching students with disabilities. This finding is consistent with previous research that suggested that faculty feel unprepared or uncomfortable teaching

students with disabilities because of a lack of training and disconnect between faculty and student support services (Gladhart, 2010). Additionally, the few evidence-based faculty development programs that exist do show that when faculty are trained to work with students with disabilities, they feel more comfortable teaching students with disabilities (Kim & Aquino, 2017). There is also some evidence that having a basic understanding of the needs of students with disabilities may improve faculty's teaching of students with disabilities. Faculty who teach education courses tend to have a better understanding of the needs of students with disabilities and engage with students with disabilities more easily (Bettencourt et al., 2018; Scott, 1991). As faculty in education receive some specific training regarding students with disabilities in their coursework prior to becoming faculty (Bettencourt et al., 2018), it may be that providing faculty in other fields with this information through training may increase their comfort working with students with disabilities.

Additionally, knowledge of teaching students with disabilities and attitude towards teaching students with disabilities was positively associated with faculty's comfort teaching students with disabilities. Faculty with more comfort teaching students with disabilities reported more knowledge regarding teaching students with disabilities. Likewise, faculty with more comfort teaching students with disabilities reported more favorable attitudes towards students with disabilities. This finding is also consistent with previous research. Faculty and students both report that when faculty lack knowledge regarding teaching students with disabilities or perceive students with disabilities poorly, faculty are uncomfortable working with students with disabilities (Barnard-Brak et al., 2010; Beilke & Yssel, 1999; Bettencourt et al., 2018; Gladhart, 2010; Sniatecki et al., 2015). This lack of comfort, knowledge, and support often negatively impacts students' learning (Stein, 2014).

R5: How Is the Relationship Between Institutional Support and Comfort Affected by Prior Knowledge, Attitudinal Favorability, and Demographic Factors?

Prior knowledge, attitudinal favorability, and demographic factors did not affect the association between institutional support and comfort. Faculty who perceived their institution as more supportive reported more comfort teaching students with disabilities, even when controlling for prior knowledge, attitudinal favorability, and demographic factors. Given that the majority of faculty on a college campus do not work in the field of education and have had no prior training regarding teaching students with disabilities (Bettencourt et al., 2018), the level of training and support they receive from the institution may be critical to their comfort working with students with disabilities. Even faculty who want to provide students with disabilities with appropriate support feel challenged providing adequate support to students with disabilities without appropriate institutional support (Bettencourt et al., 2018). This finding speaks to the importance of institutional support and training for faculty to provide the support students with disabilities need.

The association between comfort teaching students with disabilities, prior knowledge, and attitude towards students with disabilities also persisted, controlling for all else in the model. This finding is consistent with previous research, as discussed in the previous section.

When faculty feel more knowledgeable and have more positive perspectives regarding students with disabilities, faculty interactions with students with disabilities are improved (Barnard-Brak et al., 2010; Beilke & Yssel, 1999; Bettencourt et al., 2018; Gladhart, 2010; Sniatecki et al., 2015). It may also be the case that providing faculty with adequate support and training for working with students with disabilities may also improve faculty's knowledge of best teaching practices for working with students with disabilities and improve faculty attitudes

towards students with disabilities. These improvements, in turn, may provide students with disabilities with a more comfortable environment to learn in, in addition to better educational outcomes (Bettencourt et al., 2018; Stein, 2014).

Controlling for all else in the model, demographic factors (i.e., gender, field of study, length teaching students with disabilities, and receiving training in teaching students with disabilities) were not associated with the level of comfort faculty had in teaching students with disabilities. Neither field of study nor length of experience of working with students with disabilities was associated with level of comfort teaching students with disabilities. Unlike previous studies (i.e., Bettencourt et al., 2018), the current study did not directly compare faculty in education to faculty in other fields of study. Therefore, it is difficult to determine if the findings of the current study are inconsistent with the study by Bettencourt et al. (2018).

Based on previous literature, it is not surprising that length of time working with students with disabilities is not associated with faculty comfort teaching students with disabilities. Faculty tend to receive little training before or while teaching (Bettencourt et al., 2018). Additionally, the number of students in college who have been diagnosed with a disability has doubled in the past decade (Iarovici, 2014; NCES, 2019a). Moreover, interactions with individual students with disabilities may be very different. Given the lack of training and changing landscape of working with students with disabilities, years of experience working with students with disabilities may not impact faculty's comfort working with students with disabilities. Alternatively, it may be that knowledge regarding working with students with disabilities and attitude towards students with disabilities are more influential in faculty's comfort teaching students with disabilities.

Limitations

Findings of the current study should be considered within the context of several limitations. First, despite the best efforts of the researcher to assure participants of their anonymity, faculty may have felt that they needed to report that they perceived their interactions with students with disabilities more positively than they actually believe they are. It is also possible that the faculty who responded to the current study feel more passionate about supporting students with disabilities than the faculty who did not respond to the survey. While response bias cannot be ruled out entirely, all items had responses across the entire response scale. Therefore, it is unlikely that response bias seriously impacted the results of the current study. Future researchers should include more questions during their survey to understand the relationship faculty have with their students.

Second, the current study focused on one private institution, and that institution recently implemented policies to improve the services provided to students with disabilities. The university in the current study implemented procedures to support students with disabilities that are consistent with the recommendations of the Dreamscape Foundation, such as providing the latest assistive technology (Sehwani, 2018). Future researchers should consider conducting their research with different types of higher educational institutions—for example, public 2-year colleges and 4-year colleges/universities. This would give future studies more participants that might have different experiences with teaching students with disabilities.

Since this was a case study, the generalizability of the findings may be limited. Findings of the current study may not be consistent with the experiences of faculty at public universities or institutions where there have not been policy changes to improve the services provided to students with disabilities. To broaden the perspectives included, future studies might include

multiple institutions of various types in their research, both 2-year and 4-year institutions, public and private. This would allow researchers to compare faculty members' experiences of teaching students with disabilities at multiple institutions and might give researchers an opportunity to comparatively gauge effectiveness of various types of faculty development programs geared towards teaching students with disabilities.

Finally, the current study utilized four broad questions about university supports. It is possible that asking more direct questions about the institution's supports for teaching students with disabilities and faculty's use of those support could have yielded different results. Additionally, the measure used in the current study to assess faculty's knowledge of teaching students with disabilities had extremely poor internal consistency. It is possible that this poor consistency may have had some impact on the findings of the current study.

Directions for Future Research

Considering these limitations, there are several recommendations regarding directions for future research. First, future research may consider sampling a larger, more diverse sample of faculty. Faculty from the current study all came from one institution and teach lower-division courses. Additionally, the institution where these faculty work had recently undergone a policy change to better support students with disabilities by aligning its practices with recommendations from the Dreamscape Foundation (Sehwani, 2018). It is possible that faculty from other universities would report differing experiences regarding teaching students with disabilities. Experiences teaching students with disabilities may also differ depending on the type of courses (upper or lower division), type of university (public or private; 4-year or 2-year; large or small student body), or other factors. Future research is needed to understand how these factors

influence the association between university support and faculty comfort teaching students with disabilities.

Second, the current study found that faculty's reports of their comfort, knowledge, and attitudes regarding teaching students with disabilities is different from previous research on students with disabilities' perceptions of faculty. It may be that faculty in the current study have generally more comfort, knowledge, and more positive attitudes about teaching students with disabilities, but it may also be that faculty who lack training in teaching students with disabilities are poor reporters of their abilities to work with students with disabilities. Future research may consider examining the similarities and differences between perceptions of students with disabilities and faculty regarding the faculty's ability to teach these students.

Third, the current study examined the availability and use of professional development to prepare faculty to teach students with learning disabilities and the factors that affect faculty members' level of comfort teaching students with disabilities at one point in time. Much of the current literature is also cross-sectional. Understanding how university supports affect faculty's comfort with teaching students with disabilities changes over time may be useful in providing appropriate training to faculty in teaching students with disabilities.

Finally, future research may consider development and validation of a measure to assess faculty's comfort, knowledge, and attitudes regarding teaching students with disabilities. Much of the current literature (e.g., Barnard-Brak et al., 2010; Sniatecki et al., 2015) as well as the current study utilizes researcher-developed measures. However, there are some concerns regarding the internal consistency of these measures. Additionally, these measures tend to be broad measures and lack specificity. The development of a standardized measure would assist in comparing results across studies and ensuring the validity of findings.

Implications for Policy and Practice

Findings for the current study provide support for increased attention to faculty who are teaching students with disabilities. Currently, few trainings on best practices for teaching students with disabilities are offered to faculty (Gladhart, 2010). Much of the support being provided to faculty from student services currently focuses on the legal obligations the institution has towards students with disabilities (Bettencourt et al., 2018). However, this information does not provide adequate knowledge to faculty to support students in the classroom (Bettencourt et al., 2018). Based on the findings of the current study, faculty feel unsupported and lack the necessary knowledge to effectively work with students with disabilities. Due to the lack of training and knowledge, students with disabilities feel stigmatized and that faculty do not wish to help them (Stein, 2014).

There are several possible steps that administrators could consider implementing to address faculty's perceptions of lack of support in and lack of knowledge about teaching students with disabilities that may improve students' experiences. First, administrators may consider surveying all faculty who teach undergraduates to understand the areas in which they feel supported or unsupported in teaching students with disabilities. This can be used to develop trainings regarding teaching students with disabilities. Second, administration may consider requiring training regarding teaching students with disabilities to all incoming faculty and at regular intervals while working for the institution. This may increase faculty's knowledge about and comfort with teaching students with disabilities. Finally, administration may consider developing an advisory committee made up of student services representatives, students, and faculty to regularly discuss issues facing students with disabilities and faculty's concerns in effectively teaching students with disabilities.

Conclusion

The purpose of this study was to identify faculty's preparedness to teach students with disabilities at the undergraduate level. Specifically, this study examined the availability and use of professional development to prepare faculty to teach students with learning disabilities and the factors that affect faculty members' level of comfort. Faculty from one private university who taught undergraduate courses reported on the amount of support for teaching students with disabilities, their level of comfort with and knowledge about teaching students with disabilities, and their perceptions of students with disabilities. Findings suggest that faculty who receive more support from their university feel more comfortable working with students with disabilities. The current study can be used to update policies and procedures at colleges and universities in regard to the training and support faculty receive for teaching students with disabilities. Providing faculty with support and training to work with students with disabilities may improve both institution experience and academic outcomes for students with disabilities.

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Appendix A

Faculty Survey for College Faculty Preparation and Comfort in Teaching Students with Disabilities

Demographics Information:

1. What is your gender?

Male

Female

2. What is your ethnicity?

White or Caucasian

Black or African American

Asian

Hispanic or Latino

Native Hawaiian or Pacific Islander

Other

3. What is your employment status?

Full-Time

Part-Time

4. What is your area or academic concentration/field of study?

Formal Sciences

Humanities

Natural Sciences

Professions and Applied Sciences

Social Sciences

Other

Institutional Support:

5. My university adequately prepares faculty members to provides educational assistances for students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

6. My university offers workshops to faculty members regarding instructional support for students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

7. The workshops provided by my university offers effective instructional practices to use in the classroom with students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

8. Student Support Services at my university advise faculty about the needs of students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

Knowledge:

9. I have the knowledge and resources to teach students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

10. I understand the legal requirements to make accommodations for students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

11. Students with disabilities are reluctant to disclose their disabilities to me.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

12. I oftentimes seek additional guidance on methods to assist students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

Attitudinal Favorability

13. I believe that students with disabilities can be successful at the college level.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

14. I believe that students with disabilities are able to compete academically at the college level.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

15. I believe that I am sensitive to the needs and accommodations for students with disabilities who disclose their disabilities to me.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

Comfort:

16. I have positive experiences working with students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

17. I feel that I am prepared to teach students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

18. I have developed techniques that have a positive impact on teaching students with disabilities.

Strongly agree	Somewhat agree	Neither agree nor	Somewhat	Strongly
		Disagree	disagree	disagree

Triangulation:

19. When was the first time (year) you received an official notification concerning a student with a disability assigned to your classroom?

20. Did you received any individual consultation with professional staff at your current or previous institution to teach students with disabilities/

Yes or No

21. Have you attended any workshops about teaching students with disabilities?

Yes or No

22. In what year did you first received the workshop training?

23. How many workshops have you attended?

- 1 – 2
- 3 – 4
- 5 – 6
- 7 – or more

24. In the past two years, how many total hours in workshop training have you received about teaching students with disabilities?

1 – 2

3 – 4

5 – 6

7 – or more

Appendix B

Institutional Review Board Approval



October 30, 2020

Douglas Polk
Seton Hall University

Re: Study ID#2021-148

Dear Douglas:

At its October meeting, the Research Ethics Committee of the Seton Hall University Institutional Review Board reviewed your research application entitled "College Faculty Preparation and Comfort in Teaching Students with Disabilities". The study received Contingent Approval status due to a need for minor edits or the submission of a missing document(s). The reviewer's comments are below, as are any requirements from the Institutional Review Board office regarding documents that were not included in your initial submission. The comments to your application are below:

- Dates in the consent need to be updated.
- Length of time to complete the questionnaire.
- Not sure if the numbers of subjects teaching lower division courses will generate 300 responses.
- What is the justification for the sample size?
- Where did the questionnaire come from? Are there any supporting or intended psychometrics to be generated?
- More information is needed to describe the data analysis plan which is vague in its current form.

Please prepare a revised submission that includes a memo responding to each of the comments above, and include any applicable documentation: corrected IRB application, informed consent form, or any requested documents. According to federal regulations, you have 30 days from the date of this letter to respond to these requests. If you do not respond within this timeframe, the application will be withdrawn and you will have to submit a *de novo* application with updated signatures and approvals from the Pre-IRB.

Please submit the materials described electronically through the SHU IRB website. In all future correspondence with the Institutional Review Board, please reference the ID# listed above. Your revised application will be reviewed by the Chair of the IRB for adherence and compliance to the requested changes. If you would like clarification and guidance on how to comply with these requests, please contact Dr. Michael La Fountaine at 973-761-9334 or IRB@shu.edu.

Be aware that your proposal is not approved and you are not to initiate the research until formal written approval has been received from the IRB. Thank you for your cooperation.

Office of the Institutional Review Board

Presidents Hall · 400 South Orange Avenue · South Orange, New Jersey 07079 · Tel: 973.275.4654 · Fax 973.275.2978 ·
www.shu.edu

WHAT GREAT MINDS CAN DO



Sincerely,

[Redacted Signature]

Mara C. Podvey, PhD, OTR
Associate Professor
Co-Chair, Institutional Review Board

[Redacted Signature]

Phyllis Hansell, EdD, RN, DNAP, FAAN
Professor
Co-Chair, Institutional Review Board

Office of the Institutional Review Board

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www.shu.edu

WHAT GREAT MINDS CAN DO



November 19, 2020

Douglas Polk
Seton Hall University

Re: Study ID#2021-148


Dear Douglas:


The Research Ethics Committee of the Seton Hall University Institutional Review Board reviewed and approved your research proposal entitled, "College Faculty Preparation and Comfort in Teaching Students with Disabilities" as resubmitted. This memo serves as official notice of the aforementioned study's approval as exempt. If your study has a consent form or letter of solicitation, they are included in this mailing for your use.

The Institutional Review Board approval of your research is valid for a one-year period from the date of this letter. During this time, any changes to the research protocol, informed consent form or study team must be reviewed and approved by the IRB prior to their implementation.

You will receive a communication from the Institutional Review Board at least 1 month prior to your expiration date requesting that you submit an Annual Progress Report to keep the study active, or a Final Review of Human Subjects Research form to close the study. In all future correspondence with the Institutional Review Board, please reference the ID# listed above.

Sincerely,


Mara C. Podvey, PhD, OTR/
Associate Professor
Co-Chair, Institutional Review Board


Phyllis Hansell, EdD, RN, DNAP, FAAN
Professor
Co-Chair, Institutional Review Board

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