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**ENHANCING ENGAGEMENT OF STUDENTS WITH INVISIBLE  
DISABILITIES: ROWAN UNIVERSITY FACULTY  
KNOWLEDGE AND AWARENESS AND  
STUDENT PERSPECTIVES**

by  
Shariese Abdullah

A Thesis

Submitted to the  
Department of Educational Services and Leadership  
College of Education  
In partial fulfillment of the requirement  
For the degree of  
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at  
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Thesis Chair:            Burton R. Sisco, Ed.D.

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Shariese Abdullah

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## Abstract

Shariese Abdullah

### ENHANCING ENGAGEMENT OF STUDENTS WITH INVISIBLE DISABILITIES: ROWAN UNIVERSITY FACULTY KNOWLEDGE AND AWARENESS AND STUDENT PERSPECTIVES

2014/2015

Burton R. Sisco, Ed.D.

Master of Arts in Higher Education Administration

Theories of student development, engagement, and involvement have been essential to various studies that relate to the college experience. Yet little information is known about how development, engagement, and involvement affect students with disabilities. According to Karabin (2009), students with hidden disabilities encounter many obstacles in higher education. These disabilities are hidden illnesses and diseases that are not visual or immediately apparent. While these disabilities are documented and legitimate conditions, the limited amount of research available makes it difficult to utilize the existing theories to assist students. This study focuses on how Kuh's (2003) theory of engagement could be utilized in Rowan University's higher education community by administrators to assist students with hidden disabilities.

This quantitative study was structured based on a prior investigation on *Priorities and Understanding of Faculty Members Regarding College Students with Disabilities* completed at Kent State University (Cook, Rumrill, & Tankersley, 2009). The study subjects included tenured and tenure-seeking faculty and selected students enrolled in Rowan University with documented disabilities. Key findings suggest both groups shared high levels of agreement concerning disability laws and accommodation policy, but differed in their agreement levels for accommodation willingness and universal course

design. The importance of engagement and involvement in the enhancement of accommodations, learning outcomes, and socialization are discussed. Recommendations include appropriate training on the differences between accommodation policy and willingness for tenured and tenure-seeking faculty.

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## **Chapter I**

### **Introduction**

According to the United States Census Bureau, New Jersey had a total of 1,725,790 students enrolled in some form of postsecondary education in 2005 (United States Census Bureau, 2005). The U.S. Census Bureau indicated that in 2005, 6,854,000 disabled males and 7,235,000 disabled females had attained some form of college education or achieved an Associate's degree (United States Census Bureau, 2005). Many have joined academia due to harsh economic times. According to Burgstahler and Doe (2006), postsecondary academic and employment outcomes are less positive for students with hidden disabilities than their counterparts. The authors state, "Effective self-advocacy skills on the part of students as well as responsive campus support services have a positive impact on the level of success experienced by students with disabilities" (2006, p. 5). George Kuh's theory of engagement is an initiative that has promoted the academic development of students in-and-out of the classroom and has led to the development of a tool for effective educational leadership (Kuh, 2003). According to the *National Survey of Student Engagement* (NSSE), in the Spring of 2010, 2.1 million students from 750 universities and colleges completed a survey based on in-and-out of classroom learning experiences, which examined how effective the engagement process could be in higher education. The data showed student engagement could make a great impact on a student's learning, based on social and academic engagement.

#### **Statement of the Problem**

There are many misconceptions among faculty and administrators about how to accommodate and help students with hidden disabilities adjust to higher educational

environments. According to Jung (2002), “in North America, the social approach to disability has taken the form of disabilities apparatus, which is organized around the concepts of accessibility and accommodation” (p. 184). However, Burgstahler and Doe (2006) suggest that faculty and administrators do not understand the significance of appropriate accommodations for students with hidden or other disabilities, which can guarantee them an equal education. The authors state, “sometimes mistaken beliefs reflect a lack of knowledge about disabilities and assistive technology that can overcome or reduce challenges imposed by physical, sensory, psychological, and cognitive impairments” (p. 6). This lack of knowledge leads to various assumptions about the capabilities that students with invisible disabilities have or do not have. Understanding how to engage students with an invisible disability, whether this is intellectually, socially, and psychologically could increase graduation rates. With increased knowledge, college and universities could improve the academic and social experiences of students with invisible, or visible disabilities (Burgstahler & Doe, 2006).

### **Significance of the Problem**

There are many issues, in relation to the challenges involved with the engagement process of students with invisible disabilities, such as accommodations, faculty knowledge, inclusion, and disclosure. Some of these concerns regard limited knowledge of invisible disabilities, which affects the procedures and practices, which make engagement difficult to apply (Karabin, 2009). Karabin explains that, “the knowledge gained from different studies is important to faculty, student affairs personnel, and administrators who work in higher education” (p. 37). Karabin suggests that in order to apply a holistic approach and understand different obstacles students with disabilities

face, a variety of disciplines should be shared (Karabin, 2009). As educators, it is important to understand the individuals who sit in the classroom. Awareness and understanding could assist a practitioner's approach and technique, which could possibly enhance a disabled student's learning experience. Burgstahler and Doe (2006) suggest that, "most challenging careers require a college degree, even for entry-level positions" (p. 4). Therefore, creating a comfortable social and intellectual environment can possibly help students with hidden disabilities attain a postsecondary degree and begin a career.

### **Purpose of the Study**

The purpose of this study was to evaluate the knowledge of students with disabilities and the methods used to accommodate and engage students with disabilities during their collegiate experience at Rowan University. This study also evaluated faculty knowledge and perspectives concerning students with invisible disabilities as well as what faculty do to promote engagement among students with invisible disabilities. In addition, the study explored the benefits of the engagement process for students with invisible disabilities and how it can impact their accommodations, interaction with faculty, disclosure, and involvement. Sean Smith (2007), a Rowan University alumnus, conducted a similar study concerning faculty attitudes towards providing accommodations for students with learning disabilities and how it reflects upon the importance of accommodations for students with invisible disabilities. Smith's investigation is significant to this investigation and the importance of faculty knowledge and understanding of invisible disabilities since it also reflects similar concerns of students with disabilities. Smith's (2007) study indicated positive and negative perspectives concerning accommodations, which can be vital to the context of my

investigation. Chaney, Muraskin, Cahalan, and Goodwin (1998) indicate, “disadvantaged students may sometimes also be more likely to face special circumstances that are associated with lower retention rates” (p. 198). Consequently, creating a supportive, knowledgeable environment will likely increase retention rates among students with invisible or other disabilities at Rowan University.

### **Assumptions and Limitations**

In research, it is important to consider and understand the importance of limitations and findings when obtaining data. Thus, it is vital to consider the environment where the data are collected such as a university, where various other surveys were conducted during the Spring 2014 semester at the same time at Rowan University. I had to consider a broader population outside of the particular environment or a different time frame. Exploring further research on faculty attitudes toward students that have invisible disabilities prior to developing understanding could benefit more since I had no interaction with a large support staff. As a healthy disabled female student, I wanted to conduct the research free of bias. However, as the researcher, I assumed that all participants with or without a disability were honest while answering all questions. One limitation was the number of participants that were willing to contribute their time. I was concerned about the limitations when studying the faculty perspectives at Rowan University. Additionally, a limitation could be obtaining a significant percentage of disabled students that were willing to answer all questions. In conducting this quantitative research, I took into consideration any past research that focused on Rowan University’s administrator’s attitudes concerning invisible disabilities and faculty knowledge. However, there were limited data that pertained to this spectrum.

When constructing a questionnaire for students with disabilities, an important factor is that each question is comprehensive and clear for all students with all types of disabilities. A major limitation is that it is likely the research was based on the number of students with invisible disabilities and the number of students with physical disabilities that were enrolled in the Academic Success and Disability Services within Rowan University's student population where the dominant enrolled status are students with invisible disabilities and female. The researcher had confidence that females were dominant. In addition, the dominant race was Caucasian. According to Karabin (2009), a limitation of a longitudinal approach, when investigating student development can be negative due to difficulties obtaining information as time progresses. Karabin indicates, "in order to view the student from a development perspective, the ideal study would track the student longitudinally through the college experience and beyond" (p. 40). A quantitative analysis provides an assessment in relationship to how knowledgeable faculty are with students that have disabilities and how faculty knowledge can be linked to a student's contentment and academic success (Karabin, 2009). In addition, because I am a disabled student, limiting bias is important for ensuring that valid and reliable evidence are obtainable. However, in the future, the investigator should examine faculty concerns related to surveys and the disabled student accommodations to learn more about the faculty population.

### **Operational Definition of Terms**

1. Accommodations: Services that are given to those that are legally disabled to help them attain educational opportunities that students who are not disabled are given.



2. Disability Services: A service provided in higher educational institutions that helps deal with various disabilities and enhances the student's development and knowledge with the proper academic accommodations and instructional tools. These can help individuals based on their disability (Wendell, 2001).
3. Disclosure: Disabled individuals that disclose their medical condition by releasing or revealing unknown information about their conditions, sometimes to attain accessibility and accommodations for different reasons in an educational or living environment (National Collaborative on Workforce and Disability for Youth, 2005).
4. Invisible Disabilities: According to the Invisible Disabilities Association (2012), "invisible disabilities refers to symptoms such as debilitating pain, fatigue, dizziness, weakness, cognitive dysfunctions, learning differences and mental disorders, as well as hearing and vision impairments" (para. 6).
5. Physical Disabilities: The total or partial loss of one's bodily functions, so that it inhibits one's mobilization or way of life is known as a physical disability (Physical Disability Council of NSW, 2009). There can be many forms of physical disabilities: amputations, multiple sclerosis, spinal bifida, cerebral palsy, morbid obesity, paraplegia, and quadriplegia (Physical Disability Council of NSW, 2009).
6. Section 504: A law, which grants equal opportunity to all individuals who are legally disabled and protects them from discrimination and mistreatment based on their disability. It helps provide different resources to enhance their life, education, employment, and volunteerism (29 U.S.C. § 794).

7. Student Engagement: According to Kuh (2003), student engagement can be defined as peer and faculty involvement in-and-out of the classroom, which increases the quality of a student's academic experience. Kuh suggests that student engagement can be related to participation in employment, social groups, different activities, socializing and interacting with faculty, administrators, and peers (Astin, 1984; Kuh, 2003).

### **Research Questions**

The following questions guided this study:

1. What level of importance do selected Rowan University faculty have concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?
2. What level of agreement do selected Rowan University faculty have concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?
3. What level of importance do selected invisible disabled students have concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement of faculty with disabled students?
4. Do selected students with invisible and other disabilities agree that faculty at Rowan University have knowledge of: disability laws, accommodation policy,

accommodation willingness, universal design, understanding disabilities, and interaction and engagement of disabled students at Rowan University?

5. Do faculty and students agree on issues related to: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?
6. What are some of the issues that both students and faculty feel are important, in the areas of: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?

### **Overview of the Study**

Chapter II of the investigation analyzes engagement of students with disabilities. Additionally, the chapter also describes different types of invisible and physical disabilities, the limitations that each student can face, and how accommodations can help him or her during their academic experience.

Chapter III describes the methodology used in the study. Described is the context of the study, population and sample selection, instrumentation used in the study, procedures for collecting data, and how the data were analyzed.

Chapter IV presents the findings of the study in table and narrative form. The chapter provides data to answer the research questions posed in the introduction of the study.

Chapter V summarizes the study, discusses the findings in relation to the relevant literature and offers conclusions, and recommendations for practice and further research.

## **Chapter II**

### **Literature Review**

Providing factual, valid information concerning the enhancement of faculty knowledge regarding students with disabilities is essential to the higher educational community. However, there is minimal research on engaging students with various invisible disabilities. This investigation, which centers on students with invisible disabilities and their differential treatment, focuses on increasing the knowledge of the Rowan University faculty, which is likely to enhance student development among students with all disabilities. The effectiveness of the interaction in-and-out of the classroom amongst faculty and disabled students is a consistent focus throughout the review. In addition to discussing different obstacles that students with physical and hidden disabilities must encounter compared to their counterparts, the importance of faculty and student interaction are also discussed.

#### **Introduction**

From 2007 to 2008, enrollment of students with disabilities at higher education institutions has increased (U.S. Census Bureau, 2012). According to the United States Census Bureau, (2012) from 2007 to 2008, 10.8% of disabled students were enrolled in higher educational institutions (U.S. Census Bureau, 2012). With increased enrollment, the implementation of different practices, theories, and approaches can be beneficial to student success. Researchers, from the National Center for Educational Statistics (NCES), indicated that 41% of two and four-year degree-granting postsecondary institutions in 2009 employed staff that lacked incentive to change their instructional practices (Raue, Lewis, & Coopersmith, 2011). Having motivated instructional leaders

can be vital in the developmental process of all students, especially those with additional accommodations and needs. Astin's (1999) theory of student involvement elaborates on environmental influences, which can be significant to the students' involvement during the learning process. According to Astin, "...attempts to identify the curricular content and instructional methods that best meet the needs of the individual students is likely to enhance each particular student's knowledge because every student has individualized needs" (p. 521). In a postsecondary learning environment, the ability to identify the needs of students with invisible or other disabilities could help maintain a welcoming environment for students with disabilities. Therefore, creating better communication, disclosure, and interaction among students with disabilities and faculty could enhance their learning experiences.

### **Engagement**

Kuh (2003) noted that it is important for faculty to understand how effective engagement is for student development and how it can assist in creating different resources, practices, and help determine effective learning approaches for diverse groups. According to Kuh (2003), "students learn more when they direct their efforts to a variety of educationally purposeful activities" (p. 25). Being involved in sororities, fraternities, learning communities, and social groups are some of the activities that are likely to increase engagement (Astin, 1999; Kuh, 2003). Additionally, in-and-out of the class engagement assists students with disabilities and enhances the faculty's ability to make learning more meaningful. Kuh (2003) suggests:

The more students study a subject, the more they learn. Likewise, the more students practice and get feedback on their writing, analyzing, or problem solving,

the more adept they become. The very act on being engaged also adds to the foundation of skills and dispositions. (p. 25)

Due to the size, some schools can challenge students more and concentrate on effective learning challenges for all students, with or without disabilities. According to Kuh (2003), the majority of students in higher education that are more engaged, are full-time White females. He suggests that it is important to learn techniques and approaches to increase interaction and engagement for all student populations and diverse groups. Students who live on campus generally have fewer obligations, such as children, time constraints, or working full-time (Kuh, 2003). Students that are engaged are likely to invest more time and effort into their academic work, such as writing, reading, and asking more questions.

Karabin (2009) conducted a study entitled, *Student Engagement for College Students with Hidden Disability of Orthostatic Intolerance*, and part of the investigation consisted of the identity of a student with an invisible disability. However, the majority of the study focused on the importance of engagement for students with invisible disabilities and faculty knowledge and interaction. Karabin (2009) indicated how academic and social engagement are learning activities in-and-out of the class. According to Karabin (2009), “supportive non-judgmental faculties were important for academic engagement in this group of students” (p. 196). Karabin (2009) suggests that faculty interaction can help students’ with invisible disabilities feel accepted and give them a sense of belonging. However, Karabin (2009) suggests that social engagement amongst peers, friends, and the participation in different on-campus organizations can also enhance the collegiate experience of a student with or without a disability (Karabin, 2009). She indicates that

social engagement is related to living arrangements, physical engagement, and interpersonal relations. However, many students with physical disabilities feel disconnected among peers due to physical mobility, which is likely to affect peer interaction (Karabin, 2009). Students with an invisible disability are likely to feel disconnected due to self-disclosure and the judgmental beliefs of others (Karabin, 2009). Karabin reported, “students tended to display a social engagement pattern that was sporadic in nature” (p. 212). The study is useful because it provides vital information concerning students with both physical and invisible disabilities and the importance of engagement for their academic success.

### **Disengagement**

According to Kuh (2003), various students come to higher education institutions with many expectations of being engaged. However, many are not prepared academically; they have a clear perception of social engagement—participating in on-campus activities, but often are ill equipped for the demands of the classroom. Some students may become disengaged when they spend less time studying or interacting in class than those actively involved. Kuhn reports, “undergraduate students should spend at least two hours preparing for every class hour in math and science, three to four hours” (p. 27). However, there are some students that spend less than an hour with classroom material. This poor usage of time and effort can be signs of disengagement. Kuh (2003) points out that if a student does not take initiative to develop his or her own minds it can be difficult to engage with others in the classroom. Yet, at the same time there is also ownership on the part of faculty members to engage all students as well. As a result, Kuh (2003) argues that some faculty do not challenge or create an engaging atmosphere

because they feel the more work given, will result in more appointments and they will have to do more work (Kuh, 2003). However, additional assistance and different types of interaction in-and-out of the class could possibly decrease the chances of disengagement. Nonetheless, Karabin (2009) suggests that academic and social engagement could increase between faculty and students with disabilities if proper motivation is given proportionally with the amount of time spent with the diverse student groups.

### **Relevant Law**

Section 504 is a federal law created to protect students from discrimination. The law is intended to prepare disabled students for personal independence, and with accommodations, these individuals can lead a productive life and accomplish their educational goals. Section 504 states:

(1)(A) to ensure that all children with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for further education, employment, and independent living. (20 U.S.C. §§ 1400 et seq)

Section 504 requires that no disabled individual be discriminated against in a state funded school regardless of public or private designation and all disabled students shall be given equal opportunity (U.S. Department of Justice, 2012). The United States shall not exclude or deny the benefits of any disabled individual nor shall he or she be subjected to discrimination under any program or activity that receives Federal financial assistance (U.S. Department of Education, 2012). If an individual is legally disabled, he or she is entitled to accommodations that can assist with personal learning needs, such as extra



time, academic accommodation, physical accommodations to provide accessibility, note-takers or an assistant (20 U.S.C. §§ 1400 et seq).

All students are entitled to accommodations to maintain an effective learning environment. Supportive technology, academic services, professionally and academically trained personnel, and educational resources should be provided. Disability Services (DS) attains certain information based on the needs of students to accommodate them during their post secondary experience.

### **Physical Disabilities**

According to the United States Government Accountability Office (GAO), investigation on support needed for schools that assist students with disabilities showed that almost 30% of students with physical disabilities were enrolled in higher education (GAO, 2009). Students that are classified as physically disabled include: amputations, multiple sclerosis, spinal bifida, cerebral palsy, morbid obesity, paraplegia and quadriplegia are those that have mobility impairments (Physical Disability Council of NSW, 2009). The GAO argues that under federal law all higher educational institutions should ensure that the physical environment, such as campus grounds, housing, transportation, and classrooms are accessible for these students (GAO, 2009). Making the necessary academic adjustments is important for the success of the students with physical disabilities. Some students with physical disabilities travel in wheelchairs, scooters, and other mobility devices. To ensure their engagement, GAO reports that opportunities for students with physical disabilities to participate in class, social groups, and vocational programs are provided with assistance (GAO, 2009). Some students even participate in internships and physical courses. However, students with physical disabilities may

become disengaged with limited modifications made to location, classroom environment, or instructional strategies. Additionally, there are many other disabilities that are not seen visually, such as hidden disabilities that need additional assistance due to the lack of physicality.

### **Hidden Disabilities**

There are numerous hidden disabilities, such as emotional-behavioral (Bi-polar, personality disorder, Depression, Anxiety), chronic illnesses, (HIV, Cancer, Asthma, Lupus) and learning disabilities (Attention Deficit Disorder, Autism, Dyslexia, Dysgraphia). Karabin (2009) indicates, “students with hidden disabilities may experience difficulty navigating through college more so than their physical disabled and non-disabled peers because of the invisible nature of the disorder” (p. 31). Engagement can be difficult for students with hidden disabilities if they limit the disclosure of his or her disability. Karabin (2009) argues that since many students with disabilities do not appear sick many times they will not be treated as such.

### **Healthy vs. Unhealthy Disabilities**

According to Wendell (2001), the identification of one’s disability can contribute to an individuals’ illness and individual attitudes can influence motivation and goal attainment. Wendell (2001) reports that a healthy disabled person is functional and is not terminally ill but an unhealthy disabled person is unable to function and may experience a lifetime of pain and have a shorter life expectancy. Cory (2011) suggests that often society sees people with disabilities only as individuals with physical impairments. However, there are healthy disabled people that live long comfortable lives, but are on medications for a lifetime. Social environments contribute to prejudiced attitudes,

discrimination, and social injustices. Many times healthy disabled people experience physical and psychological hardship because they constantly have to prove their disability. An example of a person with a healthy chronic disability is someone that lives with Multiple Scoliosis (MS). Cory states:

MS and rheumatoid arthritis, can behave like recurring acute illnesses, with periods of extreme debility and periods of normal (or nearly normal) health, or they can have virtually constant symptoms (such as fatigue or pain) and/or be characterized by recurring acute episodes that leave behind permanent losses of function. (2011, p. 20)

Patients with Lupus, however, are considered unhealthy disabled individuals with chronic illnesses. They are considered “unhealthy” because they have a limited life expectancy. According to Royster and Marshall (2008), students with chronic illnesses such as Lupus, Cancer, and Cystic fibrosis represent 15% of the student population of full-time enrollees.

Students with invisible disabilities are likely to face many obstacles. Creating a distinction between students with physical disabilities could be significant to student success. In accordance with the United States Government Accountability Office (GAO), accessibility is essential for most physically disabled students (GAO, 2009). The enhancement of engagement can be difficult without the promotion of full participation and access to campus culture for physically disabled students (GAO, 2009). In addition to orthopedic and mobility obstacles, some students can suffer from emotional obstacles indicated by GAO (2009). Gills (2004), who researched and constructed a handbook for students with disabilities, suggests that many students with invisible disabilities may be wrongly diagnosed about their academic levels. Individuals with invisible disabilities

could require additional resources, yet still be on the same academic levels as non-disabled students. According to Gills (2004), these students can require extensions on assignments or even leaves of absence for medical treatment. It can be difficult for students with invisible disabilities to cope with their medical conditions and their college experience (Gills, 2004). Gills (2004) indicates that “a good deal of understanding and encouragement and a feeling of safety and support in their learning environment is crucial to their success” (p. 3). Some students with learning and other invisible disabilities may experience trouble with study skills (listening skills, understanding, comprehension, and analysis) (Gills, 2004). These obstacles could prevent the integration of their learning and engagement processes. Due to many medications, students are likely to experience short and long term memory loss, which can make reading problematic (Gills, 2004).

Still, students with psychological, chronic, and learning disabilities are likely to experience social or emotional problems which could impact their transition and adjustment to the college environment. Various emotional problems can impact their engagement with faculty and their involvement in social activities with peers (Gills, 2004). Gills indicates that students with invisible disabilities living on campus, “need time to develop living strategies as consistent and positive reinforcement for appropriate behavior patterns, and need to be made consistently aware of patterns that are counter-productive to functioning successfully in society” (p. 6).

Gills (2004) implies that it is important for faculty to challenge disabled students and motivate them also. Gills (2004) suggests that “accommodation does not mean exemption from course requirements or having others do the work” (p. 7). However,

faculty can increase engagement between these students by (a) giving them more time and support, (b) helping them collaborate with peers and others to encourage involvement in activities and provide understanding, (c) praising them when they are improving and criticism them in a positive way, and (d) creating better communication between them and students so students can disclose their academic needs (Gills, 2004).

### **Disclosure**

For students with any disability, disclosure can be beneficial to his or her transition, support, and outcome. It is the student's choice to reveal their identity to Disability Services (DS). However, in order to obtain accommodations, a student must identify him or herself first. The law states that students do not have to disclose a disability, but if they do, medical documentation must be provided to verify the disability (Cory, 2011). This verification usually comes from a medical doctor or therapists. A third party should have the ability to verify the diagnosis (Cory, 2011). According to Cory, reasonable accommodations are judgment calls that depend on the needs of the student.

According to The National Council on Disability Living, Learning, & Earning (NCDLLE) "most postsecondary education institutions enrolling students with disabilities provide some level of services, support, or accommodations to assist their access to education" (p. 7). However, the student must first present medical and other documentation to justify their need for accommodations. After a diagnosis is confirmed, DS and the student will set up a meeting. The meeting can assist DS with becoming familiar themselves with the student's academic goals, experiences, and what effects the student's disability may have on their academic achievement. Based on the medical documentations, the discussion, history, and experience, a conclusion can be made about

the accommodations that are needed. Cory (2011) indicates, that once the process is complete, DS staff will prepare an official accommodations letter and the student will deliver it to his or her instructor. Administrators and DS should work together to ensure that the student's needs are met based on case-by-case diagnosis each student has different needs.

The NCDLLE indicates that, under federal law, postsecondary institutions are required to provide accommodations to those students that are identified as legally disabled to ensure that they are granted the same education opportunities as their counterparts (NCDLLE, 2003). The NCDLLE (2003) suggests that many institutions employ only a single employee to help provide assistance and knowledge to disabled students and the faculty. The NCDLLE (2003) indicates that, many times, additional support is needed for students with various disabilities to tackle performance, persistence, and retention issues. It is likely that when limited support and knowledge of disabilities are provided to faculty and administrators, the necessary accommodations are subpar and decrease the success rate among disabled students (NCDLLE, 2003).

### **Accommodations**

Accommodations and accessibility are legal obligations of every higher education institution, and no student should be excluded due to necessary accommodations, he or she may need (Jung, 2002). According to Jung (2002), "A request for accommodation also enters the disabled student into a social relation where their need for some alteration in the instructional setting or process confronts the needs, views, and teaching practices of instructors" (p. 188). However, disability laws are a part of the United States human rights laws that were created to help establish equal instructional practices. Jung (2002)

indicates that universities should recognize their moral and legal duty to provide accommodations. Accommodations prevent individuals with and without disabilities from exclusion. Different administrators within higher education are resistant to the extensiveness of academic accommodations. According Smith (2006/2007), “more than 95% of faculty members surveyed would make adjustments in their schedule to meet with learning disabled students” (p. 26). In contrast, Smith also reported “only 13.1% of faculty agreed that it is okay for a student with a learning disability to substitute a course for a required course in their program” (p. 26). They may feel that providing these accommodations violates their administrative and professional integrity (Jung, 2002). Jung noted, “The freedom to teach as one sees fit may be used to resist legislated or juridical-imposed remedies” (p. 185).

Accommodations are used to prevent inequity; they help the student by providing special exceptions, such as audio books, extended time, note-takers, student assistance and sign language interpreters. Students with invisible disabilities many times do not need the physical accommodations, but need academic accommodations. Nonetheless, the social structure can make students with chronic, learning, mental and other invisible disabilities feel uncomfortable based on how people view their accommodations; Appendix A lists what accommodations are needed for students with physical and invisible disabilities. Table 2.1 (Appendix A) indicates that student with all disabilities have access to disabilities services and other programs and services.

### **Participation and Engagement**

Increased participation can help develop the engagement process between faculty and peers of disabled students that have invisible disabilities. Often times, students

decrease their participation in accepting accommodations due to lack of standardization of support services among the institution, faculty, and programs provided (NCDLLE, 2003). The NCDLLE (2003) suggests that Disability Services need to provide more information to faculty than just a letter validating a disability and needs of accommodation.

### **Faculty/Providing Knowledge**

Accommodations possibly will assist faculty with providing an equal educational playing field for disabled students. Shiu (2001) revealed that instructors with limited information about chronic illnesses could affect how they deal with medical emergencies and different situations concerning the illness. Shiu (2001) indicates with effective information, teachers could become more confident when managing students in the class with chronic illnesses. Shiu (2001) reported that creating partnerships with different resources like disability services, and medical services could help create different academic and psychological strategies. Different informational meetings and group discussions, which include issues regarding classroom and campus climates, could prevent misconceptions and misunderstandings that faculty and staff could have about chronic disabilities in comparison with physical disabilities.

### **Faculty**

Many educators and personnel could be unaware of the differential treatment between faculty and students with invisible disabilities and physical disabilities, how it can decrease confidence in students with these disabilities. There are different problems that occur like, “avoiding eye contact, maintaining physical distance, and illustrating minimal expectations for the student” (Beilke & Yssel, 1999, ¶ 17). According to Beilke



and Yssel “these actions not only serve to erode self-esteem and defines one’s status as a second class, but contribute to the system of differential treatment” (1999, ¶ 21). With motivational support from faculty and staff, invisibly disabled students are likely to begin to engage in functional academic postsecondary environments like non-disable students. In addition, programs can be created where all disabled graduates can help faculty and other students understand what it is like to be a disabled student. Different assessments can be utilized to examine the academic needs and ethical duties of faculty and staff to observe if faculty is maintaining fairness in regard to disabled students and their counterparts. The evaluations should analyze whether faculty are following the legal aspects of Section 504, and are abiding by the student’s personal accommodations.

### **Fairness**

Fairness can be seen in a negative or positive way for students with chronic disabilities. Research suggests that fairness is an issue for most educators. “We have to be fair to all students,” writes Jung (2002, p. 189). Results from a study conducted by Jung (2002) reflected how accommodations limited the amount of competitiveness amongst students. Many questions include whether the lack of competitiveness is fair, and whether students with accommodations can have an equal education. According to Jung (2002), “students, faculty, and administrators are a part of the social relations of instruction where academic achievement is organized in terms of competitiveness and comparison among students” (p. 189). Therefore, it can be difficult for a student with an invisible disability to be measured or evaluated on the same institutional standards as a non-disabled student (Jung, 2002). Even when the student appears to be perfectly “normal” he or she can face many complications as a student with an invisible disability (Jung, 2002).

In addition, the media and social media contribute to what individual's stereotype as a person being disabled. By showing Internet images and commercials of someone in a wheel chair or without ligaments, it can create stereotypic images of what people think constitutes as a disability.

### **Faculty and Student Engagement: Applying Chickering & Gamson's Seven Principles**

Over the years, faculty and administrators have learned the importance of implementing the research and knowledge of Chickering and Gamson's "Seven Principles of Good Practice." Many have learned and utilized the seven principles as ways to improve student learning and teaching competence and engagement. Many researchers in higher education use the seven principles as a guide for seeking information on developing different methods of teaching to diverse learning communities in higher education (Chickering & Gamson, 1987). Chickering and Gamson's (1987) seven principles can be used to assist faculty with student engagement in higher education by:

1. Encouraging Contact Between Students and Faculty: A method of engagement can be applied by contact between faculty and students with and without disabilities in-and-out of the class (Chickering & Gamson, 1987). According to Kuh (2003), engagement can be a process of interaction and socialization beyond the classroom. Faculty members, assisting students with physical and invisible disabilities are important during difficult social, and academic transitions; faculty encouragement can be a tool for disabled students (Chickering & Gamson, 1987; Kuh, 2003).

2. Developing Reciprocity and Cooperation Among Students: Many times, students with physical and invisible disabilities find it difficult to interact with their counterparts even though Chickering and Gamson suggest, “learning is enhanced when it is more like a team effort than a solo race” (p. 3). According to Karabin (2009), students with hidden disabilities find it difficult to be a part of a team of non-disabled students because many times him or her invisible disability is always questionable to their peers. Often, when a disabled student’s peers do not see their disability many assumptions are made, and as a result that prevents them from obtaining academic help and joining social groups (Karabin, 2009). However, students with physical disabilities encounter many other conflicts that prevent social and academic engagement with peers, such as physical limitations (Karabin, 2009). Karabin (2009) indicates that “physical energy, time between classes, academics, and day-to-day activities are barriers that prevent engagement between students with physical disabilities and his or her peers” (p. 243).
3. Encouraging Active Learning: Chickering and Gamson (1987) and Kuh (2003) suggest creating an active learning environment is important for all students. According to Kuh (2003) active learning in the class can be beneficial to the engagement of all students. Kuh (2003) suggests that creating collaborative social environments is likely to enhance interaction and assist in different techniques, which could engage diverse groups of students (Kuh, 2003).

4. Giving Prompt Feedback: According to Chickering and Gamson (1987), all students need feedback on performance and sometimes criticism to help them improve their learning skills. Additional praise and encouragement may be needed from faculty. Gills (2004) indicate that, unlike their counter parts (non-disabled individuals or physical disabled students), many students with invisible disabilities suffer from academic challenges, such as cognitive and comprehension difficulties. Sometimes working with students with invisible disabilities can motivate them and allow them to explore different learning objectives, creating an engaging academic attitude with in-class discussions (Gills, 2004). Gills (2004) states, “making students autonomous learners is the primary goal, but they still may need some individual assistance from you from time to time” (p. 7).
5. Emphasizing Time on Task: Chickering and Gamson (1987) indicate that time and the amount of energy a student puts in their academics is significant to one’s development. According to Kuh and NSSE (2003) “the more students study a subject, the more they learn about it” (p. 25). In addition, Kuh (2003) indicates that the more students engage with faculty and peers and obtain feedback on writing and comprehension the more productive he or she learning becomes.
6. Communicating High Expectations: Chickering and Gamson state that “high expectations are important for everyone-for-the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated” (Chickering & Gamson, 1987, p. 5). Gills suggests that faculty providing high

expectations can be important to students with learning or other invisible disabilities. It can allow them to understand how they can face the same obstacles as non-disabled students, with alternative ways of accomplishing their goals (Gills, 2004).

7. Respecting Diverse Talents and Ways of Learning: Disabled and non-disabled students bring different ways of learning (Chickersing & Gamson, 1987). Gills (2004) states that “special talents and the academic problems to seek assistance for academic and other problem is appropriate” (p. 8). Gills (2004) suggests that how many times faculty knowledge can increase engagement and assist in student success.

### **Faculty Knowledge & How to Prevent Disengagement**

Many students that have hidden disabilities become disengaged due to society’s idea of what a disability looks like (Barazandeh, 2002). According to Barazandeh (2002), “a person without a disability may wrongly perceive an individual with a less-visible disability as not needing accommodations” (p. 5). It is likely that many faculty members with disabilities could come to this conclusion. In addition, Barazandeh states, “if an individual with a disability detects another person’s prejudice, that individual could internalize those feelings into his or her own self-identity” (p. 5). The National Council on Disability Living, Learning & Earning (2003) indicates, “it is within these training programs that institutions of higher education need to make a systematic effort to equip future instructional and related support to address the full spectrum of needs” (p. 19). It is likely that when faculty or peers influence a disabled student, their academic success can be impacted. According to Barazandeh (2002), “many faculty members may still not

know the clear requirements of the law that schools recognize disabilities and offer accommodations, so they may attempt either to deny requests for accommodations or be less supportive in acknowledging them” (p. 6). As a result, engagement can be decreased due to misconceptions and limited awareness of invisible disabilities. According to Wilson, Getzel, and Brown (2000), “students strongly believe that the instructional faculty, more than any other campus entity, can impact their academic success” (p. 41). Therefore, it is likely that creating a supportive, inclusive and welcoming environment can be significant to the development of the student.

### **Inclusion**

According to Mosoff, Greenholtz, and Hurtado (2009), who conducted research on postsecondary inclusion on behalf of the Canadian Council on Learning (CCL), “inclusive post-secondary education rests on a fundamental principle of “zero exclusion” (p. 8). The CCL (2009) suggests that no student with learning, developmental, or other invisible disability, shall be judged based on previous academic experiences, or their diagnosis. It also states that they cannot be denied equal opportunities as non-disabled students (CCL, 2009). As a disabled student, being included to the college environment like non-disabled students means obtaining access to (a) social and diverse learning groups, (b) understanding and obtaining information about ones career goal, (c) furthering skills and developing one’s education, and (d) experiencing student life (CCL, 2009). However, CCL indicates that students with invisible disabilities have a “criteria for receiving inclusion supports include motivation, interests, and individual goals that are consistent with the offerings of the institution” (p. 10). It is likely that these criteria can enhance how students with disabilities can become engaged on campus and increase

their interaction with peers. The CCL (2009) indicates “outside of the formal obligations of courses and summer work, students are engaged in many other activities such as clubs or recreational activities” (p. 10). Accordingly, with support, it is possible that students are engaged academically and socially, which could likely improve their student outcome as a disabled student.

### **Curriculum**

For many students with developmental, chronic, learning, and other invisible disabilities, the academic curriculum can be a barrier between these students and the engagement process (Karabin, 2009). Many times, inadequate professional development and limited reconstruction of curriculums by faculty can prevent challenging standards and integration for disabled students into the traditional learning environment (Stodden et al., 2003). Karabin (2009) implies that curriculums for non-disabled students that are not inclusive create academic pressure for students with hidden disabilities. As a result, creating a feeling of inadequacy could result in disengagement between the institution and the disabled student. However, creating a separate assessment for students with disabilities and their needs academically, socially, and interactively could help improve faculty understanding and be a guide for engagement.

### **Faculty Assessments**

In higher education, faculty assessments have helped emphasize the importance of competence, effective learning methods, and student improvements. According to Aitken and Neer (1992), “the purpose of assessments are to improve student learning” (p. 270). Faculty and students play a role in assessments. Depending on the goal and the student, different formats of assessments can be constructed (Aitken & Neer, 1992). Aitken and

Neer (1992) suggest that there are many questions asked, when developing an assessment such as:

- ✓ What should be assessed?
- ✓ What format should be used in this particular assessment?
- ✓ What is the purpose and use of data collection? (p. 271)

Aitken and Neer state that “bias can be avoided by incorporating sensitivity to culture, ethnic background, sexual orientation, and gender” (p. 271). All students of every diverse group in the postsecondary institution should be included in assessments. According to the National Center on Educational Outcomes (NCEO), students with disabilities have the same right to participate in assessments just as non-disabled students (NCEO, 2003). According to the NCEO, “students with disabilities can participate with accommodations” (2000, para. 5). Many times, they will need assistance in understanding and reading the information provided. Assessments can be used for enhancing, researching and developing accommodations. However, the most important aspect of assessments for disabled students and the faculty that help develop their learning process is accountability (NCEO, 2003). The NCEO states, “reporting information on students with disabilities is important because it ensures that the performance of these students is visible” (2003, para. 21). Therefore, a positive higher education institution and faculty can help develop an engaging relationship with disabled students, which can be essential to the results of the assessments. According to Karabin (2009), “institutional engagement themes are associated with disability support services and accommodations, campus polices, academic advising and financial support” (p. 262). Consequently, the NCEO states, “in the past, failure to report the assessment results of students with disabilities



was a common way to avoid acknowledgment of whether they were benefiting from their educational experiences” (2003, para. 24). Therefore, accountability is important to changes that can be made for students with disabilities, who are receiving accommodations. Thus, it is important to provide comprehensive and consistent information to disabled students before and during assessments. Additionally, with assessments and a higher understanding of various disabilities, improvements in postsecondary education are likely to be made by administrators and faculty.

### **Summary of the Literature Review**

Creating an adaptive, structural campus environment is important for all disabled students. Nonetheless, research has indicated that students living with an invisible disability could have many obstacles obtaining accommodations because their illness is not seen. Kuh (2003) suggests that students who are engaged maintain a purposeful, productive, and involved academic experience. However, Kuh indicates that faculty can help facilitate engagement, in-and-out of the classroom. Regardless of race, gender, or disability, effective educational practices and policies should be provided (Kuh, 2003).

It is likely that with enhanced faculty knowledge students with hidden disabilities are more likely to complete and accomplish their educational goal. However, more knowledge should be attained concerning disabled students rights, the responsibility to increase communication and impact their engagement process. According to Umbach and Wawrzynski (2005), the responsibilities as an educational leader include the ability to research, assess and understand the individuals that are in the classroom as to create an effective educational environment. Though research has been conducted on hidden disabilities in higher education, further research in discovering new and innovative ways

to enhance the engagement process in-and-out of the classroom could benefit students with invisible and physical disabilities in the future.

## Chapter III

### Methodology

#### Context of the Study

Rowan University, formerly known as Glassboro State College, is a publically funded institution. Rowan University achieved university status in 1997. Located in southern NJ, Rowan University offers 90 academic degree programs. Graduate students have over 25 degree options and four doctoral options. Rowan University has 13 colleges and 316 tenured and tenure-seeking faculty on their main campus in Glassboro (Rowan University, 2012). In 1992, Rowan University was given one of the largest donations in history by Henry and Betty Rowan: 100 million dollars (Rowan University). The study took place at Rowan University during Spring 2014 semester.

The university has a student body population of 10,951 undergraduate students and 1,650 graduate students (Rowan University, 2013). *The U.S. News & World Report* indicates that the ratio between students to faculty is 16:1 (2013). Rowan University's student population consists of 52% females and 48% males (*U.S. News & World Report*, 2013). At the university, 62% of students live off campus, and 38% live on campus (*U.S. News & World Report*, 2013). As a result, many students own or operate motorized vehicles (*U.S. News & World Report*, 2013). The 2011 "Student Life" report (*U.S. News & World Report*, 2013) indicates that there are 135 clubs and organizations in which for students to participate. According to Education Portal's 2011 report, the incoming freshman class size is 1,584, with a first year retention rate of 86%.

Rowan University has a Disability Resource Center that requires students with accommodation needs to first register with the center. In 2013, The Disability Resource

Center registered 565 students with disabilities, with two-thirds of them having invisible disabilities (Rowan University, 2013). Rowan requires these students to provide medical documentation verifying their disability when registering. Students at Rowan University that register with disability services may have physical, learning, chronic, invisible, or visual disabilities. Each has different accommodation needs. Students with learning disabilities require three types of tests: aptitude assessment, achievement assessment, and information processing (Rowan University). Students with psychological or psychiatric documentation must include their diagnosis and treatment (Rowan University). This can be a guide for faculty and staff, assisting them with information regarding the best accommodations. All other students with disabilities must provide written or typed physician-signed documentation (Rowan University).

Currently, students with disabilities are provided tutoring at the Academic Success Center (Rowan University, 2013). Chronically ill students are provided testing to see what areas they will need extra help. Disabled students at the Academic Success Center are provided with different resources based on their needs, such as technology, hearing implementations, and other communication devices (Rowan University, 2013). Rowan University offers coaching to students in the Academic Success Center, to help assist academic management and developmental growth during their experience at Rowan.

### **Population and Sampling**

Rowan University consists of 13 colleges and two schools that have faculty at the rank of assistant, associate, and full professor; most have many years of experience and possess terminal degrees. The Office of Institutional Effectiveness, Research & Planning

(IERP) assisted me with distributing the survey electronically to the sample population: tenured faculty or faculty seeking tenure. The faculty members who choose to participate were informed that their responses would be used for academic purposes only, such as training, workshops, or enhancement when working with Rowan University students with invisible disabilities. According to the IPED Human Resource Survey (2011), there were 82 full professors, 136 associate professors, and 98 assistant professors who were tenured or tenure-track faculty members (IPEDS Human Resources Survey, 2011). The study was restricted to participants that were assistant professors, associate professors, and full professors that are tenured or seeking tenure. Since validation is highly important in any investigation, adjunct faculty were not included. It is possible that there could be misconceptions, since there may be different accommodations at the various institutions where adjunct faculty are employed. The second group of subjects consisted of students enrolled in Rowan University with documented disabilities that were labeled as those with invisible or other disabilities. Both groups were surveyed during the spring 2014 semester.

There are challenges associated with the engagement process of students with invisible disabilities, such as accommodations, faculty knowledge, inclusion, and disclosure. According to Rowan University (2013), there were 565 students enrolled in Disability Services and 66.7% live with an invisible disability. However, the dominant gender was female students. The total population of students with invisible disabilities was 378.

## **Instrumentation**

The design of the study for faculty and students was structured based on a prior investigation on *Priorities and Understanding of Faculty Members Regarding College Students with Disabilities* completed at Kent State University. The instrument was composed of two sections: section A consists of demographic information; section B consists of a series of statements answered on two different types of Likert scales. The first scale reflects the degree of importance: 1 = very unimportant, 2 = unimportant, 3 = important, and 4 = very important. The second scale reflects how students and faculty feel about different statements and their level of agreement: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The survey consisted of 30 items (Appendix B). Before using this instrument, I obtained permission from the researchers from Kent State University (Appendix C).

Faculty and student subjects completed a quantitative investigation survey with identical statements that were formatted and utilized in a prior investigation that contained Likert scales of importance and agreement. The study examined what faculty and students agreed upon concerning the knowledge, laws, accommodations, students' happiness, and issues around faculty interaction and engagement of students with disabilities. Faculty and student subjects completed a different demographic section that related to their status as a faculty member or student. Before the study was conducted, subjects reviewed a written statement of the purpose and the reason why the survey was being conducted. I obtained permission from Lysandra Cook, Phillip D. Rumrill, and Melody Tankersley, the copyright owners and authors of *Priorities and Understanding of Faculty Members Regarding College Student With Disabilities*, who granted the

researcher permission to reconstruct and utilize any items before distributing them to participants (Appendix C). The questions were selected based on their relevancy to this study (Appendix D). Faculty and students had the right at any time to disregard any questions. At any time the subjects had the right to discontinue or eliminate him or herself from the survey. To test the validity of the study involved the voluntary participation of both subject groups. Before sending the survey out to both subject groups it was first analyzed by my academic advisor, Dr. Burton Sisco. Thereafter, I physically distributed the survey to a tenured faculty member and also to a student with an invisible disability within the Academic Success Center in order to make sure that structure of the survey and its cognitive validity. The student and faculty member were asked about the survey's method of understanding and if any changes should be made.

Cook et al. (2006) estimated the internal reliability of their survey by calculating the Cronbach alpha for each of the six factor themes in both importance and agreement. Their results indicated a range of .76 to .97 for importance, and a range of .72 to .94 for agreement ratings. A Cronbach alpha of .70 or above indicates an internally consistent survey.

The results from *Priorities and Understanding of Faculty Members Regarding College Student With Disabilities* indicated that at least 75% of respondents rated the items as important or very important. In addition, Kent State University survey items, which related to accommodations, score of at least 75% of high agreement and 94% of a high importance. According to Cook et al. (2006), only 38% of students were in agreement that faculty knew what to do when a student was unhappy with accommodations. However, Cook et al. (2006) found that faculty results indicated a high

importance and low agreement themes for: Disability Characteristics, Legal, and UDI. Many faculty results for accommodations willingness indicated low importance and low agreement (Cook et al., 2006).

### **Procedures of Data Gathering**

There were many steps to obtaining the approval from the IRB committee. Completing the test from the Collaborative Institutional Training Initiative (CITI) Human Subjects training course before collecting any data was essential to attaining the IRB committee's approval. Thereafter, the survey (Appendix E) was distributed with the assistance of IERP and Academic Success Center and Disability Services to the number of students that had documented disabilities at Rowan University. Subjects were informed that all information and participants were anonymous. All student subjects were also informed that by their participation in the study, they would be entered to win a \$20.00 Barnes & Noble gift card. Before subjects completed the survey they were advised that their answers would be used for academic purposes only. The flyer (Appendix F) informed students of the purpose and how they could be a part of the survey. It was provided to the IRB Committee and the Academic Success Center and Disability Services. Both student and faculty surveys for the study included a consent statement, which was sent to the IRB committee for approval. The IRB approval letter to conduct the study was granted on March 21, 2014 (see Appendix G).

### **Data Analysis**

The Faculty Survey (Appendix B) and Student Survey (Appendix E) were analyzed using the *Statistical Package for the Social Sciences* (SPSS) computer software. All questions were analyzed based on disability laws, accommodation policy, understanding



disabilities, accommodation willingness, universal design, understanding disabilities, interaction and engagement with disabled students, and treatment of students with invisible disabilities and other disabilities, as well as faculty knowledge. Both sections were analyzed based on a quantitative method research analysis. The data were analyzed using descriptive statistics, which included frequencies, means, and standard deviations (SD) to analyze the importance and agreement sections of the survey.

## Chapter IV

### Findings

#### Profile of the Samples: Faculty and Students

This quantitative study consisted of two different variable groups: faculty and students. The faculty group consisted of assistant, associate, and full professors, either tenured or seeking tenure at Rowan University. The second variable group consisted of students who live with invisible disabilities and attended Rowan University. The investigation was constructed for educators with experience in higher education and students with invisible disabilities. There were no limitations to male or female students or faculty members. All volunteers were welcomed to participate regardless of his or her race, sexuality, or religion. The study was restricted to full-time faculty.

Table 4.1 corresponds to the number of faculty respondents and demographic information allowing me to produce consistent results. Table 4.1 depicts the gender of faculty respondents that volunteered for the survey, which relates to faculty knowledge and the development of students with invisible disabilities at Rowan University. The target population for this study included all tenured and tenure-seeking faculty which included approximately 316 faculty members; a total of 112 responses were received for a response rate of 35%. The second targeted group at Rowan University was students with invisible disabilities and other disabilities (Table 4.2). There were 565 disabled students registered with the Office of Disability Services and approximately 66.7% or 378 were listed as having invisible disabilities. Of the 378 surveys distributed to students, 130 responses were reviewed giving a 34% response rate. Students with hidden disabilities included Autism, ADHD, Anxiety, Asperger-Syndrome, Learning

Disabilities, Diabetes, Epilepsy, and students with Hearing Loss.

Table 4.1

*Faculty Subject Demographics (N=112)*

Subjects	<i>f</i>	%
<b>Gender</b>		
Female	54	51.9
Male	50	44.6
Missing	8	3.5
<b>Academic Status</b>		
Tenure tack	83	74.1
Seeking tenure	14	12.5
Missing	15	13.4
<b>Ethnicity</b>		
African American	5	4.5
Caucasian	85	75.9
Hispanic	3	2.7
Native American	1	.9
Asian American	6	5.3
Missing	9	8.0
Other	3	2.7
<b>College</b>		
Rohrer College of Business	8	7.1
Communications & Creative Arts	14	12.5
College of Education	23	20.5
College of Engineering	11	9.8
College Humanities & Social Science	18	16.1
College of Performance Arts	5	4.5
Science & Mathematics	23	20.5
Graduate & Continuing Education		
School of Biomedical Sciences		
Cooper Medical School		
Missing	10	9.0
<b>Disability (Yes or No)</b>		
Yes	17	15.2
No	81	72.3
Missing	14	12.5

Table 4.2

*Student Subject Demographics (N=130)*

<i>Subjects</i>	<i>f</i>	<i>%</i>
<b>Gender</b>		
Female	66	50.8
Male	62	47.7
Missing	2	1.5
<b>Academic Status</b>		
Freshman	26	20
Sophomore	30	23.1
Junior	30	23.1
Senior	30	23.1
Graduate	11	8.5
Missing	3	2.3
<b>Ethnicity</b>		
African American	10	7.7
Caucasian	97	74.6
Hispanic	6	4.6
Asian American	4	3.1
Other	7	5.4
Missing	6	4.6
<b>Live On Campus</b>		
On Campus	63	48.5
Off Campus	55	42.3
Missing	12	9.2
<b>College</b>		
Rohrer College of Business	13	10.5
Communications & Creative Arts	18	13.8
College of Education	28	21.5
College of Engineering	9	6.9
College Humanities & Social Science	22	16.9
College of Performance Arts	6	4.6
Science & Mathematics	25	19.2
Graduate & Continuing Education	3	2.3
School of Biomedical Sciences		
Cooper Medical School		
Missing	6	4.6
<b>Invisible Disability (Yes or No)</b>		
Yes	108	83.1
No	16	12.3
Missing	6	4.6

## Analysis of the Data

**Research Question 1.** What level of importance do selected Rowan University faculty have concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?

Table 4.3 depicts the importance level of faculty concerning invisible or disability laws surrounding a disabled student in higher education. Items are arranged by factor grouping according to highest to lowest importance level. Results indicate that the highest level of importance (63.4%) was given to the statement, “Faculty members at Rowan understand the educational access laws of Section 504 and the American Disabilities Act (ADA).” The lowest level of importance (44.6%) was given to the statement, “Faculty members include a statement about the rights of students with disabilities on all course syllabi.”

Table 4.3

*Faculty Importance Level: Disability Laws**1=Very Unimportant, 2=Unimportant, 3=Important, 4=Very Important*

Statements	VUI		Un		I		VI	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members understand that students with disabilities must have physical access to buildings on campus. <i>n</i> =91, <i>M</i> =3.70, <i>SD</i> =.637 Missing = 21	3	2.7	0	0	17	15.2	71	63.4
Faculty members at Rowan understand the educational access laws of Section 504 and the American Disabilities Act (ADA). <i>n</i> =91, <i>M</i> =3.64, <i>SD</i> =.641 Missing= 21	2	1.8	2	1.8	23	20.5	64	57.1
Faculty members at Rowan understand why accommodations for students with disabilities are necessary. <i>n</i> =87, <i>M</i> =3.50, <i>SD</i> =.680 Missing= 25	3	2.7	0	0	33	29.5	51	45.5
Faculty members understand that students with disabilities are not required to disclose diagnostic and treatment information to course instructors. <i>n</i> =88, <i>M</i> =3.45, <i>SD</i> .710 Missing= 24	3	2.7	2	1.8	35	31.3	48	42.9
Faculty members include a statement about the rights of students with disabilities on all course syllabi. <i>n</i> =82, <i>M</i> =3.41, <i>SD</i> =.860 Missing = 30	4	3.6	8	7.1	20	17.9	50	44.6

Table 4.4 provides a summary of the faculty importance levels concerning accommodation policy for disabled students at Rowan University. Items are arranged by

factor grouping according to highest to lowest importance level. Results indicate that the highest level of importance (63.4%) was given to the statement, “Faculty members understand that they are required to provide reasonable accommodations for students with documented disabilities.” The lowest level of importance (24.1%) was given to the statement, “Faculty members’ academic freedom permits them to decide how they will provide accommodations for student with disabilities in their courses.”

Table 4.4

*Faculty Importance Level: Accommodation Policy*  
(1= Very Unimportant; 2= Unimportant; 3= Important; 4= Very Important)

Statements	VUI		Un		I		VI	
	f	%	f	%	f	%	f	%
Faculty members understand that they are required to provide reasonable accommodations for students with documented disabilities. <i>n</i> =90, <i>M</i> =3.73, <i>SD</i> =.596 Missing=22	2	1.8	1	.9	16	14.3	71	63.4s
Faculty members and students understand that reasonable accommodations do not alter the course content or objectives. <i>n</i> =91, <i>M</i> =3.64, <i>SD</i> =.624 Missing=21	2	1.8	1	.9	25	22.3	63	56.3
Faculty members understand that reasonable accommodations do not require them to lower their academic standards. <i>n</i> =90, <i>M</i> =3.61, <i>SD</i> =.648 Missing= 22	2	1.8	2	1.8	25	22.3	61	54.5
Faculty members at Rowan understand that reasonable accommodations do not give students with disabilities an unfair advantage. <i>n</i> =91, <i>M</i> =3.58, <i>SD</i> =.616 Missing=21	2	1.8	0	0	32	28.6	57	50.9

Table 4.4 (continued)

*Faculty Importance Level: Accommodation Policy*

Statements	VUI		Un		I		VI	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members understand that reasonable accommodations enable students with disabilities to have the same opportunities as their non-disabled peers. <i>n</i> =86, <i>M</i> =3.56, <i>SD</i> =.644 Missing= 26	2	1.8	1	.9	30	26.8	53	47.3
Faculty members understand that students must self disclose to Student Disability Services their disabling condition to receive accommodations. <i>n</i> =89, <i>M</i> =3.47, <i>SD</i> =.623 Missing= 23	2	1.8	0	0	41	36.6	46	41.1
Faculty members are familiar with assistive technology that can facilitate learning. <i>n</i> =85, <i>M</i> =3.24, <i>SD</i> =.797 Missing=27	3	2.7	10	8.9	36	32.1	36	32.1
Faculty members' academic freedom permits them to decide how they will accommodate for students with disabilities in their courses. <i>n</i> =83, <i>M</i> =2.9, <i>SD</i> =.970 Missing=27	8	7.1	19	17	29	25.9	27	24.1

Table 4.5 provides a summary of the faculty importance levels concerning accommodation willingness for disabled students at Rowan University. Items are arranged by factor grouping according to highest to lowest importance level. Results indicate that the highest level of importance (42.9%) was given to the statement, "Faculty members are willing to make accommodations for students with disabilities regarding their test taking (e.g., providing untimed tests, alternate venues for tests, rephrasing of questions by proctor, or alternate formats for tests)." The lowest level of importance



(17.9%) was given to the statement, “Faculty members are willing to allow course substitutions or waivers for students with disabilities.”

Table 4.5

*Faculty Importance Level: Accommodation Willingness*  
(1= Very Unimportant; 2= Unimportant; 3= Important; 4= Very Important)

Statement	VUI		Un		I		VI	
	f	%	f	%	f	%	f	%
Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed tests, alternate venues for tests, rephrasing questions by proctor, or alternate formats for tests). <i>n</i> =86, <i>M</i> =3.49, <i>SD</i> =.664 Missing=24	2	1.8	2	1.8	34	30.4	48	42.9
Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g. providing note takers, copies of notes, tape record lectures). <i>n</i> =86, <i>M</i> =3.49, <i>SD</i> =.664 Missing= 27	2	1.8	3	2.7	33	29.5	47	42.0
Faculty members should obtain additional information about a student’s disability if he or she does not understand the information or feels excluded. <i>n</i> =82, <i>M</i> =3.18, <i>SD</i> =.848 Missing=30	5	4.5	8	7.1	36	32.1	33	29.5
Faculty members are willing to make accommodations for students with disabilities regarding grading assignments, tests, and papers (e.g., giving partial credit for progress even when the final answer is wrong, not grading for incorrect grammar and punctuation, allowing a proofreader to review work before submission, allowing the use of calculators or dictionaries). <i>n</i> =83, <i>M</i> =3.05, <i>SD</i> =.868 Missing=29	6	5.4	11	9.8	39	34.8	27	24.1

Table 4.5 (continued)

*Faculty Importance Level: Accommodation Willingness*

Statement	VUI		Un		I		VI	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members are willing to allow course substitutions or waivers for students with disabilities. <i>n</i> =82, <i>M</i> =2.83, <i>SD</i> =.900 Missing=30	7	6.3	20	17.9	35	31.3	20	17.9

Table 4.6 provides a summary of the faculty importance levels concerning universal design for disabled students at Rowan University. Items are arranged by factor grouping according to the highest to lowest importance level. Results indicate that the highest level of importance (48.2%) was given to the statement, “Faculty members have high expectations of success for all students.” The lowest level of importance (32.1%) was given to the statement, “Faculty members provide lecture and course material in a wide variety of formats and media.”

Table 4.6

*Faculty Importance Level: Universal Design**(1= Very Unimportant; 2= Unimportant; 3= Important; 4= Very Important)*

Statement	VUI		Un		I		VI	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members have high expectations of success for all students. <i>n</i> =82, <i>M</i> =3.59, <i>SD</i> =.666 Missing =30	2	1.8	2	1.8	24	21.4	54	48.2
Faculty members present course content in a well-organized, sequential manner that is paced to account for variations in students' learning styles and abilities. <i>n</i> =81, <i>M</i> =3.38, <i>SD</i> =.768 Missing=31	2	1.8	8	7.1	28	25	43	38.4
Faculty members present course content that can be understood by students with diverse learning styles and abilities. <i>n</i> =78, <i>M</i> =3.32, <i>SD</i> =.764 Missing=34	1	.9	33.9	9.8	28	25.0	38	33.9
Faculty members provide lecture and course material in a wide variety of formats and media. <i>n</i> =79, <i>M</i> =3.25, <i>SD</i> =.808 Missing=33	2	1.8	2	10.7	29	25.9	36	32.1

Table 4.7 provides a summary of the faculty importance levels concerning understanding disabilities for disabled students at Rowan University. Items are arranged by factor grouping according to the highest to lowest importance level. Results indicate that the highest level of importance (56.3%) was assigned to the statement, “Faculty members understand that reasonable accommodations are determined on a case-by-case basis.” The lowest level of importance (37.5%) was given to the statement, “Faculty members at Rowan understand the process that students undergo to document their disabilities.”

Table 4.7

*Faculty Importance Level: Understanding Disabilities*  
*(1= Very Unimportant; 2= Unimportant; 3= Important; 4=Very Important)*

Statement	VUI		Un		I		VI	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members understand that reasonable accommodations are determined on a case-by-case basis. <i>n</i> =91, <i>M</i> =3.64, <i>SD</i> =.624. Missing=21	2	1.8	1	.9	25	22.3	63	56.3
Faculty members design courses that promote interaction and communication among students and between students and instructors to create social engagement. <i>n</i> =85, <i>M</i> =3.39, <i>SD</i> =.725 Missing=27	2	1.8	6	5.4	34	30.4	43	38.4
Faculty members at Rowan know what to do when a student is unhappy with the accommodations provided to him or her. <i>n</i> =87, <i>M</i> =3.38, <i>SD</i> =.669 Missing=25	2	1.8	3	2.7	42	37.5	40	35.7
Faculty members at Rowan understand the process that students undergo to document their disabilities. <i>n</i> =91, <i>M</i> =3.34, <i>SD</i> =.718. Missing=21	2	1.8	7	6.3	40	35.7	42	37.5

Table 4.8 provides a summary of the faculty importance levels concerning interaction and engagement for disabled students at Rowan University. Items are arranged by factor grouping according to the highest to lowest importance level. Results indicate that the highest level of importance (50.9%) was assigned to the statement,

“Faculty members understand that students with disabilities are individuals just like all other students and do not share common personality traits as a function of disability.”

The lowest level of importance (28.6%) was given to the statement, “Faculty members use first person language (e.g., “person with a disability,” rather than “disabled person”) when speaking about a person with a disability.”

Table 4.8

*Faculty Importance Level: Interaction and Engagement*  
(1= Very Unimportant; 2= Unimportant; 3= Important; 4= Very Important)

Statement	VUI		Un		I		VI	
	f	%	f	%	f	%	f	%
Faculty members understand that students with disabilities are individuals just like all other students and do not share common personality or social traits as a function of disability. <i>n</i> =82, <i>M</i> =3.63, <i>SD</i> =.639 Missing=30	2	1.8	1	.9	22	19.6	57	50.9
Faculty members are careful to protect the confidentiality of students with disabilities. <i>n</i> =82, <i>M</i> =3.59, <i>SD</i> =.736 Missing=30	3	2.7	3	2.7	19	17.0	57	50.9
Faculty members do not hold over generalized stereotypes about students with disabilities (e.g., disability is a constantly frustrating tragedy, all students with disabilities are brave and courageous, all students with learning disabilities are lazy). <i>n</i> =82, <i>M</i> =3.43, <i>SD</i> =.770 Missing=30	4	3.6	2	1.8	31	27.7	45	40.2
Faculty members use first person language (e.g., “person with a disability” rather than “disabled person”) when speaking about a person with a disability. <i>n</i> =80, <i>M</i> =3.18, <i>SD</i> =.823 Missing=32	3	2.7	12	10.7	33	29.5	32	28.6

**Research Question 2.** What level of agreement do selected Rowan University faculty have concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?

Table 4.9 provides a summary of the faculty agreement levels concerning general climate/practices according to disabled students at Rowan University. Items are arranged by factor grouping according to highest to lowest agreement level. Results indicate that the highest level of agreement (44.6%) was assigned to the statement, “Faculty members understand that students with disabilities must have physical access to buildings on campus.” The lowest level of agreement (14.3%) was given to the statement, “Faculty members understand that students with disabilities are not required to disclose diagnostic and treatment information to course instructors.”

Table 4.9

*Faculty Agreement Level: Disability Laws*  
(1= Strongly Disagree; 2=Disagree; 3=Agree; 4= Strongly Agree)

Statements	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members understand that students with disabilities must have physical access to buildings on campus. <i>n</i> =88, <i>M</i> =3.48, <i>SD</i> =.678 Missing=24	1	.9	6	5.4	31	27.7	50	44.6
Faculty members include a statement about the rights of students with disabilities on all course syllabi. <i>n</i> =78, <i>M</i> =3.17, <i>SD</i> =.903 Missing=34	3	2.7	17	15.2	22	19.6	36	32.1
Faculty members at Rowan understand why accommodations for students with disabilities are necessary. <i>n</i> =85, <i>M</i> =3.01, <i>SD</i> =.784 Missing=27	5	4.5	11	9.8	47	42.0	22	19.6
Faculty members at Rowan understand the educational access laws of Section 504 and the American Disabilities Act (ADA). <i>n</i> =91, <i>M</i> =2.99, <i>SD</i> =.823 Missing=21	4	3.6	19	17.0	42	37.5	26	23.2
Faculty members understand that students with disabilities are not required to disclose diagnostic and treatment information to course instructors. <i>n</i> = 90, <i>M</i> =2.86, <i>SD</i> =.773 Missing=22	5	4.5	19	17.0	50	44.6	16	14.3

Table 4.10 provides a summary of the faculty agreement levels concerning accommodation policy for disabled students at Rowan University. Items are arranged by factor grouping from highest to lowest mean score agreement level. Results indicate that



77.7% of the faculty either agreed or strongly agreed with the statement, “Faculty members understand that they are required to provide reasonable accommodations for students with documented disabilities.” Conversely, only 28.6% of the faculty agreed or strongly agreed with the statement, “Faculty members’ academic freedom permits them to decide how they will provide accommodations for students with disabilities within their courses.”

Table 4.10

*Faculty Agreement Level: Accommodation Policy*  
(1=Strongly Disagree; 2=Disagree; 3=Agree; 4=Strongly Agree)

Statement	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members understand that they are required to provide reasonable accommodations for students with documented disabilities. <i>n</i> =90, <i>M</i> =3.73, <i>SD</i> =.596 Missing=22	2	1.8	1	.9	16	14.3	71	63.4
Faculty members at Rowan understand that reasonable accommodations do not give students with disabilities an unfair advantage. <i>n</i> =91, <i>M</i> =3.58, <i>SD</i> =.616 Missing=21	2	1.8	0	0	32	28.6	50.9	57
Faculty members understand that students must self disclose to Student Disability Services their disabling condition to receive accommodations. <i>n</i> =89, <i>M</i> =3.47, <i>SD</i> =.623 Missing=23	2	1.8	0	0	41	36.6	46	41.1
Faculty members understand that reasonable accommodations enable students with disabilities to have the same opportunities as their non-disabled peers. <i>n</i> =86, <i>M</i> =3.20, <i>SD</i> =.690 Missing=26	1	.9	10	8.9	44	39.3	29	25.9

Table 4.10 (continued)

*Faculty Agreement Level: Accommodation Policy*

Statement	SD		D		A		SA	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members understand that reasonable accommodations do not require them to lower their academic standards. <i>n</i> =87, <i>M</i> =3.10, <i>SD</i> =.850 Missing=25	4	3.6	15	13.4	36	32.1	32	28.6
Faculty members and students understand that reasonable accommodations do not alter the course content or objectives. <i>n</i> =85, <i>M</i> =3.09, <i>SD</i> =.854 Missing=27	4	3.6	15	13.4	35	31.3	31	27.7
Faculty members are familiar with assistive technology that can facilitate learning. <i>n</i> =84, <i>M</i> =2.44, <i>SD</i> =.949 Missing=28	14	12.5	32	28.6	25	22.3	13	11.6
Faculty members' academic freedom permits them to decide how they will provide accommodations for students with disabilities in their courses. <i>n</i> =85, <i>M</i> =2.34, <i>SD</i> =1.007 Missing=27	18	16.1	35	31.3	17	15.2	15	13.4

Table 4.11 provides a summary of the faculty agreement levels concerning accommodation policy for disabled students at Rowan University. Items are arranged by factor grouping from highest to lowest mean score agreement level. Results indicate that 72.9% of faculty either agreed or strongly agreed with the statement, "Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed tests, alternate venues for tests, rephrasing of questions by proctor, or alternate formats for tests)." Conversely, only 17.9% of the faculty strongly

agreed with the statement, “Faculty members are willing to allow course substitutions or waivers for students with disabilities.”

Table 4.11

*Faculty Agreement Level: Accommodation Willingness*  
(1=Strongly Disagree; 2=Disagree; 3=Agree; 4=Strongly Agree)

Statement	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed tests and alternate venues for tests, rephrasing of questions by proctor, or alternate formats for tests). <i>n</i> =86, <i>M</i> =3.09, <i>SD</i> =.777 Missing=26	2	1.8	2	1.8	34	30.4	48	42.9
Faculty members are willing to make accommodations for students with disabilities regarding note taking (e.g., providing note takers, copies of notes, tape record lectures). <i>n</i> =86, <i>M</i> =3.01, <i>SD</i> =.833. Missing=26	2	1.8	3	2.7	33	29.5	47	42.0
Faculty members should obtain additional information about a student’s disability if he or she does not understand the information or feels excluded. <i>n</i> =82, <i>M</i> =2.79, <i>SD</i> =.913 Missing=30	5	4.5	8	7.1	36	32.1	33	29.5
Faculty members are willing to make accommodations for students with disabilities regarding grading, test, and assignments (e.g., giving potential credit for process even when the final answer is wrong, not grading misspellings, incorrect grammar and punctuation, allowing a proctor to review work before submission, allowing the use of calculators or dictionaries). <i>n</i> =81, <i>M</i> =2.58, <i>SD</i> =.849 Missing=31	6	5.4	11	9.8	39	34.8	27	24.1
Faculty members are willing to allow course substitutions or waivers for students with disabilities. <i>n</i> =82, <i>M</i> =2.34, <i>SD</i> =.906 Missing=30	7	6.3	20	17.9	35	31.3	20	17.9

Table 4.12 provides a summary of the faculty agreement levels concerning universal design at Rowan. Items are arranged by a factor grouping from highest to lowest mean score agreement level. Results indicate that 57.1% of the faculty either agreed or strongly agreed with the statement, “Faculty members have high expectations of success for all students.” Conversely, 16.1% of the faculty strongly agreed with the statement, “Faculty members provide lecture and course material in a wide variety of formats and media.”

Table 4.12

*Faculty Agreement Level: Universal Design*  
(1=Strongly Disagree; 2= Disagree; 3=Agree; 4=Strongly Agree)

Statement	SD		D		A		SA	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members have high expectations of success for all students. <i>n</i> =80, <i>M</i> =3.24, <i>SD</i> =.917 Missing=32	5	4.5	11	9.8	24	21.4	40	35.7
Faculty members present course content in a well-organized sequential manner that is paced to account for variations in students' learning styles and abilities. <i>n</i> =78, <i>M</i> =2.95, <i>SD</i> =.910 Missing=34	5	4.5	19	17.0	29	25.9	25	22.3
Faculty members present course content that can be understood by students with diverse learning styles and abilities. <i>n</i> =78, <i>M</i> =2.87, <i>SD</i> =.885 Missing=34	4	3.6	23	20.5	28	25.0	21	18.8
Faculty members provide lecture and course material in a wide variety of formats and media. <i>n</i> =77, <i>M</i> =2.70, <i>SD</i> =.933 Missing=35	7	6.3	27	24.1	25	22.3	18	16.1

Table 4.13 provides a summary of the faculty agreement levels concerning understanding disabilities at Rowan. Items are arranged by a factor grouping from highest to lowest mean score agreement level. Results indicate that 55.4% of the faculty either agreed or strongly agreed with the statement, "Faculty members design courses that promote interaction and communication among students and between students and instructors to create social engagement." Conversely, only 12.5% of the faculty strongly

agreed with the statement, “Faculty members at Rowan know what to do when a student is unhappy with accommodations provided to him or her.”

Table 4.13

*Faculty Agreement Level: Understanding Disabilities*  
(1= Strongly Disagree; 2= Disagree; 3= Agree; 4= Strongly Agree)

Statement	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members design course courses that promote interaction and communication among students and between students and instructors to create social engagement. <i>n</i> =83, <i>M</i> =3.38, <i>SD</i> =.669 Missing=29	2	1.8	19	17.0	41	36.6	21	18.8
Faculty members understand that reasonable accommodations are determined on a case-by-case basis. <i>n</i> =88, <i>M</i> =3.11, <i>SD</i> =.850. Missing=24	4	3.6	15	13.4	36	32.1	33	29.5
Faculty members at Rowan understand the process that students undergo to document their disabilities. <i>n</i> =91, <i>M</i> =2.70, <i>SD</i> =.850 Missing=21	7	6.3	29	25.9	39	34.8	16	14.3
Faculty members at Rowan know what to do when a student is unhappy with accommodations provided to him or her. <i>n</i> =86, <i>M</i> =2.50, <i>SD</i> =.851 Missing=26	6	5.4	45	40.2	21	18.8	14	12.5

Table 4.14 provides a summary of the faculty agreement levels concerning interaction and engagement at Rowan. Items are arranged by a factor grouping from highest to lowest mean score agreement level. Results indicate that 62.5% of the faculty either agreed or strongly agreed with the statement, “Faculty members understand that

students with disabilities are individuals just like all other students and do not share common personality or social traits as a function of disability. ” Conversely, 50.0% of the faculty agreed or strongly agreed with the statement, “Faculty members use first person language (e.g., “person with a disability” rather than “disabled person”) when speaking about a person with a disability.”

Table 4.14

*Faculty Agreement Level: Interaction and Engagement*  
(1= Strongly Disagree; 2=Disagree; 3=Agree; 4= Strongly Agree)

Statement	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members understand that students with disabilities are individuals just like all other students and do not share common personality or social traits as a function of disability. <i>n</i> =78, <i>M</i> =3.27, <i>SD</i> =.784 Missing=34	4	3.6	4	3.6	37	33.0	33	29.5
Faculty members are careful to protect the confidentiality of students with disabilities. <i>n</i> =79, <i>M</i> =3.20, <i>SD</i> =.868 Missing= 33	3	2.7	14	12.5	26	23.2	36	32.1
Faculty members do not hold over generalized stereotypes about students with disabilities (e.g., disability is a constantly frustrating tragedy, all students with disabilities are brave and courageous, all students with learning disabilities are lazy). <i>n</i> =76, <i>M</i> =2.86, <i>SD</i> =.948 Missing=36	8	7.1	16	14.3	31	27.7	21	18.8
Faculty members use first person language (e.g., “person with a disability” rather than disabled person”) when speaking about a person with a disability. <i>n</i> =79, <i>M</i> =2.70, <i>SD</i> =.897 Missing=33	8	7.1	23	20.5	33	29.5	15	13.4

**Research Question 3.** What level of importance do selected invisible disabled students have concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement of faculty with disabled students?

Table 4.15 provides students' perspectives of the importance of disability laws. Items are arranged by factor grouping according to highest to lowest importance level. Results indicate the highest level of importance (48.5%) was given to the statement, "Faculty members at Rowan understand the educational access laws of Section 504 and the American Disabilities Act (ADA)." The lowest level of importance (42.3%) was assigned to the statement, "Faculty members at Rowan understand why accommodations for students with disabilities are necessary."

Table 4.15

*Student Importance Level: Disability Laws*  
(1=Very Unimportant; 2=Unimportant; 3=Important; 4=Very Important)

Statements	VUI		Un		I		VI	
	f	%	f	%	f	%	f	%
Faculty members at Rowan understand the educational access laws of Section 504 and the American Disabilities Act. <i>n</i> =108, <i>M</i> =3.64, <i>SD</i> =.641 Missing=22	2	1.5	2	1.5	41	20.5	63	48.5
Faculty members understand that students with disabilities must have physical access to buildings on campus. <i>n</i> =107, <i>M</i> =3.48, <i>SD</i> =.744 Missing=23	4	3.1	4	3.1	36	27.7	63	48.5
Faculty members include a statement about the rights of students with disabilities on all course syllabi. <i>n</i> =95, <i>M</i> =3.45, <i>SD</i> =.623 Missing=35	1	.8	4	3.1	41	31.5	49	37.7



Table 4.15 (continued)

*Student Importance Level: Disability Laws*

Statements	VUI		Un		I		VI	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members at Rowan understand that students with disabilities are not required to disclose diagnostic and treatment information to course instructors. <i>n</i> =107, <i>M</i> =3.13, <i>SD</i> =.82 Missing=23	3	2.3	1	.8	54	41.5	49	37.7
Faculty members at Rowan understand why accommodations for students with disabilities are necessary. <i>n</i> =97, <i>M</i> =3.00, <i>SD</i> =.911 Missing=33	1	.8	3	2.3	38	29.5	55	42.3

Table 4.16 provides a summary of students' perspectives of the importance that faculty assign to accommodation policy for disabled students at Rowan University. Items are arranged by factor grouping according to highest to lowest level of importance. Results indicate that the highest level of importance (50.8%) was given to the statement, "Faculty members understand that they are required to provide reasonable accommodations for students with documented disabilities." The lowest level of importance (25.4%) was assigned to the statement, "Faculty members' academic freedom permits them to decide how they will provide accommodations for students with disabilities in their courses."

Table 4.16

*Student Importance Level: Accommodation Policy*  
*(1=Very Unimportant; 2=Unimportant; 3=Important; 4=Very Important)*

Statement	VU		Un		I		VI	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
Faculty members understand that they are required to provide reasonable accommodations for students with documented disabilities. <i>n</i> =107, <i>M</i> =3.56, <i>SD</i> =.632 Missing=23	2	1.5	2	1.5	37	28.5	6	50.8
Faculty members and students understand that reasonable accommodations do not alter the course content or objectives. <i>n</i> =105, <i>M</i> =3.53, <i>SD</i> =.621 Missing=25	2	1.5	1	.8	41	31.5	61	46.9
Faculty members understand that reasonable accommodations do not require them to lower their academic standards. <i>n</i> =105, <i>M</i> =3.48, <i>SD</i> =.695 Missing=25	3	2.3	3	2.3	40	30.8	59	45.4
Faculty members understand that reasonable accommodations enable students with disabilities to have the same opportunities as their non-disabled peers. <i>n</i> =98, <i>M</i> =3.48, <i>SD</i> =.630 Missing=32	1	.8	4	3.1	40	30.8	53	40.8
Faculty members at Rowan understand that reasonable accommodations do not give students with disabilities an unfair advantage. <i>n</i> =105, <i>M</i> =3.47, <i>SD</i> =.680 Missing=25	2	1.5	5	3.8	40	30.8	58	44.6
Faculty members understand that students must self disclose to Student Disability Services their disabling condition to receive accommodations. <i>n</i> =107, <i>M</i> =3.38, <i>SD</i> =.773 Missing=23	5	3.8	4	3.1	43	33.1	55	42.3

Table 4.16 (continued)

*Student Importance Level: Accommodation Policy*

Statement	VU		Un		I		VI	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members are familiar with assistive technology that can facilitate learning. <i>n</i> =97, <i>M</i> =3.36, <i>SD</i> =.664 Missing=33	1	.8	7	5.4	45	34.6	44	33.8
Faculty members' academic freedom permits them to decide how they will provide accommodations for students with disabilities in their courses. <i>n</i> =96, <i>M</i> =3.15, <i>SD</i> =.781 Missing=34	4	3.1	0	8.5	48	36.9	33	25.4

Table 4.17 provides a summary of students' perspectives of the importance of faculty willingness to make accommodations for disabled students at Rowan University. Items are arranged by factor grouping according to highest to lowest level of importance. The data show that the highest level of importance (44.6%) was given to the statement, "Faculty members are willing to make accommodations for students with disabilities regarding note taking (e.g., providing note takers, copies of notes, tape recorded lectures)." The lowest level of importance (26.2%) was assigned to the statement, "Faculty members are willing to make accommodations for students with disabilities regarding grading assignments, tests, and papers (e.g., giving partial credit for process even when the final answer is wrong, not grading misspellings, incorrect grammar and punctuation, allowing a proofreader to review before submission, allowing calculators, or dictionaries)."

Table 4.17

*Student Importance Level: Accommodation Willingness*  
*(1=Very Unimportant; 2=Unimportant; 3=Important; 4= Very Important)*

Statement	VUI		Un		I		VI	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members are willing to make accommodations for students with disabilities regarding note taking (e.g., providing note takers, copies of notes, tape record lectures). <i>n</i> =98, <i>M</i> =3.54, <i>SD</i> =.612 Missing=32	1	.8	3	2.3	36	27.7	58	44.6
Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed tests and alternate venues for tests, rephrasing of questions by proctor, or alternate formats for tests). <i>n</i> =97, <i>M</i> =3.53, <i>SD</i> =.647 Missing=33	2	1.5	2	1.5	36	27.7	57	43.8
Faculty members should obtain additional information about a student's disability if he or she does not understand the information or feels excluded. <i>n</i> =97, <i>M</i> =3.28, <i>SD</i> =.703 Missing=33	3	2.3	5	3.8	51	39.2	38	29.2
Faculty members are willing to allow course substitutions or waivers for students with disabilities. <i>n</i> =94, <i>M</i> =3.12, <i>SD</i> =.828 Missing=36	5	3.8	12	9.2	44	33.8	33	25.4
Faculty members are willing to make accommodations for students with disabilities regarding grading, assignments, tests, and papers (e.g., giving partial credit for process even when the final answer is wrong, not grading misspellings, incorrect grammar and punctuation, allowing a proofreader to review before submission, or allowing calculators, or dictionaries). <i>n</i> =98, <i>M</i> =3.10, <i>SD</i> =.855 Missing=32	7	5.4	10	7.7	47	36.2	34	26.2

Table 4.18 provides a summary of students' perspectives of the importance faculty assign to universal course design at Rowan. Items are arranged by a factor grouping from highest to lowest mean score importance level. Results indicate that the highest level of importance (40.8%) was given to the statement, "Faculty members have high expectations of success for all students." The lowest level of importance (36.9%) was assigned to the statement, "Faculty members provide lecture and course material in a wide variety of formats and media."

Table 4.18

*Student Importance Level: Universal Design*  
(1= Very Unimportant; 2= Unimportant; 3=Important; 4= Very Important)

Statement	VUI		Un		I		VI	
	f	%	f	%	f	%	f	%
Faculty members have high expectations of success for all students. <i>n</i> =93, <i>M</i> =3.51, <i>SD</i> =.619 Missing=37	1	.8	3	2.3	37	28.5	52	40.8
Faculty members present course content that can be understood by students with diverse learning styles and abilities. <i>n</i> = 96, <i>M</i> =3.50, <i>SD</i> =.632 Missing=34	2	1.5	1	.8	40	30.8	53	40.0
Faculty members present course content in a well-organized sequential manner that is paced to account for variations in students' learning styles and abilities. <i>n</i> =94, <i>M</i> =3.49, <i>SD</i> =.652 Missing=36	2	1.5	2	1.5	38	29.2	52	40.0
Faculty members provide lecture and course material in a wide variety of formats and media. <i>n</i> =95, <i>M</i> =3.44, <i>SD</i> =.631 Missing=35	1	.8	4	3.1	42	32.3	48	36.9

Table 4.19 provides a summary of student perspectives of the importance faculty assign to the understanding of disabilities at Rowan. Items are arranged by a factor grouping from highest to lowest mean score importance level. Results indicate that the highest level of importance (47.7%) was given to the statement, “Faculty members understand that reasonable accommodations are determined on a case-by-case basis.” The lowest level of importance (29.2%) was assigned to the statement, “Faculty members at Rowan know what to do when a student is unhappy with the accommodations provided to him or her.”

Table 4.19

*Student Importance Level: Understanding Disabilities*  
(1= Very Unimportant; 2=Unimportant; 3=Important; 4=Very Important)

Statement	VUI		Un		I		VI	
	f	%	f	%	f	%	f	%
Faculty members understand that reasonable accommodations are determined on a case-by-case basis. <i>n</i> =107, <i>M</i> =3.50, <i>SD</i> =.664 Missing=23	2	1.5	4	3.1	39	30.0	62	47.7
Faculty members design courses that promote interaction and communication among students and between students and instructors to create social engagement. <i>n</i> =98, <i>M</i> =3.33, <i>SD</i> =.729 Missing=32	4	3.1	3	2.3	48	36.9	43	33.1
Faculty members at Rowan understand the process that students undergo to document their disabilities. <i>n</i> =106, <i>M</i> =3.32, <i>SD</i> =.711 Missing=24	2	1.5	9	6.9	48	36.9	47	36.2
Faculty members at Rowan know what to do when a student is unhappy with the accommodations provided to him or her. <i>n</i> =98, <i>M</i> =3.28, <i>SD</i> =.685 Missing=32	2	1.5	7	5.4	51	39.2	38	29.2

Table 4.20 provides a summary of students' perspectives of the importance faculty assign to interaction and engagement at Rowan. Items are arranged by a factor grouping from highest to lowest mean score importance level. Results indicate that the highest level of importance (47.3%) was given to the statement, "Faculty members are careful to protect the confidentiality of students with disabilities." The lowest level of importance (26.9%) was assigned to the statement, "Faculty members use first person language (e.g., "person with a disability" rather than "disabled person") when speaking about a person with a disability."

Table 4.20

*Student Importance Level: Interaction and Engagement*  
*(1= Very Unimportant; 2= Unimportant; 3= Important; 4= Very Important)*

Statement	VUI		Un		I		VI	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members are careful to protect the confidentiality of students with disabilities. <i>n</i> =95, <i>M</i> =3.56, <i>SD</i> =.560 Missing=35	1	.8	0	0	39	30.0	55	42.3
Faculty members understand that students with disabilities are individuals just like all other students and do not share common personality or social traits as a function of disability. <i>n</i> =96, <i>M</i> =3.53, <i>SD</i> =.664 Missing=34	2	1.5	3	2.3	33	25.4	58	44.6
Faculty member do not hold over generalized stereotypes about students with disabilities (e.g., disability is a constantly frustrating tragedy, all students with disabilities are brave and courageous, all students with learning disabilities are lazy). <i>n</i> =96, <i>M</i> =3.48, <i>SD</i> =.649 Missing=34	1	.8	5	3.6	37	28.5	53	40.8
Faculty members use first person language (e.g., “person with a disability” rather than “disabled person”) when speaking about a person with a disability. <i>n</i> =95, <i>M</i> =3.03, <i>SD</i> =.950 Missing=35	9	6.9	14	10.8	37	28.5	35	26.9

**Research Question 4.** Do selected students with invisible and other disabilities agree that faculty at Rowan University have knowledge of: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement of disabled students at Rowan University?

Table 4.21 provides a summary of the students' agreement levels concerning Rowan faculty knowledge of disability laws. Items are arranged by factor grouping



according to highest to lowest agreement level. Results indicated that highest level of agreement (36.2%) was to the statement, “Faculty members understand that students with disabilities must have physical access to building on campus.” The lowest level of agreement (27.7%) was given by students to the statement, “Faculty members included a statement about the rights of students with disabilities in all course syllabi.”

Table 4.21

*Student Agreement Level: Disability Laws  
(1=Strongly Disagree; 2=Disagree; 3=Agree; 4=Strongly Agree)*

Statement	SD		D		A		SA	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members understand that students with disabilities must have physical access to buildings on campus. <i>n</i> =102, <i>M</i> =3.27, <i>SD</i> =.785 Missing=28	2	1.5	15	11.5	38	29.2	47	36.2
Faculty members at Rowan understand the educational access laws of Section 504 and the American Disabilities Act (ADA). <i>n</i> =104, <i>M</i> =3.14, <i>SD</i> =.756 Missing=26	2	1.5	17	13.1	49	37.7	36	27.7
Faculty members understand that students with disabilities are not required to disclose diagnostic and treatment information to course instructors. <i>n</i> =103, <i>M</i> =3.13, <i>SD</i> =.825 Missing=27	3	2.3	20	15.4	41	31.5	39	30.0
Faculty members at Rowan understand why accommodations for students with disabilities are necessary. <i>n</i> =95, <i>M</i> =3.00, <i>SD</i> =.911 Missing=35	3	2.3	30	23.1	26	20.0	36	27.7
Faculty members include a statement about the rights of students with disabilities on all course syllabi. <i>n</i> =90, <i>M</i> =3.09, <i>SD</i> =.856 Missing=40	1	.8	26	20.0	27	20.8	36	27.7

Table 4.22 illustrates students' agreement level of Rowan faculty knowledge of accommodations policy. Items are arranged by factor grouping from highest to lowest mean score agreement level. Results indicate that the highest level of agreement (33.8%) of students was assigned to the statement, "Faculty members understand that students must self-disclose to Student Disability Services their disability condition to receive accommodations." The lowest level of agreement (16.2%) was given to the statement, "Faculty members' academic freedom permits them to decide how they will provide accommodations for students with disabilities in their courses."

Table 4.22

*Student Agreement Level: Accommodation Policy*  
(1= Strongly Disagree; 2=Disagree; 3=Agree; 4= Strongly Agree)

Statement	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members understand that students must self-disclose to Student Disability Services their disabling condition to receive accommodations. <i>n</i> =103, <i>M</i> =3.17, <i>SD</i> =.864 Missing=27	4	3.1	19	14.6	36	27.7	44	33.8
Faculty members understand at Rowan that reasonable accommodations do not require them to lower their academic standards. <i>n</i> =102, <i>M</i> =3.16, <i>SD</i> =.876 Missing=28	3	2.3	23	17.7	31	23.8	45	34.6
Faculty members and students understand that reasonable accommodations do not alter the course content or objectives. <i>n</i> =103, <i>M</i> =3.13, <i>SD</i> =.813 Missing=28	3	2.3	19	14.6	43	33.1	38	29.2
Faculty members understand that they are required to provide reasonable accommodations for students documented disabilities. <i>n</i> =101, <i>M</i> =3.07, <i>SD</i> =.886 Missing=29	6	4.6	18	13.8	40	30.8	37	28.5

Table 4.22 (continued)

*Student Agreement Level: Accommodation Policy*

Statement	SD		D		A		SA	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members at Rowan understand that reasonable accommodations do not give students with disabilities an unfair advantage. <i>n</i> =102, <i>M</i> =3.07, <i>SD</i> =.824 Missing=28	2	1.5	25	19.2	39	30.0	36	27.7
Faculty members understand that reasonable accommodations enable students with disabilities to have the same opportunities as their non-disabled peers. <i>n</i> =94, <i>M</i> =3.03, <i>SD</i> =.848 Missing=36	2	1.5	26	20.0	33	25.4	33	25.4
Faculty members are familiar with assistive technology that can facilitate learning. <i>n</i> =95, <i>M</i> =2.80, <i>SD</i> =.941 Missing=35	7	5.4	32	24.6	29	22.3	27	20.8
Faculty member's academic freedom permits them to decide how they will provide accommodations for students with disabilities in their courses. <i>n</i> =94, <i>M</i> =2.76, <i>SD</i> =.876 Missing=36	6	4.6	32	24.6	35	26.9	21	16.2

Table 4.23 illustrates students' agreement level of Rowan faculty's willingness to accommodate students with disabilities. Items are arranged by factor grouping from highest to lowest mean score agreement level. Results indicated that the highest level of agreement (30.0%) of students was assigned to the statement, "Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed tests, alternate venues for tests, rephrasing of questions by proctor, or alternate formats for tests)." The lowest level of agreement (14.6%) was given to the

statement, “Faculty members are willing to make accommodations for students with disabilities regarding grading, test, and assignments (e.g., giving potential credit for process even when the final answer is wrong, not grading misspellings, incorrect grammar and punctuation, allowing a proctor to review work before submission, allowing the use of calculators or dictionaries).”

Table 4.23

*Student Agreement Level: Accommodation Willingness*  
(1= Strongly Disagree; 2=Disagree; 3=Agree; 4=Strongly Agree)

Statement	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed tests, alternate venues for tests, rephrasing of questions by proctor, or alternate formats for tests). <i>n</i> =94, <i>M</i> =3.12, <i>SD</i> =.878 Missing=36	3	2.3	22	16.9	30	23.1	39	30.0
Faculty members are willing to make accommodations for students with disabilities regarding note taking (e.g., providing note takers, copies of notes, tape record lectures, etc.). <i>n</i> =92, <i>M</i> =3.02, <i>SD</i> =.914 Missing=38	4	3.1	25	19.2	28	21.5	35	26.9
Faculty members should obtain additional information about a student's disability if he or she does not understand the information or feels excluded. <i>n</i> =92, <i>M</i> =2.88, <i>SD</i> =.924 Missing=38	7	5.4	24	18.5	34	26.2	27	20.8
Faculty members are willing to allow course substitutions or waivers for students with disabilities. <i>n</i> =92, <i>M</i> =2.59, <i>SD</i> =.939 Missing=38	11	8.5	34	26.2	29	22.3	18	13.8
Faculty members are willing to make accommodations for students with disabilities regarding grading, test, and assignments (e.g., giving potential credit for process even when the final answer is wrong, not grading misspellings, incorrect grammar and punctuation, allowing a proctor to review work before submission, allowing the use of calculators or dictionaries). <i>n</i> =94, <i>M</i> =2.55, <i>SD</i> =.969, Missing=36	13	10.0	35	26.9	27	20.8	19	14.6

Table 4.24 illustrates students' agreement level of Rowan faculty universal course design. Items are arranged by factor grouping according to highest to lowest level of agreement. Results indicate that the highest level of agreement (27.7%) was assigned to the statement, "Faculty members have high expectations of success for all students." The lowest level of agreement (19.2%) was given by students to the statement, "Faculty members present course content that can be understood by students with diverse learning styles and abilities."

Table 4.24

*Student Agreement Level: Universal Design*  
(1= Strongly Disagree; 2= Disagree; 3= Agree; 4= Strongly Agree)

Statement	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members have high expectations of success for all students. <i>n</i> =91, <i>M</i> =3.09, <i>SD</i> =.877 Missing=39	3	2.3	22	16.9	30	23.1	36	27.7
Faculty members present course content in a well-organized sequential manner that is paced to account for variations in students' learning styles and abilities. <i>n</i> =90, <i>M</i> =2.80, <i>SD</i> =.985 Missing=40	9	6.9	27	20.8	27	20.8	27	20.8
Faculty members provide lecture and course material in a wide variety of formats and media. <i>n</i> =93, <i>M</i> =2.78, <i>SD</i> =.971 Missing=37	8	6.2	33	25.4	25	19.2	27	20.8
Faculty members present course content that can be understood by students with diverse learning styles and abilities. <i>n</i> =92, <i>M</i> =2.71, <i>SD</i> =.989 Missing=38	10	7.7	32	24.6	35	19.2	25	19.2

Table 4.25 illustrates students' agreement levels regarding Rowan University faculty understanding of disabilities. Items are arranged by factor grouping according to highest to lowest agreement level. Results indicate the highest level of agreement (28.5%) was assigned to the statement, "Faculty members understand that reasonable accommodations are determined on a case-by-case basis." The lowest level of agreement (15.4%) was given by students to the statement, "Faculty members at Rowan know what to do when a student is unhappy with accommodations provided to him or her."

Table 4.25

*Student Agreement Level: Understanding Disabilities*  
(1= Strongly Disagree; 2=Disagree; 3= Agree; 4= Strongly Agree)

Statement	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members understand that reasonable accommodations are determined on a case-by-case basis. $n=103$ , $M=2.98$ , $SD=.907$ Missing=27	4	3.1	31	23.8	31	23.8	37	28.5
Faculty members design courses that promote interaction and communication among students and between students and instructors to create social engagement. $n=95$ , $M=2.91$ , $SD=.900$ Missing=35	5	3.8	28	21.5	33	25.4	29	22.3
Faculty members at Rowan understand the process that students undergo to document their disabilities. $n=102$ , $M=2.86$ , $SD=.901$ Missing=28	5	3.8	34	26.2	33	25.4	30	23.1
Faculty members at Rowan know what to do when a student is unhappy with accommodations provided to him or her. $n=94$ , $M=2.60$ , $SD=.976$ Missing=36	13	10.0	32	24.6	29	22.3	20	15.4

Table 4.26 describes students' agreement level of faculty and student interaction and engagement. Items are arranged by factor grouping according to highest to lowest agreement level. Results indicate the highest level of agreement (27.7%) was assigned to the statement, "Faculty members are careful to protect the confidentiality of students with disabilities." The lowest level of agreement (17.7%) was given by students to the statement, "Faculty members use first person language (e.g., "person with a disability" rather than "disabled person") when speaking about a person with a disability."

Table 4.26

*Student Agreement Level: Interaction and Engagement*  
(1= Strongly Disagree; 2= Disagree; 3= Agree; 4= Strongly Agree)

Statement	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Faculty members are careful to protect the confidentiality of students with disabilities. <i>n</i> =92, <i>M</i> =3.08, <i>SD</i> =.905 Missing=38	5	3.8	19	14.6	32	24.6	36	27.7
Faculty members do not hold over generalized stereotypes about students with disabilities (e.g., disability is a constantly frustrating tragedy, all students with disabilities are brave and courageous, all students with learning disabilities are lazy). <i>n</i> =90, <i>M</i> =3.01, <i>SD</i> =.930 Missing=40	4	3.1	26	20.0	25	19.2	35	26.9
Faculty members understand that students with disabilities are individuals just like all other students and do not share common personality or social traits as a function of disability. <i>n</i> =91, <i>M</i> =2.96, <i>SD</i> =.918 Missing=39	6	4.6	22	16.9	33	25.4	30	23.1



Table 4.26 (continued)

*Student Agreement Level: Interaction and Engagement*

Statement	SD		D		A		SA	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Faculty members use first person language (e.g., “person with a disability” rather than “disabled person”) when speaking about a person with a disability. <i>n</i> =88, <i>M</i> =2.88, <i>SD</i> =.895 Missing=42	7	5.4	20	15.4	38	29.2	23	17.7

**Research Question 5.** Do faculty and students agree on issues related to: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?

Table 4.27 compares the agreement levels of both subject groups, faculty and students, within all survey factor areas: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement. The comparison was based on factor grouping by mean scores within each subject group. Both groups reported similar levels of agreement in the area of disability laws (*M*=3.10) and in the area of interaction and engagement (*M*=3.00). Results indicate faculty’s highest mean score was in disability laws (*M*=3.10), and lowest mean score was in the area of accommodation policy (*M*=2.70). Students’ highest mean score was in accommodation policy (*M*= 3.50) and lowest mean score was in the area of accommodation willingness (*M*=2.83).

Table 4.27

*Faculty & Student Comparison: Agreement Level*

Survey Categories	Agreement Level	
	Faculty (Mean Score)	Students (Mean Score)
Disability Laws	3.10	3.10
Accommodation Policy	2.70	3.50
Accommodation Willingness	2.76	2.83
Universal Design	2.94	2.85
Understanding Disabilities	2.79	2.84
Interaction and Engagement	3.00	3.00

**Research Question 6.** What are some of the issues that both students and faculty feel are important, in the areas of: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?

Items in Table 4.28 compare the importance levels of the categories of the survey of both subject groups: faculty and students at Rowan University. Items are arranged by factor grouping using mean scores. Results indicate that faculty highest mean score, in the area of disability laws was 3.54. Students' highest mean score was 3.50 in the area of universal design.

Table 4.28

*Faculty & Student Comparison: Importance Level*

Survey Categories	Importance Level	
	Faculty (Mean Score)	Students (Mean Score)
Disability Laws	3.54	3.34
Accommodation Policy	3.47	3.43
Accommodation Willingness	3.20	3.31
Universal Design	3.39	3.50
Understanding Disabilities	3.44	3.36
Interaction and Engagement	3.46	3.40

## Chapter V

### Summary, Discussion, Conclusions, and Recommendations

#### Summary of the Study

This study sought to evaluate two subject groups: faculty and students, concerning faculty knowledge relating to invisible and other disabilities. Specifically, the study focused on the importance and agreement levels of both groups in the following categories: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement. Prior research has been completed by scholars such as Karabin (2009). This study focused on similar issues that students with both invisible and other disabilities have struggled with in the categories of accommodations, faculty knowledge, faculty willingness, understanding disabilities, and disclosure. This investigation focused on how both groups, students and faculty in higher education, view faculty's knowledge of students with invisible or other disabilities. The study reflected upon the different obstacles and challenges that students with disabilities encounter. In addition, the research examined how faculty interaction is vital for students with invisible or other disabilities. This study can provide a better understanding concerning faculty knowledge and interaction amongst students with disabilities as more students with disabilities enroll in higher education.

#### Purpose of the Study

Rowan University has yet to complete a systemic study on invisible and other disabilities related to social engagement and faculty knowledge. The information within this study analyzes the student and faculty perspectives on how students with disabilities are treated at Rowan University. The research focused on the importance level and

agreement level of both students and faculty concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement. This information can be used as an academic faculty-training guide in the future. In addition, this information can be used for workshops related to accommodations, diverse learning, invisible, and other disabilities.

### **Methodology**

This study surveyed two groups. The first included students with invisible and other disabilities. The second included faculty, both tenured and tenure-seeking, on the main campus in Glassboro at Rowan University, which consisted of full, associate, and assistant tenured or tenure-seeking faculty. The group of students with invisible disabilities at Rowan University (2013) was the largest group within the disability student population with a documented disability (66.7%). The group of faculty was restricted to tenure and tenure-seeking faculty subjects to display factual information concerning their knowledge at Rowan University. Prior to the administration of any survey and the collection of data, the application and study was submitted to the Institutional Review Board for review on January 23, 2014 and approved on March 21, 2014. All surveys were voluntarily based and both groups were provided with information before participating in the survey that explained privacy rights, examination regarding academic purposes, and a consent statement. The Faculty Survey (Appendix B) and Student Survey (Appendix E) were analyzed using the *Statistical Package for the Social Sciences* (SPSS) computer software. The data were analyzed by utilizing a quantitative method. Most surveys were emailed and some distributed in person to both groups. The response rates of both groups

were as follows: faculty - 112 responses for a total of 35%, and students - 130 responses giving a 34% response rate.

Both student and faculty surveys were distributed digitally via the Internet to volunteer participants. Student surveys were seen first by the director of Academic Success Center and Disability Services for approval. Paper surveys were also distributed to both faculty and students. Faculty members received their survey in person at their office and students received theirs at the Academic Success Center with the help of academic coaches. All survey data were manually entered by me using statistics IBM computer software (SPSS) to calculate frequencies, means, percentages, and standard deviations. The research questions were based on a prior study conducted at Kent State University. The instrument was composed of two sections: section A asked for demographic information; section B posed a series of statements answered on two different types of Likert scales. The first scale reflected the degree of importance. The second scale reflected how students and faculty felt about the importance of different statements and their level of agreement.

### **Discussion of Findings**

The study examined six research questions, which contributed to the academic goal of the research. The six questions studied tenure and tenure-seeking faculty, and students with invisible disabilities. The questions focused on the importance and agreement levels concerning faculty understanding of disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students.

Research Question 1: What level of importance do selected Rowan University faculty have concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?

The study showed a generally high faculty response rate, concerning disability laws. Results indicated faculty agreement levels. Many faculty respondents agreed or strongly agreed, (77.7%), with the statement, “Faculty members understand that students with disabilities must have physical access to buildings on campus.” This question aimed to test whether faculty in higher education see all students as equal despite an invisible or physical disability. Even though the question was aimed at those with physical disabilities, it is clear to see that the faculty recognized the need to follow the disability laws. This indicated the high importance of physical access and importance of all the disability laws. All disability laws are essential to students with invisible or other disabilities. The findings in the research also illustrated the faculty found high importance concerning accommodation policy, with a mean of 77.7% of respondents recognizing the importance of reasonable accommodations for students with documented disabilities. Within this same category of accommodation policy, with only (50%) faculty importance response rate, was the statement reflecting faculty’s academics freedom.

The study reflected a higher amount of importance level concerning accommodation willingness (73.3%) of faculty related to the statement, “Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed tests, alternate venues for tests, rephrasing questions by proctor, or alternate formats for tests).” Alternatively, only 49.2% of faculty found

accommodation willingness to be important or very important in relation to course substitutions. A total of 69.6% of faculty that thought it was important or very important for faculty to have high expectations of success of all students concerning universal design. Overall, faculty gave a high level of importance (78.6%) to understanding disabilities. Faculty had positive thoughts concerning interaction and engagement; 70.5% of faculty (the highest mean score) thought that the statement, “Faculty members understand that students with disabilities are individuals just like all other students and do not share common personality or social traits as a function of disability,” was important or very important. Overall, the research indicates that faculty had a positive outlook toward the importance of accommodation policy, accommodation willingness, understanding disabilities, universal design, and interaction and engagement with disabled students. However, results showed a high importance level in the category of disability law pertaining only to those with physical disabilities.

Research Question 2: What level of agreement do selected Rowan University faculty have concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?

The majority of faculty (72.6%), agreed or strongly agreed with the statement concerning disability laws, which stated, “Faculty members understand that students with disabilities must have physical access to buildings on campus.” Less than 60% of faculty agreed or strongly agreed with the statement concerning disability laws that read, “Faculty members understand that students with disabilities are not required to disclose diagnostic and treatment information to course instructors.” It can be concluded that



based on factual evidence, faculty members agree upon disability laws more often when disabilities can be seen. The majority of faculty (77.7%) agreed or strongly agreed with the statement relating to accommodation policy. Thus, research indicated that faculty had a positive attitude toward accommodation policy even though they have a negative attitude about how their academic freedom permits them to carry out the policy. At the same time, almost 50% of faculty disagreed or strongly disagreed with the statement relating to accommodation policy, “Faculty members’ academic freedom permits them to decide how they will provide accommodations for students with disabilities in their courses.” Based on the highest percentage and the mean score concerning accommodation willingness, 73.3% of faculty agreed or strongly agreed with the statement, “Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed tests, alternate venues for tests, rephrasing of questions by proctor, or alternate formats for tests).” This indicated that faculty had an encouraging attitude concerning accommodation willingness, yet their accommodation willingness in certain areas of what they are willing to do is lacking. Many results in this area were dissimilar to Cook et al. (2006), which concluded a low importance and low agreement level. However, in the area of faculty agreement, concerning faculty willingness, course substitutions and making accommodations for grades at Rowan University, the findings were similar to Cook et al., where results also indicated low mean scores.

Dissimilar to other faculty responses with high mean and percentage scores, 24.2% of faculty reflects the level of disagreement or those that strongly disagreed in the area of accommodation willingness, which had a negative attitude toward the statement,

“Faculty members are willing to allow course substitutions or waivers for students with disabilities.” Within the category of universal design, the statement with the highest mean and percentage score reflected how faculty who agreed or strongly agreed (57.1%) had a positive attitude toward universal design. However, within this same group of universal design, about one-third of faculty disagreed or strongly disagreed with the statement (30.4%), “Faculty members provide lecture and course material in a wide variety of formats and media.”

Over half of faculty within the category of understanding disabilities agreed or strongly agreed (55.2%) with the statement, “Faculty members design courses that promote interaction and communication among students and between students and instructors to create social engagement.” Statistics in the research within the category of understanding disabilities show how faculty had a positive attitude concerning social engagement and promoting interaction between the instructor and student. Overall, within the group of understanding disabilities, the statement that had the lowest mean score and the highest percentage of disagree and strongly disagree responses (45.6%), was the statement, “Faculty members at Rowan know what to do when a student is unhappy with accommodations provided to him or her.” This factual evidence indicated how faculty could not possibly know the steps or procedures to take when a student was unhappy with his or her accommodations. Only 31.3% agreed or strongly agreed with this statement in the category of understanding disabilities. Within the category of interaction and engagement, 62.5% agreed or strongly agreed with the statement with the highest mean score, “Faculty members understand that students with disabilities are individuals just like all other students and do not share common personality or social traits as a function

of disability,” although nearly 30% of faculty disagreed or strongly disagreed with the statement referring to faculty members using first person language rather than disabled person.

Research Question 3: What level of importance do selected invisible disabled students have concerning: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement of faculty with disabled students?

Students’ importance level concerning disability laws had a positive outlook as 69.0% of students held a high importance level and the highest mean score toward the statement, “Faculty members at Rowan understand the educational access laws of Section 504 and the American Disabilities Act (ADA).” Yet, students within the category of disability laws ranked the following statement with the lowest mean score: “Faculty members at Rowan understand why accommodations for students with disabilities are necessary.” Within this category, the average mean score was 3.34, though the lowest means (3.00 out of 4.00) reflected the importance levels of the student respondents. Student respondents indicated how understanding the disability laws, for all disabilities, and his or her rights was essential for all students and contexts under Section 504. The findings indicated that 79.3% of students believed the statement on accommodation policy to be important or very important. Many students (59.3%) had a positive attitude regarding faculty understanding of reasonable accommodations for students with documented disabilities. Evidence in this same category reflected a lower mean score concerning accommodation policy and students’ level of importance and highest level of importance (62.3%).

Overall, there was an optimistic attitude pertaining to the category of accommodation willingness as seen in the statement, “Faculty members are willing to make accommodations for students with disabilities regarding note taking (e.g., providing note takers, copies of notes, tape record lectures),” which was reflected in the levels of importance and very important (72.3%) and highest mean score, 3.54 out of 4.00, for students. In addition, over 62% had the lowest mean within the same category with a mean of 3.10 out 4.00 with a little over 60%. Student importance levels indicated a high level of importance in regard to the accommodation willingness of instructors to modify tests or assignments. Student responses also illustrated how students’ importance level reflects how they see faculty as not having a high level of willingness to make accommodations regarding grading, assignments, tests, or papers. In the category of universal design for students, the average mean score reflected 3.48 out of 4.00. Statistics within this area pointed out how students’ importance levels maintained a consistent level of importance or very important within the area of universal design. Based on the research, students felt it important that faculty present courses that could be understood by all types of diverse learning styles. In addition, students emphasized that course materials should be presented in a wide variety of styles to help enhance success.

The majority of the students’ answers showed a consistent positive response concerning understanding disabilities. Students agreed that, “Faculty members understand that reasonable accommodations are determined on a case-by-case basis” by rating this statement with the highest level of important and very important percentage (77.7%), and with the highest mean score of 3.50 out of 4.00. Results indicated that students gave a high rating of importance regarding faculty members understanding that

each disability is unique. Student respondents also had a high level of importance regarding faculty knowledge of how to interact with students with disabilities and the importance of providing them with satisfactory accommodations. These results were consistent. In addition, students were aware that faculty understood the process that students with invisible disabilities have to undergo to document their disabilities. Overall, students' attitudes toward interaction and engagement were positive, with the highest level of importance and percentage for the statement, "Faculty members are careful to protect the confidentiality of students with disabilities." Results indicated a level of high importance and a high level of very important (72.3%) with a high mean score of 3.56 out of 4.00 for this statement. Although student results showed a lower level of importance concerning interaction and engagement (55.4%) toward faculty members use of first person language with a person with a disability, when interacting with a student, the mean score for that statement went below the average mean score of 3.40 out of 4.00.

Research Question 4: Do selected students with invisible and other disabilities agree that faculty at Rowan University have knowledge of: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement of disabled students at Rowan University?

Student agreement levels in the area of disability laws documented that 65.4% of students agreed or strongly agreed with the statement concerning physical access to public buildings of students that have physical disabilities. Research indicates how students' attitudes are similar to faculty in relation to seeing physical disabilities and abiding by laws in public institutions.

Students and faculty shared similar levels of importance regarding the inclusion of statements about the rights of students with disabilities in course syllabi. Even so, 20.8% of students strongly disagreed or disagreed that faculty included a statement about the rights of students with disabilities in their syllabi, indicating that students have a mixed perception concerning faculty including a statement about rights of students with invisible or other disabilities in their syllabi.

Based on the information gathered in this research, students know that faculty understand the process of “student self-disclosure” that occurs in disability services; however, this was not the highest level of agreement among faculty respondents regarding accommodation policy. Both groups ranked “Faculty members’ academic freedom permits them to provide accommodations for students with all types of disability” last in level of importance. Conversely, student agreement levels in the area of accommodation willingness were positive toward the statement that had the highest level of agreement concerning students with disabilities accommodations in the areas of: test taking, untimed tests, tests alterations, and proctoring.

Student respondents agreed or strongly agreed that faculty members were willing to provide extra time on tests (53.1%), however, 36.9% of students strongly disagreed or disagreed that faculty were willing to make accommodations regarding grading tests and papers. This suggests a negative attitude of faculty willingness to make adjustments to grades because of a disability, despite the fact that 50.8% of students agreed or strongly agreed that professors have expectations of success. Gills (2004) suggests that positive reinforcement can enhance engagement and challenge those with invisible or other disabilities.

Results indicated that students were split concerning their agreement level within the group of universal design; 32.3% disagreed or strongly disagreed and 38.4% agreed or strongly agreed with the statement, “Faculty members present course content that can be understood by students with diverse learning styles and abilities.” In contrast, 50.8% of students agreed or strongly agreed that “Faculty members have high expectations for all students.”

In the area of understanding disabilities, student agreement levels indicated mixed results. There were 34.6% of students who disagreed or strongly disagreed with the statement, “Faculty members at Rowan know what to do when a student is unhappy with accommodations provided to him or her,” whereas 37.7% agreed or strongly agreed. Overall, within the category of understanding disability, 25.3% of student responses indicated a level of disagreement or strong disagreement regarding faculty members and how faculty interact and create social engagement. This is in contrast with the overwhelming majority of students (47.7%) who agreed. Results indicate that many students seek a certain level of understanding in a professor on how to help a student when he or she is unhappy with accommodations. As a result, students may doubt if Rowan faculty members know what to do. However, there were large numbers of disabled students with invisible or other disabilities who agreed that Rowan University faculty members do create social interaction.

A near majority of students (48.5%) agreed or strongly agreed with the statement concerning interaction and engagement, which dealt with how faculty understand that disabled students are individuals that are not all alike. In addition, results also illustrated that 21.5% of students disagreed or strongly disagreed with the idea that faculty treat

them on an individual basis. The statement within this category which had the lowest mean score of 3.08 out of 4.00, related to how faculty at Rowan protect the confidentiality of students with disabilities; 52.3% agreed or strongly agreed that faculty protect their privacy, whereas 18.4% disagreed or strongly disagreed.

Research Question 5: Do faculty and students agree on issues related to: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement with disabled students?

The faculty and student comparison agreement mean level scores report how student and faculty differ in accommodation policy 2.70 to 3.50, yet have an average between both groups of a mean score of 2.79 out 4.00 on accommodation willingness. The results also indicate how both subject groups agreed upon interaction and engagement with a score of 3.00 out of 4.00.

Research Question 6: What are some of the issues that both students and faculty feel are important, in the areas of: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement?

The importance data scores report from both faculty and students indicate how faculty gave a higher level of importance in the category of disability law than students, though students had a higher mean score of 3.50 on universal design. However, both subject groups together had an average mean score in the category of interaction and engagement of 3.43 out of 4.00.



## Conclusions

The main intent of this study was to observe how both groups, students with invisible and other disabilities, and faculty, tenured or tenure-seeking, viewed faculty knowledge in the areas of: disability laws, accommodation policy, accommodation willingness, universal design, understanding disabilities, and interaction and engagement when interacting with students with invisible or all types of disabilities. Researching the importance and agreement levels of both was integral to the study. According to Burgstahler and Doe (2006), with continued learning, the experience is likely to progressively enhance the experience of a student with invisible and or physical disabilities. Karabin (2009) explains how faculty knowledge is essential to the academic and social enhancement. In addition, the purpose of this study was to examine the level of faculty and students' understanding of the practices and procedures that impact students with invisible or other disabilities in a university setting. Karabin (2009) suggests that as a faculty member, one must understand the different individuals who will be in classes and recognize that they have different academic needs. The surveys provided the levels of agreement and importance of a range of indicators related to the academic needs of students with disabilities from the perspectives of both the faculty and the students.

The results of the study suggest that faculty had high agreement levels and importance levels in the category of disability laws. The study also showed a high agreement level with the statement concerning faculty perceptions on physical disability and physical access all campus. Similarly, student subjects' highest agreement level concerning disability law focused on the ADA law itself and Section 504. Results indicated that both groups saw disability laws as highly important even though faculty

place a higher importance on disabilities they can physically see.

Although faculty members rate accommodation policy at a high importance level, many faculty disagreed that faculty academic freedom permits them to decide how to provide accommodations to students with disabilities. These data suggest some lack of understanding as to how Rowan University faculty members exercise their academic freedom, or indeed, what types of accommodations are permitted.

Students had mixed responses within this category of accommodation policy, giving it the lowest mean score in the area of agreement. Student responses concluded that they felt similar in this area of accommodation policy. Overall students' responses reflected faculty understanding of self-disclosure.

The findings illustrated that in the area of accommodation willingness, faculty felt a high level of importance, yet in many areas a low level of agreement. The results concluded that faculty's level of importance and agreement were based on different areas, such as grading, testing, and course substitutions. Some findings suggested a relationship of high importance between all different categories, but not all areas within the category.

Overall, faculty showed a high level of importance in regard to universal design and high levels of agreement, yet students gave a high level of importance, but a low agreement level in different areas pertaining to faculty presenting course content that can be understood by students with disabilities. The data indicated that faculty rate presentation of course content to students with different learning styles and disabilities as their second highest statement in the area of universal design. Faculty levels of importance concerning course design for students with disabilities were high across each statement.

Yet, agreement levels were low in the area of Rowan faculty knowing what to do when a student was unhappy with his or her accommodations. In the category of understanding disabled student agreement levels and importance levels, both were consistently high. Overall data indicated that students were likely to think that faculty understood their disability before they walked into the classroom. Findings in the category concerning interaction and engagement revealed a pattern of consistency, with both students and faculty showing that the majority of faculty and students maintain a level of a high importance and agreement.

Most of the results were consistent with prior investigations explored in *Priorities and Understanding of Faculty Members Regarding College Students with Disabilities* completed at Kent State University. Certain faculty statements in the category of accommodation willingness provided low agreement levels. However, unlike Kent State University, many faculty subject responses indicated high importance levels on accommodation policy and disability laws. Both Kent University and Rowan University results indicated a high level of importance and agreement in the area concerning disability laws section regarding the statement related to “Faculty members understand that students with disabilities must have physical access to buildings on campus.”

### **Recommendations for Practice**

1. Results indicate a high importance level in the category of interaction and engagement for both subject groups: faculty and disabled students. Facilities can create different workshops where faculty can learn different ways to use their academic freedom to assist and engage disabled students inside and outside the classroom.

2. Based on the results, higher-education institutions like Rowan University that have tenure-seeking and tenured faculty should have the appropriate training on the differences between accommodation policy and willingness.
3. This study showed how students with invisible and other disabilities are knowledgeable about disability laws, and assumed faculty were knowledgeable about everything that a disabled student needed to excel in his or her class. As a result, faculty knowledge about disability laws beyond physical access could enhance interaction and universal design.

### **Recommendations for Further Research**

1. A study related to the differences between the attitudes that Rowan University faculty have regarding accommodation policy and accommodation willingness.
2. A study on the knowledge of Section 504 in higher education on individuals that are not physically disabled.
3. A workshop on how faculty can assist students that are not happy with their accommodations, and where to get assistance on campus.

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## Appendix A

### Accommodations

Table 2.1

*Examples & Definitions of Disabilities and Accommodations*

Type	Definition	Examples
General (All Disabilities)	Both physical and hidden disabled individuals are not informed about financial assistant programs, services and grants according to U.S. Government Accountability Office (GAO). According to the GAO (2011) offices, such as the Education’s Office of Postsecondary Education (OPE), Education’s Office for Civil Rights (OCR) and The Social Security Income (SSI) provide resources for career and financial information. General Academic Assistance & Services According to Paula Gills support and motivation that all students with physical or hidden disabilities receive the more likely they are to succeed (Gills, 2004).	Disability Services
Hidden	Students with hidden disabilities require additional time, tutoring and different approaches for recorders; academic problems, which may occur (Gills, 2004).	Computer screen magnifiers; voice audio books; voice typist (i.e. Dragon Dictator)
Physical	Nonacademic Services Students with physical disabilities require nonacademic tools to assist them during their college experience to assist them during different classes, groups activities, clubs or other social events.	Wheel chair lift; personal care assistant accessibility to all buildings (i.e. dorms; activities; classrooms) accessible transportation for those with disabilities

Table 2.2

*Historical Timeline of Legislation Regarding Disability Movement*

Date	Legislation
1973	<p>Section 504(Public Law 93012): federal law; first national civil rights law to protect those who are disabled from discrimination and segregation</p> <p>Americans With Disabilities Act (ADA) Public Law (101-336): Rehabilitation Act used to protect the rights of individuals that are disabled</p>
1990	<p>ADA Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990: laws require universities to provide equal access to educational programs for qualified students with disabilities;</p> <p><a href="http://www2.ed.gov/policy/rights/guid/ocr/disability.html">http://www2.ed.gov/policy/rights/guid/ocr/disability.html</a></p>
2001	<p>Section 508: requires all Web site content be equally accessible to people with disabilities; applies to Web applications, web pages and all attached files; applies to intranet as well as public-facing web pages.</p>
2004	<p>Summary of Perform (SOF)- Individuals with Disabilities Education Act; <a href="http://idea.ed.gov/">http://idea.ed.gov/</a></p>

## Appendix B

### Faculty Survey

#### Rowan Students With Invisible Disabilities Survey

*(Based on Priorities and Understanding of Faculty Members Regarding College Students with Disabilities, Kent State University, 2009).*

Participation in this survey is voluntary, and you are not required to answer any of the questions. The purpose of this study is to evaluate the knowledge of students with disabilities and the methods faculty use to accommodate and engage students with disabilities during their collegiate experience at Rowan University. It will only take two to five minutes to complete all questions and participants are expected to complete all questions that relate to him or her, completing all questions will be of great academic benefit. Your participation is voluntary and there is no intended conflict between you and Rowan University. All participants must be 18 years old or older and all identities will be kept anonymous and information confidential. This study will be used for academic purposes only and it would be of great benefit to complete all questions. If you have any questions related to or concerning this study, feel free to contact Shariese Abdullah by phone (973) 392-2629, or email at [abdull56@students.rowan.edu](mailto:abdull56@students.rowan.edu) or Dr. Sisco, thesis advisor by phone at (856) 256-4500 x 3717 email at [sisco@rowan.edu](mailto:sisco@rowan.edu) There are no known expected risks that can affect any volunteer participant and the participant has the right to disregard any questions at any time.

#### *Directions:*

Please use the following scale to rate the IMPORTANCE of each statement.

1 = Very Unimportant, 2 = Unimportant, 3 = Important, 4 = Very Important.

Please use the following scale to rate your AGREEMENT with each statement.

1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree.

Thank you for your valuable input.

IMPORTANCE- how important the statement is to you.

AGREEMENT- extent to which you agree the statement represents the general climate/practices at (Rowan University).

## Section A: Faculty Demographic Information Form

Please respond to each by indicating the answer that corresponds or pertains to you.

1. Your gender:            Female            Male
  
2. Which of the following categories best describes your ethnicity?  
African-American                      Mexican-American/ other Hispanic  
Asian-American                         Native American  
Caucasian                                 Other (please describe) \_\_\_\_\_
  
3. What is your current academic rank?  
Assistant Professor  
Associate Professor  
Full Professor
  
4. Please indicate whether you are:  
Tenure track  
Seeking tenure
  
5. Please indicated what college you are principally affiliated with:  
  
Rohrer College of Business  
  
College of Communication & Creative Arts  
  
College of Education  
  
College of Engineering  
  
College of Humanities & Social Sciences  
  
College of Performing Arts  
  
College of Science & Mathematics  
  
College of Graduate & Continuing Education(CGCE)  
  
School of Biomedical Sciences  
  
Cooper Medical School of Rowan University

6. In the last two years, how many courses have you taught that were attended by one or more students with invisible disabilities?  
1      2      3      4      5+
7. In the last two years, how many courses have you taught, approximately how many students with invisible disabilities have formally requested that they be provided with one or more accommodations?  
1      2      3      4      5+
8. Do you live with a physical or invisible disability?  
Invisible Disability (e.g. Autism, Learning Disability, Cancer, Epilepsy, or Diabetes) Physical Disability (e.g. Arthritis, Quadriplegic, or Paraplegic)  
No      Yes      If yes, please indicate the nature of the disability:

SECTION B 1 = Very Unimportant, 2 = Unimportant, 3 = Important, 4 = Very Important. 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree.	Importance Rating	Agreement Rating
1. Faculty members at Rowan University understand the educational access laws of Section 504 and the American Disabilities Act (ADA).		
2. Faculty members understand that students with disabilities must have physical access to buildings on campus.		
3. Faculty members at Rowan understand the process that students undergo to document their disabilities.		
4. Faculty members at Rowan understand that students with disabilities are not required to disclose diagnostic and treatment information to course instructors.		
5. Faculty members design courses that promote interaction and communication among students and between students and instructors to create social engagement.		
6. Faculty members understand that they are required to provide reasonable accommodations for students with documented disabilities.		

7. Faculty members understand that reasonable accommodations are determined on a case-by-case basis.		
8. Faculty members understand that reasonable accommodations do not alter the course content or objectives.		
9. Faculty members at Rowan understand that reasonable accommodations do not give students with disabilities an unfair advantage.		
10. Faculty members understand that reasonable accommodations do not require them to lower their academic standards.		
11. Faculty members understand that reasonable accommodations enable students with disabilities to have the same opportunities as their non-disabled peers.		
12. Faculty members at Rowan know what to do when a student is unhappy with the accommodations provided to him or her.		
13. Faculty members at Rowan understand why accommodations for students with disabilities are necessary.		
14. Faculty members are willing to make accommodations for students with disabilities regarding note-taking (e.g., providing note takers, copies of notes, tape record lectures).		
15. Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed tests, alternate venues for tests, rephrasing of questions by proctor, or alternate formats for tests).		
16. Faculty members should obtain additional information about a student's disability if he or she does not understand the information or feels excluded.		
17. Faculty members are willing to make accommodations for students with disabilities regarding grading assignments, tests, and papers (e.g., giving partial credit for process even when the final answer is wrong, not grading misspellings, incorrect grammar and punctuation, allowing a proofreader to review		

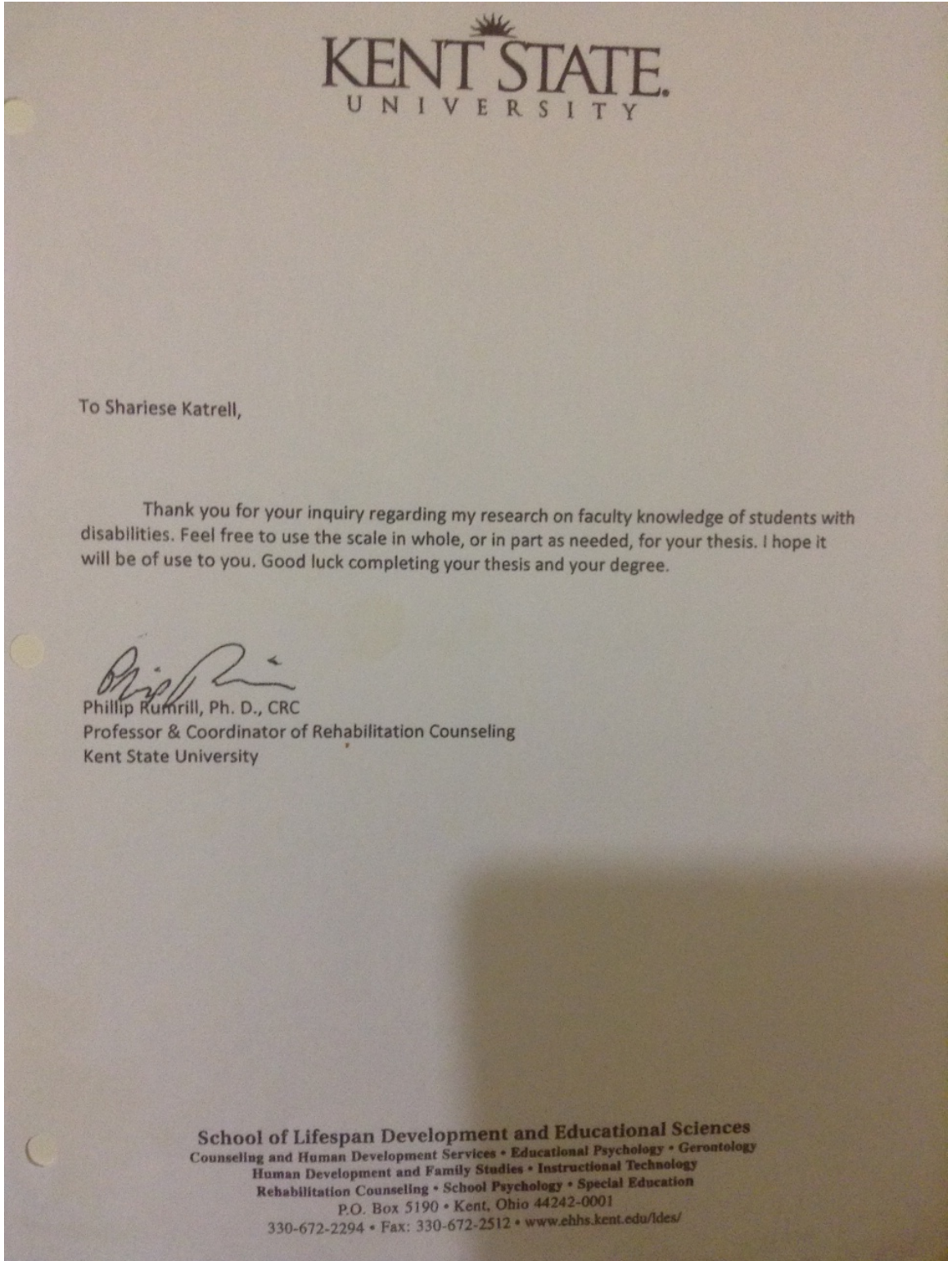
work before submission, allowing the use of calculators or dictionaries).		
18. Faculty members are willing to allow course substitutions or waivers for students with disabilities.		
19. Faculty members are familiar with assistive technology that can facilitate learning.		
20. Faculty members' academic freedom permits them to decide how they will provide accommodations for students with disabilities in their courses.		
21. Faculty members understand that students with disabilities are individuals just like all other students and do not share common personality or social traits as a function of disability.		
22. Faculty members use person first language (e.g., "person with a disability" rather than "disabled person") when speaking about a person with a disability.		
23. Faculty members do not hold over generalized stereotypes about students with disabilities (e.g., disability is a constantly frustrating tragedy, all students with disabilities are brave and courageous, all students with learning disabilities are lazy).		
24. Faculty members are careful to protect the confidentiality of students with disabilities.		
25. Faculty members include a statement about the rights of students with disabilities on all course syllabi.		
26. Faculty members provide lecture and course material in a wide variety of formats and media.		
27. Faculty members present course content that can be understood by students with diverse learning styles and abilities.		
28. Faculty members present course content in a well-organized, sequential manner that is paced to account for variations in students' learning styles and abilities.		
29. Faculty members have high expectations of success for all students.		

30. Faculty members understand that students must self disclose to Student Disability Services their disabling condition to receive accommodations.		
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## Appendix C

### Permission to Use Survey



## Appendix D

### Disability Categories

Statements	Category
Faculty members at Rowan University understand the educational access laws of Section 504 and the American Disabilities Act(ADA).	Disability Laws
Faculty members understand that students with disabilities must have physical access to buildings on campus.	Disability Laws
Faculty members at Rowan understand the process that students undergo to document their disabilities.	Understanding Disabilities
Faculty members at Rowan understand that students with disabilities are not required to disclose diagnostic and treatment information to course instructors.	Disability Laws
Faculty members understand that students must self disclose to Student Disability Services their disabling condition to receive accommodations.	Accommodation Policy
Faculty members understand that they are required to provide reasonable accommodations for students with documented disabilities.	Accommodation Policy
Faculty members understand that reasonable accommodations are determined on a case-by-case basis.	Understanding Disabilities
Faculty members and students understand that reasonable accommodations do not alter the course content or objectives.	Accommodation Policy
Faculty members at Rowan understand that reasonable accommodations do not give students with disabilities an unfair advantage.	Accommodation Policy
Faculty members understand that reasonable accommodations do not	Accommodation Policy

require them to lower their academic standards.	
Faculty members understand that reasonable accommodations enable students with disabilities to have the same opportunities as their non-disabled peers.	Accommodation Policy
Faculty members at Rowan know what to do when a student is unhappy with the accommodations provided to him or her.	Understanding Disabilities
Faculty members at Rowan understand why accommodations for students with disabilities are necessary.	Disability Laws
Faculty members are willing to make accommodations for students with disabilities regarding note-taking (e.g., providing note takers, copies of notes, etc..)	Accommodation Willingness
Faculty members are willing to make accommodations for students with disabilities regarding test taking (e.g., providing untimed test, alternate venues etc.)	Accommodation Willingness
Faculty members should obtain additional information about a student's disability if he or she does not understand the information or feels excluded.	Accommodation Willingness
Faculty members are willing to make accommodations for students with disabilities regarding grading assignments, tests, and papers etc...	Accommodation Willingness
Faculty members are willing to allow course substitutions or waivers for students with disabilities.	Accommodation Willingness
Faculty members are familiar with assistive technology that can facilitate learning.	Accommodation Policy
Faculty members' academic freedom permits them to decide how they will provide accommodations for students with disabilities in their courses but they should recognize what accommodations are needed within academic and social engagement.	Accommodation Policy
Faculty members understand that	Interaction & Engagement

students with disabilities are individuals just like all other students and do not share common personality or social traits as a function of disability.	
Faculty members use person first language (e.g., “person with a disability” rather than “disabled person”) when speaking about a person with a disability.	Interaction & Engagement
Faculty members do not hold over generalized stereotypes about students with disabilities (e.g., disability is a constantly frustrating tragedy etc..	Interaction & Engagement
Faculty members are careful to protect the confidentiality of students with disabilities.	Interaction & Engagement
Faculty members include a statement about the rights of students with disabilities on all course syllabi.	Disability Laws
Faculty members provide lecture and course material in a wide variety of formats and media.	Universal Design
Faculty members present course content that can be understood by students with diverse learning styles and abilities.	Universal Design
Faculty members present course content in a well-organized, sequential manner that is paced to account for variations in students’ learning styles and abilities.	Universal Design
Faculty members have high expectations of success for all students.	Universal Design
Faculty members design courses that promote interaction and communication among students and between students and instructors to create social engagement.	Understanding Disabilities

## Appendix E

### Student Survey

#### Invisible Disability Investigation

#### Students Participants

#### Rowan Students With Invisible Disabilities Survey

*(Based on Priorities and Understanding of Faculty Members Regarding College Students with Disabilities, Kent State University, 2009).*

Participation in this survey is voluntary, and participants are not required to answer any of the questions. Your participation is voluntary and will not affect you academically at Rowan University. All participants must be 18 years old or older and all identities will be kept anonymous and information confidential. This study will be used for academic purposes only. To complete this survey will take from two to five minutes only. By completing this survey you can become an eligible for a Barnes & Noble reward card of \$20.00. At anytime the voluntary participant has the right to discontinue proceedings in the survey. All information is used only for educational purposes, which can benefit the students with invisible disabilities at Rowan University. It would be of benefit to complete all questions. If you have any questions related to or concerning this study, feel free to contact Shariese Abdullah by phone (973) 392-2629, or email at [abdull56@students.rowan.edu](mailto:abdull56@students.rowan.edu) or Dr. Sisco, thesis advisor by phone at (856) 256-4500 x 3717 email at [sisco@rowan.edu](mailto:sisco@rowan.edu) There are no known expected risks that can affect any volunteer participant and the participant has the right to disregard any questions at any time.

#### *Directions:*

Please use the following scale to rate the IMPORTANCE of each statement.

1 = Very Unimportant, 2 = Unimportant, 3 = Important, 4 = Very Important.

Please use the following scale to rate your AGREEMENT with each statement.

1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree.

Thank you for your valuable input.

IMPORTANCE- how important the statement is to you.

AGREEMENT- extent to which you agree the statement represents the general

## SECTION A: Student Demographics

### 1. What gender are you?

- Male  
 Female

### 2. What is your current status?

- Freshman  
 Sophomore  
 Junior  
 Senior  
 Graduate

### 3. Do you live with a physical or invisible disability?

Invisible Disability (e.g. Autism, Learning Disability, Cancer, Epilepsy, or Diabetes)

- yes or  no

Physical Disability (e.g. Arthritis, Quadriplegic, or paraplegic) If yes please indicate \_\_\_\_\_

### 4. Please indicate your grade point average? \_\_\_\_\_

### 5. What is your racial ethnic classification?

- Caucasian     African American     Asian American     Hispanic     Other

### 6. Do you live on or off campus?

- On Campus  
 Off Campus

### 7. What college do you belong to?

- Rohrer College of Business  
 College of Communication & Creative Arts



- College of Education
- College of Engineering
- College of Humanities & Social Sciences
- College of Performing Arts
- College of Science & Mathematics
- College of Graduate & Continuing Education(CGCE)
- School of Biomedical Sciences
- Cooper Medical School of Rowan University

SECTION B 1 = Very Unimportant, 2 = Unimportant, 3 = Important, 4 = Very Important. 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree.  Thank you for your valuable input.	Importance Rating	Agreement Rating
1. Faculty members at Rowan University understand the educational access laws of Section 504 and the American Disabilities Act (ADA).		
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5. Faculty members understand that students must self disclose to Student Disability Services their disabling condition to receive accommodations.		
6. Faculty members understand that they are required to provide reasonable accommodations for students		

with documented disabilities.		
7. Faculty members understand that reasonable accommodations are determined on a case-by-case basis.		
8. Faculty members and students understand that reasonable accommodations do not alter the course content or objectives.		
9. Faculty members at Rowan understand that reasonable accommodations do not give students with disabilities an unfair advantage.		
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allowing the use of calculators or dictionaries).		
18. Faculty members are willing to allow course substitutions or waivers for students with disabilities.		
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28. Faculty members present course content in a well-organized, sequential manner that is paced to account for variations in students' learning styles and abilities.		
29. Faculty members have high expectations of success for all students.		
30. Faculty members design courses that promote interaction and communication among students and between students and instructors to create social engagement.		



## Appendix G

### Institutional Review Board (IRB) Approval Letter



March 21, 2014

Shariese K. Abdullah  
107 Redding Circle  
Princeton, NJ 08540

Dear Shariese K. Abdullah:

In accordance with the University's IRB policies and 45 CFR 46, the Federal Policy for the Protection of Human Subjects, I am pleased to inform you that the Rowan University Institutional Review Board (IRB) has approved your project, category 7, through its expedited review process.

IRB application number: 2014-178

Project Title: Enhancing Engagement of Students with Invisible Disabilities at Rowan University:  
Faculty Knowledge and Awareness, Student Perspectives

In accordance with federal law, this approval is effective for one calendar year from the date of this letter. If your research project extends beyond that date or if you need to make significant modifications to your study, you must notify the IRB immediately. Please reference the above-cited IRB application number in any future communications with our office regarding this research.

Please retain copies of consent forms for this research for three years after completion of the research.

If, during your research, you encounter any unanticipated problems involving risks to subjects, you must report this immediately to Dr. Harriet Hartman ([hartman@rowan.edu](mailto:hartman@rowan.edu)) or call 856-256-4500, ext. 3787 or contact Dr. Shreekanth Mandayara, Associate Provost for Research ([shreek@rowan.edu](mailto:shreek@rowan.edu)) or call 856-256-5150.

If you have any administrative questions, please contact Karen Ueiser ([kueiser@rowan.edu](mailto:kueiser@rowan.edu)) or 856-256-5150.

Sincerely,

A handwritten signature in cursive script that reads "Harriet Hartman".

Harriet Hartman, Ph.D.  
Chair, Rowan University IRB

c. Burton Sison, Educational Leadership, James Hall

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