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# Exploring First-Year College Students' Attitudes Toward Disability: Impacts of Disability Inclusion Training

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# Exploring First-Year College Students' Attitudes Toward Disability: Impacts of Disability Inclusion Training

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# Abstract

Students with disabilities face numerous environmental and societal barriers at college. This quasi-experimental research project sought to examine what effect a short targeted training on disability inclusion would have on first-year college students' attitudes toward persons with disabilities. A pretest and posttest of the Multidimensional Attitudes Scale Toward Persons with Disabilities was administered to a treatment and control group of college students enrolled in variety of first-year seminar courses at St. Cloud State University in St. Cloud, Minnesota. It was hypothesized that students who participated in the disability inclusion training would report significantly more positive attitudes toward persons with disabilities than students in the control group. Independent sample t-tests revealed no statistical significance between the two groups and the null hypothesis was accepted. Although the study did not create clear delineation of the trainings effectiveness, an understanding of first-year college students' attitude toward persons with disabilities was gained. Astonishingly, students who identify as having a disability were found to have less positive attitudes toward persons with disabilities than students who do not identify as having a disability. It is recommended that disability inclusion training and education efforts continue, and attempts to create campus communities that are inclusive of all identities persist. A proposed Model for Building Inclusive Communities was created to assist colleges and universities efforts to support students with disabilities.

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# Chapter I: Introduction

Whether inception of disability occurs gradually or sudden, may it be congenital or acquired, temporary or permanent, disability alters the biological, psychological, social, and spiritual health of individuals (Falvo, 2014; Nosek, 2012; World Health Organization (WHO), 1980; World Health Organization (WHO), 2001). The experience of disability impacts a large majority of the population to varying degrees, either directly or indirectly. Falvo (2014) explains that, "the term experience implies that not all individuals–even those with the same medication condition—are affected by disability in the same way" (p. 2). This statement gives perspective into the myriad of complexities involving disability and its multidimensionality. Personal factors, social environments, physical environments and developmental factors, all impact individuals lived experiences with disability (Falvo, 2014).

A considerable amount of the information available to persons with disabilities and their families, is rooted in historic traditions that represent the presence of disability as burdensome and negative (Falvo, 2014; Meyers, Jenkins-Lindburg, Nied, 2013; Nosek, 2012). This predisposes persons affected by disability to feelings of blame and isolation in an abelist society (Griffin & McClintock, 1997; Haegele & Hodge, 2016). Medical discoveries and technological advancements make treatment options available for many who wish to decrease the effects of disabling conditions. Regrettably, societal oppression of persons with disabilities is propagated by the notion that impairments, which lead to disability due to attitudinal and environmental factors, should be cured. Over time, constructs have emerged that either devalue the existence and personhood of those living with disabilities, or elevate them to a "beyond human" status as the "holy innocents endowed with special grace, with the function of inspiring others to value life"; both of which put disability first, and the lived experience of those with limitations a distant last (Block, n.d., p. 1; Meyers et al., 2013).

Institutions of higher education, and the students who attend them, are not exempt from the consequences caused by negative societal attitudes toward disability, however, they can lead the change against the status quo (Meyers et al., 2013). Educating individuals at critical points of human development can adjust the social fabric toward inclusion, and decelerate the spread of negative attitudes toward persons with disabilities, ultimately relinquishing disabling environments all together (Meyers et al., 2013).

## Defining Disability

Disability related terms are often used incorrectly and interchangeably. Vash and Crewe (2004) use The World Health Organization's International Code of Impairment, Disease, and Handicap's (1980) recommendation to help clarify acceptable language use for referring to disability; *impairment* refers to "conditions or diseases of the body or its organs", *disability* refers to "any functional limitation or restrictions in the ability to carry our activity resulting from an illness, injury, or birth defect", and *handicap* "refers to the interference experienced by a person with a disability in a restrictive environment" (p.26-27).

The Americans with Disabilities Act (ADA) (1990) defines disability as "a physical or mental impairment that substantially limits one or more of the major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment regardless of whether the individual actually has the impairment". This definition, enacted by ADA legislation, is in fact a legal definition and does not suggest that disability is diagnosed. Meyers et al. (2013) clarify the fact that disability does not refer to a person's body with their operational definition stating, "disability is viewed as a social construct, taking into account the full lived experience in terms of the functional limitations and the social, cultural, and political consequences" (p. 6).

The label of disability should not be placed onto an individual. Lived experience and/or self-proclamation of having a disability is the appropriate way to delineate its presence. Despite this, people with physical, mental, sensory, cognitive, emotional, or psychological impairments and/or conditions are frequently deemed disabled by others due to social constructs reinforced throughout history. Disability should not be a diagnosis of ability nor an indication of less than status. Disability is created; the product of environmental and social barriers placed upon individuals with impairments and conditions (Falvo, 2014; Meyers et al., 2013; Nosek, 2012; Oliver, 2013; Owens, 2015; Smart, 2001; Turner & Louis, 1996; Vash & Crewe, 2004). Some individuals with impairments, considered disabled through the societal lens of normative standards, may not feel disabled by the environments in which they exist, thus the label of disability does not fit their lived experience.

**Stigma.** *Stigma* is a social construction that devalues a person based on recognizable differences of distinctive, often less desirable, characteristics (Dovidio, Major, and Crocker, 2000). Quoting Crocker, Major, and Steele (1998), Dovidio et al. (2000) explain that, "a person who is stigmatized is a person whose social identity, or membership in some social category, calls into question his or her full humanity—the person is devalued, spoiled, or flawed in the eyes of others" (p.1). Stigmatized individuals, perceived as having some negative quality that separates them from normal societal expectations, face many prejudices (Dovidio et al., 2000).

**Prejudice.** At the most basic level, *prejudice* is a negative attitude (Dovidio et al., 2000). Gerrig and Zimbardo (2002) define *prejudice* as, "a learned attitude toward a target object, involving negative affect (dislike or fear), negative beliefs (stereotypes) that justify the attitude, and a behavioral intention to avoid, control, dominate, or eliminate the target object" (as cited by The American Psychological Association, n.d.).

**Stereotypes.** *Stereotype* can be defined as "an image of, or attitude towards, persons or groups that is not based on observation and experience, but on preconceived ideas or an artificial construction about that person or group, designed to imply a certain essential nature" (University of South Carolina, n.d., p.9).

**Person-First Language.** Describing persons with disabilities by their condition and/or impairment is not always necessary; often other identifying characteristics (hair color, clothing, personality, etc.) can be referred to before deferring to disability. *Person-first language*, deemed best practice by the disability community, is used to describe persons with disabilities, in which the person is referred to first, and disability second (American Psychological Association (APA), 1992; Meyers et al., 2013). For example, person-first language structure would suggest, "the woman who has paraplegia" instead of "the paraplegic woman"; the later devalues the personhood of the woman and defines her by her condition.

**Ableism.** Linton (1998) defines *ableism* as "discrimination in favor of the able-bodied…includes the idea that a person's abilities or characteristics are determined by disability or that people with disabilities as a group are inferior to nondisabled people" (as cited in Meyers et al., 2013, p. 50).

## Prevalence of Disability

Nearly 1 in 5 people, or 56.7 million Americans, living in the United States reported having a disability in 2010; half of them reporting a severe disability (United States Census Bureau (USCB), 2010; Meyers et al., 2013). In the past twenty years, colleges and universities around the country have seen a steady increase in the enrollment of students with disabilities

(Meyers, 2013; United States Department of Education National Center for Education Statistics (ED NCES), 2016; USCB, 2010). Conservative figures estimates that 11% of all undergraduate students are living with a disability in the United States, a number triple that of thirty years ago (Meyers et al., 2013; ED NCES, 2016). Between 2000 and 2010 there was a 45% increase in full-time enrollment for students with disabilities and a 26% increase in part-time enrollment (Meyers et al., 2013; ED NCES, 2016).

This steady increase can be attributed to advancements in disability rights legislation which protect individuals with disabilities from exclusion from any federally funded entity, including institutions of post-secondary education. Students with disabilities are eligible to receive reasonable accommodations that provide them equal opportunities and participation in accessing their education, however, less than 40% of students who received special education services in high school, ever identify their needs to disability services offices on college campuses (Marshak, Wieren, Ferrell, Swiss, & Dugan, 2010; Summers, White, Zhang, & Gordman, 2014). Considering that more than half of college students eligible for academic accommodations do not receive them, it is not surprising that students with disabilities are less likely than their counterparts to persist through a degree program and graduate from college (Horn & Berktold, 1994).

## Attitudinal Barriers to Disability

Overgeneralization about what persons with disabilities can do, what they are like, how they communicate, and how they can be helped, create widespread attitudinal barriers for people with disabilities (Vash & Crewe, 2004). Sweeping statements and ideas about persons with disabilities effortlessly place people into categories of “us” and “them” (Meyer, 2013; Vash & Crewe, 2004). In this context, “us” or “we” refers to persons without disabilities, and “they” or "them" refers to persons with disabilities. Separation of non-disabled and disabled groups indicates a hierarchal structure of power and oppression which places persons with disabilities in a one down position. Societal norms and cultural expectations communicate validation for negative attitudinal barriers and allow them to persist.

Human beings, in an attempt to make sense out of a world they cannot control, often blame the individual living with impairment(s) rather than recognizing the handicapping nature of the society in which they live. (Vash & Crewe, 2004). Perceptions that pity, mourn, or shame persons with disabilities construct rigid attitudinal barriers that are difficult for people to knock down.

## Attitudinal Barriers to Academic Accommodations

Academic accommodations provide students with disabilities equal access to learning; accommodations do not afford students an academic advantage or ensure their collegiate success, rather, they remove environmental barriers in an attempt to make learning possible. Students are required to willfully disclose a disability to their institution in order to be considered for academic accommodations. Students' reluctance to reveal a disability and receive academic accommodations in college, is directly related to environmental, societal, and attitudinal barriers (Couzens, Poed, Kataoka, Brandon, Hartley, & Keen, 2015; Kranke, Jackson, Taylor, Anderson-Fye, & Floersch, 2013; Marshak et al., 2010; Stein, 2013; Summers et al., 2014). Vilchinsky, Werner, and Findler (2010) explain that *attitudes* "refer to an individual's propensity to evaluate a particular entity with some degree of favorability or nonfavorability" (p.164). Attitudes can be examined in terms of behaviors, cognitions, and emotions (Findler et al., 2007; Vilchinsky et al., 2010). Students with disabilities maintain that attitudes toward disability depends on the type of impairment that leads to disability (Stein, 2013).

## Students with Disabilities

The National Center for Education Statistics (2011) found that 31% of students with disabilities report Specific Learning Disabilities, 18% report Attention Deficit Disorder (ADD)/ Attention Deficit Hyperactive Disorder (ADHD), 15% report Mental Illness or Psychiatric Disorder, 11% report an Unspecified Health Impairment/condition, 7% report Mobility Limitation/Orthopedic Impairment, 4% Difficulty Hearing, 3% Cognitive Difficulties, 2% report a Traumatic Brain Injury, 2% report Autism Spectrum Disorder (ASD), and 4% report other impairments (Lewis & Farris, 1999; Meyers et al., 2013). The most commonly reported disabilities are not easily recognized, falling under a frequently used umbrella term "hidden disabilities".

Learning disabilities, ADD/ADHD, ASD, psychological/psychiatric disorders, and other less recognizable conditions are included in the category of hidden disabilities. "Hidden disabilities can be developmental or acquired; hidden because they rarely have a physical presentation, but rather affect a range of cognitive processes" (Couzens et al., 2015, p. 25; Kranke et al., 2013). The term *hidden disabilities* also commonly referred to as *non-apparent disabilities* or *invisible disabilities*, holds negative connotations and implies that an impairment or condition that has no obvious physical representation, may not actually exist. The social stigma of mental illness is one example of how the term hidden disability manifests negative perceptions of those with psychological disorders. The term *non-visible* is more acceptable for use when referring to impairments that are not easily recognized.

Based on the aforementioned statistics, upwards of 80% of the disabilities reported by students are non-visible. The general public lacks knowledge about many non-visible disabilities; one student stated, "I think people are more accepting of visible disabilities, something concrete" (Stein, 2013, p. 156). A study conducted by The National Center for Learning Disabilities found that one-third of people attribute a learning disability to watching too much television, poor diet, and/or vaccinations, and 55% of people believe eye glasses alone could treat a learning disability (Cortiella & Horowitz, 2014). It is no wonder that only 17% of young adults with learning disabilities receive accommodations in college (Cortiella & Horowitz, 2014). "Students are not provided with enough information about the less visible disabilities such as learning disability and behavioral disorders that are often the most difficult to understand (Meyers & Lester, 2016, p. 3). This lack of general knowledge leads to stigma, misconceptions, and negative attitudes, all of which must be addressed in order to create a fully inclusive society.

**Psychological disabilities.** Current studies report that prevalence of psychological disabilities among college students is beginning to surpass both learning disabilities and ADD combined (Stein, 2013). Psychological disabilities frequently co-occur with another condition and/or impairment, most often a learning disability or ADHD (Fichten, Nguyen, Budd, Asuncion, Tibbs, Jorgensen, Barile, & Amsel, 2014). Stein (2013) found that students often conceal diagnosis of a psychological disability and choose to discuss, or reveal, a co-occurring disorder to the university in an attempt to reduce being stigmatized. One student explains, "I think I'm going to be treated differently because of it…there are times I purposefully leave out what I have because I'm afraid of being discriminated against" (Stein, 2013, p. 155). Stigma and negative stereotypes, along with organizational and institutional barriers, are cited among the most arduous obstacles to success for college students with disabilities (Stein, 2013).

## Need for Training

These complex attitudinal challenges point to a need for increased training, discussion, and education about the experiences, strengths, challenges, and oppression of persons with disabilities. Currently, no such training is available for the general student population, faculty, or staff, at St. Cloud State University (SCSU), the mid-sized public university in the upper Midwest region of the United States where the research for this project took place.

A history of diversity tensions plague this area, often overflowing to students, staff, and even infrastructures of SCSU. The university has responded earnestly to these intercultural obstacles, implementing university wide initiatives that seek to create inclusive environments. Targeted trainings, regarding the societal oppression of two key marginalized populations have informed, educated, and inspired attitudinal change at SCSU. Increased efforts to create inclusive and safe communities for Lesbian, Gay, Bisexual, Transgender, Queer, Questioning, Intersex, Pansexual, Two-Spirit, Asexual, and Allies individuals (shortened to the communities accepted acronym LGBTQ) and individuals whose race and ethnicity are other than white, have been successful at SCSU.

**Safe space training.** St. Cloud State, in partnership with the campus's LGBT Resource Center, facilitates Safe Space trainings, implemented in response to discrimination, prejudices, and stereotypes faced by LGBTQ individuals. This short targeted training helps participants understand the differences between sexual orientation, gender identity, and biological sex, demonstrates and coaches appropriate use of terminology used to describe sexual orientation and gender identity, identifies ways to make campuses inclusive for LGBTQ individuals, offers historical significance to the issue of sex and gender, and helps participants understand how to support LGBTQ individuals during the coming out process (Campus Pride, n.d.).

**Community anti-racism education initiative.** St. Cloud State has also enacted an anti-racism training with the mission to facilitate long term change at the university and in the community. This targeted training focuses on institutionalized racism and investigates power and privilege dynamics at work in society (Community Anti-Racism Education Initiative (CARE), n.d.). Additionally, it provides strategies for individuals and educators to confront stereotypes, prejudice, and discrimination, and promotes inclusive environment for all people no matter race or ethnicity (CARE, n.d.). Gillborn (2015) explains that, "The terms "race" and "disability" have a lot in common: Both are usually assumed to be relatively obvious and fixed, but are actually socially constructed categories that are constantly contested and redefined" (p. 280).

As with issues of race, sexual orientation, and gender identity, a greater awareness of issues facing persons with disabilities is vital to forming fully inclusive campus communities. In 2015 SCSU enrolled 15,461 undergraduate and graduate students (Office of Strategy, Planning, and Effectiveness- St. Cloud State University, 2015). That same year, more than 700 students, or about 4.5% of the total student body, were registered in SCSU's student disability services office (Personal communication, 2017). Considering that a large majority of college students eligible to receive academic accommodations will never disclose a disability to their university, estimations for SCSU's accommodation eligible population is more realistically much higher. Education and training that focuses on the historical oppression of persons with disabilities, social issues of disability, and address stereotypes, discriminations, and prejudices surrounding disability, is a clear next step toward creating a fully inclusive community at SCSU.

## Creation of Disability Inclusion Training

This study is the product of a targeted training I developed for the peer mentors at SCSU. Peer mentors support first-year students with various lived experiences and identities including: race, ethnicity, culture, sexual orientation, gender, socioeconomic status, ability, and more. Extensive trainings, including the previously described anti-racism and safe space training, human development theory, cognitive learning styles, group facilitation, helping skills, student development theory, as well as mental health issues, prepare peer mentors to interaction with diverse populations, yet training concerning the psychosocial aspects of disability was lacking.

**Developers background.** Combining theoretical knowledge and research supported best practices from fields that approach people holistically and consider all aspects of a person's humanity, a comprehensive disability inclusion training was created. Masters level education, training, and practice in the fields of rehabilitation counseling and student development and college counseling, provided an appropriate vantage point from which to approach the development of a targeted training that combines two complementary philosophical perspectives.

**Theoretical base.** The training presented for this study is based in the social model of disability, which views physical, mental, and emotional impairments as neutral, only leading to disability when functional limitations are caused by environmental and societal barriers (Nosek, 2012). Taking a social justice and civil responsibility stance, comparisons between the social model and medical model of disability urge students to accept the most inclusive paradigm and become advocates for oppressed and disparaged populations.

**Goal of training.** The goal of this disability inclusion training is to (a) encourage open conversation about disability related issues (b) confront conscious and unconscious stereotypes (c) inform and educate individuals about psychosocial aspects of disability (d) endorse and advocate the use of person-first language and (e) notify individuals of support services available to students with disabilities at SCSU. The following provides a basic overview of the disability inclusion training developed for this study.

**Training overview.** Participants were asked to think critically about the current state of inclusion for persons with disabilities by exploring visible and non-visible stereotypes, discrimination, prejudice and stigma within their communities. Next, the medical model of disability was compared and contrasted with the social model of disability. This discussion was followed by an interactive activity entitled “The Power of Words”(used with permission from the Center on Disability Studies at University of Hawaiʻi at Manoa) which helps students recognize how negative words and images can affect attitudes toward persons with disabilities (Cook, Duggla, & Gibo, 2010). Vash and Crewe (2004) testify that “words have the power to shape images of the referenced objects and their choice is important in building or breaking down stereotypes” (p. 26). After a short reflection period, person-first language handouts were distributed and terminology was explained and practiced. To emphasize how language is socially constructed, examples common in everyday life were used. In closing, students were left with recommendations on how to implement strategies that lead to change.

## Overview of Methodology

This study explored first-year college students’ attitudes toward persons with disabilities. The study investigates the following research question:

*RQ*- What effect does short targeted training on disability inclusion have on first-year college students’ attitudes toward persons with disabilities?

$H_o$: There is no statistically significant difference between the control and treatment group mean scores as a result of disability inclusion training.

$H_a$: There is a statistically significant difference between control and treatment group mean scores as a result of disability inclusion training.

First-year college students’ attitudes toward persons with disabilities were surveyed using the Multidimensional Attitudes Scale Toward Persons with Disabilities (MAS). This indirect measure examines the relationship between the affective, cognitive, and behavioral dimensions of attitude (Findler et al., 2007). A diverse group of first-year college students were surveyed in this study. Instructors of first-year seminar courses were recruited for their classes participation and either scheduled times for their students to take the pretest and posttests (control group), or schedule a presentation time during one class period and a follow up date for the posttest (treatment group). Students in the treatment group completed the MAS pretest and participated in the targeted training on disability inclusion, while students in the control group simply completed the MAS pretest and returned to regular class activities. Participants in the treatment group were provided with tangible skills and practice using inclusive, person-first language, and were provided information about resources available on SCSU's campus to persons with disabilities. Participants' attitudes toward persons with disabilities were re-assessed using the MAS two to four weeks after the initial survey. Pretest and posttest MAS measures were matched using a student provided personal identifier word and data analysis was conducted.

To gain understanding of college students' attitudes toward persons with disabilities, MAS pretest results from both the control and treatment group were combined; *t*-tests confirmed that students in both groups held similar baseline attitudes on the pretest measure. Descriptive and inferential statistics revealed that first-year college students have overwhelmingly positive attitudes toward persons with disabilities. Independent sample *t*-tests showed that the disability inclusion training used for this study did not have a statistically significant effect on first-year college students' attitudes toward persons with disabilities, however, the study did find that college students with disabilities had significantly less positive attitudes toward disability than their counterparts. Continued disability awareness training and education efforts must persist to empower and increase self-efficacy in students with disabilities.

# Chapter II: Literature Review

## Historical Oppression of Persons with Disabilities

Disability has historically been used as justification for the unequal treatment of people perceived as different from the societal norm.  Past governmental leaders, educators, and medical professionals have referred to difference in ability as so problematic in society that unjust treatment was necessary for the common good (Baynton, n.d.).  People with disabilities have traditionally been viewed with repulsion and fear, and forced to endured ghastly and cruel means of treatment.  Often seen as either outcasts or objects of pity, society has aimed to modify persons with disabilities to a more normative state (Baynton, n.d.; Nosek, 2012).  Customary philosophy of disability considered physical and mental impairments punishment for sin—that when imposed unjustly—would lead the affected individual to commit immoral and evil acts against themselves and others (Livneh, 2012).  Labels such as “insane” were created to illustrate persons with disabilities as non-human, separating those with recognizable difference from those without (Livneh, 2012).

Early attempts from individuals like Benjamin Rush and Dorothea Dix, both of whom advocated for humane treatment of individuals medically diagnosed as “insane,” were quickly halted by the industrialization of the United States and upticks of immigration populations (Trent, n.d.). Theorists and proponents of the eugenics movement believed that “insane” people were “hereditarily inferior people” (Trent, n.d.). They advised public figures in positions of power to stop the breeding of these “inferior people” by segregating them from the general public and into institutions where they could be treated for their medical condition (Trent, n.d.). Several states segregated persons with disabilities lawfully until the early 1900’s prohibiting visibly diseased, mutilated, or deformed individuals from appearing in public as not to disturb society with their disgusting and unsightly form (Griffin & McClintock, 1997; Meyers et al., 2013). Individuals with recognizable conditions and impairments were not seen as functional or contributing members of society and were easily disregarded, however, the presence of a physical and/or mental impairment was not always required to judge an individual as clinically "insane" or disabled.

The United States has a history of displacing medical diagnoses of disability onto African Americans, Women, and Immigrant populations in order to hinder equality efforts (Baynton, n.d.). Baynton explains that "a common argument for slavery was that the impaired intelligence of African Americans made them incapable of equality with other Americans"; in addition to the claim that people of Africa could not take care of themselves was the diagnosis of *drapetomania*, the "disease of the mind that caused slaves to run away" (n.d., p. 1). During the women's suffrage movement, disabilities such as, frailness, hysteria, nervous instability, and temperament disabilities, were all cited by opponents of women's rights (Baynton, n.d.). When racial, gender, and ethnicity status were not enough of a rationale for exclusion from society, disability was the added justification for oppression of minority populations (Baynton, n.d.).

Zola (1988) offers a distinctive insight into the societal oppression of persons with disabilities through a lived experience he coins, "the great achievement syndrome" (p. 1). People with disabilities, residing in positions of power or having achieved an iconic status in society, send the message to other persons with disabilities that they must "overcome their disabilities" to lead successful and happy lives (Zola, 1988, p. 3). Failure to achieve similar accomplishments highlights personal insufficiencies and weakness leading to further perpetuation of stereotypes (Zola, 1988). People without disabilities come to expect the same "overcoming of disabilities" from *all* persons with disabilities. Attempts to change individual's status from disabled to non-disabled are unrealistic and further devalue the personhood and lived experiences of persons with disabilities.

Confronting harmful stereotypes may not be enough to change the greater societal environment that has historically oppressed persons with disabilities. The unchanging nature of stereotypes calls for a term that can move beyond these stagnate misconceptions and recognizes the constant interactions of human beings. Social constructs are "ways of understanding and picturing disability" that are undoubtedly rooted in the experience between persons with disabilities and persons without disabilities (Block, n.d., p. 1). The ability of social constructs to "persist across generations" and "transcend geographical boundaries" yields more detrimental outcomes than stereotypes, and makes it nearly impossible for society to ever fully confront and discontinue them (Block, n.d., p. 1).

The social construct of *super humanness* depicts persons with disabilities, who have "overcome adversity", as heroic examples for others with similar disabilities who may never attain the same results (Block, n.d.). Other social constructs include, but are not limited to: the belief that disability is an abnormality that must be cured, the all too common stigmatization of individuals with a mental illness as harmful to society, the view that persons with disabilities are less than human, and the notion that the lives of persons with cognitive impairments are meant to inspire others to value their own (Block, n.d.). Offering people an alternative understanding and picture of disability, is necessary to counteract social constructs, systematic oppression, and exclusion of the largest minority population in the world. Sociocultural and historical factors, as well as social customs and norms, advance negative attitudes towards persons with disabilities and prolong oppression (Livneh, 2012). Nosek (2012) states, "Most of us who live with disabilities suffer not nearly as much from the disability itself as from the millennia of negative perception surround it" (p. 114).

### Language as Oppression

How a society perceives its members is established through language (Meyers et al., 2013). Meyers et al. (2013) explain the harmful effects negative attitudes and labels have on persons with disabilities:

> Attitudes and labels place the stigma of disability on individuals. Labeling is related to the social construction of identity, and labels have often been cultivated by those with privilege as a way to collectively marginalize and oppress certain identities. The groups that are targeted are often deemed as deviant from the norm and incur negative labels and attitudes (p. 60).

Labels such as "inferior" (historically used to describe persons with disabilities) advance bias, expresses negative attitudes, and leads to devaluation and places persons with disabilities in an "other" lesser category in relation to the "norm" (American Psychological Association, 1992; Granello & Gibbs, 2016; McCoy & DeCecco, 2011). Words like "affliction" imply that persons with disabilities are merely suffering victims of a medical condition imposed on them from God to help them, and others, have patience and faith while "handicap" assumes the condition a person has must be overcome in order to make it without unbearable struggles in a competitive world (Baynton, 1998).

Disability first, or handicapping language, places the disability a person has, before the acknowledgement of their personhood, illustrating persons with disabilities as their medically diagnosed conditions rather than human beings (American Psychological Association, 1992).

Terms like “affliction”, “handicapped” and “crippled”, although once socially acceptable, are no longer appropriate expressions for describing disability (McCoy & DeCecco, 2011).

The American Psychological Association recommends using non-handicapping language that protects the “integrity of individuals as whole human beings” and recommends that the word disability be used to refer to an attribute a person has, and handicap to refer to the source of limitations” (American Psychological Association, 1992, p. 1). Non-handicapping language redirects focus away from an individual’s impairments, and portrays persons with disabilities as contributing members of society with individualized goals and preferences.

Inclusive, non-handicapping language, avoids labeling people by their disabilities, and does not reflect persons with disabilities as “patients” with “illnesses” that must be cured; simply put, it does not place mental, emotional, or physical impairments before the person as a whole. In fact, The International Code of Impairment, Disease, and Handicap, is moving to eliminate historically stigmatizing labels all together, choosing to replace labels of impairment, disability, and handicap, with categories of body, activities, and participation (Vash & Crewe, 2004). The incessant use of handicapping language in our society leads to negative attitudes towards persons with disabilities, and it is clear that attitudes, and other environmental limitations, can be more handicapping than disability itself (American Psychological Association, 1992). “The first step to implementing change is to agree to use language which gives dignity and value to people with disabilities” (McCoy & DeCecco, 2011, p. 5).

Generally, the disability community agrees that person-first language is best practice when referring to persons with disabilities (Vash & Crewe, 2004). Person-first language does not use slurs, stereotypes, or social constructs, instead, it places the person before the impairment; for example, person-first language refers to a “person with epilepsy” rather than referring to them as an “epileptic”. There is a well-defined connection between negative, offensive, incorrect, non-person-first, disabling language, and presence of negative attitudes towards persons with disabilities, an issue that must be addressed for the advancement of all mankind (American Psychological Association, 1992; Baynton, 1998; Granello & Gibbs, 2016; Granello & Granello, 2000; McCoy & DeCecco, 2011)**.** Oppressive language stems from historically oppressive models of disability.

## Medical Model of Disability

The medical model of disability positions power over persons with disabilities by establishing medical professionals, educators, and politicians as the authority that governs their experiences (Beaudry, 2016; Falvo, 2014; Haegele & Hodge, 2016; Meyers et al., 2013; Nosek, 2012; Owens, 2015). This old paradigm interprets disability as a medical condition, and emphasizes a physical or mental deficit that must be fixed in order to return the individual to a normative state, permitting the affected individual to be functional and participate in society (Beaudry, 2016; Meyers et al., 2013; Nosek, 2012). From this perspective, disability is the cause of a diagnosed medical condition, an abnormality that resides within the individual, a deficiency or problem, which can only be cured at the hands of medical or educational professionals (Beaudry, 2016; Falvo, 2014; Haegele & Hodge, 2016; Nosek, 2012).

The historical oppression of persons with disabilities lends unjust support to the medical model. Emphasis on this diagnosis driven model overlooks a persons ability to function within their own environments and the broader context of society (Falvo, 2014). Yet, according to Longmore (1998) disability is not simply or even primarily a series of medical conditions. It is much more a social condition.

## Social Model of Disability

Beginning in the 1960's, disability activists and sociologists constructed a "new paradigm" of disability, one that encompassed the lived experience of persons with disabilities in society (Beaudry, 2016; Nosek, 2012). The social model of disability challenges the discrimination and marginalization of persons with disabilities, and attempts to remove social barriers that prohibit their full inclusion in society (Owens, 2015).

The theoretical stance of the social model describes disability as a phenomenon caused by social oppression, prejudices, and [restrictive] non-inclusive environments, rather than a condition that resides within an individual (Beaudry, 2016; Nosek, 2012). This model advocates for social and political change and attempts to decrease the environmental barriers that create disability (Haegele & Hodge, 2016). This more progressive model asserts that there is a natural range in human variation that creates innumerable conditions that may lead to impairments (Beaudry, 2016; Haegele & Hodge, 2016; Nosek, 2012; Owens, 2015). The impairments themselves are neutral, neither good nor bad, ableing or disabling, it is instead the dysfunctional interaction between an individual with an impairment, and the surrounding physical and social atmosphere, that creates disability (Beaudry, 2016; Haegele & Hodge, 2016; Nosek, 2012; Owens, 2015). Disability is a societal problem rather than a shortfall or disorder that defines individuals, thus it is "society's responsibility to become more inclusive and accommodating towards people with emotional, cognitive, physical, or sensory impairments" (Nosek, 2012, p. 115). Adapting the social model of disability will assist society as it evolves towards inclusivity (Haegele & Hodge, 2016).

Challengers of the social model argue that it fails to recognize the realities of the limitations faced by persons with disabilities due to their medical conditions and/or impairments

(Beaudry, 2016). Rather than a dispute of the existence of biological conditions, Michael Oliver, a founding theorist of the social model of disability, makes it clear that the model never meant to ignore the existence of impairments as real and important to the individuals who have them (Beaudry, 2016; Oliver, 2013). The theory takes the position that presence of impairments does not equate to disability itself; disability is the product of limitation within society. Additionally, the model should be viewed as a collectivist overview of disablement instead of a narrative of the lived experience of each individual living with any impairments/conditions (Beaudry, 2016; Oliver, 2013). Jonas-Sebastien Beaudry (2016) expresses apprehension for arguments of dichotomy that challenge the social model of disability's concern for all dimensions of person with disabilities, inquiring about how a model that focuses "on social oppression, and institutionalized ableism would imply that they do not care about, or discredit, other dimensions of human welfare"(p. 215). Comprehensive review of the social model confirms its relevancy to conceptualize the experience of disability, however, theorists have continued to develop models, such as the biopsychosocial model, that more clearly define the relationship of biological, psychological, and social aspects of health and wellness.

Colleges and universities, especially those from the liberal education tradition, promise to offer their students a comprehensive education by the time they graduate; this includes an awareness of issues of social justice and oppression. Being that the academic understanding of disability is generally that of a medical condition rather than a psychosocial state, it is valuable to examine, and edify, how attitudes toward persons with disabilities affect campus environments and the students who attend and call them home. (Nosek, 2012).

## Disability Law in Higher Education

People with disabilities are enrolling at institutions of higher education at steadily increasing rates (Summers, White, Zhang, & Gordon, 2014). Disability rights laws, enacted over the past 40 years, grant federally recognized protections to persons with disabilities to support their full inclusion in society. The Rehabilitation Act of 1973 states “No otherwise qualified individual with a disability in the United States, shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance” (United States Department of Labor, 29 U.S.C. § 701). Colleges and universities in the United States rely on federal funding to provide financial aid assistance to the students that attend them. Disability rights legislation requires any federally funded entity to provide reasonable accommodations for persons with disabilities. The Americans with Disabilities Act (ADA) enhances laws first defined by the Rehabilitation Act of 1973, clarifying in more specific terms what disability means under federal law.

The ADA defines disability as, “an impairment that substantially limits one or more major life activities, a record of such an impairment, or being regarded as having such an impairment” (United States Department of Labor). Critical to the change in terminology is the fact that personal history is contained in the words *“regarded as having”* and *“person with an impairment that substantially limits major life activities”* need not attempt to change or alter their current state by use of medication, equipment, or assistive technology in order to be granted full protection under federal law (Cornell University Law School, 42 U.S. Code § 12102 - Definition of disability). The ADA of 2008 clearly establishes the precedence that persons with disabilites are more than the impairments they have, adding support to the social model of disability.

Although federal law protects college students with disabilities from physical and environmental barriers such as access to buildings, societal barriers, prejudices, stereotypes, and discriminations are prevail. In fact, “coping with disability during college can greatly impact success and completion of a degree” (Kranke, Jackson, Taylor, Anderson-Fye, & Floersch, 2013, p.35). The National Council on Disability (2011) found that students with disabilities complete college at half the rate of their peers without disabilities.

Reasonable accommodations are available to students with disabilities to help them access their education. Extended test time, alternate location for testing, and alternate format texts, are the most commonly offered, and used, academic accommodations (Summers et al., 2014). These tools can greatly enhance educational success if students choose to use them, unfortunately many attitudinal barriers exist that prohibit students with disabilities from getting the support they need (Summers et al., 2014; Kranke et al., 2013; Marshak, Wieren, Ferrell, Swiss, & Dugan, 2010).

Various student-expressed explanations give insight to the disparity between enrollment in college, and completion of an undergraduate degree. Students articulate a desire to brand themselves differently at college, craving a new social identity that differs from the stigmatizing identities of their high school experiences (Marshak, Wieren, Ferrell, Swiss, & Dugan, 2010). One student recounts overhearing a fellow student’s criticism of another who utilizes academic accommodations at college: “well, I don’t know what her problem is, I’ve got a disability too…but you don’t see me running for [accommodations]. I work hard to get where I’m at” (Marshak et al., 2010, p.156). This example solidifies the concept of the “great achievement syndrome" inferring that students who use accommodations are less than other students with disabilities who do not. Students feel a vital need to be viewed by their peers as "normal" as opposed to different or abnormal (Kranke et al., 2013; Marshak et al., 2010).

**Disability Education in Colleges**

Students bring with them an engrained set of cultural beliefs, values, assumptions, and attitudes to college (Meyers et al., 2013). These viewpoints, often socialized into them, help to make sense out of their immediate surroundings and the world around them. It is the responsibility of institutions of higher education, educators, and peers, to confront harmful stereotypes and prejudices in productive ways that foster self-exploration and growth (Lyons, 1991). "Stigma is more difficult to change than knowledge" thus addressing these barriers from a social justice stance is imperative (Gillespie-Lynch, Brooks, Someki, Obeid, Shane-Simpson, Kapp, Daou, & Smith, 2015, p. 2561). Bruder and Margo-Wislon (2010) found that 65% of undergraduate students did not feel courses and discussions prompted awareness of disability issues (p. 7).

Research supports the success of structured workshops and courses designed to increase awareness of disability related issues and confront misconceptions (Adrian, 1997; Bruder & Margo-Wilson, 2010; Frailing & Slate, 2016; Gillespie-Lynch et al., 2015; Li, Wu, & Ong, 2014). Examples of effective disability awareness courses are numerous, each presenting an archetype for strategic course planning. A semester long course entitled "the Criminalization of Mental Illness", offered to criminal justice majors at a southern Texas university, improved students attitudes about people with mental illness (Frailing & Slate, 2016). This disability awareness initiative was found to have a positive impact on participants, increasing their awareness and understanding of disability and contributing an understanding of misconceptions held about persons with disabilities (Li et al., 2014).

Yet another example of effective intervention comes from the small liberal arts college, Southwestern University in Georgetown, Texas. This university required all new entering freshman to enroll in, and complete, a first-year seminar course, for general education credits, entitled "Disability, Society, and Ethical Issues" (Adrian, 1997). The course was created "to examine the relationship between societal attitudes and institutions and persons with disabilities" with the added objective "for students to assess their personal attitudes toward persons with disabilities and to develop an understanding of how these attitudes influence behavior" (Adrian, 1997, p. 6 & 3). The commitment of this university to implement an overarching course on disability is a clear statement of the place, and importance of, disability related education has in the college experience.

Fields of study including healthcare, psychology, education, and rehabilitation, offer disability related courses and trainings, but tend to place persons with disabilities into categories of patients, clients, or students (Adrian, 1997). Educators are encouraged to implement language and materials into their classrooms that describe and highlight the lived experiences of persons with disabilities rather than presenting perspective from a strictly medical diagnosis model of disability (Lyons, 1991).

## Dimensions of Attitude

Vilchinsky et al. (2010) impart that "attitudes refer to an individual's propensity to evaluate a particular entity with some degree of favorability or nonfavorability" (p. 164). Triandis (1971) identified the three dimensions of attitude (cognitive, emotional, and behavioral) in his early definition stating, "an idea charged with emotion which predisposes a class of actions to a particular class of social situations" (p.9). The multidimensionality of attitude is thoroughly endorsed and considered the standard theoretical framework for surveying attitudes (Findler et al., 2007; Meyers & Lester, 2016; Vilchinsky et al., 2010). The dimensions of attitude (affects, cognitions, and behaviors) are defined and expanded upon below for the purposes of this study.

**Affects.** Affects can be referred to as emotions toward a referent (positive or negative feelings) and are the emotional underpinnings of attitude (Antonak & Livneh, 1988; Findler et al., 2007; Vilchinsky et al., 2010). Findler et al. (2007) created the affect subscale of the MAS to reflect psychosocial contexts of affect and included emotions such as: anger, disgust, fear, sadness, stress, depression, upset, serenity, and calmness (to name a few).

**Cognitions.** Cognitions are thoughts and can be defined as "an individual's ideas, thoughts, perception, beliefs, opinions, or mental conceptualizations of the referent" (Findler et al., 2007, p. 166). The cognitive component of attitude refers to the thoughts individuals have about interacting with persons with disabilities (Findler et al., 2007).

**Behaviors.** A widely accepted definition of behavior in terms of attitude is, a willingness to interact or behave in a certain manner towards a referent (Findler et al., 2007; Vilchinsky et al., 2010). Finder et al. explain that "people are typically reluctant to enter into unpredictable, and therefore stressful, interactions with people with overt disabilities"; they will often either try to escape the situation, or mind their own business (2007, p. 169).

## College Students Attitudes Toward Persons with Disabilities

Negative societal perceptions, formed by negative language, create attitudinal barriers for persons with disabilites in society and on college campuses (Bruder & Margo-Wilson, 2010; Seo & Chen, 2009; Griffin, Summer, McMillan, Day, & Hodapp, 2012; Hergenrather & Rhodes, 2007). Use of person- first language in higher education is not the norm. McCoy and DeCecco

(2011) found that 71% of college students used incorrect and/or offensive language (e.g. schizophrenic, epileptic, crippled, and retard) to describe persons with disabilities. Use of language has also been examined in relation to tolerance. College students who prescribe to a broad definition of "mental illness" are more tolerant of persons with mental illnesses, and have less socially restrictive attitudes toward them than their counterparts (Granello & Granello, 2000). Granello & Gibbs (2016) found that undergraduate students reported lower levels of tolerance to the non-person-first description of "the mentally ill" than to the person-first description of "people with mental illnesses" (p. 36).

Negative attitudes toward persons with disabilities affect the experience of all students, faculty, and staff at an institute of higher education; the negative biases evident in portions of the student population can easily transfer to those with little or no understanding of disability related issues (Hergenrather & Rhodes, 2007). Feelings of pity, awkwardness, and/or embarrassment during encounters and/or interactions with persons with disabilities were predominantly reported by undergraduate students, graduate students, and faculty; feelings of admiration were also reported (Bruder & Margo-Wilson, 2010). Although typically thought of as a positive expression of regard, viewing persons with disabilities with admiration can actually perpetuate negative attitudes by objectifying and patronizing their personal lived experiences.

Undergraduate students report hesitancy to interact with persons with disabilities as well as limited interactions with persons with disabilities outside of the classroom experience (Bruder & Margo-Wilson, 2010; Perez, Shim, King, & Baxter Magolda, 2015). Students less comfortable interacting with persons with disabilities are also uncertain how to act around them (Griffin et al., 2012). Students reported questioning the appropriateness of their conversation during most interactions with persons with disabilities (Bruder & Margo-Wilson, 2010). Although students convey insecurity in their actions with, and feelings toward, persons with disabilities, little evidence suggests the realities of their caution.

Interpersonal social interactions with persons with disabilities have been shown to foster positive attitudes (Bruder & Margo-Wilson, 2010; Griffin et al., 2012; Hergenrather & Rhodes, 2007; Lyons, 1991; Seo & Chen, 2009; Yazbeck, McVilly, & Parmenter, 2004). College students with positive perceptions of, and high comfort levels with, persons with disabilities, are more likely to interact with them frequently (Griffin et al., 2012). Education alone is not enough to alter negative attitudes toward persons with disabilities and promote inclusion (Yazbeck et al., 2004). "Increasing awareness and creating a culture of understanding and inclusion for students with disabilities must begin in the classroom" (Bruder & Margo-Wilson, 2009, p. 9).

## Developmental Model of Intercultural Maturity

Educators should consider using a multidimensional framework to assist college students in achieving the educational goal of developing intercultural maturity (King & Baxter Magolda, 2005). Intercultural maturity "describes how people become increasingly capable of understanding and acting in ways that are intercultural aware and appropriate" and accounts for the interconnectedness and interrelatedness of cultures (King & Baxter Magolda, 2005, p. 572). Based heavily on Kegan's holistic model of lifespan development, King and Baxter Magolda's multidimensional model of intercultural maturity integrates cognitive, intrapersonal, and interpersonal domains of human development over three developmental levels of intercultural maturity: initial, intermediate, and mature (King & Baxter Magolda, 2005; Perez et al., 2015).

The initial level of development is characterized by, but not limited to, students': assumption that knowledge is certain and can be categorized as right or wrong, a resistance to challenge their own belief system, ignorance of their own intersecting social identities, lack of awareness of how social systems work, views of social problems egocentrically and the assumption that difference is a threat to their own identity (King & Baxter Magolda, 2005, p. 576).

As students shift to the *intermediate* level of development, attributes begin to evolve towards intercultural maturity and can include: an evolving awareness of multiple perspectives and sense of identity, self-exploration of values, identities, and beliefs, willingness to interact with diverse other and refrain from judgment, and an increased curiosity of how social systems work (King & Baxter Magolda, 2005, p. 576).

The more difficult to achieve, mature level of development, features students, ability to understand alternative cultural worldview, aptitude to create an internal self and engage challenges to their belief system, comprehension of how community practices affect social systems, and willingness to advocate for the rights of others (King & Baxter Magolda, 2005, p. 576). The multidimensional model of intercultural maturity also recognizes that students who achieve a mature level of intercultural development are "capable of recognizing the ways in which power, privilege, and oppression affect the construction of knowledge, images of self, and interactions with others" (Perez et al. 2015, p. 761).

A recent study confirmed and refined King and Baxter Magolda's original model, adding two transitional stages between the initial level of development and the intermediate, and between the intermediate level of development and mature level (Perez et al., 2015). These transition phases are marked by reflective thinking and an expressed desire to further explore both theirs, and others, cultures; transition phases provide evidence that a shift in intercultural maturity is underway (Perez et al., 2015).

As students progress from the initial level of intercultural maturity to the intermediate level, their cognitive, interpersonal, and intrapersonal domains of human development are affected. Students in the first transition phase of this model often minimalize difference as begin to explore their own identity, frequently grappling with their internal and external sense of self as perspectives adjust to the change in intercultural thinking (Perez, et al., 2015). Students also demonstrate a willingness to interact with, and suspended judgment of, individuals from other cultures and begin to recognize that social structures exist (Perez et al., 2015). Perez et al. (2015) identify just one indicator of transition from the intermediate level of development to the mature level, that is, students "consider how to challenge overt acts of oppression and how to act as advocates"; this trait that falls under the interpersonal domain of human development (p.768). The meek representation of identified cognitive, intrapersonal, and interpersonal growth during the second transition phase, which is required to elevate students from the intermediate level to the final level of this model, can be attributed to the shortage of college students who truly function from the mature level of intercultural maturity.

Despite diverse cultural demographics, student expressed interactions with those culturally different from them, fail to demonstrate evidence of transcending beyond the initial and intermediate developmental levels, to the more advanced mature level of intercultural maturity (Perez et al., 2015). Perez, et. al. explains, "because many students arrive on campus from homogeneous communities and may have limited exposure to cultural differences, it may be particularly critical for educators to attend to the initial level of intercultural maturity and then transition from initial to the intermediate level" (2015, p. 774). For that reason, educating first-year college students on disability related issues is an obvious place to begin confronting the negative attitudes they tend to hold about persons with disabilities.

# Chapter III: Methodology

This quantitative, quasi-experimental, pretest posttest, control group designed study, seeks to answer the following research question:

RQ- What effect does short targeted training on disability inclusion have on first-year college students' attitudes toward persons with disabilities?

It is hypothesized that:

$H_o$: There is no statistically significant difference between control and treatment group mean scores as a result of disability inclusion training.

$H_a$: There is a statistically significant difference between control and treatment group mean scores as a result of disability inclusion training.

Research activities for this study took place at St. Cloud State University (SCSU), one of Minnesota's largest and most affordable public institutions of higher education enrolling 15,092 undergraduates and 1,832 graduate students in the fall of 2016, fifteen percent of which were students of color (St. Cloud State University, 2017; Minnesota State Colleges and Universities, 2017). Undergraduates of the university receive a well-rounded liberal education and have over 200 majors, minors, and pre-professional programs to choose from; they also enjoy a 23:1 student/faculty ratio (St. Cloud State University, 2017; Minnesota State Colleges and Universities, 2017). St. Cloud State University commits that upon graduation, students will have the skills, knowledge, and experience to: think creatively and critically, seek and apply knowledge, communicate effectively, integrate existing and evolving technologies, engage as a member of a diverse and multicultural world, and act with personal integrity and civic responsibility (St. Cloud State University, 2017).

## Participants

All participants of this study were enrolled in one of four first-year seminar courses at SCSU and were recruited using a consecutive sampling method. The total sample population was 227 students (117 treatment and 110 control). Data matching eliminated 72 participants from the study due to incomplete surveys, mismatched identifier words, or missing posttest (assumingly due to absence or withdrawal from the course). In total, 155 students, both male (37%) and female (63%) ranging in age from 17 years of age to 23 with a mean age of 18.4 years, provided valid results used in the final analysis. The treatment group consisted of 65 students (42%) and the control group contained 90 students (58%) – 96% of all participants reported freshman status having completed less than fifteen college credits. The majority of students surveyed identified as white (79%), a number almost four times that of all other racial identities combined (21%). Table 3-1 displays demographic details.

Questions pertaining to disability status and experiences were included in the demographic survey (see Appendix A). Almost 75% of students reported knowing someone with a disability, yet less than ten percent of the total sample population reported having a disability themselves. The top three reported disabilities were ADD/ADHD, learning disabilities, and psychological disabilities, that when combined encompassed more than 85% of the total reported disabilities.

Table 3-1

*Demographic Characteristics by Frequency and approximate Percentage (n=155)*

| | Frequency (n) | Percentage (%) |
|---|---|---|
| **Gender** | | |
| Male | 57 | 37 |
| Female | 98 | 63 |
| **Age (years)** | | |
| 17 | 1 | < 1 |
| 18 | 104 | 67 |
| 19 | 46 | 30 |
| 20 | 2 | 1 |
| 21 | 1 | < 1 |
| 23 | 1 | < 1 |
| **Education (based on credits)** | | |
| Freshman | 148 | 96 |
| Sophomore | 5 | 3 |
| Junior | 2 | 1 |
| **Race** | | |
| Latino/Latina | 1 | < 1 |
| Asian | 8 | 5 |
| Black/African American | 14 | 9 |
| White | 122 | 79 |
| Two or more | 10 | 6 |
| **Know PWD** | | |
| Yes | 116 | 75 |
| No | 38 | 25 |
| No Response | 1 | <1 |
| **# of PWD Known** | | |
| 0 people | 37 | 24 |
| 1-2 people | 56 | 36 |
| 3-4 people | 34 | 22 |
| 5-6 people | 9 | 6 |
| 7+ people | 18 | 12 |
| **Interaction with PWD (hours per week)** | | |
| >1 hour | 105 | 69 |
| 1-3 hours | 28 | 18 |
| 3-5 hours | 9 | 6 |
| 5 + hours | 11 | 7 |
| **Are a PWD** | | |
| Yes | 14 | 9 |
| No | 138 | 90 |
| Unsure | 1 | < 1 |
| **Type of Disability** | | |
| No Disability | 141 | 91 |
| ADD/ADHD | 5 | 3 |
| Eye Disease | 1 | < 1 |
| Hearing Loss | 1 | < 1 |
| Learning Disability | 4 | 3 |
| Psychological | 2 | 1 |
| Psychological & ADD/ADHD | 1 | <1 |
| **Prior Disability Training** | | |
| Yes | 32 | 21 |
| No | 121 | 79 |

## Procedure

**Recruitment and grouping.** In late August, 2016 I began contacting select instructors slated to teach a variety of first-year seminar courses at SCSU for fall semester 2016; via email or personal communication, I requested their class's participation in this study. Students enrolled in first-year seminar courses at SCSU represent varying attributes and diverse characteristics of the greater population at SCSU including: conditionally admitted students, high risk students, high achieving students, student athletes, first-generation students, traditionally underrepresented students, transfer students, and non-traditional students. In total, 11 instructors of 12 classes, representing four different first-year seminar courses, offered their participation.

Classes were placed into two groups; seven classes completed an initial assessment, received a 40-minute targeted training on disability inclusion, and completed a posttest (treatment group), while five different classes completed the initial assessment and posttest without the training intervention (control group). Groups were chosen based on instructor's availability and relevance of the disability inclusion training to the overall course material. A steady chain of communication was developed with instructors beginning with the initial recruitment email. Instructors from both groups were contacted prior to my scheduled class visit to confirm the time and date and inquire about accessibility needs for students.

## The Multidimensional Attitudes Scale Toward Persons with Disabilities

The Multidimensional Attitudes Scale Toward Persons with Disabilities (MAS) was employed to assess first-year college students' attitudes toward persons with disabilities. This indirect, implicit, multidimensional instrument, aims to project participants own emotions, cognitions, and behaviors through their responses to a scripted realistic social scenario vignette in which a person without a disability has an interaction with a person with a disability (Findler et al., 2007). Implicit measures have a reputation of greater reliability when measuring attitudes than more direct, explicit, self-reporting measures because of the more automatic unconscious responses tendered (Fazio & Olson, 2003; Yazdani, Yazdani, & Nobakht, 2016). The MAS askes participants to complete a series of items, indicating to what degree of likelihood they believe the character from the vignette would have affects, cognitions, and behaviors toward a person with a disability (Findler et al., 2007; Meyers & Lester, 2016). The degree of likelihood is set on a Likert scale ranging from, 1- *not at all* to 5-*very much*, with higher scores representing more negative attitudes toward persons with disabilities (Findler et al., 2007). See Appendix B for the full MAS instrument.

The sample population used to create the MAS comprised largely of college students with an average of 14 years of education (first-year college student), a parallel age and education level to the sample population used in this study (Findler, Vilchinsky, & Werner, 2007). This instrument has proven to be a preferred instrument to accurately measure college students' attitudes toward persons with disabilities in many studies (Findler et al., 2007; Meyers & Lester, 2016; Vilchinsky, Werner, & Findler, 2010).

The MAS solidly reflects three distinct components of attitude: affective, cognitive, and behavioral (Findler, et al., 2007; Vilchinsky et al., 2010; & Meyers & Lester, 2016). Internal consistency analysis of the original 47 item instrument resulted in the reduction of interrelated items to a 34 multidimensional instrument, including 16-item affective, 10-item cognitive, and 8-item behavioral (Findler et al., 2007). A factor analysis of the items supported a clear delineation of each subscale and confirmed internal consistency and reliability (Findler et al., 2007).

Pearsons correlation was conducted to examine the relationship between attitudinal variables (affects, cognitions, and behaviors) and was found to be moderately significant and positive establishing the measures content validity (Findler et al., 2007). The MAS was then compared to Yuker, Block, and Young's (1966) Attitudes Toward Disabled People Scale, a well-established measure of disability-related attitudes, and concurrent validity and was found to be significantly positively correlated (Findler et al., 2007).

**Change to MAS.** The original MAS investigated gender differences in relation to attitudes toward persons with disabilities; the gendered names "Joseph "or "Michelle" were used to describe the character in the vignette and distributed to male and female participants creating a four group comparison of – gender of the participant x gender of the person with a disability (Findler et al., 2007; Vilchinsky et al., 2010). This study did not analyze difference of attitudes toward persons with disabilities based on gender beyond descriptive statistics. In an attempt to reduce conflicts with attitudes toward gender, "Joseph/Michelle" was changed to the gender neutral name "Jordan", and the gender pronoun "him/her" was changed to "they", allowing participants to assume the gender identity of the individual in the vignette.

## Informed Consent and Pretest

Data collection for the initial assessment began November 1st, 2016 and concluded November 16th, 2016. I attended agreed upon class session and began with a short personal introduction. A written statement of consent (see Appendix C) explaining the nature of the study, use of collected data, and my contact information, was provided to each participant on the day of the initial administration of the MAS. Prior to collecting students' signatures I reiterated that participation in the study was completely voluntary, and there would be no consequence for declining participation. In total, 11 students declined participation and did not complete the consent form or survey. Signed consent forms were gathered and stored separate from completed surveys to protect confidentiality. No personal identifiers were collected, instead participants were asked to provide an easy to remember code word to match the pretest and posttest surveys. Instructors were provided an electronic copy of the consent form and asked to circulate it via email to their students for their personal records. Pretests were distributed with informed consent forms and completed only after students consented to participate.

Three pilot test were conducted prior to beginning the study to gauge the amount of time participants would use to complete the survey. Times ranged from 4 minutes 36 seconds to 6 minutes 52 seconds. Considering the additional demographic information that would be collected, administration time for the pretest was set at ten minutes. Overall, the hypothesized administration time was accurate, although select classes required about 15 minutes to complete the survey (due to tardiness, distractions, and questions). Completed surveys were stored by class and group to assist in the pretest- posttest matching process.

**Treatment groups procedure.** Following the pretest, treatment group classes took part in the disability inclusion training I created, which focused on stereotypes of persons with disabilities, legal rights of persons with disabilities, perceptions of disability, use of person-first language, and resources available to students with disabilities at SCSU (see Appendix D for PowerPoint slides and content description). Care was taken to maintain consistency throughout the seven trainings; material and content was not altered at any point and conversations discussed during training followed similar thematic lines.

**Control group procedure.** With the completion of the initial survey, participants in control group classes were thanked for their support and left to finish regularly scheduled course activities.

**Follow up.** Instructors were contacted via email thanking them for their participation and inquiring about a date to re-administer the MAS. Instructors of treatment group classes were provided an electronic copy of SCSU's Student Disability Services (SDS) guide detailing what SDS is, what services are provided, how to apply for accommodations, criteria for documentation of disability, student's rights and responsibilities, policies and procedures, and contact information student support offices (Student Disability Services-St. Cloud State University, n.d.). The director of SDS provided a copy of the guide to be distribute electronically to students for their personal reference and use. This was deemed best practice for relaying information in a non-threatening manner as students with disabilities face countless barriers to seeking accommodations from SDS in college. The control group did not receive the SDS guide. Initially there was concern that the extent of information provided in the guide might skew posttest assessments, however, the guide could have been distributed after the completion of the surveys.

### Posttest

The final stage of data collection began November 29th, 2016 and concluded December 7th, 2016. No changes were made to the MAS for redistribution, however, the demographic survey was removed. Early in the second round of data collection, concerns were raised about participant's ability to remember the identifier word they provided (used to match surveys) on the initial test. After committee consult, the decision was made to create a list of the identifier words (for each class) and display it during administration of the posttests.

As in the pretest administration, the class began with a short introduction. It was clarified that individuals whom had not completed an informed consent form and pretest in a previous class period need not complete the survey. Surveys were distributed to participants and identifier words were displayed on the overhead projector to spark student's memory. Participants were again given approximately ten minutes to complete the survey, which proved to be more than adequate. Surveys were collected and stored by class to assist in the matching of participant's data at the completion of the study.

All research activities (pretest, training, and posttest) occurred between November 1st, 2016 and December 7th, 2016. The average time elapsed between initial administration of the MAS and final administration was 23.7 days for the treatment group (range = 9 days), 20.4 days for the control group (range = 6 days), and 26.2 days in total (range = 9 days). Data was not reviewed during the collection process.

### Internal Consistency and Reliability of MAS

Cronbach's alpha reliability coefficients for this study's MAS pretest, posttest, and its three subscales, are reported in Table 3-2. The 34-item *total MAS* was found to be highly reliable in both pretest (*a* = .90) and posttest (*a* = .93) analysis. The *affects* subscale, consisting of 16 items, rendered a pretest Cronbach's alpha of .88 and a posttest of .90. The 10-item *cognitions* subscale followed the pattern of reliability for both the pretest (*a* = .87) and posttest (*a* = .89). *Behavior*, the last subscale containing 8-items, delivered the lowest, yet still highly reliable, coefficients for both the pretest (*a* = .80) and posttest (*a* = .79).

Table 3-2
*Reliability Coefficients for Pretest/Posttest Subscale and Total MAS (N=155)*

| **Scale** | **Items (N)** | **Cronbach's Alpha** |
|---|---|---|
| Affect Pretest | 16 | .88 |
| Affect Posttest | 16 | .90 |
| Cognitions Pretest | 10 | .87 |
| Cognitions Posttest | 10 | .89 |
| Behavior Pretest | 8 | .80 |
| Behavior Posttest | 8 | .79 |
| Total MAS Pretest | 34 | .90 |
| Total MAS Posttest | 34 | .93 |

## Correlations

To describe the relationship between variables, Pearson correlation was performed (see Table 3-3 found as attachment). All MAS test variables (*total MAS, affect, cognitions, behavioral*) indicated a strong, or moderately strong, positive correlation to each other with less than one percent chance of error.

The *total MAS* pretest variable revealed a strong correlation with the pretests of the *affects* and *behaviors* subscales ($r = .87$, $p < .01$ and $r = .75$, $p < .01$). The *cognitions* subscale pretest was moderately correlated with the *total MAS* pretest variable ($r = .66$, $p < .01$). The *total MAS* posttest variable was highly correlated with all three subscale posttests, *affects*, *behaviors*, and *cognitions* ($r = .90$, $p < .01$, $r = .80$, $p < .01$, and $r = .74$, $p < .01$); *total MAS* pretest and *total MAS* posttest means were also highly correlated ($r = .74$, $p < .01$).

## Overview of Data Analysis

All usable data was aggregated and included in the analysis of results. Descriptive statistics were used to accurately report demographic survey results including, age, education level, gender, race, disability status, and other disability related inquiries. Frequencies outline the percentage of respondents with positive, neutral, and negative attitudes toward persons with disabilities based on mean scores of the MAS and its 34-interrelated items. Missing item data was replaced with the mean score of given item for the respective group (treatment/control). Data is reported to the tenths place, rounding up for numbers five and over, and down for numbers four and under. Cronbach's Alpha was used to support internal consistency and estimate reliability of interrelatedness of the items and combined assessment. Pearsons correlation, reported as significant at $p < 0.05$ and $p < 0.01$ (2-tailed), describes relationships between variables. Paired sample t-tests were run on each group (control and treatment) separately to examine differences between the pretest and posttest mean scores. Results are reported by distinct dimension of attitude and overall attitude toward persons with disabilities. Independent sample *t*-tests compare the means of the treatment and control group to investigate difference between groups and assess treatment effectiveness. Lastly, analysis of variance was used to investigate differences in attitudes toward persons with disabilities based on two demographic variables, the number of persons with disabilities participants know, and the number of hours participants spend with persons with disabilities weekly.

# Chapter IV: Results

## First-Year College Students' Attitudes Toward Persons with Disabilities

Descriptive statistics of the measure were used to identify and understand participants' attitudes toward persons with disabilities. Attitudes were assessed using the MAS pretests for all participants (control and treatment group combined, *N*=155). To ensure uniformity among all participants, *total MAS* pretest means of the control and treatment group were compared using independent sample t-tests. No statistically significant difference was shown between the treatment group pretest (*M* = 2.30, *SD* = .54) and control group pretest (*M* = 2.34, *SD* = .44); *t*(153) = -0.62, *p* = .54, indicating a clear baseline.

Means and standard deviations for the initial MAS, its three interrelated subscales, affect, cognition, and behavior, and each item within a given subscale were examined. Likert scale results were placed into three categories: more positive attitudes (scores of 1 and 2), more neutral attitudes (scores of 3), and more negative attitudes (scores of 4 and 5). Table 4-1 displays percentages of respondents' attitudes in terms of positive, neutral, and negative, for each subscale and item within designated subscale.

Many items included in the MAS are positive or neutral rather than negative, and phrased in the opposite direction of the instruments, 1-*not at all* to 5- *very much*, Likert scale (Findler et al., 2007). These items were reverse coded at the time of data entry. Items for each subscale are listed from highest mean to lowest (more negative attitudes to more positive attitudes). Below is a summary of items that demonstrated more neutral or more negative attitudes toward persons with disabilities.

Participants reported a mean score on the *total MAS* pretest of 2.32 (*SD* = 0.49) ranging from 1.26 to 3.59, with 89% having more positive attitudes, 11% having more neutral attitudes, and zero percent having more negative attitudes. Further consideration reveals multiple subscale items to which participants responded in contrast to the overall results of the initial survey.

Of the 16-items housed in the *affect* subscale, responses to five items indicated more negative feelings or emotions toward persons with disabilities: 51% or respondents did not express *serenity* (*M* = 3.54, *SD* = 1.04) in relation to interactions with persons with disabilities, 49% had low levels of *relaxation* (*M* = 3.42, *SD* = 1.01), 50% exhibited *shyness* (*M* = 3.27, *SD* = 1.18), 36% reported low levels of *calmness* (*M* = 3.10, *SD* = 1.13), and 41% reported *nervousness* (*M* = 3.06, *SD* = 1.27) when interacting with persons with disabilities.

The 10-item *cognitions* subscale displayed predominantly more positive attitudes toward persons with disabilities, with seven of the ten items reporting over 50% of the responses as positive. Two items, “He/she seems to be an interesting guy/girl” (*M* = 2.51, *SD* = 0.88) and “He/she will enjoy getting to know me” (*M* = 2.60, *SD* = 0.94) revealed more neutral *cognitions* with 50% for the first and 45% for the latter.

Only one of the eight items in the *behaviors* subscale showed less willingness to interact with a persons with disabilities (more negative attitudes); 41% of responses to the item “Continue what he/she was doing” (*M* =3.28, *SD* = 1.01) were more negative, 39% were more neutral, and only 20% were more positive.

Table 4-1

*Means and Standard Deviations, and approximate Percentages of Respondents Positive, Neutral, and Negative Attitude Toward People with Disability (n=155)*

| **MAS Factors** (range) | M (SD) | Positive Attitude (1 and 2) | Neutral Attitude (3) | Negative Attitude (4 and 5) |
|---|---|---|---|---|
| **MAS (1.26-3.59)** | **2.32 (0.49)** | **89** | **11** | **0.0** |
| **Affect (1.19-4.44)** | **2.40 (0.63)** | **83** | **17** | **< 1** |
| Serenity *(-)* | 3.54 (1.04) | 14 | 35 | 51 |
| Relaxation *(-)* | 3.42 (1.01) | 21 | 30 | 49 |
| Shyness | 3.27 (1.18) | 29 | 21 | 50 |
| Calmness *(-)* | 3.10 (1.13) | 28 | 36 | 36 |
| Nervousness | 3.06 (1.27) | 36 | 23 | 41 |
| Alertness | 2.58 (1.15) | 48 | 30 | 22 |
| Tension | 2.54 (1.15) | 49 | 30 | 21 |
| Stress | 2.43 (1.18) | 56 | 22 | 22 |
| Helplessness | 2.26 (1.15) | 64 | 20 | 16 |
| Pity | 2.17 (1.08) | 62 | 25 | 13 |
| Fear | 1.86 (1.00) | 75 | 17 | 8 |
| Guilt | 1.90 (1.07) | 76 | 12 | 12 |
| Shame | 1.62 (0.83) | 86 | 9 | 5 |
| Upset | 1.79 (1.05) | 78 | 12 | 10 |
| Depression | 1.46 (0.82) | 90 | 7 | 3 |
| Disgust | 1.37 (0.73) | 94 | 3 | 3 |
| **Cognitions (1-4.2)** | **2.34 (0.61)** | **83** | **16** | **<1** |
| He/she will enjoy getting to know me. *(-)* | 2.60 (0.94) | 43 | 45 | 12 |
| He/she seems to be an interesting guy/girl. *(-)* | 2.51 (0.88) | 42 | 50 | 8 |
| We may get along really well. *(-)* | 2.30 (0.73) | 59 | 38 | 3 |
| I can make him/her feel more comfortable. *(-)* | 2.45 (0.93) | 52 | 38 | 10 |
| I can always talk with him/her about things that interest both of us. *(-)* | 2.50 (1.01) | 44 | 41 | 15 |
| He/she looks like an OK person. *(-)* | 2.29 (0.85) | 57 | 38 | 5 |
| He/she looks friendly. *(-)* | 2.10 (0.76) | 71 | 26 | 3 |
| I enjoy meeting new people. *(-)* | 2.35 (1.10) | 56 | 30 | 14 |
| He/she will appreciate it if I start a conversation. *(-)* | 2.09 (0.85) | 72 | 23 | 5 |
| Why not get to know him/her better? *(-)* | 2.13 (0.94) | 64 | 30 | 6 |
| **Behavior (1-3.88)** | **2.15 (0.63)** | **86** | **14** | **0.00** |
| Continue what he/she was doing | 3.28 (1.01) | 20 | 39 | 41 |
| Read the newspaper or talk on a cell phone | 2.54 (1.19) | 50 | 45 | 5 |
| Initiate a conversation if he/she doesn't make the first move *(-)* | 2.28 (0.99) | 63 | 26 | 11 |
| Start a conversation *(-)* | 2.10 (0.99) | 68 | 24 | 8 |
| Find an excuse to leave | 2.13 (1.06) | 66 | 20 | 14 |
| Move away | 1.70 (0.86) | 80 | 17 | 3 |
| Get up and leave | 1.67 (0.93) | 80 | 13 | 7 |
| Move to another table | 1.47 (0.73) | 91 | 6 | 3 |

*Note:* Items marked *(-)* are reverse coded. Presented data for initial MAS (groups combined)

## MAS Results by Demographics

Independent sample *t*-tests analyzed differences in mean scores based on gender (male/female), having participated in disability training in the past (yes/no), identify as having a disability themselves (yes/no), and knowing someone with a disability (yes/no). Paired sample *t*-tests were also conducted to inspect within group differences between pretest and posttest scores for gender (male/female), having participated in disability training in the past (yes/no), identify as having a disability themselves (yes/no), and knowing someone with a disability (yes/no). In an attempt to unearth more specific details about attitudes, one way analysis of variance (ANOVA) was conducted on all MAS test variables compared to the number of people respondent knows with a disability and the amount of time spent with persons with disabilities.

**Gender.** Independent sample *t*-tests were conducted on all MAS test variables to examine differences in attitude toward persons with disabilities between male and female respondents. No statistical difference was evident on the MAS pretest or posttest between males (N = 57) (*M* = 2.33, *SD* = .48; *M*= 2.18, *SD* = .52) and females (N = 98) (*M* = 2.32, *SD* = .49; *M*= 2.25, *SD* = .56); *t*(153) = 0.14, *p* = .89 and *t*(153) = -0.74, *p* = .46. The *cognitions* subscale pretest was the only test variable with any statistical difference for males (*M* = 2.47, *SD* = .62) and females (*M* = 2.26, *SD* = .59); *t*(153) = 2.07, *p* = .04, males demonstrating less positive thoughts about persons with disabilities than females.

Paired sample *t*-tests were used to consider any change in attitude toward persons with disabilities within gender groups (male/female). The female group (N = 98) showed a significant increase in attitude toward persons with disabilities from the *total MAS* pretest (*M* = 2.32, *SD* = .49) to the *total MAS* posttest (*M* = 2.25, *SD* = .55), *t*(97) = 2.06, *p* = .04. Similar results were found in analysis of the male group (N = 57) between the *total MAS* pretest (*M* = 2.33, *SD* = .48) and *total MAS* posttest (*M* = 2.18, *SD* = .52), *t*(56) = 2.66, *p* = .01.

**Prior training.** Only 21% of individuals surveyed had received prior disability related training (N = 32) while 79% had not (N = 121). Independent sample *t*-tests reveal no statistical difference for the *total MAS* pretest or posttest between individuals with previous training (*M* = 2.32, *SD* = .51; *M* = 2.10, *SD* = .85) and those without (*M* = 2.32, *SD* = .49; *M* = 2.25, *SD* = .52); *t*(153) = 0.25, *p* = .98 and *t*(153) = -1.49, *p* = .14. No statistical significance was found when prior training was tested demonstrating no difference in attitude toward persons with disabilities based on previous training.

To examine change in attitude toward persons with disabilities within groups based on previous disability related training, paired sample *t*-tests were used. Participants who reported previous training (N = 32) demonstrated a highly significant positive change in their attitude toward persons with disabilities when comparing the mean scores of the *total MAS* pretest (*M* = 2.32, *SD* = .51) and *total MAS* posttest (*M* = 2.10, *SD* = .58), *t*(31) = 3.31, *p* = .002. Participants with no previous training also showed a significant increase in positive attitudes toward persons with disabilities between the *total MAS* pretest (*M* = 2.32, *SD* = .49) and *total MAS* posttest (*M* = 2.25, *SD* = .52), *t*(120) = 1.97, *p* = .05.

**Students self-Identified with disability.** About 10% of the sample population identified as having a disability. Independent sample *t*-tests revealed many significant differences between the mean scores of individuals who reported having a disability and those who did not. Table 4-2 displays mean scores, standard deviations, and *t*-test results for the MAS and its subscales.

Respondents who disclosed a disability had significantly less positive attitudes toward persons with disabilities on all pretest MAS variables, most noticeably the initial *total MAS*;

those reporting a disability (*M* =2.78, *SD* = .49) had significantly less positive attitudes toward persons with disabilities as compared to those who did not report a disability (*M* = 2.27, *SD* = .47), *t*(150) = 3.85, *p* < .001. Those reporting a disability expressed more negative *affect* (*M* =2.93, *SD* = .55) than those who did not (*M* = 2.34 , *SD* = .62), *t*(150) = 3.44, *p* = .001, more negative *cognitions* (*M* = 2.71, *SD* = .67) than those who did not (*M* = 2.30, *SD* = .60), *t*(150) = 2.47, *p* = .02, and more negative *behaviors* (*M* = 2.55, *SD* = .77) than those who did not (M = 2.11, SD = .61), *t*(150) = 2.56, *p* = .01.

Although participants who reported a disability still had less positive attitudes toward persons with disabilities on the *MAS posttest* (*M* = 2.52, *SD* = .55) than those who did not report a disability (*M* = 2.19, *SD* = .53), *t*(150) = 2.18, *p* = .03, no significant differences were found on the affect, cognitive, or behaviors subscales between the two. While those who did not report a disability showed a slight decrease in mean scores between pretest and posttest measures, those who reported a disability had a considerable reduction in mean scores of all MAS variables.

To explore the drastic decrease in mean scores (more positive attitude toward persons with disabilities) the *total MAS* variable was examined using a paired sample *t*-test. The increase in positive attitude toward persons with disabilities was not significant for those disclosing a disability between the *total MAS* pretest (*M* = 2.78, *SD* = .49) and *total MAS* posttest (*M* = 2.52, *SD* = .55), *t*(13) = 1.88, *p* = .08. On the other hand, participants who did not report a disability had a significant increase in positive attitude toward persons with disabilities between the *total MAS* pretest (*M* = 2.27, *SD* = .47) and *total MAS* posttest (*M* = 2.19, *SD* = .53), *t*(137) = 2.71, *p* = .008.

Table 4-2

*Independent Sample t-tests (Means and Standard Deviations) for Presence of Disability*

| | Pretest | | | | | | Posttest | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes (N=14) | | No (N=138) | | | | Yes (N=14) | | No (N=138) | | | |
| | *M* | *SD* | *M* | *SD* | *t* | *df* | *M* | *SD* | *M* | *SD* | *t* | *df* |
| Affect | 2.93 | .55 | 2.34 | .62 | 3.44*** | 150 | 2.55 | .72 | 2.21 | .66 | 1.85 | 150 |
| Cognitions | 2.71 | .67 | 2.30 | .60 | 2.47* | 150 | 2.57 | .53 | 2.24 | .62 | 1.92 | 150 |
| Behavior | 2.55 | .77 | 2.11 | .61 | 2.56** | 150 | 2.38 | .74 | 2.10 | .63 | 1.62 | 150 |
| Total MAS | 2.78 | .49 | 2.27 | .47 | 3.85*** | 150 | 2.52 | .55 | 2.19 | .53 | 2.18* | 150 |

Note. * p < 0.05, ** p < 0.01, ***p < 0.001

**Knowing someone with a disability.** Seventy-five percent of participants reported knowing someone with a disability. This group had more positive attitudes on all pretest and posttest MAS variables (affects, cognitions, and behaviors) than the twenty-five percent of participants who reported not knowing anyone with a disability. Table 4-3 displays means, standard deviations, and independent sample *t*-test results for differences between those who know persons with disabilities and those who do not.

Statistical significance was supported for both the pretest and posttest total MAS when comparing means scores of those who know someone with a disability (*M* = 2.27, *SD* = .48; *M* = 2.17, *SD* = .52) and those who do not (*M* = 2.48, *SD* = .47; *M* = 2.38, *SD* = .56), *t*(152) = -2.28, *p* = .02, *t*(152) = -2.15, *p* = .03, clearly demonstrating more positive attitudes toward persons with disabilities by participants who have some relationship or contact with someone who has a disability.

Respondents who know someone with a disability also reported more positive *cognitions* (*M* = 2.26, *SD* = .58) and *behaviors* (*M* = 2.06, *SD* = .62) than those who do not (*M* = 2.61, *SD* = .64; *M* = 2.40, *SD* = .61) on the corresponding pretest measures, *t*(152) = -3.19, *p* = .002 and *t*(152) = -2.96, *p* = .004.

Table 4-3

*Independent Sample t-tests (Means and Standard Deviations) for Knowing PWD*

| | Pretest | | | | | | Posttest | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes (N=116) | | No (N=38) | | | | Yes (N=116) | | No (N=38) | | | |
| | *M* | *SD* | *M* | *SD* | *t* | *df* | *M* | *SD* | *M* | *SD* | *t* | *df* |
| Affect | 2.38 | .64 | 2.43 | .61 | -0.38 | 153 | 2.17 | .63 | 2.41 | .72 | -1.96* | 153 |
| Cognitions | 2.26 | .58 | 2.61 | .64 | -3.19** | 153 | 2.23 | .61 | 2.42 | .62 | -1.65 | 153 |
| Behavior | 2.06 | .62 | 2.40 | .61 | -2.96** | 153 | 2.09 | .65 | 2.28 | .62 | -1.57 | 153 |
| Total MAS | 2.27 | .48 | 2.48 | .47 | -2.28* | 153 | 2.17 | .52 | 2.38 | .56 | -2.15* | 153 |

Note. * $p < 0.05$, ** $p < 0.01$

While no statistical difference was shown between those who know persons with disabilities and those who do not on the pretest *affect* subscale, significance was established for the subscale in the posttest assessment. Those who reported knowing persons with disabilities (*M* = 2.17, *SD* = .63) had more positive feelings toward them than those who did not (*M* = 2.41, *SD* = .72), *t*(152) = -1.96, *p* = .05.

Within group paired sample *t*-tests revealed an increase in positive attitude toward persons with disabilities among those who reported knowing someone with a disability; difference between the *total MAS* pretest (*M* = 2.27, *SD* = .48) and *total MAS* posttest (*M* = 2.17, *SD* = .52), *t*(115) = 2.83, *p* = .005 was highly significant. No change in attitude toward persons with disabilities was found between the *total MAS* pretest ($M$ = 2.48, $SD$ = .47) and *total MAS* posttest ($M$ = 2.38, $SD$ = .56), $t(38) = 1.64$, $p = .11$, for those who did not know someone with a disability.

**Number of persons with disabilities known.** The number of people with disabilities respondents know had a clear effect on their overall attitudes including their affects, cognitions, and behaviors. Based on mean scores, participants who reported knowing seven or more people with disabilities had more positive attitudes toward persons with disabilities than those who did not know any on all pretest and posttest MAS measures. Furthermore, Table 4-4 displays a consistent pattern of mean scores descending as the number of people with disabilities known increases.

One way analysis of variance revealed significant results between the number of people with disabilities known and means scores on the *cognitions* subscale pretest, $F(4, 149) = 3.54$, $p < .05$, and the *behavior* subscale pretest, $F(4, 149) = 2.86$, $p < .05$. Since the results in these two subscales were found statistically significant, post hoc tests were computed using Bonferroni. The Bonferroni test is designed to compare each of the conditions (number of people with disabilities known) to the other conditions and will compare the five levels: no people, 1-2 people, 3-4 people, 5-6 people, and 7+ people. The Bonferroni post hoc showed that on pretest measure of *cognitions*, respondents who do not know anyone with a disability ($M$ = 2.61, $SD$ = .65) have more negative attitudes toward persons with disabilities than those who know three or four people with disabilities ($M$ = 2.19, $SD$ = .53). Post hoc tests also uncovered statistical difference on pretest measure of behavior meaning that those who do not know anyone with a disability ($M$ = 2.43, $SD$ = .60) also have less positive attitudes than those who know seven or more people with disabilities ($M$ = 1.90, $SD$ = .56).

Table 4-4

*Means and Standard Deviations for number of PWD known (N=154)*

| | | Pretest | | Posttest | |
|---|---|---|---|---|---|
| | *N* | *M* | *SD* | *M* | *SD* |
| **Affect** | | | | | |
| No people | 37 | 2.45 | .60 | 2.42 | .72 |
| 1-2 people | 56 | 2.38 | .61 | 2.22 | .58 |
| 3-4 people | 34 | 2.50 | .70 | 2.29 | .73 |
| 5-6 people | 9 | 2.22 | .80 | 1.96 | .52 |
| 7+ people | 18 | 2.30 | .53 | 1.95 | .61 |
| **Cognitions** | | | | | |
| No people | 37 | 2.61 | .65 | 2.43 | .63 |
| 1-2 people | 56 | 2.36 | .55 | 2.32 | .60 |
| 3-4 people | 34 | 2.19 | .53 | 2.22 | .62 |
| 5-6 people | 9 | 2.03 | .69 | 1.90 | .53 |
| 7+ people | 18 | 2.14 | .66 | 2.14 | .66 |
| **Behavior** | | | | | |
| No people | 37 | 2.43 | .60 | 2.30 | .61 |
| 1-2 people | 56 | 2.10 | .64 | 2.08 | .59 |
| 3-4 people | 34 | 2.10 | .65 | 2.18 | .75 |
| 5-6 people | 9 | 2.01 | .49 | 1.93 | .64 |
| 7+ people | 18 | 1.90 | .56 | 2.03 | .68 |
| **Total MAS** | | | | | |
| No people | 37 | 2.49 | .47 | 2.40 | .56 |
| 1-2 people | 56 | 2.31 | .44 | 2.21 | .46 |
| 3-4 people | 34 | 2.31 | .55 | 2.24 | .61 |
| 5-6 people | 9 | 2.11 | .53 | 1.93 | .42 |
| 7+ people | 18 | 2.16 | .45 | 2.02 | .53 |

**Hours spent weekly with persons with disabilities.** The number of hours spent with persons with disabilities weekly was also examined. Parallel to the number of people with disabilities a respondent knows, the more hours spent with persons with disabilities the more positive attitudes toward disability are reported. Again, a pattern of descending mean scores based on more hours spent is shown in Table 4-5.

One way analysis of variance was carried out to explore differences in attitudes based on number of hours respondents spend weekly with persons with disabilities. Attitudes toward disability were statistically different based on the number of hours spent with persons with disabilities on the initial MAS cognitions subscale ($F(3, 149) = 3.06$, $p < .05$) and behaviors subscale ($F(3, 149) = 3.13$, $p < .05$), as well as on the overall MAS posttest ($F(3, 149) = 4.11$, $p < .05$) and its cognitions subscale ($F(3, 149) = 5.33$, $p < .05$). Bonferroni post hoc tests were computed on all statistically significant measures (MAS and subscales) to examine differences in attitudes toward disability between the numbers of hours spent with persons with disabilities.

Pretests of the cognitions subscale revealed that those who spend five or more hours with persons with disabilities ($M = 1.89$, $SD = .61$) have statistically more positive attitudes than those who spend less than one hour ($M = 2.42$, $SD = .64$). The pretest MAS behaviors subscale found that respondents who spend one to three hours with persons with disabilities ($M = 1.90$, $SD = .53$) have significantly more positive attitudes than those spending less than one hour weekly ($M = 2.25$, $SD = .64$). Post hoc of the total MAS posttest found respondents who spend more than five hours weekly with persons with disabilities ($M = 1.85$, $SD = .55$) have significantly more positive attitudes than those spending less than one hour weekly ($M = 2.32$, $SD = .53$). Posttest results from the cognitions subscale also found respondents who spend more than five hours weekly with persons with disabilities ($M = 1.73$, $SD = .67$) have significantly more positive attitudes than those spending less than one hour weekly ($M = 2.38$, $SD = .61$).

Table 4-5

*Means and Standard Deviations for number of hours spent weekly with persons with disabilities (N=153)*

| | | Pretest | | Posttest | |
|---|---|---|---|---|---|
| | *N* | *M* | *SD* | *M* | *SD* |
| **Affect** | | | | | |
| >1 hour | 105 | 2.42 | .62 | 2.33 | .65 |
| 1-3 hours | 28 | 2.38 | .66 | 2.08 | .56 |
| 3-5 hours | 9 | 2.21 | .66 | 2.01 | .92 |
| 5+ hours | 11 | 2.34 | .79 | 1.92 | .66 |
| **Cognitions** | | | | | |
| >1 hour | 105 | 2.42 | .64 | 2.38 | .61 |
| 1-3 hours | 28 | 2.23 | .47 | 2.17 | .49 |
| 3-5 hours | 9 | 2.26 | .40 | 1.97 | .63 |
| 5+ hours | 11 | 1.89 | .61 | 1.73 | .67 |
| **Behavior** | | | | | |
| >1 hour | 105 | 2.25 | .64 | 2.20 | .66 |
| 1-3 hours | 28 | 1.90 | .53 | 1.99 | .57 |
| 3-5 hours | 9 | 2.14 | .67 | 2.03 | .67 |
| 5+ hours | 11 | 1.88 | .52 | 1.88 | .63 |
| **Total MAS** | | | | | |
| >1 hour | 105 | 2.38 | .48 | 2.32 | .53 |
| 1-3 hours | 28 | 2.22 | .48 | 2.09 | .41 |
| 3-5 hours | 9 | 2.21 | .55 | 2.00 | .69 |
| 5+ hours | 11 | 2.10 | .53 | 1.85 | .55 |

## Within Group Tests

Paired sample *t*- tests were used to explore differences between the pretest and posttests within each group. Statistical significance was supported for the *affect* subscale and the *total MAS* scores in both groups. See Table 4-6 for results of all paired sample *t*-tests.

**Treatment group.** The group that participated in the disability inclusion training had a highly significant increase in positive *affect* when comparing the subscales pretest ($M$ = 2.38, $SD$ = .70) and posttest ($M$ = 2.14, $SD$ = .65), $t(64)$= 3.70, $p$ = .00. The *total MAS* pretest scores ($M$= 2.30, $SD$ = .54) and *total MAS* posttest scores ($M$ = 2.17, $SD$ = .55) were also found statistically significant, *t*(64)= 2.60, *p* = .01, supporting an overall increase in positive attitude toward persons with disabilities for those in the treatment group.

**Control group.** The group that did not participate in the disability inclusion training also demonstrated statistical significance when comparing the *affect* subscale pretest scores (*M* = 2.41, *SD* = .58) and posttest scores (*M* = 2.30, *SD* = .66), *t*(89)= 2.13, *p* = .036, although to a much lesser degree. Likewise, this groups *total MAS* pretest scores (*M*= 2.34, *SD* = .44) and *total MAS* posttest scores (*M* = 2.26, *SD* = .53), were significant; *t*(89)= 2.13, *p* = .036, alluding to an increase in positive attitudes toward persons with disabilities as well, but with less significance than the treatment group.

Table 4-6

*Paired Sample t-tests (Means and Standard Deviations) by Group*

| | **Treatment** (*N*=65) | | | | | | **Control** (*N*=90) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pretest | | Posttest | | | | Pretest | | Posttest | | | |
| | *M* | *SD* | *M* | *SD* | *t* | *df* | *M* | *SD* | *M* | *SD* | *t* | *df* |
| Affect | 2.38 | .70 | 2.14 | .65 | 3.69** | 64 | 2.41 | .58 | 2.30 | .66 | 2.13* | 89 |
| Cognitions | 2.33 | .64 | 2.27 | .65 | 0.81 | 64 | 2.35 | .59 | 2.28 | .60 | 1.13 | 89 |
| Behavior | 2.08 | .68 | 2.11 | .67 | -0.47 | 64 | 2.20 | .59 | 2.15 | .64 | 0.88 | 89 |
| Total MAS | 2.30 | .54 | 2.17 | .55 | 2.60** | 64 | 2.34 | .44 | 2.26 | .53 | 2.13* | 89 |

Note. * p < 0.05, ** p < 0.01

## Effect of Disability Inclusion Training

To examine the research question, what affect does short targeted training on disability inclusion have on first-year college students' attitudes toward persons with disabilities, and test the hypothesis that claims there will be a statistically significant difference between control and treatment group mean scores as a result of disability inclusion training, independent sample *t*-tests were conducted on the *total MAS* posttest results. No statistically significant difference was observed between first-year college students' attitudes toward persons with disabilities who participated in the disability inclusion training (*M* = 2.17, *SD* = .55) and those that did not (*M* = 2.26, *SD* = .53), *t*(153) = -1.01, *p* = .31; the collected data supports the null hypothesis and rejects the alternate hypothesis. Table 4-7 presents all independent sample *t*-test results, means, and standard deviations for both the pretest and posttest.

To further investigate differences between the treatment and control group's posttest scores, *t*-tests were conducted on each of the three subscales. Although the control group displayed a higher posttest mean score (*M* = 2.30, *SD* = .66) in the *affect* subscale than the treatment (*M* = 2.14, *SD* = .65) it was not significant, *t*(153) = -1.46, *p* = .15.

A similar pattern followed with the posttest means for the *behaviors* subscale; the control (*M* = 2.15, *SD* = .64) again with higher mean scores than the treatment (*M* = 2.11, *SD* = .70), yet no significance was found; *t*(153) = -0.41, *p* = .92. Posttest means for the *cognitions* subscale were comparable between the control group (*M* = 2.28, *SD* = .60) and treatment group (*M* = 2.27, *SD* = .65), *t*(153) = -0.15, *p* = .88).

Table 4-7

*Independent Sample t-tests (Means and Standard Deviations) for Group Pretest and Posttest*

| | Pretest | | | | | | Posttest | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Treatment (*N*=65) | | Control (*N*=90) | | | | Treatment (*N*=65) | | Control (*N*=90) | | | |
| | *M* | *SD* | *M* | *SD* | *t* | *df* | *M* | *SD* | *M* | *SD* | *t* | *df* |
| Affect | 2.38 | .70 | 2.41 | .58 | -0.29 | 153 | 2.14 | .65 | 2.30 | .66 | -1.46 | 153 |
| Cognitions | 2.33 | .64 | 2.35 | .59 | -0.20 | 153 | 2.27 | .65 | 2.28 | .60 | -0.15 | 153 |
| Behavior | 2.08 | .68 | 2.20 | .59 | -1.21 | 153 | 2.11 | .67 | 2.15 | .61 | -0.41 | 153 |
| Total MAS | 2.30 | .54 | 2.34 | .44 | -0.62 | 153 | 2.17 | .55 | 2.26 | .53 | -1.02 | 153 |

Note. * $p < 0.05$, ** $p < 0.01$

Data collected from the participants of this study rendered surprising results. Analysis conclude that first-year college students have more positive attitudes towards persons with disabilities than expected. Surprisingly, students who reported having a disability had the least positive thoughts, feelings, emotions, and behaviors towards persons with disabilities, an unexpected outcome of the study findings that will be explored further in chapter 5.

# Chapter V: Discussion

This study examined what effects a short targeted training on disability inclusion had on first-year college students' attitudes toward persons with disabilities.  Literature expresses a clear need for increased awareness of disability related issues due to socially constructed stigmas, stereotypes, and prejudices that contribute to the oppression of persons with disabilities. Although first-year college students' attitudes toward persons with disabilities were not significantly increased as the result of this training, research imparts that education is only an initial step in the process of attitudinal change and inclusion. The following discussion will make a case for continued efforts to address college students' attitudes toward persons with disabilities through numerous interventions, including but not limited to, assessment, creating allies, developing educational courses, providing short targeted trainings, and increased interactions between persons with disabilities and people without disabilities. Yuker (1994) explains that attitudes toward persons with disabilities are hard to change; interventions must concentrate on the specific needs of the environment in which they take place.

Many studies have attempted to adjust college students' attitudes toward persons with disabilities using educational trainings with little success. Salih and Al-Kandari (2007) conducted a quasi-experimental pretest-posttest designed study that attempted to increase positive attitudes toward persons with disabilities in students entering the social work field. Participants in the treatment group were enrolled in a semester long course focused on disability while participants in the control group were enrolled in a course that did not concentrate on disability (Salih & Kandari, 2007).  A multidimensional inventory was used to assess attitudes toward persons with disabilities and *t*-tests revealed no statistically significant differences between the two groups mean scores (Salih & Kandari, 2007).

Meyers and Lester (2016) employed the same multidimensional scale (MAS), used in the present study, to assess an educational program for college students that intended to improve attitudes of those without disabilities toward those with disabilities. Participants in the experimental group were enrolled in a 16-week comprehensive disabilities studies course while participants in the control group were enrolled in an introductory psychology course (Meyers & Lester, 2016). Consistent with the results of this study, no statistically significant differences in attitudes were found on the total MAS or its subscales between the treatment and control groups in pretest or posttest measures as the result of this course. The failure of these studies to cultivate a significant increase in positive attitudes toward persons with disabilities can be attributed to the initial attitudinal climate.

## College Students' Attitudes Toward Disability

The students surveyed in the Meyers and Lester (2016) study did not report negative attitudes toward persons with disabilities when they were initially surveyed, similar findings were reported of students in this study (89% reported positive attitudes, 11% neutral attitudes, and 0% negative). One explanation for this study's inability to find significant change in attitudes towards person with disabilities as a result of targeted training is the fact that first-year college students already demonstrate predominantly positive attitudes toward persons with disabilities.

Morin, Rivar, Crocker, Boursier, and Caron (2013) found that younger and more educated people have more positive attitudes toward persons with disabilities. This seems to contradict King and Baxter Magolda's Developmental Model of Intercultural Maturity, however key to the initial level of the model (where the majority of first-year college students fit) is the assumption that knowledge is certain (2005). Yazdani, Yazdani, and Nobakht (2016) claim that

"A common problem with attitudinal research is that respondents may provide socially sanctioned or politically correct responses to questions about attitudes" (p. 25). It is reasonable to believe that the responses participants provided were based less on their actual inherent beliefs about persons with disabilities, but rather on what society, and their peers, would deem the right or wrong answers.

Students' responses on the MAS support this position, as the majority of items were categorized by either neutral or more positive attitudes toward persons with disabilities. Even more telling is the fact that students reported the most positive attitudes on items that were most obviously negative emotions (disgust, depression, upset, shame, guilt, fear) or behaviors that could be considered undesirable (move away, get up and leave, and move to another table). There were no items to which student's (mean scores) reported authentically negative attitudes.

**Students with disabilities.** Another identifier of an initial level of intercultural maturity as described by King and Baxter Magolda's, is ignorance of one's own intersecting social identities and the assumption that difference is a threat to one's identity (2005). As previously described, almost half of the students who qualify for academic accommodations in college do not disclose their disability to the institution. Fear of rejection, not wanting to be seen as different, and a need for self-efficacy all contribute to students' decision to conceal their disabilities. Meyers et al. states, "In many instances, these students may see college as a way to break away from their disability" (2013, p. 39).

Only about 9% of respondents self-identified as having a disability and about 1% were unsure if they identified as having a disability; these statistics point to uncertainty among first-year college students regarding what disability is and if it is part of their identity. Furthermore, socially constructed stereotypes and prejudices lead to stigma about persons with disabilities, establishing a disability identity as undesirable and problematic. These oppressive effects of society's negative attitudes toward persons with disabilities were evident in this study.

First-year college students with disabilities have considerably less positive attitudes toward persons with disabilities then those who did not disclose a disability. Corrigan and Watson (2002) state that "prejudice, which is fundamentally a cognitive and affective response, leads to discrimination, the behavioral reaction" (p. 16). Negative behavioral attitudes can result in lack of support, avoidance, and segregation in society and on college campuses (Corrigan & Watson, 2002). Public stigma of persons with disabilities leads to self-stigma for persons with disabilities. Self-stigma can be defined as: negative beliefs about ones character or competence, low self-esteem and low self-efficacy, as well as the failure to purse work, education, or independence (Corrigan & Watson, 2002, p.16). The students surveyed in this study interact in an environment in which attitudes toward persons with disabilities are generally positive, yet they still hold less positive attitudes toward persons with disabilities (indicating self-stigma) than the population in general. Providing disability related education and training for the general student population can reduce prejudice and discrimination of persons with disabilities and encourage students with disabilities to have a more positive sense of self.

## Direct Benefits of the Study

An unforeseen benefit of merely addressing disability as a societal issue was that students reported even more positive attitudes toward persons with disabilities at the close of this study then when it began. This suggests that, although students began with positive attitudes toward persons with disabilities, this study had a positive effect as it further increased positive attitudes. Both the control and treatment groups demonstrated a significant change in attitudes from the initial survey to the final, however there was a less than one percent sampling error among those who participated in the training, while those who did not, had less than five percent sampling error. The significance levels at which scores changed, adds support for educational trainings related to disability.

## Need for Continued Education

About one fifth of the participants in this study had previously participated in a disability related training; surprisingly, this group did not express significantly more positive attitudes toward persons with disabilities than those with no prior training. Intriguingly, students with prior disability related training did radically increased their positive attitudes toward persons with disabilities. This signifies the importance of continued disability related education for college students and suggests attitudes towards persons with disabilities will continually increase as disability awareness education and training compounds.

## Recommendations

Providing training opportunities across campuses that support the social model of disability and offer insight to the historical oppression of persons with disabilities, as well as the societal attitudes that lead to the devaluation of persons with disabilities, supports inclusion for all people and normalizes disability. Oslund (2014) writes:

> I am myself disabled. In much the same way that the GLBTQ movement moved to reclaim the term “queer”, the community of disabled and disabled service providers are reclaiming the term “disabled”. There is nothing wrong with being disabled. Our line of thinking is that problems do not necessarily arise directly from our disabilities, rather, we are handicapped by specific contexts (p. 19).

Evidence from this study provides support for implementation of campus wide disability inclusion training at SCSU. Meyers et al. declares, “Each person has a responsibility to examine their own positionality within the system, understand ones colludes with the system, and where one can evoke change" (p. 72). Interventions that address disability awareness and inclusion should provide opportunities for self-exploration and reflection of one's own oppressed identities, may it be disability related or otherwise, as well as their role as the oppressor of others. Yazdani et al. (2016) found that self-reflection lead to more positive attitudes towards persons with disabilities and greater understanding the world of persons with disabilities.

Training and education for students who identify as having a disability is especially vital. Ideally these students would have the most positive attitudes toward persons with disabilities, but as this study illustrates, many students with disabilities struggle with self-stigma. Schlossberg's Theory of Marginality and Mattering (1989) recognizes the importance of mattering in the context of student development and highlights the role colleges and universities can play in decreasing harmful feelings of marginalization, such as insecurity and self-consciousness, for students (Meyers et al., 2013). The theory points to a direct need to empower students with disabilities and instill confidence in their ability to advocate for themselves and their community.

Students who identify as having a disability should be placed at the helm of initiatives that educate and encourage inclusion for persons with disabilities. Allocating the power to facilitate conversations and trainings related to the experience of disability to the students who claim a disability identity can increase their sense of belonging and help them become authors of their own experience while decreasing feeling of marginalization. Training, led by students with disabilities, is not only advantageous to their self-confidence, but can increase positive attitudes for students who do not identify as having a disability.

Studies confirm that knowing someone with a disability is correlated with more positive attitudes toward persons with disabilities (Genskow & Maglione, 1965; Meyers, 2016; Yuker, 1994). First-year college students who reported knowing and spending time with persons with disabilities (75%) had significantly more positive attitudes towards disability than those who did not. Findler et al. (2007) recognized that people's emotions and thoughts about disability are more negative than their behaviors, and explained that "people do not tend to act (or admit to acting) on their feelings and thoughts of discomfort with people with disabilities" (p. 173).

Research confirms that those who have more contact and positive interactions with persons with disabilities have significantly more positive attitudes toward disability than those who rarely interact with persons with disabilities (Bruder, 2010; Seo & Chen, 2009; Yazbeck, McVilly, & Parmenter, 2004). The creation of ongoing opportunities that increase positive interactions between students with disabilities (psychological, physical, emotional, sensory, etc.) and students without disabilities are needed to increase acceptance and normalize disability.

## Proposed Model for Building Inclusive Communities

A proposed model for the inclusion for all students on college campuses was developed as a result of this study. The following model draws upon research regarding students' barriers to seek academic accommodations in college, college students' attitudes toward disability, and best practices for supporting college students with disabilities. Future research on best practices, used increase attitudes toward persons with disabilities, especially pertaining to students who identify as having a disability, could lend support to this proposed model. The following are five components, or key areas of focus, colleges and universities should concentrate their effort toward to establish inclusion for students, staff, and faculty with disabilities on their campuses.

**Assessment.** Assessing for social and environmental barriers, and understanding the campus culture and norms, provides a framework from which to approach change. A comprehensive review of the campus climate will help tailor initiatives and inform implementation strategies deemed best practice for each unique setting. Applying both qualitative and quantitative measures will tender thorough results. To assess college students attitudes toward disability [in the general population] a multidimensional instrument that includes affective, cognitive, and behavioral scales should be used. Findler et al.'s (2007) Multidimensional Attitudes Scale Toward Persons with Disabilities (MAS) is a high-quality and well established instrument found to be exceptionally reliable and valid. More specific assessment of the needs of students who identify as having a disability, practices of Student Disability Services Offices, needs of faculty and staff, and goals of the university can be examined through interviews, and other qualitative and quantitate methods.

**Education.** Campus wide initiatives such as short targeted trainings, workshops, and semester long courses that meet general education requirements increase awareness of the social, biological, and psychological components of the experience of disability. Disability related education and instruction should not focus on a person's physical or psychological conditions or impairments, rather emphasize strengths and aptitudes (Cory, White, and Stucky, 2010; Meyers & Lester, 2016).

Disability and chronic illness should be approached by the recommendations of the International Classification of Functioning, Disability, and Health (ICF) as a spectrum of health rather than disease (Falvo, 2014). This philosophical approach, presented by the World Health Organization (2001), moves educators and medical professionals away from the outdated medical model of disability and acknowledges that everyone has the potential for declining health, addressing "disability as a social construct that is a synthesis of biological, individual, and social factors and reflects the interaction between the individual and his or her social and physical environments" (Falvo, 2014, p. 4).

Education for students who identify as having a disability is essential. Student Disability Services Offices can provide targeted support for student about the impairments and conditions they have and offer strategies for accessing their education. Targeted ongoing support in the form of a training series, with topics such as: coping, disability law and policies, assistive technologies, and skills development, is another way to relay helpful information to students.

**Allies**. This component is about identifying current allies and developing new allies. Ally development is a continual process that must begin with a clear assessment of those already committed to advocacy and social justice for persons with disabilities. Assessment of current attitudes toward persons with disability will help to uncover those who will help to build inclusive communities. Meyers et al. (2013) defines being an ally as, "the attitudinal position of a person, the willingness to learn about an identity, and the actions taken as a mark of commitment" (p.72). Collaboration with student leaders, staff, faculty, and administrators who express positive attitudes towards persons with disabilities will assist efforts for further education and action. Education and training will expose new partners and allies.

**Empowerment.** Reducing public stigma reduces self-stigma. When students with disabilities have positive attitudes toward disability it fosters self-acceptance, disability acknowledgement, and willingness to disclose their disabilities (Yuker, 1994). Students with disabilities should be empowered to be their own advocates, engaging in critical conversations on campus and in their communities about policies and procedures that affect their experiences. In addition, they should be placed at the helm of education efforts and deemed experts of their own experiences, even if it contradicts common generalizations or societal norms. Developing a peer mentor program in which upper classman can support students with disabilities who are new to college life, or those who have acquired a new condition that has functional limitations and leads to disability, is another way to empower individuals to be leaders on campus.

**Universal design.** Faculty and staff should utilized inclusive pedagogical strategies that reduce students' need for accommodations due to environmental barriers; this practice of inclusion for the abilities of all is commonly referred to as Universal Instructional Design (Meyers et al., 2013). Faculty and staff generally want to provide their students with the greatest access possible, but far too often lack the specific training and support needed to create and maintain classrooms and spaces that benefit all students. Colleges and universities that support students with disabilities also support the faculty and staff that have the most contact with them.

**Model benefits.** As attitudes (thoughts, feelings, emotions, interactions) toward persons with disabilities increase, public stigma is reduced, and inclusive communities develop. Inclusive environments can lead to more self-disclosure and in turn continue to increase positive attitudes toward disability. Yazdani et al. (2016) explain that the affective component of attitude influences cognitive processing and behavior, meaning that as feelings towards persons with disabilities become more positive on campus, so does the willingness of persons without disabilities to interact with persons with disabilities and vice-versa. Additionally, students with disabilities not only feel less marginalized and believe they matter to the university, but tangible achievement benefits will increase. Graduation rates among students with disabilities will likely increase when environmental and societal barriers are removed. Grade point averages will likely rise as the result of classrooms that employ Universal Design strategies for academic inclusion, and enrollment and retention statistics could be expected to increase as more attention to the needs of students with disabilities is given by university.

Each campus has a unique culture and community specific to their educational values. Implementation of any initiative should be tailored to the specific needs of a given campus. It should be noted that this Proposed Model for Building Inclusive Communities does not take into account the specific needs of campus environments and further development is warranted. Critical to this model is its overlapping nature of the components which often happen in tandem and demonstrates its fluidity and ability to be advanced.

## Limitations

Several limitations were exposed in this study. First, the MAS, though an effective indirect measure of attitudes, is a self-report instrument. Measures that rely on self-reports often produce socially sanctioned responses even when questions are directed to reflect the attitudes of an unknown other (Taylor, 1961; Yazdani et al., 2016). The environments in which participants completed the MAS may have added social pressure to their responses. Students were typically seated in small groups of four or five at round tables, or desks arranged in a group format facing each other. First-year seminar courses at SCSU utilize these seating arrangements to encourage conversation and reflection in the classroom, but in this case, the close proximity in which students were seated may have affected the responses provided. In addition, students regularly conversed with each other before, during, and after the instrument was distributed. The presence of the instructor, and myself, in the classroom at the time of administration may have also skewed the results of the surveys.

Due to time constraints, little instruction was provided to participants detailing the specifics of the MAS instrument. Students were asked to read the directions provided and work through the survey quickly; they were encouraged to choose their initial response, not thinking too deeply about their choice. This seemed to be problematic as many participants' responses displayed patters that could indicate little to no thoughtfulness.  Many surveys had whole columns to which only one response of the Likert scale, ranging from *1-not at all* to *5- very much*, was chosen; many deferred to the 1-not at all response adding support to the limitation that responses were socially sanctioned.  Several surveys exhibited a neutral response (3 on the Likert scale) to every item on the survey.  This behavior of choosing only one response suggests that participants overlooked the scaling and may have skewed the data, especially considering many MAS items are reverse coded and posed from a positive or neutral stance.

Providing the MAS survey in a computer mediated space, outside of the classroom, may have rectified limitations from the physical environment, time restrictions, and instructional confusion.  Giving participants ample time to complete the survey in the space of their choice may have tendered more realistic and accurate responses.

It is also possible that the MAS assessment did not meet the needs of this study.  In the instrument, scenarios used to measure attitudes depict a person with a physical disability (someone who uses a wheelchair) interacting with a person without a disability; being that the majority of the training created for this project focused on psychosocial aspects of disability, the instrument and training may have been misaligned.  Various instruments have been developed to measure attitudes toward an array of disabilities and related issues, after a thorough review of possible surveys, the MAS was chosen because of its development and use in the college student population, and its reputation for consistency and reliability.  Future studies should nevertheless consider using the MAS assessment, however, conversation and education related to physical disabilities should be more comprehensive within the targeted training.

Yet another possible limitation was the disability inclusion training used in the treatment group.  Unlike the comprehensive trainings offered at SCSU which last 3-4 hours allotting ample time for reflection and discussion, this training was limited to 40 minutes or less due to class time restrictions. It would have been advantageous to align the training more closely with the models currently in use.

Finally, little was known of the classroom discussions or activities students in the control group participated in. It is possible that disability related education was provided by the instructors of control group classes. This may have contributed to the control groups' increase in positive attitudes toward persons with disabilities from pretest to posttest.

## Conclusion

This assessment of first-year college students attitudes toward persons with disabilities is corroborated by previous research proclaiming that individuals involved in higher education have more positive attitudes toward disability than the general public, and that attitudes toward students with disabilities are increasing (Brownlee & Carrington, 2000; Meyers & Lester, 2016: Vilchinskey et al., 2010) That being said, educational trainings are advantageous and may offer more slight increases, which overtime, could change attitudes more drastically. Engaging in conversation regarding stereotypes about persons with disabilities, understanding historical ties to oppressive perspectives of disability, exploring more inclusive ideals and viewpoints in which to form thought about persons with disabilities, and offering real, tangible techniques for change, has an obvious effect on many groups within the greater population.

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# Appendix A

## Personal Details

1. Age: _________

2. Gender   (circle one)

    Male

    Female

    Prefer to specify ____________________

    Prefer not to say

3. Race (circle one)

    American Indian or Alaska Native

    Latino or Latina

    Asian

    Black or African American

    Native Hawaiian or Other Pacific Islander

    White

    Two or more races

    Prefer not to say

5. Education Level Based on Credits (circle one)

    1st semester freshman- 0 completed college credits

    1st semester freshman- previously completed less than 15 credits at college

    2nd semester freshman- completed more than 15 credits at college

    College Sophomore

    College Junior

    College Senior

6. Do you personally know someone who has a disability? (circle one) YES NO

If yes, how many people do you know who are living with a disability?

1-2 people

3-4 people

5-6 people

7+ people

7. In what context do you know said person(s) with disabilities? (circle all that apply)

Spouse

Family

Friend

Neighbor

In-class

Co-worker

Church

other ____________________

8. How many hours a week do you spend interacting with persons with disabilities?

Less than 1 hour

1-3 hours

3-5 hours

5 or more hours

9. Do you consider yourself to have a disability? (circle one)

YES NO

If yes, what disability do you have? ________________________________

10. Have you ever received or participated in any disability issues related training?

YES NO

# Appendix B

**Identifier Word ___________________________________** ***(please remember this word)***

## The Multidimensional Attitude Scale Towards Individuals with Disabilities (MAS)

Liora Findler, Noa Vilchinsky, and Shirli Werner 2007

*Vignette:*

"Imagine the following situation. Jordan went out for lunch with some friends to a coffee shop. A person in a wheelchair with whom Jordan is not acquainted, enters the coffee shop and joins the group. Jordan is introduced to this person, and shortly thereafter, everyone else leaves, with only Jordan and the person in the wheelchair remaining alone together at the table. Jordan has 15 minutes to wait for a ride. Try to imagine this situation."

People experience a variety of *emotions* when they are involved in such a situation. In the next column is a list of possible emotions, which may arise before, during, and/or after such a situation. Please rate on each line the likelihood that this *emotion* might arise in Jordan.

| | **Degree of Likelihood** | | | | |
|---|---|---|---|---|---|
| **Affect** | **Not at all** | | | | **Very Much** |
| 1. Tension | 1 | 2 | 3 | 4 | 5 |
| 2. Stress | 1 | 2 | 3 | 4 | 5 |
| 3. Helplessness | 1 | 2 | 3 | 4 | 5 |
| 4. Nervousness | 1 | 2 | 3 | 4 | 5 |
| 5. Shame | 1 | 2 | 3 | 4 | 5 |
| 6. Relaxation | 1 | 2 | 3 | 4 | 5 |
| 7. Serenity | 1 | 2 | 3 | 4 | 5 |
| 8. Calmness | 1 | 2 | 3 | 4 | 5 |
| 9. Depression | 1 | 2 | 3 | 4 | 5 |
| 10. Fear | 1 | 2 | 3 | 4 | 5 |
| 11. Upset | 1 | 2 | 3 | 4 | 5 |
| 12. Guilt | 1 | 2 | 3 | 4 | 5 |
| 13. Shyness | 1 | 2 | 3 | 4 | 5 |
| 14. Pity | 1 | 2 | 3 | 4 | 5 |
| 15. Disgust | 1 | 2 | 3 | 4 | 5 |
| 16. Alertness | 1 | 2 | 3 | 4 | 5 |

People experience a variety of *cognitions* when they are involved in such a situation. Following is a list of possible thoughts that may arise before, during and/or after such a situation. Please rate on each line the likelihood that this *cognition* might arise in Jordan:

| | **Degree of Likelihood** | | | | |
|---|---|---|---|---|---|
| **Cognitions** | **Not at all** | | | | **Very Much** |
| 1. He/she seems to be an interesting guy/girl. | 1 | 2 | 3 | 4 | 5 |
| 2. He/she looks like an OK person. | 1 | 2 | 3 | 4 | 5 |
| 3. We may get along really well. | 1 | 2 | 3 | 4 | 5 |
| 4. He/she looks friendly. | 1 | 2 | 3 | 4 | 5 |
| 5. I enjoy meeting new people. | 1 | 2 | 3 | 4 | 5 |
| 6. He/she will enjoy getting to know me. | 1 | 2 | 3 | 4 | 5 |
| 7. I can always talk with him/her about things that interest both of us. | 1 | 2 | 3 | 4 | 5 |
| 8. I can make him/her feel more comfortable. | 1 | 2 | 3 | 4 | 5 |
| 9. Why not get to know him/her better? | 1 | 2 | 3 | 4 | 5 |
| 10. He/she will appreciate it if I start a conversation. | 1 | 2 | 3 | 4 | 5 |

People experience a variety of *behaviors* when they are involved in such a situation. Following is a list of possible behaviors which may arise before, during and/or after such a situation. Please rate on each line the likelihood that Jordan would *behave* in the following manner:

| | **Degree of Likelihood** | | | | |
|---|---|---|---|---|---|
| **Behavior** | **Not at all** | | | | **Very Much** |
| 1. Move away | 1 | 2 | 3 | 4 | 5 |
| 2. Get up and leave | 1 | 2 | 3 | 4 | 5 |
| 3. Read the newspaper or talk on a cell phone | 1 | 2 | 3 | 4 | 5 |
| 4. Continue what he/she was doing | 1 | 2 | 3 | 4 | 5 |
| 5. Find an excuse to leave | 1 | 2 | 3 | 4 | 5 |
| 6. Move to another table | 1 | 2 | 3 | 4 | 5 |
| 7. Initiate a conversation if he/she doesn’t make the first move | 1 | 2 | 3 | 4 | 5 |
| 8. Start a conversation | 1 | 2 | 3 | 4 | 5 |

# Appendix C

## Exploring First-Year College Student's Attitudes Towards Disability: Assessment of Disability Inclusion Training
## Consent to Participate

You are invited to participate in a research study about college student's attitudes towards disability.

If you agree to be part of the research study, you will be asked to take a brief survey that describes a situation in which people with and without disabilities interact. You will also participate in a short targeted training on building inclusive communities. Another brief survey will follow in the weeks after training.

The inclusion training you will participate in confronts stereotypes and prejudices held against people with disabilities. These conversations can be difficult for people with and without disabilities and it is important that all participants are respectful of people's differences. No judgment will be placed on any participant of this study.

Data collected will remain confidential. Personal identifiers will not be linked to participant's names. Instructors will not have access to the data collected; only the researcher and her thesis committee chair will have access to any data collected. It will not be shared with outside parties.

Participating in this study is completely voluntary. Your decision whether or not to participate will not affect your current or future relations with St. Cloud State University, or the researcher. If you decide to participate, you are free to withdraw at any time without penalty.

If you have questions about this research study, you may contact Molly Tast at tamo1101@stcloudstate.edu or Dr. Seth Christman – schristman@stcloudstate.edu . Results of the study can be requested from the researcher or at the St. Cloud State University Repository after the completion of this study.

Your signature indicates that you are at least 18 years of age, you have read the information provided above, and you have consent to participate.

______________________________Signature ________________Date

# Appendix D

## Training PowerPoint

***Slide 1***

Students were introduced to the topic of disability in relation to SCSU's Husky Compact which commits that students will gain experience and knowledge of how to engage as a member of a diverse and multicultural world. It was explained that persons with disabilities belong to a minority population—populations differentiated from society by either numbers or power difference—by my definition.

Inclusive Communities

Perceptions of Disability

***Slide 2***

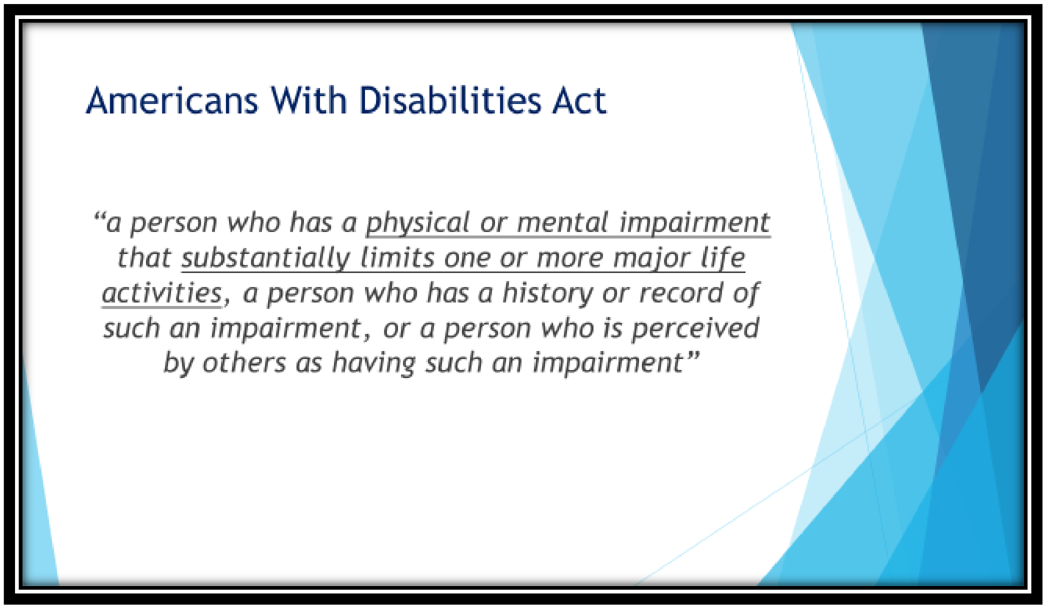
Prevalence figures were shared, and participants were asked to work in groups and reflect on two questions, “what stereotypes exist about persons with disabilities”, and “what do you believe about persons with disabilities”. Groups were asked to share their thoughts and conversation about the two previous questions. Students were encouraged to share openly but respectfully in the larger group and asked an additional question; how can living with a disability affect a person’s life at college?

## Let’s Get This Conversation Started…

- 15% of the worlds population is living with a disability
- 11% of undergraduate students are living with a disability (that’s a little over 1 in 10)
- What stereotypes exist about people with disabilities?
- What do you believe about people living with disabilities?
- How can living with a disability affect a persons life at college? Do students with disabilities have any barriers on a college campus?

***Slide 3***

After students reflect on what challenges students with disabilities face at college, The Americans with Disability Act's (ADA) definition of disability is reviewed explaining that this legal definition protects students' rights to academic accommodations.



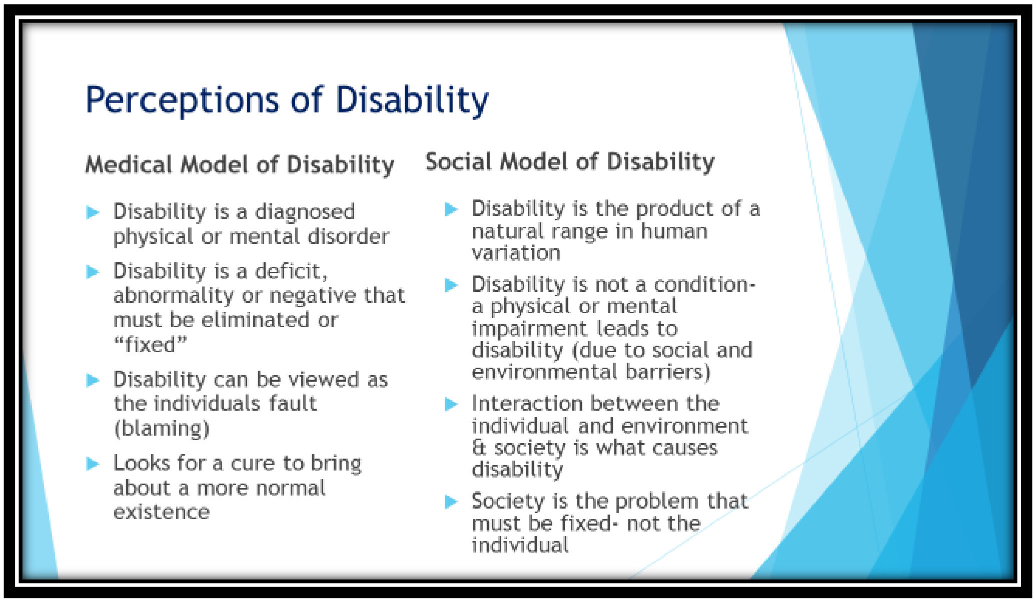
Americans With Disabilities Act

*"a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment"*

### *Slide 4*

Perceptions of disability were reviewed from a theoretical perspectives, namely, the medical model of disability and the social model of disability. It is important to note that the social model of disability does not discredit or deny the benefits of medical treatments. Medical advancements and assistive technologies have truly made participation in society possible for many persons with disabilities.

The key idea here is that persons with disabilities should not need to "cure" or "fix" themselves in order to fully participate in society. Persons with disability should not feel pressured to change who they naturally are to be a fully included member of society. Persons with disabilities should be allowed (free from any psychological or attitudinal barriers) to choose to seek medical treatment or not.



Perceptions of Disability

Medical Model of Disability

- Disability is a diagnosed physical or mental disorder
- Disability is a deficit, abnormality or negative that must be eliminated or "fixed"
- Disability can be viewed as the individuals fault (blaming)
- Looks for a cure to bring about a more normal existence

Social Model of Disability

- Disability is the product of a natural range in human variation
- Disability is not a condition- a physical or mental impairment leads to disability (due to social and environmental barriers)
- Interaction between the individual and environment & society is what causes disability
- Society is the problem that must be fixed- not the individual

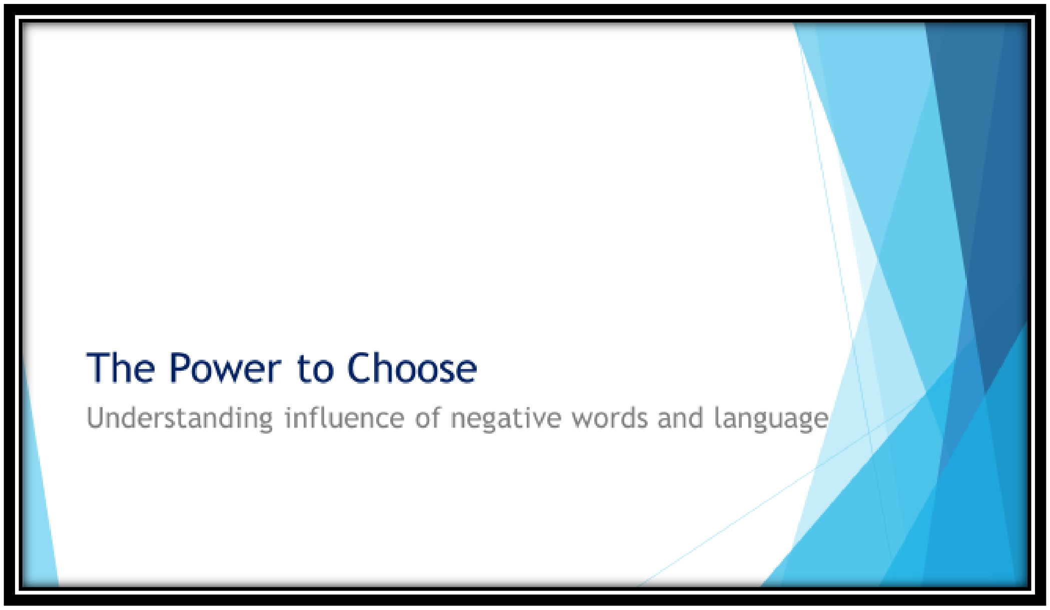
***Slide 5***

The social model of disability was explained using a common example of how the environment can lead to disability. Participants were asked what percentage of the population is left handed. The class was then asked to assess if environments are set up to be fully inclusive of all people, including those who are left handed. It is then explained that the physical world is set up for the majority of the population (who are right handed) to function to the best of their abilities, and people who are left handed suffer, even loss of life, because they are forced to maneuver a world that is not accessible for them.

LEFT VS RIGHT

***Slide 6***

Negative messages are pervasive and support the medical model of disability. Negative words and language place the blame onto individuals living with disabilities in society. Cook et al. (2010) created an activity titled "The Power of Words" in order "to illustrate how words can be used to build positive and negative images" (p. 54). Participants were asked a series of "would you rather" questions intended to demonstrate forced choice, often involving two negative options/outcomes (Cook et al., 2010). The activity is processed and used as a lead in to person first language (Cook et al., 2010).



The Power to Choose

Understanding influence of negative words and language

***Slide 7***

Person-first language is recommended by professionals, educators, and most importantly persons with disabilities, as best practice for refer to persons with disabilities (American Psychological Association, 1992; Vash & Crewe, 2013). Person-first language places the personhood of an individual before the impairments that lead to disability. Handouts are distributed that offer examples and basic recommendations for using person-first language and participants practice using this style of language. Handouts provided by Snow, 2008 and National Center on Birth Defects and Developmental Disabilities.

Person First Language

- Language shapes perceptions of the world and influences the way we see things
- Labels promote bias and express negative attitudes
- Person should not be solely defined by reference to disability
- “the mentally ill” vs “people with mental illnesses”

***Slide 8***

Students were asked to identify this common symbol and its meaning. When it was identified as a "handicapped parking sign" it created an opportunity to discuss how difficult changing language and perceptions can be. I used myself as an example and explained that I, even though I have expansive knowledge about disability related issues, still catch myself calling this a "handicapped sign" at times; the key is to catch yourself and change your behavior. Students were asked to use their person-first language handouts to use correct terminology for this sign [accessible parking].


Using Person First Language

In conclusion, participants will be informed of services available to students with disabilities at SCSU. Student Disability Services prepared an electronic PDF version of their offices brochure to distribute via email. Instructors of treatment group classes were asked to email the electronic brochure to their students following the presentation.

# Appendix E

## Power of Words Activity

Adapted with permission from Cook, S., Duggla, G., & Gibo, M. (2010). Disability 101: Increasing Disability Awareness and Sensitivity. S. E. Brown & C. L. Hatch (Eds.). Center on Disability Studies, University of Hawaiʻi at Manoa.

**Instructions:**

- Inform the students that the following activity will require them to sit and stand multiple times. Make a statement such as "if you need to stay seated, please just raise your hand instead of standing"
- Explain that a series of questions will be read, each question will have two options.
- If you "would rather" or agree to the first option please stand, if you agree to the second option please remain seated.

*(Each question is intended to demonstrate the impact of having forced choices and have students think about how words can bring up different images (both positive and negative).*

**Would you rather…:**

1. Have bad breath or stinky feet?
2. Have a huge booger hanging from your nose that you can't get rid of or have a medical condition that makes you fart every five minutes?
3. Have a tiny butt on your forehead or little feet that dangle from your chin?
4. Be smart or strong?
5. Be called unique or determined?
6. Be good looking with no friends or unattractive with many friends?
7. Be called geek or dork?
8. Never be able to get your driver's license or never go out without a chaperone?
9. Believe in yourself or have someone believe in you?
10. Make your own decisions or have your parents choose everything for you?
11. Win no medals in the Olympics or win 5 gold medals in the Special Olympics?
12. Be called stupid for the rest of your life or use a wheelchair?
13. Be blind or deaf?
14. Cut off both your legs or not be able to read and write?
15. Be called lazy or weak?
16. Be called crippled or disabled?
17. Be called retard or mental?

## Discussion

Explain to students that the words we use can bring up positive or negative images. The choices they made during the activity were based on their personal image of what those words meant.

1. Did anyone feel they had to make a choice between two undesirable labels?
2. What are some thoughts that went through your mind when making your choice?
3. Were any of these especially tough decisions?  Why?
4. What are your thoughts on having a choice?  Does everyone get to choose how they are labeled? Or what their life circumstances will be?
5. Can you identify some of the options that brought up negative images? Positive images?
6. What are your thoughts on the power of words?

# Appendix F

## Communicating With and About People with Disabilities

About 50 million Americans report having a disability. Most Americans will experience a disability some time during the course of their lives. Disabilities can affect people in different ways, even when one person has the same type of disability as another person. Some disabilities may be hidden or not easy to see.

### People First Language

People first language is used to speak appropriately and respectfully about an individual with a disability. People first language emphasizes the person first not the disability. For example, when referring to a person with a disability, refer to the person first by using phrases such as: "a person who …", "a person with …" or, "person who has…"

Here are suggestions on how to communicate with and about people with disabilities.

| People First Language | Language to Avoid |
|---|---|
| Person with a disability | The disabled, handicapped |
| Person without a disability | Normal person, healthy person |
| Person with an intellectual, cognitive, developmental disability | Retarded, slow, simple, moronic, defective or retarded, afflicted, special person |
| Person with an emotional or behavioral disability, person with a mental health or a psychiatric disability | Insane, crazy, psycho, maniac, nuts |
| Person who is hard of hearing | Hearing impaired, suffers a hearing loss |
| Person who is deaf | Deaf and dumb, mute |
| Person who is blind/visually impaired | The blind |
| Person who has a communication disorder, is unable to speak, or uses a device to speak | Mute, dumb |
| Person who uses a wheelchair | Confined or restricted to a wheelchair, wheelchair bound |
| Person with a physical disability | Crippled, lame, deformed, invalid, spastic |
| Person with epilepsy or seizure disorder | Epileptic |
| Person with multiple sclerosis | Afflicted by MS |
| Person with cerebral palsy | CP victim |
| Accessible parking or bathrooms | Handicapped parking or bathroom |
| Person of short stature | Midget |
| Person with Down syndrome | Mongoloid |
| Person who is successful, productive | Has overcome his/her disability, is courageous |

**For more information about disability and health, visit www.cdc.gov/disabilities**

National Center on Birth Defects and Developmental Disabilities
Office of the Director