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**THE IMPACT OF ON-LINE TRAINING ON COLLEGE FACULTY
ATTITUDES AND KNOWLEDGE OF STUDENTS WITH DISABILITIES**

By

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A Dissertation Prospectus Submitted to the Faculty of Old Dominion University in Partial
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Abstract

Due to legislation, advances in technology, and hopefully, a more positive social acceptance, students with disabilities are entering college at a faster rate than has ever been experienced. Data reveal that the largest increase in identified disabilities of incoming college freshmen are in the area of learning disabilities. However, many students with disabilities do not complete their college education, partly due to faculty members' lack of knowledge about various disabilities, less than accepting attitudes, and the lack of accommodations made for them. Using the Scale of Attitudes Toward Disabled Persons (SADP) and the Disability Knowledge Questionnaire, the impact of an on-line training program on college faculty's attitudes and knowledge of students with disabilities was examined. Disability-related legislation, adaptive teaching strategies, information about learning disabilities and attention deficit disorder, and accommodations for students with disabilities was presented in an on-line format.

While no significant differences were found between groups, the results revealed that on-line training led to slightly improved scores on both the post Scale of Attitudes Toward Disabled Persons and the post Disability Knowledge Questionnaire. Qualitative data revealed that many faculty were willing to provide accommodations to assist students with learning disabilities, but were cautious about any changes that would jeopardize the integrity of the course content. Faculty also identified the need for students with learning disabilities to be more proactive when requesting accommodations. Further research is recommended to explore the best method of bringing about the desired changes when providing training.

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To my colleagues and the administration at school...my sincere thanks for the commitment you made to me for completing my degree and for providing assistance and gentle nudges when needed. To my family and friends...thanks for supporting me and always believing in me. And to my Mom and Dad....I did it! Finally! I love you and would not be at this stage of my life without your undying love, support, encouragement, and constant belief in me. Thank you!

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Chapter I: INTRODUCTION

Students generally attend college to further their education, to mature, and to begin the process of becoming productive members of society (Junco & Salter, 2004). College provides students with the opportunity to explore various academic and career paths, learn more about their own personality traits and interests, develop meaningful relationships with both fellow students and faculty, and experience the reality of independent thinking and creative problem-solving while they learn and grow. A student's ability to reach his or her goals may be seriously impeded if they have a disability. Students with disabilities want to fulfill their personal academic goals, prepare themselves for employment and continue to grow towards a life of financial security and independence, in the same way as students without disabilities (Malakpa, 1997) and benefit from attending college (Pearman, Elliott, & Aborn, 2004). Education is identified as one of the factors that improves quality of life for individuals with disabilities (Pearman, et al, 2004, Salkever, 2002). Making the transition to college, while difficult for many high school students, can be even more daunting for students with disabilities (Kim-Rupnow & Burgstahler, 2004). Vasek (2005) asserts that many students with disabilities often face faculty who are less than receptive to provide classroom accommodations and often hold negative attitudes towards these students. Baggett (1994) notes that the attitudes and willingness of college faculty to make necessary accommodations for students with disabilities has a direct relationship to the progress these students make academically.

Vasek (2005) estimates that the number of college students with disabilities currently enrolled in higher education has now reached close to one and a half million. A

study by Jameson (2007) found that more students with disabilities were entering college and had a desire to prove their value to society through their successful completion of college. In measuring the value of college education among students with and without disabilities, Bailey (1994) found a significant difference between students with disabilities (79.1 mean response) and students without disabilities (59.4 mean response) when asking if a college education is important to making them a valuable member of society. Students with disabilities reported an increased importance in the value of employment opportunities and a further development of social networks gained through a college education.

The significant increase in the number of students with disabilities who are enrolling in college is noted by Jameson (2007), Fichten, Jorgensen, Havel, & Barile (2006), and Lehmann, Davies & Laurin, 2000. Mott (2003) also reports a swift rise in the number of students with disabilities entering college, explaining that approximately 9% of incoming first year students have disabilities compared with approximately 3% twenty years ago. Battle (2004) confirms the tripling of students with disabilities pursuing higher education from 1978 to 1998. Leyser, Vogel, & Wyland (2000) emphasize that The Higher Education and Adult Training for People with Handicaps (HEATH) Resource Center of the American Council on Education (ACE) report an increase in the “proportion of first-time, full-time students with disabilities attending college between 1978 and 1994 from 2.6% to 9.2 %”(p. 47). Leyser, Vogel, & Wyland (2000) further identify learning disabilities as the category of disability that has the highest increase in college admission. The percentage of students with learning disabilities increased “from 15.3% in 1988 to 32.2% in 1994.” While 15% of the college

students who report having a disability identified a learning disability specifically in 1978, Mott (2003) observes an increase to 41 % in 1998. The National Center for Educational Statistics, while combining undergraduate and graduate students in their data, determines there are at least 29% who have a learning disability. Yet, today there are relatively few colleges or universities that provide their faculty and staff with training to prepare them to deal with the growing population of students with disabilities. If we assume this trend will continue to increase, college faculty must be fully versed in methods of meeting the learning needs of all students, particularly those with disabilities. Administrations of institutions of higher learning should provide mandatory training regarding resources available to students and faculty, appropriate accommodations, and the responsibilities of both students with disabilities and faculty.

Background of the Problem

Historically, students with disabilities are often overlooked or forgotten in higher education's student affairs, are often stereotyped, and may be the victims of prejudice. Henderson (1999) identifies legislation and the advances in technology as two factors that have influenced predictions of expected growth in the number of students with disabilities who will be entering colleges and universities.

Fortunately, there has been an increasing interest in the supportive services and programs that are offered by colleges and universities for students with disabilities, as noted by Ganschow, Coyne, Parks & Antonoff (1999). Historically, the emphasis on addressing the educational needs of postsecondary students with disabilities included services that would meet the social and emotional needs of students (Blalock and Dixon, 1982). Jones and Krumsvik (2008) contend that in addition to these services students

with disabilities need to self-advocate for programs that will assist with their academic endeavors. Hadley (2007) agreed that college freshmen with a learning disability are often not equipped with the skills necessary to request reasonable accommodations. When this absence of self-advocacy is combined with the lack of understanding of legislation that impacts the provision of educational services to individuals with disabilities and the lack of preparedness on the part of college faculty to address these student needs it becomes a monumental task for these students to succeed.

Statement of the Problem

Seeing an increase in the number of students with disabilities entering college, faculty and staff must be prepared to offer the educational, technological, and/or supportive resources necessary to allow students with disabilities the opportunity to succeed. Lehmann, Davies & Laurin (2000) claim that many students with disabilities entering college do not complete their course of study, often leaving school before the academic work necessary for graduation is completed. Fairweather and Shaver, (1990) found that students with disabilities were seventy-five percent less likely to attend a postsecondary institution than students without disabilities. This finding is confirmed by Sitlington and Frank (1990) who describe the fact that college students with disabilities are less likely to complete their degrees than students without disabilities. In other words, students with disabilities do not reach the level of success that they strive to achieve. However, since introduction of the Americans with Disabilities Act (ADA) of 1990 and the 2004 amendment to the Individuals with Disabilities Education Act (IDEA) more students with disabilities are entering post secondary education than previously.

The lack of preparedness of college faculty and staff to address the needs of students with disabilities may one of the reasons these students are less likely to graduate than students without disabilities. Baggett (1994) studied the awareness of students with disabilities of college faculty and discovered that faculty members were unable to identify students with disabilities, other than obvious physical disabilities, unless the student disclosed their disability to the faculty member. Baggett further asserts that faculty members were not aware of disability legislation or their own school's policies related to the delivery of services for students with disabilities. Gordon, Lewandowski, Murphy & Dempsey (2002) suggest that because some disability legislation, specifically the Americans with Disabilities Act (ADA), is relatively new, there was confusion between legislation related to special education (The Individuals with Disabilities Education Act of 1990) and the purpose of preventing discrimination under the ADA. Lehmann, et al. (2000) report that students with disabilities expressed concerns over the fact that their instructors were unable to adapt teaching strategies or classroom management to meet their needs. Lehmann, et al. further declare that students perceived the need for faculty to have information and training about disabilities. Continuous support, in the form of disability training for faculty, was recognized as a necessity in order to have the faculty adept at utilizing effective teaching strategies with students with disabilities.

Another factor that may influence the provision of adequate services for students with disabilities is that many of these students experience negative attitudes on the part of college faculty towards them (Malakpa, 1997). Only two other problems, accessibility and school support systems, rank higher than the negative attitudes of faculty, according

to Malakpa. Further claims are made by Malakpa that students with disabilities may also encounter problems from the school's staff, as well as students, because of the lack of understanding the school community may have towards the need for specific accommodations.

Purpose and Overview of the Study

The purpose of this experimental study is to determine if changes will occur in faculty attitudes, their knowledge of disabilities and related legislation, and their understanding of appropriate accommodations after exposure to on-line training, and have a positive effect on their intentions and incorporation of adaptive teaching strategies in their classrooms. In this study, "attitudes" refers to the affective, behavioral, and cognitive beliefs an individual has towards the use adaptive teaching strategies. Subjective norms are an individual's beliefs about the normal expectations of others regarding the use of adaptive teaching strategies. Perceived behavioral control refers to an individual's beliefs about the ease or difficulty of incorporating adaptive teaching strategies into their classroom management. It is hypothesized that if on-line adaptive teaching strategy training, specifically designed to address the educational needs of students with invisible disabilities, is provided to college faculty, there will be a significant change in faculty members attitude, knowledge of disabilities and related legislation, and their understanding of appropriate accommodations which will result in a positive intent to utilize newly-learned teaching strategies. It is also hypothesized that if on-line adaptive teaching strategy training is provided there will be an increased willingness to adapt teaching strategies to meet the needs of students with disabilities, which should foster improvement in student's academic progress.

In this study, invisible disabilities are defined as “hidden neurological conditions that present significant challenges to learning, interacting with others, regulating mood and thinking patterns and to otherwise experiencing a full lifestyle.” Retrieved January 23, 2005, from <http://www.ldpride.net/idexplain.htm#Definition>. The types of invisible disabilities addressed in this study will include: learning disabilities, attention deficit disorder (ADD), and attention deficit hyperactivity disorder (ADHD). Learning disabilities are a classification given to a heterogeneous group of disorders that affect how a person receives, understands, stores, and retrieves information and are typically found in individuals with average or above average intelligence (Scott, 1997).

Figure 1 shows the path changes hypothesized by the researcher. Training was provided that includes knowledge of invisible disabilities and various adaptive teaching strategies that are appropriate to use when teaching students with these identified disabilities. The training will be designed to have participants explore their attitudes, subjective norms, and perceived behavioral control. As mentioned earlier, for the purpose of this study, “attitudes” refer to the affective, behavioral, and cognitive beliefs of college faculty towards the result of making classroom accommodations for students with disabilities. “Subjective norms” refer to college faculty beliefs about the normal expectations of others regarding the implementation of accommodations in the classroom. “Perceived behavioral control” refers to the beliefs of college faculty regarding how easy or difficult it would be for them to make accommodations for students with disabilities. The participant’s intention of changing his/her behavior, in this case the incorporation of adaptive teaching strategies or accommodations, should be influenced by his/her attitudes, subjective norms, and perceived behavioral control. This

study further investigates the relationship between identified intentions on the part of participants and any changes in behavior (reported use of teaching strategies or accommodations in the classroom).

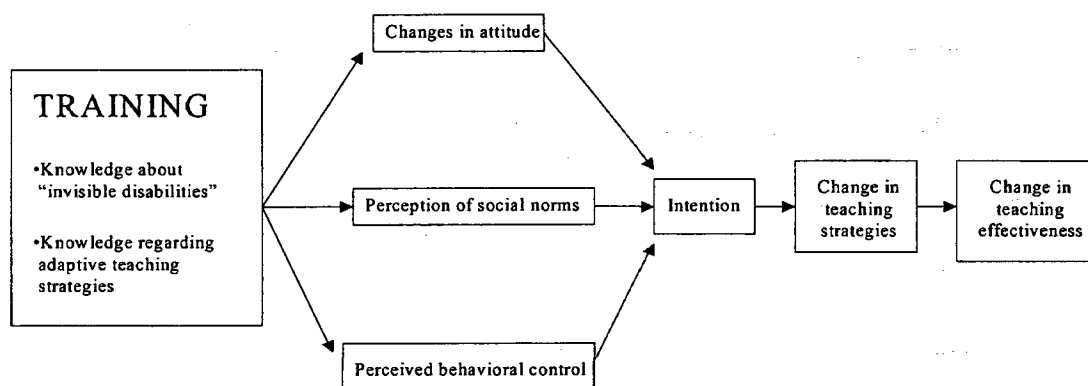


Figure 1 Path diagram of changes due to training.

Significance of the Study

This research makes a significant contribution to the current body of knowledge and further advances the understanding of issues surrounding attitudes, knowledge, and acceptance of students with disabilities by college faculty. Faculty members must be aware of the special needs of students with disabilities if these students are to be successful in the classroom. Hart & Williams (1995) state that college faculty typically assume one of four behaviors when interacting with students with disabilities. Three of these behaviors have negative connotations: avoidance, overprotection, and rejection. The fourth behavior identified is that of being a nurturer for the student. An introspective

look at one's attitudes towards students with disabilities, while possibly difficult for some, offers an opportunity for collegial and professional growth.

Another benefit of this research is to educate college faculty to available resources that may be used to adapt their teaching strategies and further increase the likelihood of success for students with disabilities. Therefore, the research questions to be addressed are: 1) Will the provision of on-line training that incorporates information about invisible disabilities, disability legislation, and appropriate accommodations result in more positive faculty attitudes towards students with disabilities than faculty who did not receive the training? 2) Will the provision of on-line training that incorporates information about invisible disabilities, disability legislation, and appropriate accommodations result in improved knowledge in these areas by faculty who received the training versus faculty who did not receive the training?

Chapter II: LITERATURE REVIEW

Introduction

As noted by Paul (2000) the National Center for Education Statistics (1996) reported that in the fall of 1994, 10.3% of all students enrolled in higher education institutions in the United States reported at least one disability. Interestingly, the American Council on Education, in a 2004 report, indicate the number of undergraduate students who assert they have a disability is approximately 9%. This percentage has nearly tripled over the past twenty years. In order to adequately address the needs of students with disabilities, the American Council on Education recommends professional development and training opportunities for faculty about how to best educate this specific population of students. New Report Looks at College Access Challenges for Students with Disabilities. (July 6, 2004). Retrieved March 4, 2009, <http://www.acenet.edu/AM/Template.cfm?Section=Search&template=/CM/HTMLDisplay.cfm&ContentID=8850>.

While recent data on students with disabilities in college is limited, it should be noted that while the total number of college students with disabilities has remained relatively constant (6-8%) between 1988 and 2000 (Mason & Mason, 2005), the number of these students that reported having a learning disability increased from 40% in 2000 to 51% in 2002. Skinner (2007) and Hadley (2007) both assert that there is an increasing number of students with learning disabilities who are pursuing postsecondary education. Enrollment increased specifically in community colleges, four-year colleges, and universities. Previously, Henderson (2001) reported longitudinal data that indicating that between 1988 and 1998 the number of students with learning disabilities entering college

more than doubled. The National Center for Educational Statistics report findings from 2003-2004 indicate that over “11% of undergraduates in either two or four-year postsecondary education have a documented disability.” Of this percentage, over 7 % had a diagnosed learning disability and 11% had been diagnosed with attention deficit disorder. Profile of Undergraduates in U.S. Postsecondary Education Institutions: 2003-04. Retrieved March 6, 2009, <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006184>.

Research indicates that many members of society hold negative attitudes towards individuals with disabilities. Chan, Wang, Thomas, Wong, Chan, Lee, & Lui (2002) emphasize the importance of studying societies’ attitudes when looking at opportunities available to individuals with disabilities. Adrian’s (1997) findings suggest the type of disability has an influence over how society will respond to people with that specific disability. One of the biggest obstacles to full inclusion into mainstream community life is a negative public attitude. Goddard & Jordan (1998) assert that behavior is affected by negative attitudes projected on individuals with disabilities and that stereotypes, including dependence, isolation, depression, and emotional instability are often used to describe individuals with disabilities. An individual’s specific disability is often less limiting than the handicap placed on them through the negative attitudes of others (Furnham & Pendred, 1983; Roush, 1986). The discrimination that many individuals with disabilities encounter in life may be partially due to the negative attitudes many have towards them (Perry & Apostol, 1986; Satcher & Dooley-Dickey, 1992). Chang, Tremblay, & Dunbar (2000) support this notion, citing the prejudice, discrimination, and the lack of access to education and career opportunities for individuals with disabilities.

The potential to reach independence and become contributing members of society can be more difficult for individuals with disabilities due to negative attitudes and discrimination (O’Keeffe, 1994). Palmer, Redinius, & Tervo (2000) contend that even though attempts have been made to increase the level of societal awareness and acceptance of individuals with disabilities, negative attitudes continue. With the knowledge that society continues to hold negative attitudes toward individuals with disabilities, it is a concern of this researcher that similar attitudes might be present in our public education system, particularly among faculty working in higher education. As Paul (2000) reasons, federal legislation, such as the Americans with Disabilities Act, implies that colleges and universities are considered public institutions and, therefore, college and university faculty need to have an increased awareness and knowledge of students with disabilities.

D’Alonzo, Giordano, & Cross (1996) contend that “not all public school teachers have positive attitudes about teaching students with disabilities” and are not adequately prepared, in regard to disability awareness training, to properly meet the educational needs of their students (p. 304). Specific to post-secondary education, Malakpa (1997) contends that students with disabilities have numerous obstacles to overcome in their pursuit of higher education. In addition to concerns about available supportive services and accessibility issues, negative attitudes towards students with disabilities by faculty are prevalent. Garvar-Pinhas & Schmelkin (1989), Nadar (1984), and Winzer (as cited in Antonak & Larrivee, 1995) confirm that many educators are opposed to, and hold negative attitudes toward, the inclusion of students with disabilities in their classrooms. Biklen (1985) stresses the importance of positive attitudes toward students with disabilities if these students are to be fully accepted in the classroom. Antonak &

Larrivee (1995) emphasize that acceptance of students with disabilities will only occur when there are changes in attitudes of educators over an extended period of time. This may also hold true in the attitudes of non-disabled students, faculty, and staff on college campuses towards students with disabilities and points to the lack of training provided. The concerns over how students with disabilities are perceived by college faculty and staff and the apparent limited knowledge college personnel have regarding how to address the educational needs of students with disabilities are issues that require attention. The substandard teaching methods of college faculty, are highlighted as a challenge for students with disabilities who are enrolled in their classes according to the American Council on Education. Retrieved 3/6/09, <http://www.acenet.edu/AM/Template.cfm?Section=Search&template=/CM/HTMLDisplay.cfm&ContentID=8850>. A positive change in faculty perceptions of students with disabilities may be occurring. Murray, Wren, & Keys (2008) report the willingness of college faculty to spend increased time working with students with learning disabilities so that they may succeed in the classroom. Minor accommodations for students with learning disabilities were reported as being acceptable by faculty, however major modifications were still met with resistance.

Historical and Legislative Implications

One of the reasons colleges and universities are seeing an increase in the number of students with disabilities applying to, being accepted, and pursuing a postsecondary education, may be due to changes in legislation that directly impact the provision of equal services to all students. As students transition from high school to college, it is imperative to recognize the similarities and differences that three federal laws have on

students with disabilities. The Individuals with Disabilities Education Act (IDEA, 1990), P.L. 101-476, (formerly called P.L. 94-142 or the Education for all Handicapped Children Act of 1975) requires public schools to make available to all eligible children with disabilities a free appropriate public education in the least restrictive environment appropriate to their individual needs. Rao (2004) acknowledges the relationship between the increase in enrollment in postsecondary institutions by students with disabilities and disability legislation. Thomas (2000) found an increase in enrollment of students with disabilities from 29 percent in 1986 to 45 percent in 1994. Leyser, Vogel, & Wyland (2000) confirm that under this legislation, an individual transition plan (ITP) “be developed to prepare students with disabilities for transition to postsecondary education” (p.47). However, this legislation only provides services for students through the age of twenty-one, or until graduation from high school.

The Rehabilitation Act of 1973 (P.L. 93-112) Section 504 states that “no qualified individual with a disability in the United States shall be excluded from, denied the benefits of, or be subjected to discrimination under” any program or activity that receives federal financial assistance. Under this law, services must be provided to anyone with a disability and prevents discrimination in educational settings by helping to eliminate barriers that might prevent the students from engaging in programs, services, or activities that are offered to the general school population. Colleges and universities are responsible for determining if a student’s disability is substantial enough to qualify for services and to make “reasonable accommodations” for such students. Postsecondary institutions are also responsible for “suggesting reasonable adjustments in teaching methods that do not alter the essential content of a course or program.” Retrieved March

30, 2006, from <http://superv.tjc.edu/ADA/idea.htm>. This legislation may also include the development of a 504 plan, which is written with the collaboration of students, parents, and school personnel in colleges and other postsecondary institutions.

The Americans with Disabilities Act (ADA) of 1990 (P.L. 101-336) requires any college or university receiving or not receiving federal funds, whether public or private, “give people with disabilities an equal opportunity to benefit from all of their programs, services, and activities,” including education. Similar to Section 504 of The Rehabilitation Act of 1973, the Americans with Disabilities Act protects students from discrimination and helps eliminate barriers to full participation in regular school programs and services. This legislation differs from the other laws in that any accommodation plan is developed between the student and the school’s Coordinator of Disability Services.

As described earlier, legislation that advocates for educational opportunities and support services for individuals with disabilities is certainly one factor which has caused a continuing increase in the number of students with disabilities who are pursuing a postsecondary education. The Rehabilitation Act of 1973, Section 504, also mandates that a high school student with a disability must have an individualized transitional plan that helps prepare the student for the transition to postsecondary education. If high schools are preparing students for postsecondary education, then college faculty and staff must to be prepared to accept, support, and understand the needs of students with disabilities so that they can achieve. Disability awareness training is one method this author believes will assist with this process.

Assisting Individuals with Disabilities

Obviously, not all college faculty and staff have negative attitudes towards students with disabilities. Vasek (2005) and Patten (1980) identify a willingness among faculty to provide classroom accommodations for students with disabilities. The problem is simply a matter of the faculty not knowing what assistance is needed or how to make accommodations. Numerous researchers have identified strategies that would assist individuals who wish to change their attitudes towards students with disabilities. Modifications in attitude can be made through the provision of information regarding disabilities and the persons with the disabilities, direct interaction with the individual with the disability, and the provision of simulated experiences that would allow an individual to “experience” what it might be like to have a disability (Donaldson, 1980, Larrivee, 1981, Wilczenski, 1995). Denhart (2008) examined the perceived barriers that students with learning disabilities identified in their pursuit of achieving success in higher education and found that these barriers were surmountable by increasing faculty awareness of issues related to students with learning disabilities and utilizing the assistance of the school’s disability specialist. Encouraging students with learning disabilities to be proactive in requesting accommodations was also found to be effective in overcoming barriers.

Junco and Salter (2004) describe the successful use of an online training program to improve attitudes towards students with disabilities among faculty, staff, and students. Their research was conducted at a Carnegie classification Masters College and University in the Northeastern United States and participants consisted of a mixture of faculty, staff and administrators. The Attitudes Toward Disabled Persons (ATDP) scale was

administered to two randomly selected groups to measure attitudes of persons with disabilities. One group took the ATDP prior to completing the training and the other group took the scale after the training was concluded. The training program was conducted entirely online and included information about disability legislation related to working with students with disability in higher education, procedures for accommodating students with disabilities, related resource information, and video vignettes depicting the experiences of college students with disabilities. Participants required approximately an hour to complete the training and were provided the ability to pause their training and return at a later time. Results revealed a modestly significant difference in ATDP scores for individuals taking the scale prior to the training and those who took the scale after the training was completed. The results demonstrated that this training program appeared effective in changing faculty and staff attitudes toward individuals with disabilities. The current study, while investigating the change in attitudes of college faculty and with plans to use similar training material, will consist of on-line training specific to invisible disabilities, and the use of participant interviews as data collection methods, with the hope of building on this existing research and providing additional insight into the concern over attitudes toward students with disabilities.

Satcher & Gamble (2002) administered the Scale of Attitudes Toward Disabled Persons (SADP) to investigate the basis of attitudes of students with disabilities by law students. They found that attitudes towards individuals with disabilities was significantly improved by the formation of intimate relationships between individuals with and without disabilities. They also found that familiarity with the Americans with Disabilities Act legislation could predict attitudes towards individuals with disabilities. The SADP

has been utilized in efficacy studies of motivational videos and peer tutoring in regards to changing attitudes toward persons with disabilities (Hammond, 2000) and measuring attitudes of social work graduate students (Martin & Ligon, 2000).

Measel (as cited in Junco and Salter, 2004) points out that even though training may be effective in improving attitudes, college disability service offices are not providing the amount of support that is required to fully integrate students with disabilities into all aspects of college life. Baggett (1994) notes that the attitudes and willingness of college faculty to make necessary accommodations for students with disabilities has a direct relationship to the progress these students make academically.

Keim, Ryan, & Nolan (1998) recommend the need for professional standards to be developed that address the practical applications for people working with individuals with disabilities. For college faculty specifically, Vogel and Adelman (1992) reason that information and training be provided to faculty that includes awareness of legal issues regarding the delivery of educational services to students with disabilities. Sowers & Smith (2004) contend that faculty knowledge of disability related legislation and perceptions of students with disabilities improves after training is provided.

Many faculty are limited in their experience teaching students with disabilities, are not aware of services that are available within their universities to assist students with disabilities, and are not familiar with disability legislation (Baggett, 1994). There is a need for faculty members to become more knowledgeable about legislation that impacts the rights of individuals with disabilities (Benham, 1997; Thompson & Bethea, 1997).

Hart & Williams (1995) found that college faculty are often uncomfortable when they have students with disabilities in their classes and the disability can have a negative

effect on the faculty member's behavior. Hart, et al claim that although federal legislation has assisted individuals with disabilities in their employment and educational pursuits, it has not removed the attitudinal and communicative barriers that people with disabilities must deal with every day. The authors further contend, "attitudes toward those with disabilities pose a major barrier to effective teaching" (p.141). Students with disabilities report that interactions with college faculty often consist of non-accommodating and cynical responses (Rosenthal, Domangue, Folse, 2000). The need exists for professional preparation training to be conducted for college staff that provide services for students with disabilities (Dukes & Shaw, 2004). Antonak and Larrivee (1995) conclude that long-term changes in attitudes will only occur after faculty welcome and accept the integration of students with disabilities into their classrooms.

Theory of Planned Behavior as a Theoretical Framework

The theoretical framework for studying the attitudes of college faculty towards students with disabilities and their willingness to incorporate adaptive teaching strategies into their classrooms when working with students with disabilities is drawn from the theories of reasoned action and planned behavior. The Theory of Reasoned Action (TRA) was developed by Icek Ajzen and Martin Fishbein in 1967 and has been widely used to study how personal attitudes impact an individual's behavior. This theory has been applied to a wide variety of topics such as attitudes toward tax evasion (Hessing, Elffers, & Weigel, 1998), moral behavior (Vallerand, Sessaies, Currier, & Pelletier, 1992), AIDS-preventive behaviors (Fisher, Fisher, & Rye, 1995), attitude toward affirmative action programs (Bell, Harrison, & McLaughlin, 2000), and predicting physician behavior (Millstein, 1996), to name a few. The TRA is based on two

assumptions. First, that a person's behavior is governed by their attitudes towards the consequence of the behavior, and second, that behaviors are determined by the opinions of the person's social environment (Ajzen & Fishbein, 1980).

The Theory of Planned Behavior (TPB) evolved from the Theory of Reasoned Action and helps explain how the behavior of people can be changed and suggests attitudes are a product of salient beliefs (Lowe, Bennett, Walker, Milne, & Bozionelos, 2003). While the TRA focuses on voluntary behavior, researchers have recognized that behavior was not totally voluntary and under the control of the individual. Ajzen (1998), recognizing that behavior was not under an individual's volitional control, developed the TPB, which focused on deliberative, well thought-out behaviors and added the concept of perceived control to the original TRA model. The TPB has been applied to studies that investigate beliefs with the intent to exercise (Lowe, et al., 2003), compliance with speed limits (Elliott, Armitage, & Baughan, 2003), predicting eating and activity patterns (Baker, Little, & Brownwell, 2003), and decisions of African-American students to complete high school (Davis, Ajzen, Saunders, & Williams, 2002), among others.

Within the field of social psychology, it is theorized that attitudes may be based on any one of, or combination of, three components: cognitive information (what one knows about an object or situation), affective information (how one feels about the object or situation), and behavioral information (how one has acted on the object or situation in the past). The attitudes of college faculty towards students with disabilities may be associated with these elements in the following example: I like students with disabilities because they work hard (cognitive), I have treated students with disabilities fairly in the

past (behavioral), and I don't have negative feelings about students with disabilities (affective).

When discussing behavior and attitude, one must consider the components that impact the development of each. The TRA theorizes that an individual's intention is the best method to predict their subsequent behavior. Intentions are developed through an individual's attitude toward performing the behavior and the perception they have regarding subjective norms about the behavior. Attitudes are formed from an individual's belief about the consequences of the behavior (Morrison, Golder, Keller, & Gillmore, 2002). The TPB presumes that intentions have the added component of perceived behavioral control in addition to the individual's attitude toward the behavior and the perception of subjective norms about the behavior (Elliott, Armitage, & Baughan, 2003). Perceived behavioral control depicts an individual's concept of how easy or difficult it will be to perform a specific behavior and is influenced by internal and external factors. Internal factors include beliefs about skills, abilities and willpower, where external factors include opportunity, time, and dependence on others (Ajzen, 1991).

Results of a New Zealand study of athletes' attitudes toward sports psychology (Anderson, Hodge, & Lavalley, 2004) demonstrated that the Theory of Planned Behavior was able to predict intention better than the Theory of Reasoned Action. The Theory of Planned Behavior is also supported in its use with males, guilty of domestic abuse, and their intentions to complete a treatment program (Chovanec, 1995).

As applied to this study, the theory holds that it would be expected for the independent variable, the on-line training, to influence or explain the dependent variables

of change in attitude of individuals with disabilities. It would also be expected that the on-line training would bring about an increase in faculty knowledge related to both general and specific disability information, disability legislation, accommodations and resources for individuals with disabilities, as they relate to college faculty intentions and behaviors towards students with invisible disabilities and their willingness to adapt teaching strategies when working with such students. Intentions, in this context, refer to a faculty members' plan to change or not change their teaching methods to better accommodate students with disabilities. After receiving on-line training in adaptive teaching strategies, will faculty identify a course of action they plan to follow that will assist in the delivery of educational information to students with disabilities?

Chapter III: RESEARCH DESIGN AND METHODOLOGY

Overview and Design

Through the use of a true experimental design, the impact of on-line training on college faculty attitudes and knowledge of students with disabilities was explored. The Scale of Attitudes Toward Disabled Persons (SADP) was used to measure multidimensional attitudes of college faculty and was administered both pre and post treatment to both the control and treatment groups. A Disability Knowledge Questionnaire was also administered and was used to measure college faculty's understanding of disability legislation as it relates to higher education, their knowledge of the characteristics of three specific invisible disabilities, learning disabilities, attention deficit disorder, and attention deficit hyperactivity disorder, and their understanding of all aspects of the provision of accommodations for students with invisible disabilities. Adaptive teaching strategies and recommendations for accommodations was provided to the treatment group through on-line training and incorporated information regarding disability legislation, knowledge of various invisible disabilities, and case stories to explore attitudes and perceptions of students with disabilities. Interviews were conducted at the conclusion of the training to gather information-rich qualitative data and used to supplement the findings. The specific research questions addressed whether college faculty would change their attitudes toward students with disabilities and show an improvement in their knowledge about students with disabilities and the need for appropriate accommodations after receiving formal training about invisible disabilities, disability legislation, and adaptive teaching methods.

The independent variable in this study was the on-line training. The dependent variables in this study were participant's attitudes towards individuals with disabilities, knowledge of invisible disabilities, knowledge of disability related legislation, and knowledge of academic accommodations for students with disabilities as measured on the Scale of Attitudes toward Disabled Persons and the Disability Knowledge Questionnaire. Demographic variables included the age and gender of faculty, length of teaching experience and highest level of education attained of faculty, the amount and type of exposure to individuals with invisible disabilities, and academic division in which each participant worked. Knowledge of disabilities was defined as the general knowledge one had of the conditions and life circumstances of individuals with learning disabilities, attention deficit disorder (ADD), and disability legislation. Exposure to individuals with disabilities was defined as the frequency of contact with individuals who have the above named disabilities and the intensity of the contact one has had with these same individuals. Knowledge of and exposure to disabilities was gathered on the SADP-Form R, Personal Information Form (Appendix A) and the Disability Knowledge Questionnaire (Appendix D) that was completed prior to and at the conclusion of the training.

Participants

Participants in this study consisted of full time and adjunct faculty who were currently employed at a small, private, Liberal Arts College, located in the Mid-Atlantic States. Traditional support services, including disability services, have been provided to all students at this institution in the past. Since 2000, approximately 7-9% of each incoming freshmen class has had a documented disability. Faculty had not been provided with instructional material or training that offered methods of incorporating adaptive

teaching strategies into classes or recommended accommodations that would be helpful when teaching students with disabilities. Faculty also received no information about specific student needs when there were students with a disability assigned to class rolls other than identifying generic topics such as a student requiring additional time to complete a test or a quiet location to take tests.

Due to the small number of faculty at this institution (83), the researcher invited all faculty to participate in this study. The Academic Dean of the institution offered full support for the research and encouraged all faculty to take part in this research project. Matching was used to insure that both the treatment group (minimum $N = 30$) and control group (minimum $N = 30$) did not significantly differ. The criteria for matching were length of employment, age, gender, faculty members' academic division, and previous knowledge of and exposure to individuals with invisible disabilities. Matched participants were randomly assigned to either the treatment or control groups.

Participants for the post-treatment interviews were selected through purposeful sampling. Purposeful random sampling, by academic division, was determined prior to the beginning of the on-line training, when outcomes were unknown. A minimum of five faculty from each academic division were randomly selected from the treatment group to participate in the post-treatment interviews. In addition, extreme case sampling was used to gather information about unusual or extraordinary cases in order to gain insight into cases that may offer the greatest learning opportunity. Self-reporting by participants was used for these cases. Participants were informed at the time of the sample selection that a buffet reception and token of appreciation would be provided at the conclusion of data collection as incentive for their involvement in this study.

Description & Comparison of Groups

There were initially 64 faculty who participated in this study and 53 who completed all aspects of the study. The descriptive statistics collected included the age and gender of the faculty, the highest educational level attained, their current academic rank, their length of employment at this institution, and the academic division in which they teach. Additional descriptive statistics included whether faculty knew someone with a disability, their general knowledge of the conditions and life circumstances of persons with an invisible disability (i.e. learning disability, attention deficit disorder), and the frequency and intensity of their contact with persons with invisible disabilities. Thirty-two faculty were randomly assigned to the treatment and the remaining thirty-two faculty were assigned to the control group. A Chi-Square test of independence was performed to determine whether the observed frequencies differ significantly from the expected frequencies. There was no significant difference between groups with the exception of the educational degrees earned by faculty in the treatment and control group. A summary description of demographics and potential differences by group is provided in Table 1.

Table 1

Participant Demographics and Potential Differences By Group

Variable	Treatment Group		Control Group		Total		Significance
	n	%	n	%	n	%	
Age of faculty							
25-50 years old	15	46.9%	15	46.9%	30	46.9%	$X^2(1, N = 64) = 0.25, p > .05$
51 and older	17	53.1%	17	53.1%	34	53.1%	
Gender of faculty							
male	19	59.4%	15	46.9%	34	53.1%	$X^2(1, N = 64) = 0.25, p > .05$
female	13	40.6%	17	53.1%	30	46.9%	
Degree of Faculty							
M.S.	8	25.0%	15	46.9%	23	35.9%	$X^2(1, N = 64) = 5.06, < .05^*$
Ph.D.	24	75.0%	17	53.1%	41	64.1%	

Rank of Faculty						$\chi^2(3, N = 64) = 5.13,$ $p > .05$
instructor	4	12.5%	8	25.0%	12	18.8%
assistant	11	34.4%	6	18.7%	17	26.6%
professor						
associate	6	18.7%	6	18.7%	12	18.8%
professor						
professor	11	34.4%	12	37.5%	23	35.9%
Length of Employment						$\chi^2(1, N = 64) = 0.56,$ $p > .05$
< 15 years	15	46.9%	20	62.5%	35	54.7%
> 16 years	17	53.1%	12	37.5%	29	45.3%
General Knowledge of Person(s) with Invisible Disabilities						$\chi^2(1, N = 64) = 0.56,$ $p > .05$
no, some knowledge	18	56.3%	17	53.1%	35	54.7%
moderate, extensive knowledge	14	43.7%	15	46.9%	29	49.3%
Frequency of Contact with Person(s) with Invisible Disabilities						$\chi^2(2, N = 64) = 4.91,$ $p > .05$
never, very infrequent	7	21.9%	6	18.7%	13	20.3%
on occasion	12	37.5%	13	40.6%	25	39.1%
very frequent	13	40.6%	13	40.6%	26	40.6%
Intensity of Contact with Person(s) with Invisible Disabilities						$\chi^2(2, N = 64) = 0.88,$ $p > .05$
not at all intense	9	28.1%	9	28.1%	18	28.1%
somewhat intense	11	34.4%	13	40.6%	24	37.5%
moderately, very intense	12	37.5%	10	31.3%	22	34.4%

* $p < .05$

When collecting demographic data 6 sets of age ranges were used. For better analysis these sets were collapsed to form 2 sets, 25 - 50 years old and 51 years of age and older. Overall, 46.9% (n=30) of faculty fell into the 25-50 age range and 53.1% (n=34) were in the 51 and older range. The results of the chi-square test were not significant, $\chi^2(1, N = 64) = 0.25, p > .05$.

Males comprised 53.1% ($n = 34$) of the faculty that initially participated in this study and females comprised 46.9% ($n=30$). The results of the chi-square test were not significant, $X^2(1, N = 64) = 0.25, p > .05$.

Thirty-six percent ($n=23$) of faculty involved in this study reported their highest level of education achieved was a Masters degree while 64% ($n=41$) attained a Ph.D. The results of the chi-square test were significant, $X^2(1, N = 64) = 5.06, p < .05$. The proportion of faculty who had achieved a Ph.D. ($N = 41$) was much greater than the expected N of thirty-two (32).

The academic rank of faculty was dispersed as follows: 18.8% ($n=12$) instructors, 26.6% ($n=17$) assistant professors, 18.8% ($n=12$) associate professors and 35.9% ($n=23$) professors. The results of the chi-square test were not significant, $X^2(3, N = 64) = 5.13, p > .05$.

When collecting initial demographic data, 7 categories for length of employment were used. For better analysis these categories were collapsed down to two, those faculty who had been employed less than 16 years at the college, and those employed 16 or more years at the college. Fifty-five percent ($n = 35$) were employed less than 16 years while 45% ($n= 29$) had been employed 16 years or longer. The results of the chi-square test were not significant, $X^2(1, N = 64) = 0.56, p > .05$.

For better analysis of the initial demographics collected the 4 categories of responses to the item measuring the knowledge participants had of the life circumstances faced by individuals with invisible disabilities were collapsed into two categories. Faculty who had either no knowledge or some knowledge of the life circumstance faced by individuals with invisible disabilities accounted for 55% ($n=35$) of those in the study.

Forty-five percent ($n = 29$) of the faculty reported having moderate or extensive knowledge. The results of the chi-square test were not significant, $X^2(1, N = 64) = 0.56$, $p > .05$.

There were four categories for faculty to report the frequency with which they have contact with individuals with invisible disabilities that were collapsed to three of analysis. Twenty percent ($n=13$) described their contact to be never or very infrequent, 39% ($n=25$) reported their frequency of contact was on occasion, and 41% ($n=26$) described having frequent contact with individuals with invisible disabilities. The results of the chi-square test were not significant, $X^2(2, N = 64) = 4.91$, $p > .05$.

Four response categories were collapsed into three categories for better analysis of the data collected regarding the intensity of contact with individuals with disabilities. Faculty reporting the intensity of their contact with persons with disabilities to be not at all intense accounted for 28% ($n=18$). Thirty-eight percent ($n = 24$) indicated their contact was somewhat intense, and 34% ($n = 22$) reported having very intense contact. The results of the chi-square test were not significant, $X^2(2, N = 64) = 0.88$, $p > .05$.

Measures

Scale of Attitudes Toward Disabled Persons

Antonak (1982) developed the Scale of Attitudes Toward Disabled Persons (SADP) which is a contemporary measurement instrument designed to assess multidimensional attitudes of individuals towards those with disabilities. Upton & Harper (2004) report the use of the SADP in studies that have investigated disability attitudes among high school and college students, parents of disabled children, and professionals working in the human service field. Based on the reported validity and

reliability data, Antonak's SADP was selected as one instrument that was used in this study. Permission was granted by the author of the SADP to use this scale in any form that met the researcher's needs.

The Scale of Attitudes Towards Disabled Persons instrument (Appendix B) consists of twenty-four items that measure overall attitudes toward people with disabilities. Responses for each item are a six point Likert-type scale, with the following range of possible responses: -3, "I disagree very much," -2, "I disagree pretty much," -1, "I disagree a little," +1, "I agree a little," +2, "I agree pretty much," +3, "I agree very much."

Upton & Harper (2004) found the SADP to be a reliable instrument (Spearman-Brown reliability of .81). As reported by Antonak and Larrivee (1995) "analyses of SADP data in previous investigations have indicated satisfactory psychometric characteristics of the scale. Factor analysis of SADP data and analyses of the relationships between SADP scores and respondent sociodemographic and experiential data have supported the scale's construct validity. Analyses of the relationship between SADP scores and scores on other instruments measuring attitudes toward people with disabilities have provided evidence for the concurrent validity of the scale" (p. 142-143). Cronbach's alpha will be used to measure reliability.

The SADP Form-R (Appendix A), a survey instrument that identifies age, gender, length of teaching experience, major field, and previous knowledge of and exposure to individuals with disabilities was used to gather demographic information.

Disability Knowledge Questionnaire

A Disability Knowledge Questionnaire (Appendix D), modeled after the content in the Accommodating Students with Disabilities (ASD) Project at Utah State University and was administered, in its adapted form, to measure participant's knowledge in the areas of disability legislation, reasonable accommodations, adaptive instructional techniques, specific diagnoses, and resource access and availability. Permission was granted by Charles Salzberg, director of the ASD project, to use and adapt this questionnaire to best meet the needs of this research. The questionnaire asked faculty to respond to twenty-five multiple choice and true-false questions and statements that address general and specific information about disabilities, disability legislation, accommodations, and resource material. There was no existing reliability information for this questionnaire. The Disability Knowledge Questionnaire was pilot tested among staff members from the college. Convenience sampling was used to select ten participants. The first ten staff members who responded to an invitation to participate in this pilot study were selected. The Disability Knowledge Questionnaire was delivered to participants by the researcher along with instructions for completing the questionnaire and time table for completion. Upon completion by all participants, Cronbach's Alpha was used to measure reliability (0.668) and expert review of the instrument was also provided by faculty members with expertise in survey development and the content area addressed. Modifications to the instrument included removal of a question regarding the likelihood of using available resources to accommodate students with disabilities. No correct answer could be expected based on individual participant's willingness to use

available resources. A blueprint of the Knowledge of Disabilities Questionnaire can be found in Appendix C.

For the sample, Cronbach's Alpha was used to measure reliability for each of the five scales of the Disability Knowledge Questionnaire as well as the entire scale. Overall reliability for the Disability Knowledge Questionnaire was 0.62. Subscale reliability was as follows: General Disability Information (0.06), Disability Legislation (0.27), Accommodations (0.43), Specific Disability Knowledge (0.37) and Resources (0.01).

In addition to measuring the impact of faculty attitudes and knowledge of disabilities, the level of behavioral change that participants make, or plan to make in their teaching to further accommodate students with disabilities, was measured through the use of participant interviews. Interview questions (Appendix E) were designed to solicit open-ended responses to issues related to the faculty member's understanding of invisible disabilities, experiences faculty have had with student's with learning disabilities, attention deficit disorder, and attention deficit hyperactivity disorder, and accommodations faculty have made, or are considering making, for these students. Faculty perceptions of changes that can be implemented by the college for improved services to individuals with disabilities was also addressed during the interviews.

Materials

The adaptive teaching strategies training instructor provided the treatment group with an on-line training handbook and instructional information (Appendix E), which specifically addressed attitudes and knowledge of the aforementioned invisible disabilities and offered recommended accommodations and strategies to improve faculty interactions and teaching skills with students with these disabilities.

On-line training handbooks included definitions, symptoms, and characteristics most often exhibited by individuals with learning disabilities, attention deficit disorder, and attention deficit hyperactivity disorder. Examples of potential difficulties these students may have with the learning process was highlighted and accommodations that may aid the student were identified. Disability legislation that impacts post-secondary education was identified and faculty were encouraged to incorporate required accommodations in their teaching. Adaptive teaching strategies were presented and available resources to assist faculty in teaching students with these identified disabilities were shared.

Procedure

This true experimental design randomly assigned participants, after matching, to two groups and involved the administration of a pretest and posttest to both groups, while treatment was only provided to the experimental group. Figure 2 diagrams the research design used in this study.

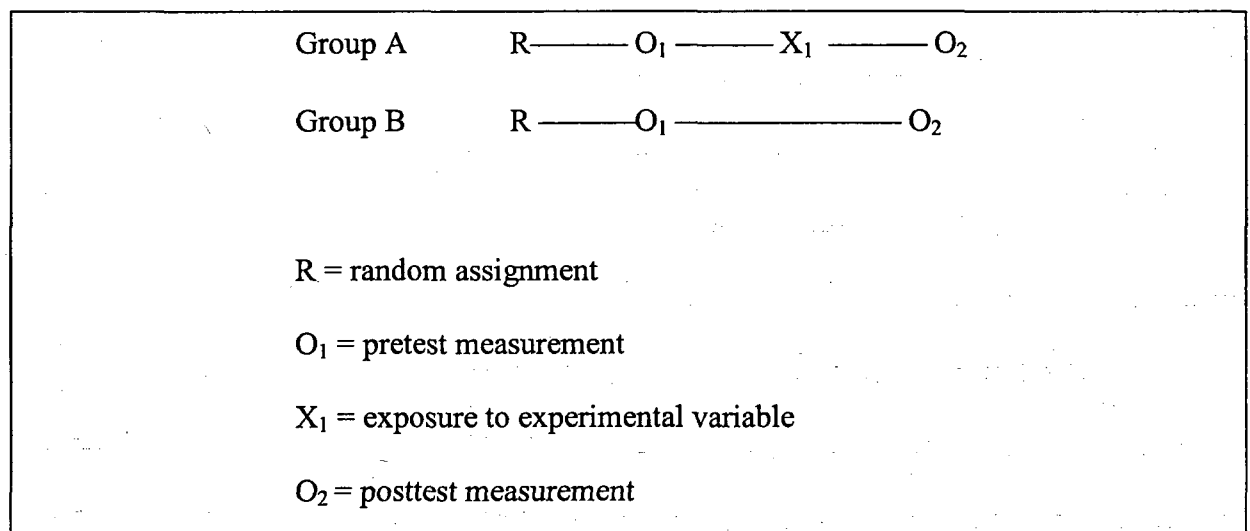


Figure 2 Research design

Both full time and adjunct faculty at the identified institution were asked to participate in this study. Once participants were selected and agreed to participate in the study, they were e-mailed a letter of introduction, explaining the timeline and procedure of the study, and thanking them for their participation. In the first phase of this study, participants were asked to complete the Scale of Attitudes Towards Disabled Persons (SADP), and the Disabilities Knowledge Questionnaire (DQ), as well as the SADP Form-R, a demographic survey that identifies gender, length of teaching experience, major field, and previous knowledge of and exposure to individuals with disabilities. The principal investigator administered the scales and survey via e-mail attachments. Participants were given the SADP, the DQ, and the SADP Form-R and asked to complete them and return to a research assistant. The assistant coded all returned data so that the assigned codes could be identified and corresponded to the assignment in either the treatment or control group. Scores from this initial administering of the SADP, the DQ, and information obtained from the SADP Form-R, were tabulated and kept confidential by the research staff.

Participants in the treatment group were asked to complete the on-line training within two weeks of the date of training material distribution. Follow-up e-mails were sent to all participants in the treatment group one week into the training to again offer thanks for their participation and to serve as a friendly reminder to complete all training materials by the designated completion date.

After the training sessions were completed, all participants, both the treatment and control group members, were asked to complete the SADP, and the DQ, again with coded

numbers on the instruments that enabled the researchers to compare scores from the first administration.

At the conclusion of training, individual interviews were conducted by the principal investigator with participants identified in the treatment group in order to gain a better understanding of their intent to adapt teaching strategies and behavioral changes they have made in their teaching methods, as well as to collect information-rich data. A blueprint for interview questions was developed by identifying potential questions related to participants knowledge and experience with, or exposure to, individuals with disabilities, methods used in their current teaching practice, and their thoughts of incorporating new strategies into their teaching and advising of students with disabilities. The blueprint referenced potential questions in the following categories: invisible disabilities, accommodations, resources, and satisfaction with the training.

Topics explored during the interviews included: participant's knowledge of students with invisible disabilities in the specific course(s) taught, behavioral changes participants made in their teaching methods, and personal comments regarding their attitudes about themselves, their students, or changes they have implemented, or plan to implement. Interviews were conducted in the participant's (faculty) office at times that were coordinated for convenience. During individual interviews, notes were taken by the researcher, in addition to an audio tape recording of the interview in order to capture all responses correctly. Immediately after each interview, the researcher reviewed the interview responses in conjunction with respective audiotapes and recorded all data into dated documents. Interview questions are found in Appendix D.

Analysis of Data

Analytic procedures used in the analysis of this research data related directly to the hypothesis that was being tested. The researcher in this study hypothesized that if on-line adaptive teaching strategy training, specifically designed to address the educational needs of students with invisible disabilities, was provided to college faculty, there would be a significant change in faculty members attitude toward students with disabilities and in their knowledge of invisible disabilities and related disability legislation which would result in a positive intent to utilize newly learned strategies. A second hypothesis stated that if adaptive teaching strategy training was provided then there would be an increased willingness to adapt teaching strategies to meet the needs of students with disabilities.

A univariate analysis of covariance (ANCOVA) was used to analyze whether the means on the dependent variables (change in attitudes towards individuals with disabilities and knowledge of disability-related issues) were significantly different between the treatment and control groups. Descriptive statistics, including mean, standard deviation, and range were reported. Initial and follow-up scores from the SADP and the DQ were compared within groups and between groups in order to assess whether the treatment had any significance in raising or lowering participant attitudes towards, and knowledge of students with disabilities.

Analysis of the qualitative data gathered during post-treatment interviews consisted of both individual case analysis and cross-case analyses. As indicated earlier, this researcher personally transcribed into typed files all hand-written responses from interviewed participants. By doing so, the researcher was able to reflect on the participant's responses in relation to the overall study and gain a more thorough

understanding of the data. The recorded audiotapes and transcription were reviewed by the researcher to further analyze data.

Individualized case analysis consisted of a written description of responses from each interviewed participant. The researcher solicited the assistance of the Student Disabilities Coordinator (SDC), who was not a part of the study, to assist in then analysis of this qualitative data. Both read through the entire data set of responses from the interview questions and recorded emergent themes. From these themes the researcher and the SDC generated lists individually of topics that emerged from the responses and then developed a list of potential categories based on the identified topics. Together the researcher and SDC reviewed proposed topics and categories and developed an agreed upon list of categories and identified a label that best described the clusters of topics. After the agreement checks, inter-rater reliability was determined by completing the agreement checks and a reliability rate of 78.55 % was achieved.

Chapter IV: RESULTS

Introduction

This chapter summarizes the data collected and provide the details of the statistical analysis of that data. There were two major categories of variables: The dependent variable was attitude and knowledge scores from the questionnaires and the independent variable was the on-line training that was provided to the treatment group. The results of the analyzed data will be presented in this chapter along with accompanying tables and figures.

Attitude by Group

As previously described, the first research question investigated whether receiving on-line training about invisible disabilities, disability legislation, and appropriate accommodations, would change college faculty attitudes toward students with disabilities. A one-way analysis of covariance (ANCOVA) was conducted to determine differences in faculty scores on the post test scores on the Scale of Attitudes Towards Disabled Persons (SADP). The independent variable, on-line training, was provided to the treatment group. The dependent variable was scores on the SADP. The results of the ANCOVA indicated that there were no significant differences on the post test scores on the SADP, $F(1,49) = 1.59$, $MSE = .167$, $p > .05$. As shown in Table 2, the mean values on the post-test were nearly identical for the treatment and control group. The mean value of the treatment group was 4.30 compared to a mean of 4.21 obtained by the control group. A summary of pre and post means for the SADP is provided in Table 2.

Table 2

Attitude by Group on Scale of Attitudes Toward Disabled Persons

Group	<i>n</i>	Pre mean	Standard Deviation	Post mean	Standard Deviation
Treatment	25	4.1333	0.41	4.2972	.31
Control	28	4.1399	0.41	4.2083	.42
Total	53	4.1368	0.40	4.2502	.37

Knowledge by Group

As previously described, the second research question investigated whether receiving on-line training about invisible disabilities, disability legislation, and appropriate accommodations, would bring about an increased knowledge about students with disabilities, issues surrounding their educational needs and rights, including disability related legislation and the need for appropriate accommodations among college faculty. The Disability Questionnaire consisted of 25 questions and was divided into the following categories: General Disability Information, Disability Legislation, Accommodations, Specific Disability Information, and Resources. An Analyses of Covariance (ANCOVA) was conducted for each of the five scales to determine if participants' post-training scores on the Disability Knowledge Questionnaire (DQ) significantly differed from pre-training scores. The dependent variables were scores on each of the five scales on the questionnaire. The independent variable was group (treatment or control).

The results of the ANCOVA did not reveal significant differences between groups, $F(1, 51) = .072$, $MSE = .069$, $p > .05$. Both the treatment and control groups

scored higher in their post-training Disability Knowledge Questionnaire than they did in the pre-training questionnaire. As shown in Table 3, the mean values on the post-test were nearly identical for the treatment and control group. The mean value of the treatment group was 3.36 compared to a mean of 3.28 for the control group. Table 3 represents the results by item showing how participants scored on items related to knowledge of general disability knowledge.

Table 3

Knowledge by Group on General Disability Information

Group	<i>n</i>	Pre mean	Standard Deviation	Post mean	Standard Deviation
Treatment	25	2.88	0.88	3.3600	0.99
Control	28	2.72	0.92	3.2759	0.96
Total	53	2.80	0.90	3.3148	0.97

The second scale measured participant's knowledge of legislation related to disabilities. An ANCOVA was conducted and was not significant, $F(1, 51) = 2.094$, $MSE = .899$, $p > .05$. As shown in Table 4, the treatment group improved their post-training mean score on questions related to disability legislation while the control group showed no improvement in mean score on their post-training Disability Knowledge Questionnaire when compared to their pre-training questionnaire mean score. The mean values on the post-test were nearly identical for the treatment and control group. The mean value of the treatment group was 4.40 compared to a mean of 4.31 for the control group. Table 4 represents the results by item showing how participants scored on items related to knowledge of disability legislation.

Table 4

Knowledge by Group on Disability Legislation

Group	<i>n</i>	Pre mean	Standard Deviation	Post mean	Standard Deviation
Treatment	25	3.96	0.98	4.40	0.65
Control	28	4.31	0.60	4.31	0.85
Total	53	4.15	0.81	4.35	0.76

The third scale measured participant's knowledge of accommodations for students with invisible disabilities. An ANCOVA was conducted and was not significant, $F(1, 51) = 1.93$, $MSE = 1.78$, $p > .05$. As shown in Table 5, the mean value of the treatment group was 3.80 compared to a mean of 4.14 for the control group. The treatment group obtained a lower mean value in their post-test on questions related to accommodations while the control group showed improvement in mean value on their post-training Disability Knowledge Questionnaire when compared to their pre-test questionnaire mean value. Table 5 represents the results showing how participants scored on items related to knowledge of accommodations for students with invisible disabilities.

Table 5

Knowledge by Group on Accommodations for Students with Invisible Disabilities

Group	<i>n</i>	Pre mean	Standard Deviation	Post mean	Standard Deviation
Treatment	25	3.92	0.95	3.80	1.12
Control	28	3.86	1.03	4.14	0.99
Total	53	3.89	0.98	3.98	1.05

The fourth scale measured participant's knowledge of disability information specific to students with invisible disabilities. The results of the ANCOVA revealed no significant difference between groups, $F(1, 51) = .005$, $MSE = .004$, $p > .05$. As shown in Table 6, the treatment group had a lower post-test mean value on questions related to specific disability information than in the pre-test, while the control group obtained a higher mean value on their post-test Disability Knowledge Questionnaire when compared to their pre-test questionnaire mean values. Post-test mean values were nearly identical for the treatment and control group. The mean value for the treatment group was 2.44 compared to a mean of 2.31 for the control group. Table 6 presents the results by showing how participants scored on items related to their knowledge of specific disability information.

Table 6

Knowledge by Group on Specific Disability Information

Group	<i>n</i>	Pre mean	Standard Deviation	Post mean	Standard Deviation
Treatment	25	2.52	0.77	2.44	0.77
Control	28	2.00	0.89	2.31	1.07
Total	53	2.24	0.87	2.37	0.94

The fifth scale measured participant's knowledge of resources available to them to assist students with invisible disabilities. An ANCOVA was conducted and was not significant, $F(1, 51) = .174$, $MSE = .138$, $p > .05$. Both the treatment group and control group improved their post-test mean value on questions related to resources on the Disability Knowledge Questionnaire when compared to their pre-test questionnaire mean

values. As shown in Table 7, post-test mean values were nearly identical for the treatment and control group. The mean value of the treatment group was 3.08 compared to a mean value of 3.28 for the control group. Table 7 presents the results showing how participants scored on items related to their knowledge of resources that can be used to assist students with invisible disabilities.

Table 7

Knowledge by Group on Resources to Assist Students with Invisible Disabilities

Group	<i>n</i>	Pre mean	Standard Deviation	Post mean	Standard Deviation
Treatment	25	2.80	0.76	3.08	0.86
Control	28	3.03	0.82	3.28	1.00
Total	53	2.93	0.80	3.19	0.93

Post-Training Interviews

At the conclusion of the on-line training fifteen faculty were randomly selected from the treatment group and interviewed by the researcher. Questions asked covered a variety of related topics including faculty attitudes about providing accommodations for students with either a learning disability or attention deficit disorder, academic expectations of these students, knowledge of signs and symptoms of these disabilities, and experiences faculty have had in teaching students identified with either a learning disability or attention deficit disorder. Additional questions focused on faculty knowledge of services available from the campus Student Disabilities Coordinator, resources they would like to have made available, and how faculty might incorporate some of these services into their teaching and classroom instruction. The researcher also

asked interviewed participants about their level of preparedness to work with students with either a learning disability or attention deficit disorder. Finally, participants were asked to describe their level of satisfaction with the on-line training and comment on aspects of the training they believed were of benefit or not of benefit.

There was some initial confusion about the term invisible disabilities. The term was defined as those individuals with either a learning disability or attention deficit disorder. Once clarified, participants could respond specifically to their feelings and experiences with regard to this population of students.

All faculty interviewed expressed a willingness and obligation to provide accommodations to students with invisible disabilities, with a few expressing the need for the accommodations to be fair to other students. One participant commented, "I'm willing to make reasonable accommodations but not functionally make their work load any easier" while another expressed a similar sentiment, "these students deserve reasonable accommodations, but we should not reduce the academic standards." The need to maintain classroom integrity while assisting students with disabilities was theme heard throughout the interviews. No one interviewed opposed providing accommodations. One faculty member correctly described the need for students to take responsibility in identifying what accommodations they feel are necessary after consultation with the Student Disabilities Coordinator.

The experiences faculty have had with students with invisible disabilities varied, however most indicated that the notification that is provided to faculty by the Student Disabilities Coordinator is helpful in determining what accommodations are required.

Faculty also commented that most students with a learning disability openly share information about their disability and the accommodations they would like to receive.

Faculty demonstrated their understanding of the signs and/or symptoms of invisible disabilities through their answers. An indication of a potential learning disability or attention deficit disorder that faculty identified were expressed by a number of participants as the “inability to stay focused, restlessness, disorganization of thoughts in written assignments, impulsiveness, and inattention.” A theme of frustration was heard throughout the interviews as faculty described some of the difficulties they have faced when teaching students with invisible disabilities. One participant summed up her frustrations, “Students do not always identify themselves as having a disability and we may not receive any notification of the need for accommodations from the Student Disabilities Coordinator; it’s difficult to know whether some students have a disability or not.”

Faculty agreed unanimously that their expectations for students with invisible disabilities is exactly the same as for students without disabilities. Two comments that were echoed by other faculty included “I hold them to the same standards as other students” and “I do not change the guidelines for my classes.”

Faculty offered a variety of suggestions for assistance when working with students with invisible disabilities that could be provided by the Student Disabilities Coordinator. “Continue to let me know what accommodations students require,” “I wish text books could be put on tape,” and “provide untimed testing.” In addition, faculty commented that they would like “periodic training regarding the needs of students with disabilities and updates on what are reasonable accommodations.” Faculty also

identified a number of suggestions regarding accommodations they could make for students with a learning disability or attention deficit disorder when asked what accommodations they feel would be helpful. "I might recommend a student with a learning disability take a reduced course load and seek tutoring as needed." Another participant stated that she recognizes "the possible need to post my lecture notes on Blackboard" while a number of participants commented that they already inform all students that Power Points from class lectures are available on Blackboard.

While many interviewed faculty were able to identify a number of resources that were available through the Student Disability Coordinator, one third of faculty expressed very limited knowledge of available resources prior to the on-line training. This topic was addressed in the training. Faculty also indicated more of a willingness to contact the Student Disabilities Coordinator when they suspect that a student may need accommodations.

One hundred percent of faculty expressed satisfaction with the format and content of the on-line training manual. Some expressed that there was so much information that it was "hard to retain" and "possibly a bit too long." One faculty member did comment that they thought the training manual "was very good. I gave copies to other faculty to read and increase their awareness of what we can do to help students with disabilities."

Faculty were asked to comment on aspects of the on-line training manual they found both most and least useful. Information on disability legislation and specific information about learning disabilities and attention deficit disorder were aspects repeated most frequently as being most useful. Other faculty felt the case studies that were provided and the information on accommodations and resources was most useful.

Aspects of the training manual faculty felt were least useful were few, with almost half of those interviewed commenting that there was nothing about the manual that was not useful. A couple of respondents expressed a desire to have more cases studies added to the manual.

Over 50% of the faculty interviewed expressed the fact that they felt well prepared to work with students with a learning disability or attention deficit disorder. It should be noted that a few qualified their statement by adding they felt well prepared “as long as the Student Disabilities Coordinator is available to help.” Two respondents said they felt more comfortable working with students with invisible disabilities after receiving the on-line training. It was also recommended by faculty that a workshop on invisible disabilities and accommodations be made available to all faculty. Providing students with information about campus services and available resources was also suggested as a way to have students take personal responsibility for obtaining the assistance they may need.

Overall, the interview data suggested faculty generally were accepting of students with invisible disabilities and willing to make reasonable accommodations so these students could achieve academic success. The responsibilities of students with disabilities, faculty members, and the Student Disabilities Coordinator regarding identification of disabilities and requests for accommodations need to be better defined and made available to all members of the college community.

CHAPTER V: DISCUSSION

This research study was designed to evaluate whether an on-line training program that addressed both the attitudes of faculty towards individuals with disabilities and the level of knowledge that they had regarding specific disabilities, disability legislation, accommodations and resources that can assist students with disabilities would produce positive changes in their attitudes and knowledge. It was the intention of the researcher that positive changes would lead to positive behaviors when working with students with disabilities. The theoretical framework utilized for this research comes from Ajzen's Theory of Planned Behavior which reasons that the behavior of people can be changed and that a change in attitude may create new behaviors. Ajzen (1991) suggested that a change in attitudes could provide the readiness for an individual to intend to make behavioral changes. Although the hypotheses were not supported, the results provided information that will be useful for future research. Data reveal that participants appeared as though they had a positive attitude towards students with disabilities prior to the training.

While more students with disabilities are enrolling in college each year (Battle, 2004, Vasek, 2005) the graduation rate of these students falls below the average of students without a disability. The largest segments of students with a documented disability are those who have either a learning disability or attention deficit disorder. Many students with a learning disability are not prepared to advocate for themselves regarding the accommodations that can help them succeed in college (Heiman & Precel, 2003). Participants in this study reported similar sentiment, identifying the need for

students with disabilities to take a more active role in asking for the accommodations and services they feel are necessary to achieve success in the classroom.

Lehmann, Davies, & Laurin (2000) observed that faculty may also be uncomfortable discussing disability related issues with students due to their lack of specific knowledge related to the disability and due to attitudinal barriers, whether real or perceived, that may prevent faculty from fully accepting students with disabilities. It appears that attitudes towards students with disabilities may becoming more positive in higher education. In a parallel study that investigated faculty perceptions of students with learning disabilities, Murray, Wren, & Keys (2008) reported that faculty had positive perceptions of students with learning disabilities. Many participants in this current study also expressed positive attitudes towards students with disabilities during their post-training interviews. College faculty must be aware of the special needs of students with disabilities if these students are to be successful in the classroom (Mason & Mason, 2005). This research makes a contribution to the current body of knowledge and further advances the understanding of issues surrounding attitudes, knowledge, and acceptance of students with disabilities by college faculty.

The evaluation was conducted by collecting data from faculty on two separate instruments, the Scale of Attitudes Towards Disabled Persons and the Disability Knowledge Questionnaire, as well as from individual faculty interviews conducted at the end of the study. The data was analyzed for the purpose of examining the differences in the pretest and posttest scores on the above mentioned two instruments for each group. It was hypothesized that college faculty receiving the on-line training (treatment group) would show significant improvements in their posttest scores on the above mentioned

instruments. Results of this study found that while the treatment group did show slight improvement on their posttest scores, there was no significant difference between posttest scores when compared to the control group on either of the instruments. Therefore, the quantitative data did not provide evidence for training effectiveness.

Descriptive Statistics

Attitudes

Attitudes as referenced in this study relate to the affective, behavioral, and cognitive beliefs of college faculty towards individuals with disabilities. When measuring the change in attitudes between pre and post SADP mean scores each intervening variable was examined.

A review of the literature reveals very few studies which have utilized on-line training in an effort to improve attitudes toward individuals with disabilities. A study by Junco and Salter (2004) however, did find a modestly significant improvement in attitudinal scores in the posttest results on the Attitudes Toward Disabled Persons (ATDP) scale after the administration of an on-line training program. The use of on-line training has been found effective in a number of other disciplines. Bangert & Easterby (2008) concluded that the provision of online courses to nursing students was perceived as a positive learning experience. Pacifici, Delaney, White, Nelson, and Cummings (2006) examined the effectiveness of on-line training courses for foster parents and results revealed significant improvement in the knowledge gained through this method. Soong, Tam, and Hui-Chan (2005) evaluated the effectiveness of on-line training of problem-solving skills needed by individuals with a traumatic brain injury. They found

participants exhibited improved and quicker problem-solving abilities after the on-line training.

Similar to a study by McDonald (2008) which reported an increase in participant confidence after training faculty on the topic of problem-based learning, participants in this current study expressed feeling better prepared to work with students with disabilities after this training.

While investigating professors' perceptions about students with attention deficit hyperactivity disorder (ADHD) Vance & Weyandt's (2008) findings were similar to those in this current study; there was not a significant difference in perceptions of students with disabilities by faculty who had training and those that had not received training.

In order to improve faculty attitudes towards students with disabilities there needs to be a mechanism in place that will keep faculty better informed of all aspects related to the education of these students (Rao, 2004). Participants in this study reported a desire to have additional training for working with students with disabilities and recommended such training become a regular part of new employee orientation. Periodic re-training was identified as another method to keep faculty updated on accommodations that could be used in the classroom and when advising students with disabilities.

Knowledge

As described in previously,, the second research question investigated whether the provision of on-line training that incorporates information about invisible disabilities, disability legislation, and appropriate accommodations would result in improved knowledge in these areas by faculty who received the training versus faculty who did not

receive the training. Subscales explored in the Disability Knowledge Questionnaire were General Disability Information, Disability Legislation, Accommodations, Specific Disability Information, and Resources.

There was no significant change in posttest scores on the general disability information scale. While participants did not know the percentage of high school students with disabilities attending college, data revealed that 82.8% of participants were aware that learning disabilities are the most common type of disability reported by students in higher education institutions. Data also showed that participants felt college faculty, universally, have limited knowledge regarding accommodations for students with disabilities. Post training interviews revealed that faculty did not have a clear understanding of the types of disabilities they would most likely encounter in the classroom.

College faculty are often ill-equipped to address the specific needs of students with these invisible disabilities due to a variety of reasons (Denhart, 2008). Unfamiliarity with legislation that outlines the rights of students with disabilities, what accommodations may be helpful when teaching students with disabilities, what resources are available within their institution, and how to best incorporate these factors into their teaching are some of the obstacles faculty face when they attempt to assist students with disabilities in the learning process. While posttest scores on the disability legislation scale of the Disability Knowledge Questionnaire improved they were not significant. In their study exploring community college faculty knowledge of the Americans with Disabilities Act, Dona and Edmister (retrieved April 2, 2009 from www.ahead.org/uploads/docs/jped/articles/Volume14/Volume14_2/jped142donacommco

ll.doc) contended that faculty are not knowledgeable of disability legislation, particularly the Americans with Disabilities Act. Contrary to this finding, data from this study reveal 84% of participants were knowledge of the Americans with Disabilities Act.

Vasek (2005) reported that faculty were particularly lacking in their knowledge of disability related legislation. Results of this study demonstrated that 75% of participants were knowledgeable of the implications of federal laws relating to college students with disabilities.

While 83% of participants were able to identify the best services that could be provided for students with invisible disabilities, only 34.45 were able to identify the best method for faculty to assist students with invisible disabilities. Participants were familiar with the process for determining whether a student has a disability (83%) and with the primary focus of academic accommodations (82%). Data from post-training interviews reveal the participants in this study were also familiar with accommodations and resources that could be utilized through the Student Disabilities Coordinator.

Parallel with Vasek's (2005) findings, participants shared a basic knowledge of accommodations, such as extended time for taking exams and administering exams in quiet, monitored environments, but were limited in their knowledge of additional accommodations and resources that might be appropriate and that are offered through the Student Disabilities Coordinator's office. The treatment group scored lower on their post-training mean score on questions related to accommodations and raises possible questions about the clarity and/or the quantity and quality of information provided on accommodations in the on-line training.

In the analysis of the change in mean score on questions related to specific disability information the treatment group scored lower on their post-training mean scores. Only 7.8% of participants were familiar with behaviors and social practices of students with a learning disability. These results raise questions that would require further investigation and could be indicative of the need for additional training. Possibilities for this discrepancy could be that the material presented on specific disabilities in the on-line training may have been too in-depth or information about individuals with learning disabilities and those with attention deficit disorder may have been too similar. Participants did recognize (76.6%) the need for documentation of a disability in order to ensure the provision of appropriate accommodations.

A high percentage (78%) of participants were knowledgeable of the objective for providing individualized accommodations for students with disabilities and 83% reported being familiar with the role and responsibility of the Student Disability Coordinator. Of concern is the fact that only 25% of participants were able to identify the best resource(s) available for students with invisible disabilities.

Limitations of the Study

Sample Size and Selection

The number of participants in this study was small. Only 53 completed all aspects of the research. Because the data was collected at only one college the findings from this group, while providing valuable data, can not be generalized to all college faculty. Future studies at various size colleges or universities, with a greater number of participants would be beneficial for validating the findings of this study. Additionally, due to the small number of faculty at the institution where this research was conducted,

all faculty were offered the opportunity to participate but not all chose to participate. Therefore, this study may have missed gathering data from faculty who had varying attitudes and knowledge about students with disabilities. The hypotheses were not supported by the findings of this study. There was not enough power to detect differences, and there was not a large enough sample size.

Administration of Instruments

Due to unexpected delays the time between the administration of the pre and post Scale of Attitudes Towards Disabled Persons and Disability Questionnaires was longer than initially planned. This delay may have caused some participants of the treatment group to have difficulty recalling information that was provided during the on-line training. If this study is to be replicated, strict timetables will need to be enforced in order to prevent possible threats to validity.

Attrition

Eleven participants did not complete the required instruments and training throughout the course of the study. Of the initial 64 participants, only 53 completed all aspects. Two participants informed the researcher they could not continue prior to the administration of the pre SADP and DQ due to other obligations. Two participants did not complete the post SADP and DQ due to leaving the college and not responding to requests. Seven others did not complete the post SADP and DQ despite repeated requests to do so. Because this was a pretest-posttest design with random matching for the treatment and control groups, selection-bias would result in groups being composed of different types of participants for the posttest. As shown in Table 8, the attrition of members of both the treatment and control group are presented. Of the 9 participants

who dropped out after completing the pre SADP and DQ, 5 were from the treatment group and 4 from the control group. Of the 4 in the control group who dropped out of the study, all were in the 51 and older age category. Due to the small sample size this finding was not found to be significant or to have skewed the results in any way.

Table 8

Attrition by Groups

Variable	Treatment Group		Control Group		Total	
	n	%	n	%	n	%
Age of faculty						
25-50 years old	2	40%	0	0%	2	22%
51 and older	3	60%	4	100%	7	78%
Gender of faculty						
male	2	40%	1	25%	3	33%
female	3	60%	3	75%	6	67%
Degree of Faculty						
M.S.	3	60%	3	75%	6	67%
Ph.D.	2	40%	1	25%	3	33%
Rank of Faculty						
instructor	1	20%	2	50%	3	33%
assistant professor	1	20%	0	0%	1	11%
associate professor	1	20%	1	25%	2	22%
professor	2	40%	1	25%	3	33%
Length of Employment						
15 years or less	1	20%	2	50%	3	33%
16 years or more	4	80%	2	50%	6	67%
General Knowledge of Person(s) with Invisible Disabilities						
no, some knowledge	3	60%	2	50%	5	56%
moderate, extensive knowledge	2	40%	2	50%	4	44%
Frequency of Contact with Person(s) with Invisible Disabilities						
never, very infrequent	1	20%	1	25%	2	22%
on occasion	2	40%	1	25%	3	33%
very frequent	2	40%	2	50%	4	44%
Intensity of Contact with Person(s) with Invisible						

Disabilities					
not at all intense	2	40%	1	25%	3 33%
somewhat intense	1	20%	2	50%	3 33%
moderately, very intense	2	40%	1	25%	3 33%

Testing Effects

All participants in this study were administered the Scale of Attitudes Towards Disabled Persons and the Disability Questionnaire at the beginning of this study. While participants in the control group did not receive the on-line training, they may have become sensitized to the methods of interacting and teaching students with disabilities, a potential effect from simply completing the initial instruments. Scores obtained from participants may have changed due to testing and the familiarity of questions, because of the pretest–posttest design of this study. Participants may have also been curious about various aspects of available resources, disability legislation, or accommodations and researched this information independent of this study. There was a restriction of range in scores on the SADP as they were tightly bunched. The fact that there was not a statistical significance in pretest and posttest results might indicate that faculty had a positive attitude toward individuals with disabilities prior to the study, thus limiting the potential for improvement. An additional limitation of this study is that it appears as though many of the participants already knew the material that was presented.

Diffusion of Treatment

Another threat to internal validity was diffusion of treatment. The institution where this research was conducted is a small, close-knit college, with a true sense of community between faculty, staff, and students. Because of the small number of total faculty (83) at this institution and the number of faculty who completed the study as part of the treatment group (25), 30% of the total faculty had access to the information provided in

the on-line training. With the constant interaction and educational exchange, both formal and informal, which occurs within this campus, some participants of the control group were potentially exposed to, and even tried, some of the techniques that were learned and implemented by the treatment group. As described earlier, one member of the treatment group explained during the post treatment interview that she had shared the on-line training information with a colleague, who may or may not have been a member of the control group. This raises concern in that some of the members of the control group may have been exposed to the training information and thus skew the outcomes of their scores on the post SADP and Disability Knowledge Questionnaire.

Recommendations for Future Research

Sample Size

The sample size in this study was too small and thus did not have the power to demonstrate the effectiveness of the treatment provided. A larger, more varied sample would provide the opportunity to further examine the effectiveness of this training and potentially lead to more valid generalizations. Future research should be conducted at larger colleges and universities, both private and public institutions, in various regions of the United States and the results compared. This would allow for comparisons to be made by demographic characteristics.

Administration of Instruments

Future research is recommended and would hopefully yield positive results and assist in the development of improved attitudes and increased knowledge of students with disabilities. It is suggested that any such research implement and adhere to a strict timeline for administration of the instruments. The Scale of Attitudes Towards Disabled

Persons addressed participant's attitudes towards individuals with disabilities generally. Different measures should be examined in an attempt to gather data related to attitudes towards individuals with invisible disabilities.

Scope of Disabilities

This research addressed the impact on college faculty attitudes and knowledge of students with invisible disabilities, specifically learning disabilities and attention deficit disorder. It would be worthwhile to conduct parallel research that investigated attitudes and knowledge of students with physical disabilities to promote the attention to all students with disabilities and examine the differences in results for this study. The review of the literature found frequent mention of the need for college faculty to have an accepting attitude toward students with disabilities as well as the lack of orientation faculty are provided in order to prepare to meet the needs of all students.

Length of Training

If a similar study is to be replicated, it is recommended that the training time be lengthened and include the expansion of material presented. In addition to the on-line training manual, instructional materials could be presented, such as video vignette's depicting interactions between students with disabilities and faculty members, and on-line discussions about attitudes towards students with disabilities and the sharing of successful accommodations that faculty have used could be organized.

Conclusions

This study was designed to investigate the impact of on-line training of college faculty attitudes and knowledge of students with disabilities. Although the hypotheses were not supported the information gained was informative and added to the limited

research conducted on this topic. Due to limitations of the study there could be no confidence in the findings.

Implications for Practice

Data from this study can be used if similar research is conducted in the future or if this training would ever be implemented as part of new faculty orientation and/or on-going faculty workshops. One potential outcome of this study is that all faculty will have access to the manual and that periodic training workshops be provided so that faculty can be better prepared to meet the need of all students.

Results of this study will be shared with college administration in an effort to encourage the development of a training program. The Student Disabilities Coordinator will also be made aware of the results of this study in order to better educate and coordinate the dissemination of information necessary for faculty to effectively address student needs. From data collected and a review of the literature, it appears that training would also be helpful for students with invisible disabilities so that they recognize the need to assert themselves and ask for the services and accommodations that would help in their academic endeavors.

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Appendix A
Scale of Attitudes Toward Disabled Persons Form-R, Personal Information Form

SADP - Form R
 Personal Information Form

- (1) Today's date: ____ / ____ / ____
- (2) Age last birthday: ____ (25-30) ____ (31-40) ____ (41-50) ____ (51-60) ____ (61-70)
 ____ (70+)
- (3) Sex: ____ M ____ F
- (4) Highest educational level attained (Check only one):
 ____ Master's Degree ____ Doctorate
- (5) Current academic rank: ____ Instructor ____ Assistant Professor ____ Associate
 Professor ____ Professor
- (6) Division: ____ Humanities ____ Natural Sciences & Mathematics ____ Social
 Sciences
- (7) Length of employment at VWC: ____ < 2 years ____ 2-5 years ____ 6-10 years
 ____ 11-15 years ____ 16-20 years ____ 21-25 years ____ > 25 years
- (8) Do you know a person or persons with a disability? ____ Yes ____ No
 If "Yes," in what ways do you know this person or persons (Check all that apply):
 ____ Spouse ____ Child ____ Sibling ____ Relative (explain):

 ____ Client, patient, or student ____ Co-worker ____ Neighbor ____
 Acquaintance
 (explain): _____

 ____ Other (explain): _____

Please rate your general knowledge of the conditions and life circumstances of persons with an "invisible disability" (i.e. learning disability, attention deficit disorder):

No knowledge	Some knowledge	Moderate knowledge	Extensive Knowledge
1	2	3	4

Please rate the frequency of your contact with persons with an “invisible disability”:

Never	Very infrequent	On occasion	Very frequent
1	2	3	4

Please rate the intensity of your contact with persons with an “invisible disability”, regardless of the frequency of that contact:

Not at all intense	Somewhat intense	Moderately intense	Very intense
1	2	3	4

Appendix B

Scale of Attitudes Toward Disabled Persons

Directions: The statements presented below express opinions or ideas about persons who are disabled. There are many differences of opinion; many persons agree and many persons disagree with each statement. We would like to know your opinion about them. Circle the appropriate number that best corresponds with how you feel about the statement. There are no right or wrong answers. You should work as quickly as you can, but don't rush. There is no time limit.

Please respond to every statement.

KEY

1: I disagree very much

2: I disagree somewhat

3: I neither agree or disagree

4: I agree somewhat

5: I agree very much

- | | | | | | | |
|---|---|---|---|---|--|--------------------------------------------------------------------------------------------------------------------------|
| 1 | 2 | 3 | 4 | 5 | | 1. Children who are disabled should not be provided with a free public education. |
| 1 | 2 | 3 | 4 | 5 | | 2. Persons who are disabled are not more accident-prone than are other people. |
| 1 | 2 | 3 | 4 | 5 | | 3. Individuals who are disabled are not capable of making moral decisions. |
| 1 | 2 | 3 | 4 | 5 | | 4. Persons who are disabled should be prevented from having children. |
| 1 | 2 | 3 | 4 | 5 | | 5. Persons who are disabled should be allowed to live where and how they choose. |
| 1 | 2 | 3 | 4 | 5 | | 6. Adequate housing for persons who are disabled is neither too expensive nor too difficult to build. |
| 1 | 2 | 3 | 4 | 5 | | 7. Rehabilitation programs for persons who are disabled are too expensive to operate. |
| 1 | 2 | 3 | 4 | 5 | | 8. Persons who are disabled are in many ways like children. |
| 1 | 2 | 3 | 4 | 5 | | 9. Persons who are disabled need only the proper environment and opportunity to develop and express criminal tendencies. |
| 1 | 2 | 3 | 4 | 5 | | 10. Adults who are disabled should be involuntarily committed to an institution following arrest. |
| 1 | 2 | 3 | 4 | 5 | | 11. Most persons who are disabled are willing to work. |
| 1 | 2 | 3 | 4 | 5 | | 12. Individuals who are disabled are able to adjust to life outside an institution. |
| 1 | 2 | 3 | 4 | 5 | | 13. Adults who are disabled should not be prohibited from obtaining a driver's license. |

- | | | | | | | |
|---|---|---|---|---|-----|---------------------------------------------------------------------------------------------------------------------------------|
| 1 | 2 | 3 | 4 | 5 | 14. | Persons who are disabled should live with others who are similarly disabled. |
| 1 | 2 | 3 | 4 | 5 | 15. | Zoning ordinances should not discriminate against persons who are disabled by prohibiting group homes in residential districts. |
| 1 | 2 | 3 | 4 | 5 | 16. | The opportunity for gainful employment should be provided to persons who are disabled. |
| 1 | 2 | 3 | 4 | 5 | 17. | Children who are disabled in regular classrooms have an adverse effect on other children. |
| 1 | 2 | 3 | 4 | 5 | 18. | Simple repetitive work is appropriate for persons who are disabled. |
| 1 | 2 | 3 | 4 | 5 | 19. | Persons who are disabled show a deviant personality profile. |
| 1 | 2 | 3 | 4 | 5 | 20. | Equal employment opportunities should be available to individuals who are disabled |
| 1 | 2 | 3 | 4 | 5 | 21. | Laws to prevent employers from discriminating against persons who are disabled should be passed. |
| 1 | 2 | 3 | 4 | 5 | 22. | Persons who are disabled engage in bizarre and deviant sexual activity. |
| 1 | 2 | 3 | 4 | 5 | 23. | Workers who are disabled should receive at least the minimum wage established for their jobs. |
| 1 | 2 | 3 | 4 | 5 | 24. | Individuals who are disabled can be expected to fit into our competitive society. |

<p>THANK YOU FOR YOUR ASSISTANCE IN RESPONDING TO THIS QUESTIONNAIRE</p>

Richard F. Antonak

SADP-Form R Revis

Revised with permission 1/15/2007, Wayne Pollock

Blueprint for Disabilities Questionnaire

Content	Knowledge	Item number
General Disability Information	Prevalence of student's with disabilities (SWD) in college	1,2
	Percentages of students with disabilities, by disability group	3
	Post-graduation employment for SWD	4
	Perceived relationships between faculty and SWD	5
	SWD self-perception	
Disability Legislation	Academic standards, as they relate to SWD	
	Definition of "disability" by the Americans with Disabilities Act	9
	Legislation that relates to post-secondary education of SWD	10
	Implications of legislation to faculty and student responsibilities	11
	Implications of legislation to faculty and student rights	12
Accommodations	Reasons for academic accommodations	6, 7, 13
	Process for determining accommodations for SWD	14
	Faculty role and responsibilities in determining the need for accommodations	8
	Factors used to determine	15

	appropriate accommodations	
	Process for SWD to obtain accommodations	14
	Process to change/modify academic accommodations	16
Specific Disability Information	Common disabilities reported in post-secondary education	3, 20
	Symptoms and characteristics of Learning Disabilities and Attention Deficit Disorder	17, 18, 19
Resources	Available resources for SWD	23, 25
	Role and responsibility of Student Disability Coordinator	21, 22, 24

Disability Knowledge Questionnaire

Disabilities Questionnaire

For the following questions, please type the correct answer in the blank next to the question number.

General Disability Information

1. What is the percentage of high school students with disabilities that are likely to attend a post-secondary institution?

_____ A. 12%

_____ B. 25%

_____ C. 38%

_____ D. 51%

2. What percentage of incoming college students (nationally) reported having a disability in 2003?

_____ A. 4%

_____ B. 9%

_____ C. 14%

_____ D. 19%

3. What is the most common type of disability among higher educational institutions?

_____ A. Learning disabilities

_____ B. Neurological impairments

_____ C. Orthopedic impairments

_____ D. Sensory impairments

4. What is the post-graduation employment status of students with disabilities?

- ☐ A. They are less likely than students without disabilities to be employed in their field of study.
- ☐ B. They are more likely than students without disabilities to be employed in their field of study.
- ☐ C. They are more likely to be unemployed
- ☐ D. They are equally likely to be employed in their field of study.

5. What level of knowledge do college faculty have regarding accommodations for students with disabilities?

- ☐ A. No knowledge
- ☐ B. Limited knowledge
- ☐ C. Moderate knowledge
- ☐ D. Extensive knowledge

6. Which service is best for students with disabilities in post-secondary institutions?

- ☐ A. An interpreter
- ☐ B. Individual tutoring by the course instructor
- ☐ C. Reasonable accommodations
- ☐ D. Recording of class lectures

7. Which of the following accommodation statements is incorrect?

- ☐ A. Class accommodations are determined by the individual instructor
- ☐ B. Documentation of the disability is required for students with disabilities to receive accommodations
- ☐ C. Instructors are required to have a statement regarding accommodations in their syllabi

___ D. Students with disabilities have a responsibility to inform me if they require accommodations

8. What is the best method for faculty to assist students with disabilities?

___ A. Contact the Student Disabilities Coordinator to discuss the student

___ B. Discuss the disability with the student in order to better understand how you can help

___ C. Encourage the student to speak with the Student Disability Coordinator

___ D. Talk with the student about how to best implement accommodations

Disability Legislation

9. How does the Americans with Disabilities Act (ADA), define "disability?"

___ A. Any person who has a physical or mental impairment which substantially limits one or more major life activities

___ B. Any person who reports having an impairment

___ C. Any person who is unable to function independently

10. What laws apply to students with disabilities in post-secondary education?

___ A. Section 504 of the Rehabilitation Act & the ADA

___ B. Section 508 of the Rehabilitation Act & the ADA

___ C. Special Educational Needs and Disability Act

___ D. The Individuals with Disabilities Education Act (IDEA)

11. What is an implication of federal laws pertaining to students with disabilities in post-secondary education?

___ A. Students must be admitted to state universities

___ B. Students must disclose details of their disability to faculty

- ☐ C. Students must have a right to confidentiality of disability-related information
 - ☐ D. Students must receive tutoring if requested
12. Under what circumstances should accommodations be provided for SWD?
- ☐ A. The instructor deems the student unable to complete class assignments
 - ☐ B. The need for accommodations is appropriately documented
 - ☐ C. The student identifies himself or herself as having a disability
 - ☐ D. The student informs the instructor of accommodations he/she received in high school
13. What is the focus of academic accommodations?
- ☐ A. Ensure that students with disabilities have private instruction necessary for academic success
 - ☐ B. Ensure that students with disabilities will be encouraged
 - ☐ C. Give the student a “leg up” in the course
 - ☐ D. Help to mitigate the impact of the student’s disability

The Accommodation Process

14. Who decides whether a student has a disability for purposes of accommodations?
- ☐ A. The academic Dean’s office
 - ☐ B. The college attorney
 - ☐ C. The instructor
 - ☐ D. The Student Disabilities Coordinator
15. Which criterion is used in determining appropriate accommodations for

students with disabilities?

- ☐ A. The disability
- ☐ B. The faculty member's opinion
- ☐ C. The limitations imposed by the disability
- ☐ D. The specific course assignments

16. Who determines the specific accommodations to be provided for a student with disability?

- ☐ A. The instructor
- ☐ B. The student
- ☐ C. The Student Disabilities Coordinator
- ☐ D. The student and instructor

Specific Disabilities

17. Which disability is described by difficulty with organizational and study skills, social skills, and mathematical skills?

- ☐ A. Attention Deficit Disorder
- ☐ B. Learning Disorder
- ☐ C. Obsessive Compulsive Disorder
- ☐ D. Personality Disorder

18. Which disability is described by procrastination, chronic lateness, and disorganization are difficulties associated with which disability?

- ☐ A. Attention Deficit Disorder
- ☐ B. Bipolar Disorder
- ☐ C. Depressive Disorder

19. Individuals with which disability have problems in self-regulatory behaviors, social perception, and social interaction?

- ☐ A. Attention Deficit Disorder
- ☐ B. Attention Deficit Hyperactivity Disorder
- ☐ C. Learning Disorder
- ☐ D. Personality Disorder

20. How do you know if a student has either a learning disability or attention deficit disorder?

- ☐ A. The student fails to complete assignments in a timely manner
- ☐ B. The student informs the instructor
- ☐ C. The student provides documentation of the disability
- ☐ D. The student's behavior is disruptive

Resources

21. Which statement best describes the roles and responsibilities of the Student Disabilities Coordinator?

- ☐ A. Determines student course load based on previous semester grades
- ☐ B. Evaluates documentation and determines qualification for disability-related services
- ☐ C. Provides tutoring for students with disabilities
- ☐ D. Recommends off-campus sources for student support

22. How willing are you to use the resources available to accommodate students with disabilities?

- ☐ A. Not likely

____ B. Somewhat likely

____ C. Likely

____ D. Very likely

23. Which resource is best for students with disabilities?

____ A. Academic advisors

____ B. Individual tutoring by the instructor

____ C. Mandatory enrollment in academic skills development course

____ D. Recorded class lectures

24. What is the objective of providing individualized accommodations on exams?

____ A. To accommodate the students learning differences

____ B. To dilute the scholastic requirements

____ C. To provide oral exams when requested

____ D. To reformat the test

25. What is the best method for students with disabilities to obtain lecture notes?

____ A. Faculty assign a classmate to take notes for the student with disabilities

____ B. Faculty make lecture notes available through Blackboard or on reserve in the library

____ C. Faculty provide pre-recorded class lectures to student

____ D. Faculty clarify the students' responsibility to obtain notes from a classmate

Blueprint for Interview Questions

	Knowledge	Experience with/exposure to individuals with disabilities	Practice/change
Invisible disabilities (learning disability and/or attention deficit disorder)	<p>Do faculty understand the term "invisible disabilities?"</p> <p>What knowledge, if any, do faculty have of symptoms and characteristics of individuals with a LD and/or ADD?</p> <p>What opinions do the faculty have regarding accommodating student's with disabilities?</p>	<p>Describe any contact or experience you have had with individuals with disabilities</p> <p>What exposure have you had with individuals with a DL and/or ADD?</p> <p>What are the most difficult aspects of teaching a student with a disability (specifically, LD and/or ADD)?</p>	<p>What are your expectations of students with disabilities?</p> <p>What assistance will be beneficial to you when working with students with disabilities?</p>
Accommodations	<p>What knowledge do faculty have of appropriate accommodations?</p> <p>What accommodations might be helpful and/or necessary for student academic success?</p> <p>What is the process for providing accommodations?</p>	<p>What accommodations have you made for students?</p> <p>What are your opinions regarding accommodating students with disabilities?</p> <p>In your experience, what do other faculty think of providing accommodations?</p>	<p>What would you say to your class regarding the possible need for accommodations?</p> <p>How do you incorporate accommodations into your teaching?</p> <p>What additional assistance would you like in providing accommodations to students with disabilities?</p>
Resources	What knowledge do faculty have of the Student Disabilities Coordinator and available services?	How have you used available resources?	What is your intent of utilizing available resources when working with student's with

			disabilities?
Satisfaction with Training	How satisfied were you with the amount of material presented?	What aspects of the training material presented did you find most useful?	Do you feel adequately prepared to work with students with disabilities?
	How convenient was it for faculty to complete the on-line training?	What aspects of the training material presented did you find least helpful?	How will you incorporate what you learned into your teaching and advising?
		What improvements would faculty recommend to improve the training?	

Interview Questions

Participant name/ID number: _____

Date of Interview: _____

- 1) How would you define the term “Invisible disabilities?”
- 2) What are your views on accommodating students with disabilities?
- 3) Invisible disabilities, in the context of this study refer to learning disabilities, attention deficit disorder (ADD), and attention deficit hyperactivity disorder (ADHD). What experiences have you had with students with invisible disabilities in your classes?
- 4) What symptoms and characteristics of individuals with a LD and /or ADD do you know about?
- 5) What are the most difficult aspects of teaching a SWD (specifically LD or ADD)?
- 6) What are your academic expectations of students with invisible disabilities in your classes?
- 7) What assistance from the Student Disability Coordinator would be helpful when working with students with invisible disabilities?
- 8) What accommodations might be helpful to a student with a learning disability or attention deficit disorder?
- 9) How would you incorporate accommodations into your teaching and classroom instruction?
- 10) What do you know of the resources available through our Student Disability Coordinator?
- 11) How will you use the available resources when working with SWD?
- 12) How satisfied were you with the on-line training material provided?
- 13) What aspects of the on-line training did you find most useful?
- 14) What aspects of the on-line training did you find least helpful?
- 15) How prepared do you feel to work with students with a learning disability and/or attention deficit disorder?
- 16) What can the college do to assist faculty in identifying and accommodating students with disabilities?

- 17) What else can you tell me that would help me understand your views on accommodating students with disabilities?
- 18) What else can you tell me about your experience with the training?

Appendix G
Treatment Group Training Outline

Orientation

Letter of Introduction and thanks

Overview and Objectives of On-line Training

Overview: On-line training procedure

Access to on-line training handbook

Timeframe of training

Scheduling of interviews

Disability Legislation

Knowledge of disabilities (LD, ADD)

Adaptive teaching strategies

Accommodations for students with disabilities

Available resource information

Objectives: After completing the on-line training, participants will be able to:

1. Identify symptoms and characteristics of students with:
Learning Disabilities (LD)
Attention Deficit Disorder (ADD)
2. Identify disability legislation that impacts post-secondary education
3. Describe difficulties with teaching students with LD and/or ADD
4. Describe at least three accommodations or adaptive teaching strategies that can be used for students with LD and/or ADD
5. Identify at least three available resources related to the education of students with disabilities

On-line Training Handbook Contents

Disability Legislation

Americans with Disabilities Act

Individuals with Disabilities Education Act

Defining Learning Disabilities and Attention Deficit Disorder

Difficulties teaching students with LD and/or ADD

Responsibilities

Faculty

Student with Disability

Institution

Resources

Post-training

Re-administer the Scale of Attitudes Toward Disabled Persons (SADP) and the Knowledge of Disabilities instruments

Conduct interviews

Appendix H
Accommodations for Students with Disabilities

In the classroom accommodations:

Tape record class
Use of interpreter
Scribe service
Taped reading
Extended time for assignments and editing
Written assignments on concrete level
Assignments on board
Consideration for absences based on student's condition
Study skills tutorial
Other _____

Modified Settings for examinations:

Spell-editing assistance via computer spell-check or Learning resource Center professional staff
Reader
Scribe
Extended time
Private room (Department or LRC)
Testing in the Learning Resource Center
Alternate test formats (oral, untimed, objective)
Computer for test-taking and in-class essays

(Written by and permission granted for use by The Accommodating Students with Disabilities Project; changes adopted for use with this specific research study)

Training Handbook for Faculty

Preparing Faculty to Accommodate Students with Disabilities

Thank you for agreeing to participate in this research study. As some of you know, I have spent a good portion of my adult life working with, and for, individuals with disabilities in an attempt to improve their independence and their quality of life. I feel fortunate to have the opportunity to conduct research and provide training that I believe will impact our students with disabilities. Your participation in this study will provide the data for my doctoral dissertation, but equally important, it will provide you with information about specific disabilities, legislation that impacts educators in higher education, and suggested accommodations and resources that can be used in and out of the classroom.

This on-line training is designed to allow you to complete the training at your own pace. Some of you may wish to complete a single section at a time, while others may choose to complete the entire training in a single session. The training consists of an introduction and six sections, each focused on a specific aspect of how to assist students with disabilities in their pursuit of education. For this study, we will only focus on students with learning disabilities, attention deficit disorder, and attention deficit hyperactivity disorder, commonly referred throughout the training as “invisible disabilities.”

I hope you find this training handbook helpful. Thank you, again, for your participation.

Contents

Introduction

Section I: The law

Frequently asked questions about disability legislation.

Section II: Responsibilities

Student responsibilities

Faculty and instructor responsibilities

Student Disabilities Coordinator (SDC) responsibilities

Institutional responsibilities

Frequently asked questions about responsibilities

Section III: The accommodation process

Frequently asked questions about the process

Section IV: Case stories

Section V: Information on specific disabilities

Providing customized accommodations

Students with learning disabilities

Attention deficit disorder (ADD)

Section VI: Resources

Services and equipment

Information on accommodated testing

Information on using note-takers

Universal design for learning (U D L)

Suggestions for improving student performance

Syllabus statements

Glossary

Online information

Introduction

Higher education is changing! One important change is the growing diversity of students; disability is part of that diversity. Therefore, it is likely that you have students with disabilities in your classes and programs. **Here are important points to keep in mind:**

1. **You are not alone when it comes to accommodating students with disabilities; neither are you expected to be an expert on disability.** Call on our Student Disability Coordinator (SDC), Fayne Pearson, to request help, to get answers to questions, to raise concerns, or to get clarification on Virginia Wesleyan's policies and procedures relating to students with disabilities.
2. **The design and implementation of disability-related accommodations is a collaborative process involving the student, the SDC and, often, the faculty member.** For more information see Section II, Responsibilities.
3. **There are four main implications for faculty regarding the laws governing disability-related services in higher education.** Students with disabilities must meet the same admission standards as other students. Once admitted, they have the same rights to all programs and facilities and are eligible to receive reasonable accommodations that relate to their disability. They have a right to confidentiality of all disability-related information. For more information see Section I, The Law.
4. **Students with disabilities are responsible to meet the same academic standards as other students.** While students may receive some reasonable accommodations intended to mitigate the educational impact of their disabilities, these accommodations should not water down the curriculum, alter the standards

for performance or waive any course or class activity that provides students with essential knowledge or skills. For more information see Section III, The Accommodation Process.

Be careful about inadvertently identifying someone as having a disability. It is easy to accidentally disclose a student's disability without thinking. Be aware of this as you speak with students. Remember that the student determines how much disability related information he or she is willing to disclose.

Faculty should have basic information about students with disabilities in postsecondary education; that's what these materials are about. To set the stage, some of the most important background information has been condensed in this list of important points.

When a student requests an accommodation....

1. Ask the student if he or she has applied for services with the Student Disabilities Coordinator (SDC).

If the student has not applied:

Refer the student to the SDC so that the disability can be documented and appropriate accommodations determined. Do not provide any disability-related accommodations until you have received a request from the SDC.

If the student has applied:

You should receive documentation from the SDC recommending accommodations for the student. If the student does not have this, ask the student to obtain it before providing the accommodation.

2. Once the student provides you with the SDC's accommodation request:

- a. Talk with the student on how best to implement those accommodations;
- b. Keep a copy for your own records and refer back to it as needed.

3. If at any time you have questions regarding the accommodation plan, call the SDC. Continue to provide the accommodation to the student unless the SDC instructs otherwise.

Section I. The Law.

Quote by President John F. Kennedy: "In giving rights to others which belong to them, we give rights to ourselves and to our country."

Of the applicable federal laws and regulations, Section 504 of the Rehabilitation Act of 1973, and Title II of the Americans with Disabilities Act of 1990 most completely define the obligation of colleges and universities toward students with disabilities. These laws provide for accommodations and academic adjustments, including auxiliary aids and services, to ensure there is no discrimination on the basis of disability.

Under the ADA and the Rehabilitation Act, a person with a disability is defined as any person who has a physical or mental impairment that substantially limits a major life activity as compared to the average person in the general population. Individuals who have a record of a disability, or are regarded as having such a disability, have certain protections under the law and cannot be subject to discrimination.

The ADA does not guarantee equal results, establish quotas, or require preferential treatment for persons with disabilities over those without disabilities.

Section 504:

Section 504 of the Rehabilitation Act was the first law to specifically address the needs of students with disabilities. It states in part: "No otherwise qualified individuals with disabilities 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." Section 504 and subsequent amendments require that institutions of higher education provide students with disabilities the same opportunity to engage in educational experiences as non-disabled students. Students who voluntarily disclose that they have a disability (self identify) provide documentation of that disability, and meet the eligibility requirements are entitled to receive approved accommodations (referred to as appropriate academic adjustments in Section 504), such as modifications of programs or auxiliary aids, in order to participate in programs and activities.

The Americans with Disabilities Act, the "ADA":

The Americans with Disabilities Act is a wide-ranging legislation intended to make society more accessible to people with disabilities. It protects fundamental rights and extends equal opportunity for individuals with disabilities to the areas of public accommodations, employment, transportation, state and local government services, and telecommunications.

Under the ADA, a person with a disability is defined as any person who:

1. has a physical or mental impairment which substantially limits one or more major life activities;

2. has a record of such impairment; or
3. is regarded as having such an impairment.

The ADA also clarifies the Section 504 phrase “otherwise qualified” individual with a disability, as one either:

“with or without reasonable modification to rules, policies, or practices, the removal of architectural, communication, or transportation barriers, or the provision of auxiliary aids and services, meets the essential eligibility requirements for the receipt of services or the participation in programs or activities.”

Sections 504 of The Rehabilitation Act apply to colleges and universities receiving federal financial assistance. The mandates of the ADA apply to all institutions of higher education, regardless of the receipt of federal funds.

In summary, these laws hold four very important implications for educators:

First, students with disabilities have the right to be in higher education if they are otherwise qualified to be there. Once a student with a disability has met the university entrance or admission criteria, with or without the use of accommodations, he or she has the same right as any other student to the educational experience. Just like any other student, those with disabilities are responsible for determining their own level of success.

Second, once they are enrolled, students with disabilities have the right to access all of the programs, academic and non-academic, that are available to other students. Instructors cannot refuse to work with a student simply because they know he or she has a disability or because they are concerned that having a disability would prevent him or her from being successful. Furthermore, students with disabilities should be held to the same set of standards and criteria as students without disabilities.

Third, students with disabilities are eligible for some accommodations that relate to their disabilities. Instructors need to be prepared to make adaptations or reasonable accommodations to their procedures and practices so that students with disabilities are able to do the same things that other college students are required to do. This may include altering or making changes in the delivery of lecture or course materials or in the assessment of knowledge in order to counter the effects of the disability.

Fourth, students with disabilities have a right to confidentiality of all disability-related information. As a result, there may be times when faculty and instructors may receive a request for accommodation without being told who the accommodation is for. Other times, the student may approach their instructor and tell them that he has a disability that will require some accommodation. In either case, information about a student’s disability or accommodation should not be shared with others without the

student's permission. It is up to the student to decide how much information he is comfortable sharing about his disability.

All parties involved in providing accommodations; including students, faculty members, and institutions of higher education, have a unique set of rights and responsibilities. For more information on what these are, see Section 2, Responsibilities.

Thoughts on confidentiality:

Faculty do not have the right to challenge the legitimacy of a student's disability, demand to review diagnostic information, refuse to provide accommodations, or refuse to work with a student because he or she has a disability. Concerns regarding an accommodation request should be discussed with the SDC.

Frequently asked questions about the law.

1. Academic standards,
2. Coping in the workforce,
3. Eligibility for services, and
4. Reasonable accommodations.

Are students with disabilities required to meet the same academic standards as other students?

Yes! Students with disabilities must meet the same admissions and retention standards as is required of other students. Students who have academic difficulty due to a disability or illness may appeal a denial of admission or a retention decision at which time disability information may be used by the appeal committee to make a final decision. The appeal committee may offer provisional admission or retention. There are no quotas related to students with disabilities.

How will these students cope in the workforce if accommodations are provided at the university?

The purpose of accommodations in postsecondary education is to level the playing field for students in an academic setting and allow the student to receive an education without discrimination. Accommodations in employment are often similar to those in postsecondary education. Employers also provide reasonable accommodations to persons with disabilities under Title I of the Americans with Disabilities Act. In both cases, individuals with disabilities must meet the same performance criteria as others.

What is a disability and who is eligible for services from the SDC?

The ADA defines a disability as a physical or mental impairment that substantially limits a major life activity. Individuals who have a history of such an impairment or have been

regarded by others as having an impairment are also protected from discrimination under the ADA. The SDC serves students who meet the eligibility guidelines of the institution. These guidelines are defined by each institution based on several factors, including the definition of disabilities set forth in the Americans with Disabilities Act (ADA).

The ADA refers to “reasonable accommodations.” But, what does that mean?

Reasonable accommodations are adaptations aimed at mitigating the impact of the disability without compromising the integrity of the academic program or course. Accommodations may include instructional strategies, adaptive technology, or aides such as sign language interpreters. **Providing reasonable accommodations enables students with disabilities to have equal access to education and services in higher education as required by federal law.**

Accommodations should:

1. Level the playing field for students with disabilities, and
2. Be reasonable in relation to the course.

Accommodations should not:

1. Water down curricula or compromise academic integrity;
2. Substantially change any essential elements of the curriculum or academic program;
3. Ensure that all students with disabilities are successful. Rather, students should be given the opportunity to determine their own level of success or failure; and
4. Consume extra personal time from the instructor to re-teach or tutor the student.

This concludes Section I, The Law. Please proceed to Section II, Responsibilities.

Section II. Responsibilities.

Quote by President John F. Kennedy: “Let us think of education as the means of developing our greatest abilities, because in each of us there is a private hope and dream which, fulfilled, can be translated into benefit for everyone and greater strength for our nation.”

Student responsibilities.

1. Voluntarily identify disability related needs to the appropriate office/program;
2. Provide current and complete documentation of disability to the Student Disability Coordinator (SDC);
3. Formally request needed accommodations and services in a timely manner;
4. Notify the SDC of any changes or concerns in needed services or accommodations;
5. Abide by the student code of conduct set by the college or university;
6. Attend class and maintain the academic standards set by the university, the college, and the department;
7. Use services responsibly and treat service providers and faculty with respect and courtesy; and
8. Abide by the policies of the SDC.

Students have a responsibility to advocate for their own needs. Some have better developed self-advocacy skills and assertiveness than others. You have a right to expect that students have a good understanding of their limitations as well as their needs for accommodations in your particular class. You can help reinforce independence and further their development as professionals by showing respect for their needs. Convey high expectations just as you would for any other student.

Faculty & instructor responsibilities.

1. Refer students to the SDC to have the disability documented and appropriate accommodations determined;
2. Include a statement in your syllabus informing students about reasonable accommodations and alternate format materials (see Section VI, Resources);

3. Help provide reasonable accommodations including the use of auxiliary aids, note takers, and tape recorders;
4. Provide advising, counseling, and instruction to students with disabilities in a fully accessible environment;
5. Show confidence in students' abilities to achieve their intellectual, personal, and professional potential;
6. Keep disability related information confidential, discussing it only with people who have a valid reason to know; and
7. Discuss all student related information directly with the student.

Additional information for faculty:

1. Faculty and staff may not have access to a student's diagnostic information;
2. When using a tape recorder in the classroom, it is appropriate that the student sign an agreement (form available at SDC) not to release the recording or otherwise infringe on the publishing rights of the instructor; and
3. If a faculty/staff member has questions about the appropriateness of the approved accommodations requested, the SDC should be contacted for further clarification. Continue to provide accommodations while the issue is being resolved and refer all questions to the SDC.

Student Disabilities Coordinator (SDC) responsibilities.

1. Provide information and services so that students with disabilities may participate in all of the programs, services, and activities of the institution;
2. Provide services in a timely fashion;
3. Review documentation of a disability for eligibility and determine on behalf of the institution what types of accommodations are appropriate;
4. Keep disability-related information confidential, discussing it only with those who have a valid reason to know;
5. Help faculty and staff provide reasonable accommodations;
6. Consult with college/university administration, faculty, and staff on the provision of services, accommodations, and access as required under current federal and state law; and
7. Advocate responsibly for the rights of persons with disabilities.

Institutional responsibilities.

1. Provide a campus in which educational, cultural, and extracurricular activities are physically and programmatically accessible;
2. Create policies that encourage the inclusion of persons with disabilities in employment and education; and
3. Provide a process so students with disabilities may address their grievances with the institution and the office(s) that provide services.

Frequently asked questions about responsibilities.

1. Applying for services,
2. Confidentiality about a student's disability,
3. Disability documentation,
4. SDC funding,
5. Eligibility requirements,
6. Grading students with disabilities,
7. Kinds of accommodations,
8. Requesting accommodations, and
9. Student's behavior.

How can students with disabilities apply for services and become enrolled with the SDC?

Information regarding disability services is published in all university publications. There is also information that is sent to each student at the time of his or her acceptance to the institution, and during orientation. Often students are referred by faculty, advisors, friends and family. Students requesting accommodation must self identify to the SDC and provide current documentation of a qualifying disability. Each student will be interviewed by the SDC who will determine eligibility, services and provide referral and counseling.

If the student does not have current medical or psychological documentation, the SDC will refer the student to qualified professionals who can provide the necessary evaluation.

What about confidentiality? How much information am I allowed to know about a student's disability? If I knew more, maybe I could be more helpful or design a better accommodation.

It is important to remember that it is up to the student to decide how much information he or she is comfortable sharing. All disability-related information is confidential. There may even be times when you receive a request for accommodation from the SDC without knowing which student in your class will be receiving the accommodation.

Accommodations such as note takers may not require any intervention from you and the

SDC may be able to handle the services without notifying you. However, most of the time a student will approach you and tell you that he or she has a disability that will require some accommodations. In any case, information about a student's disability should not be disclosed without the student's permission.

What kind of disability documentation is required? Is a letter from a physician enough?

Students must provide full medical evaluations prepared by professionals with expertise in the specific disability. For example, documentation of a learning disability must include this diagnosis, information related to the history of the problem, specific reports of the standardized testing and other instruments used to make the diagnosis, a statement of the limitations presented by the disability in the educational arena, and recommendation for remediation and accommodation. The report must be submitted by an appropriate licensed professional. Further, the professional must include his or her professional credentials.

In the case of a medical condition or psychiatric disability, the SDC seeks information related to the medical condition, the limitations the condition imposes, side effects of medications and treatments and other information needed to determine appropriate accommodations.

How is the SDC funded? Who pays for accommodations the student, the department, or the institution?

The college is not permitted to charge students for accommodations or services needed because of a disability. The college is not required to provide items of a personal nature such as wheelchairs, personal computers, readers or tutors for personal study, or personal care attendants. The institution is responsible for insuring that all "programs, services, and activities" are accessible and appropriate and that disability-related adjustments are available.

Who decides whether a student meets eligibility requirements for disability related adjustments and services and how is it done?

In order to receive services from the SDC, a student must meet the criteria for eligibility as defined by the institution (i.e. the ADA definition of a disability) and have limitations related to the physical or academic environment. The services provided are determined on a case-by-case basis by the SDC after a careful review of the medical or psychological documentation and interviews with the student.

Should I grade students with disabilities differently than other students?

Students with disabilities need to be held to the same academic standards as other students. It would indeed be unfair to them to do otherwise. It would also violate the intent of the ADA and institutions could be held liable for "watering down the curriculum" for students with disabilities.

What kinds of accommodations are provided?

The SDC provides many accommodations. Some of these include:

1. Interpreters for the deaf,
2. Readers,
3. Scribes,
4. Note takers,
5. Telecommunication device for the deaf or amplified phones,
6. Accommodated examinations,
7. Assistive technology laboratory,
8. Alternate format materials, and
9. Priority registration.

How should I respond when a student in my class requests accommodations?

The first question is, have you received an accommodation form or letter from the SDC? If not, you will want to refer the student to the SDC office. Only they (not you) can determine if the student is eligible for disability-related adjustments and services. Moreover, let the student know that all disability-related accommodations must be approved and coordinated through the SDC. If the student is requesting something that you already make available to students in your classroom, by all means provide that, but do not refer to it as a disability related accommodation. If you would like information on things to do that can be helpful to all students, see the Universal Design for Learning ideas suggested on the file: Resources of your Handbook.

What about the student's behavior? What do I do if a student with a disability needs so much assistance it is affecting the whole class? What if the student is disruptive in class?

First, understand that most accommodations are not time-consuming to the instructor. Most time-consuming services are provided through the SDC Office. It is important to note that the law does not obligate instructors to tutor students. Individual tutoring is not considered to be a "reasonable" accommodation under the ADA.

Regarding classroom behavior, students with disabilities are bound just as all students are by the institution's code of conduct and should be held to that code. If a student's behavior becomes very disruptive or dangerous or threatening, the instructor has the option of calling campus security for assistance, just as he or she would with any other student. Faculty can also refer students for tutoring, counseling, and other services and programs offered by their institution.

This concludes Section II, Responsibilities. Please proceed to Section III, The Accommodation Process.

Section III. The Accommodation Process

There are five steps in the accommodation process:

1. Getting to the Student Disabilities Coordinator (SDC),
2. Meeting the eligibility requirements,
3. Deciding on specific accommodations,
4. Implementing the accommodation plan, and
5. Revising the accommodation plan.

Step 1: Getting to the Student Disabilities Coordinator (SDC).

There are a variety of ways that students may come into contact with the SDC once they come to college. Those who received accommodations in high school may be referred by their high school counselors or parents.

Students may not be aware of the services available through the SDC. Some students may not even realize that they have a disability. This puts faculty members and instructors in a good position to inform students about the SDC. Include a statement on your syllabus (see the syllabus statement in Section VI, Resources) about your institution's policies on students with disabilities. Inform your students about services available on campus. This creates an open and approachable climate and also provides clear direction to students on the steps to follow to receive accommodations. It also reminds students that all disability related accommodations are coordinated through the SDC.

Postsecondary institutions do not actively set out to identify students with disabilities. Rather, students must voluntarily disclose that they have a disability, provide documentation of the disability, and meet the SDC's eligibility criteria.

Step 2: Meeting the eligibility requirements.

In this step, the student brings documentation of his or her disability and sits down with your SDC. The SDC then evaluates the documentation to determine whether the student meets the eligibility requirements. If the student has met the eligibility requirements, he or she moves to Step 3. Students who do not meet the eligibility requirements are guided to other appropriate services (e.g. academic support services) available at the college.

The individual completing the documentation must be a professional with the appropriate credentials for the diagnosis being made. Operating within the institution's definition of disability protects the rights of students with disabilities.

Step 3: Deciding on specific accommodations.

In this step, the student and the SDC look at the student's limitations and take into consideration how these limitations affect the student's ability to meet the course

requirements. The counselor then makes individual recommendations for accommodation for each course the student is taking.

Step 4: Implementing the accommodation plan.

This step begins when the student approaches the instructor and says that he will need some accommodations. The student should provide you with a letter from the SDC recommending accommodations for your course. If the student has not been to the SDC or does not have this letter, there is very little you should do. Remind them that all disability-related accommodations must be coordinated through the SDC and encourage them to resume the discussion with you after they have been to the SDC and have the accommodation letter.

Once the student provides you with a letter, look it over. Set up a time to talk privately with the student so you can review the SDC recommendations and discuss how the accommodation will be delivered. Work out a way to coordinate the accommodation so that the student's confidentiality is protected. If the request seems clear and reasonable, implement the accommodation plan. It is recommended that a copy of the plan, signed by you and the student, be returned to the SDC. Be sure to keep a copy of the request and plan for your own files and refer back to it as needed.

The letter from the SDC will usually state the name of the student and make specific recommendations for accommodations. It will not disclose the nature of the student's disability.

Step 5: Revising the accommodation plan.

This step is only necessary when for one reason or another, there is a need to make adjustments or set some conditions on the original accommodation. Keep in mind that not every student will go through the fifth step of the process because most of the time, accommodations go smoothly.

While the adjustments are being worked out, continue to provide the accommodations that you originally agreed to. Most often, small adjustments can be handled between you and the student. Other times, it may be helpful to consult with the SDC. In any case, continue to provide the original accommodation and communicate in writing any changes you and the student make with the SDC.

In summary:

The SDC's involvement in the accommodation process is intended to give students with disabilities appropriate and legally mandated supports to work toward a higher education. It is also there to provide legal protection for the faculty member or instructor. Bypassing the SDC can be a mistake that can have serious consequences for the students, faculty member, and institution.

Frequently asked questions about the process:

1. Accommodations that do not seem effective,
2. Attendance,
3. Goals of accommodation,
4. Other students in the class,
5. Process of testing accommodation, and
6. Waiving a course.

How do I respond to a student for whom the specified accommodations do not seem to be effective?

If the accommodations recommended through the SDC are not working, you may wish to meet with the student again privately and discuss these concerns. It may be that you and the student can reach a more workable solution. If so, document your new agreement and send a copy to the SDC counselor, keeping a copy for your records. It may also be helpful to meet with the student and the SDC to address your concerns and work out a better plan. It is important that you never argue with the student or do anything that might jeopardize the student's confidentiality. It is also important to maintain the accommodations that were previously recommended until a new solution is agreed upon.

What if a student with a disability has problems with regular attendance in the class?

There may be times when attendance accommodations may be requested if the student's disability interferes with attending class. The presence of a note taker or tape recorder will be of assistance to these students. On the other hand, it is not reasonable for a student not to go to class because he or she has a note taker or tape recordings of classes. Students with disabilities are required to meet the same academic requirements of the class as the other students, including attendance. If regular attendance is a problem related to a student's disability, please contact the SDC to discuss these concerns.

What are the goals of accommodation?

The goal of accommodation is to provide equal access to education and to the academic experience of the institution to qualified students with disabilities. In no way should academic standards be altered. However, at times faculty may need to change the way in which they measure a student's competency in a subject. Possible changes may typically occur with students who have a vision impairment or some physical impairments, although most likely will not be required in the course of this research study.

Other students in the class express resentment that accommodations are being provided to another student who appears "normal" but who claims to have a disability. How should I respond?

This situation can be uncomfortable, but can be handled by simply explaining to them that all students have the right to confidentiality. You are not at liberty to discuss any student's academic situation with others. However, express that you would be happy to meet with him or her individually to discuss his or her needs.

How does the testing accommodation process work?

The process utilized at Virginia Wesleyan is designed to ensure academic integrity while providing the student with the approved accommodations.

There are many details to be determined in an accommodated testing procedure. These details may include the date, time, and place of the exam; the conditions for the exam; instructions to the proctor, scribe, interpreter, etc.; and how the exam will be picked up and returned. The specific test accommodations are determined for each student by the SDC, based on her analysis of the student's disability-related impairment.

It is important for the instructor to provide the SDC with critical information on how each test is to be given. For example, the instructor would need to specify if formula sheets could be used on the exam or if there are instructions to be given the student at the beginning of the exam period; otherwise, the student with the disability could be at a disadvantage.

Are institutions expected to waive courses or write individualized education plans (IEP) for students with disabilities?

Postsecondary educational institutions are not required to write Individualized Education Plans for students with disabilities as public (K–12) schools do. In postsecondary education, academic programs are required to consider reasonable adjustments or accommodations that do not compromise the integrity of the program. Modifications should not substantially alter the essential skills of a course. It is unusual for courses to be waived for students with disabilities, especially in their chosen fields of study.

Essential skills are those skills critical to the purpose of the course. Essential skills should not be “watered down.” (See **essential skills** and **essential requirements**, in Glossary, in Section VI, Resources).

This concludes Section III, The Accommodation Process. Please proceed to Section IV, Case Stories.

Section IV. Case Stories.

Faculty are encouraged to consider how they would answer the highlighted questions at the end of each case story prior to reading the answer.

Getting to the Student Disability Coordinator.

Jason is a student in your class. You have noticed that he is struggling with taking notes in class and the quality of assignments he has submitted is poor. He has talked with you after class to get some direction. You offer some helpful tips on working through the

assignments. You also mention the classes on study skills and other assistance that is available for academic support on campus, including services to students with disabilities for those who are eligible. Jason tells you that he received some services in his high school program. But, this is his first time “on his own” and he wants to see what he can do. **Should you be concerned about his situation?**

It may be frustrating to watch Jason struggle, but you handled the situation well. Jason is now aware of the resources available to him. He is also aware that you are willing to be supportive if he chooses to use them. Jason may find help with a learning style and study skills that are right for him and he may benefit from resources that you suggested are available to all students. As an instructor, you may also be interested in ideas that facilitate better learning for all your students. However, avoid the temptation to lower your expectations or offer help to Jason you would not offer other students. You are not expected to provide one-on-one tutoring. It is an unrealistic expectation for you, and Jason may actually postpone seeking help from the SDC.

Paul is a student in your class who has performed poorly on the past two exams, but who seems highly motivated to learn the materials. During office hours he drops by to visit with you. He expresses frustration with his performance on the exams and tells you that he needs some help. **How would you go about putting him in contact with the resources available on your campus without suggesting that you think he has a disability?**

Many students have situations in which learning does not come easily. Most universities have a variety of academic support services available. Perhaps the most important thing beyond communicating approachability is to be knowledgeable and to inform students how they may access these services. Even if it appears to you that the student may have a disability, avoid suggesting that to the student. Instead provide a variety of resources that the student may explore on his or her own.

Meeting the eligibility requirements.

Mark approaches you at the beginning of the semester and tells you that he will need some accommodations in your course. You say that is fine and ask to see his Accommodation Letter. He says that this is his junior year, and he has never before gone through the SDC. He presents you with a copy of some official looking diagnostic information from his psychologist and tells you that all the information you will need about his disability and the accommodations are in the report. You are not comfortable with the situation. **How should you respond?**

You will be relieved to know that faculty have neither the obligation nor the right to review a student’s medical or psychiatric documentation. You should give Mark’s documentation back to him along with information on how to contact the SDC. Tell him

the SDC is the person designated to examine the diagnostic information and coordinate disability-related accommodations.

Melissa is a student in your Biology class. A week before mid-term she approaches you and requests accommodations on the test. She tells you that she has test anxiety because of some learning disability issues, and will not be able to take the test without additional time or she is sure to fail the test. You refer her to the SDC and request that she talk with Fayne Pearson about her concerns. Two days later she comes to you again, distraught. The SDC is not able to authorize her eligibility. They could not determine significant learning disability and testing anxiety is not considered a disability eligible for accommodations. **What can you do?**

It is important to note that not all learning issues will qualify for eligibility or are recognized as a disability under the ADA. There are no easy answers for what to do when students are struggling in your class. Be aware of other services on campus that may be available to Melissa. Virginia Wesleyan's Office of Counseling Services provides counseling or therapy to help students with test anxiety. Melissa may benefit from these or similar services. As an instructor, you can also explore ways to facilitate learning differences for all your students. As one example, some instructors allow all their students to drop one test score during the semester.

Deciding on specific accommodations.

Petra is a business major with a disability. As part of her accommodation plan the SDC has recommended that she be permitted to use a four-function calculator on exams. This semester she is enrolled in both College Algebra and Statistics. You, as her major professor and academic advisor, feel that a command of basic math skills is essential to advanced business courses and crucial to her success in the business world after graduation. **When is it appropriate to approach the SDC about accommodations you believe are incongruous with an academic program?**

Deciding whether or not an accommodation is reasonable for a specific class or course of study boils down to a concept known as "essential skills" or "essential functions." Essential skills are defined as those things that are central to the purpose of the course or program.

Remember, accommodations are never intended to water down the curriculum or substantially change the essential elements of a program. It is the responsibility of each department to determine what skills or competencies are essential to that particular course of study. Given this, keep in mind that the accommodations may be reasonable for one course within a program, but not others.

In this situation, having access to a simple four-function calculator would probably not prevent Petra from learning the essential concepts of the Statistics course. However, if the student's ability to perform addition, subtraction, multiplication, and division are essential for demonstrating competency of the College Algebra curriculum, it would not be appropriate to implement an accommodation that would circumvent the demonstration of essential skills for the major. In fact, doing so would compromise both the student's future and the integrity of the curriculum.

Implementing the accommodation plan.

James is a student in your chemistry class. From the beginning of the semester you have noticed that James is struggling, both in the computations of the work in class, and in the performance of the lab exercises. He is aware that his work is not improving and approaches the labs nervously. As the semester progresses, he sits further back and leaves class looking discouraged. Two weeks before the final exam, James approaches you after class. He has checked out some of the resources available for help on campus and is scheduled for testing for a learning disability. He requests that you allow him to postpone the final for two more weeks and retake the midterm exam. He is hoping by that time to receive testing accommodations through the SDC. **What are your obligations to provide accommodations retroactively?**

It is important to know that students can disclose a disability and request accommodations at any point in time. However, it is also important to know that as an instructor, you are not obligated to provide accommodations retroactively. Services can begin at the time of determining eligibility. If you have any further questions or concerns on an individual student situation, contact our SDC for clarification or suggestions.

Caitlin's accommodation plan requires a private room for testing. Usually the department office provides a quiet place, but on this particular day a mass mailing is underway with department aids busily moving in and out of the room and creating distraction. **What should you do if an accommodation does not go as intended?**

The key to a private room for testing is to provide room that is distraction free. It is up to the professor to arrange with the SDC who is going to administer the examinations. There are a variety of options for correcting accommodations that fail to go as intended.

Javier arrives at his professor's office to pick up lecture notes on Friday as planned. The professor however has been detained in a meeting with the college president and has forgotten to leave his notes. The midterm is Monday. **What happens if you as the professor forget to provide an accommodation?**

As the professor you decide on an appropriate solution. You may want to extend the deadline or discount test questions covered by those particular lecture notes.

Revising the accommodation plan.

Evan has a learning disability and is recommended time and half on exams. He isn't doing well and requests oral examinations. Without SDC approval, you agree. It becomes apparent, however, that the oral examinations are easily prompted and often slip into a personal tutorial. **Why is it important to communicate changes you make to the accommodation plan with the SDC?**

The purpose of the SDC is to assist professors and to help avoid uncomfortable situations like this. Adhering to the accommodation plan, as outlined by the SDC, may help you avoid difficult situations. Sometimes accommodation plans need adjustments or fine-tuning. Often, these minor changes can be handled between the student and the faculty member. Any adjustments that are made to the plan, regardless of how small they may seem, are best communicated with the SDC. Any major change to an accommodation plan should always be coordinated through the SDC in order to ensure it is both appropriate and effective for the student. Remember, accommodations should never compromise academic integrity.

Josh is in your education class. You have noticed throughout the semester that he is struggling with the take home assignments and that he scored poorly on tests. During class you have emphasized your willingness to work with students during office hours, yet you sense that for some reason, he is not able or willing to come for assistance. Since he receives note-taking assistance through the SDC, you decide to contact the SDC. You reach the SDC and request more information about Josh and the implications of his disability. You believe if you just knew more about his disability and personal situation, you would be in a better position to help. **What information about a student can you request from the SDC?**

All disability-related information is protected under the student's right of confidentiality. It is up to the student to determine how much information he or she is comfortable sharing. The SDC can discuss information on the student's accommodations and how these accommodations work in the classroom. But they will not be able to share information about the student's disability unless the student has given that permission.

Shannon, a first year student, begins to experience adverse side effects caused by changes in her medication (taken to help with her Attention Deficit Disorder) and her self-control begins to deteriorate. During her photography lab Shannon is aggressive towards a fellow student. The professor knows Shannon receives accommodations through the SDC but doesn't know what to do. **What should you do if a student with**

disabilities behaves in a way that is threatening to him or herself or threatening to other students?

When a student becomes a threat to him or herself or to other classmates, you are empowered to do whatever is necessary to maintain safety within your classroom. If the situation warrants, call campus security. At times it may be more effective to call the SDC. The important point is that students with disabilities be held to the same code of conduct as other students. Having a disability should never excuse disruptive or dangerous behavior.

Kelly is a sophomore who has a learning disability. She has approached you, as her instructor, and told you that she would prefer to work directly with you for the accommodations that she needs, rather than go through the SDC. **What, if any, are the dangers in providing accommodations to a student who obviously has a disability?**

Accommodations should always be coordinated through the SDC. Although the student's disability may seem obvious, the most appropriate accommodations may not be as clear. Remember, the purpose of accommodations is to alleviate the effects of the student's disability as they coincide with the requirements of your course. Let the SDC evaluate the student's needs and serve as a support to you in providing the accommodations. This will allow you to focus on your area of expertise, which is the content of your course!

Yung Su is a student from Hong Kong studying English as a Second Language. She is struggling in your English Literature class. She saw the statement regarding disability related services on the syllabus and would like to receive accommodations for your course. **What should you do?**

The Americans with Disabilities Act (ADA) applies to all students who meet the criteria established by the act, regardless of ethnicity or citizenship. However, the act **ONLY** requires that accommodations be provided to individuals who have documented disabilities recognized under the act. While Yung Su may be at a disadvantage in your course, the fact that she is not fluent in English does not qualify her for disability related accommodations. Feel free to make any adaptations or adjustments you would make for any of your students, but be clear to communicate that you are not providing disability related accommodations. Encourage her to go to the SDC with any need for accommodation related to a disability.

You have been asked to provide **Whitney**, a student in one of your courses, a distraction-free room for taking tests and quizzes as part of her accommodation plan. One day, after class attendance has been especially low, you decide to give your students a pop quiz. After you pass out the quiz, you ask that any students who have arranged for disability related testing accommodations to meet you outside the classroom. Whitney looks flushed and very upset as she picks up her things and files past her classmates to meet

you outside the classroom. **What went wrong in this situation and what could have been done differently?**

Although unintentionally, the instructor in this situation publicly divulged information that identified Whitney as having a disability. Keep in mind that students have the right to have all information related to their disability held confidential. Not many students wish to be identified as having a disability, especially among their peers. One thing that might have prevented such a situation from occurring is to anticipate and discuss in the implementation stage how accommodations for pop quizzes and other in-class tests would be handled.

Terry is a student who receives copies of your lecture notes and transparencies as part of his accommodation plan. You are happy to work with the SDC to provide accommodations to students who have disabilities, but have otherwise made it a requirement for your students to attend class and take their own notes in order to obtain lecture materials and information. A few weeks into the semester, you notice that class attendance is especially low. Before class one day, you see Terry and another student exchange money for what appears to be a copy of your lecture notes. **What can you do?**

Providing a disability related accommodation for a student should not in any way compromise the expectations for the other students in your class. To avoid situations like this from occurring, the most important thing that you can do is set guidelines in advance on how you expect the student to handle the accommodation. Meet with the student to discuss your expectations and ask the student to agree to and sign a contract or code of conduct outlining the use of the materials. If you feel a student has violated the agreement, contact the SDC to discuss the situation. Continue to provide the accommodation as specified in the accommodation plan until the SDC has advised you otherwise.

This concludes Section IV, Case Stories. Please proceed to Section V, Information on Specific Disabilities.

Section V. Information on Specific Disabilities.

Students with learning disabilities.

“Learning disability” is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical skills. These disorders are intrinsic to the individual, presumed to be caused by central nervous system dysfunction, and may occur across the life span. Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not, by themselves, constitute a

learning disability. Although learning disabilities may occur simultaneously with other disabilities, or with extrinsic influences, they are not the result of those conditions or influences (NJCLD, 1990).

Things to keep in mind:

Learning disability (LD) is:

1. Individual-specific. Commonly recognized as affecting performance in basic academic functions. Less frequent, but no less troublesome, are problems in organizational skills, time management, and social skills. Many adults with a LD may also have language based and/or perceptual problems;
2. Like interference on the radio or a fuzzy TV picture, incoming or outgoing information may become scrambled as it travels between the eye, ear, or skin and the brain;
3. Often inconsistent, it may present problems on Mondays, but not on Tuesdays. It may cause problems throughout grade school, seem to disappear during high school, and then resurface again in college. It may manifest itself in only specific areas, such as math or foreign language; and
4. FRUSTRATING! Persons with learning disabilities often have to deal not only with functional limitation, but also with the frustration of having to “prove” that their invisible disabilities may be as problematic as physical disabilities.

Characteristics of learning disabilities: Remember every student, both those with and without disabilities, has deficits in some of the following skill areas. Not every student with a learning disability has limitations in every area. Limitations vary from a very mild to a more severe form of

1. Reading and oral language skills,
2. Written language skills,
3. Organizational and study skills,
4. Mathematical skills, and
5. Social skills.

Learning disability is not:

A form of mental retardation or an emotional disorder. In fact, the marked discrepancy between intellectual capacity and achievement is what characterizes a learning disability.

Things you might do:

1. Select a well-written textbook. Try to choose one with a study guide or provide your own study guide and example test questions. Explain what constitutes a good answer;

2. Provide students with a detailed course syllabus early. Books take an average of six weeks to be tape-recorded. It is the responsibility of the student to make sure he or she contacts all available resources to obtain the proper materials;
3. Make all expectations of the class clear (e.g., grading criteria, materials to be covered, due dates, and test dates). Give assignments both orally and in writing to avoid confusion;
4. Present new or technical vocabulary visually (e.g., handout, overhead, or blackboard) and use it in context for added clarity;
5. Allow students to tape lectures for note taking purposes;
6. Allow students with a learning disability to demonstrate mastery of course material using alternative methods when applicable, such as note takers, accommodated testing, and tape recorders;
7. Encourage students to use available campus support services; and
8. Make copies of overhead materials, lecture notes, and expanded syllabi in hard copy or electronic formats.

Accommodations to consider:

1. Academic counseling or reduced course load;
2. Textbooks and printed course materials on cassette tape;
3. Readers, note takers, scribes, and assistive technology equipment;
4. Copies of overheads or class notes;
5. Exam accommodations (oral exams, computer assisted exams, reformatted tests);
6. Tape recorded lectures; and
7. Captioned films or videos.

Students with attention deficit disorder (ADD).

Attention Deficit Disorder (ADD), also referred to as Attention Deficit Hyperactivity Disorder (ADHD) is a neurobiological disorder that interferes with a person's ability to sustain attention or focus on a task or delay impulsive behavior. Its core symptoms are inattention, and/or over activity. Appropriate accommodations are often similar to those recommended for students with learning disabilities.

Things to keep in mind:

ADD and ADHD are characterized by varying degrees of difficulty in:

1. Attention span,
2. Impulse control, and
3. Hyperactivity (which may or may not be present).

Things you might do:

1. Encourage students to sit at the front of the class;
2. Give assignments and multi-step instructions in written form as well as verbally; and
3. Give directions one at a time.

Other associated difficulties may include: distractibility, memory problems, disorganization, procrastination, chronic boredom, low self-esteem, chronic lateness, restlessness, depression, mood swings, anxiety, relationship problems, employment problems, sense of underachievement.

Accommodations to consider:

1. Academic counseling/reduced course load;
2. Textbooks and printed course materials on cassette tape;
3. Readers, note-takers, scribes, and assistive technology equipment;
4. Copies of overheads and class notes;
5. Testing accommodations (oral exams, computer assisted exams, reformatted tests);
6. Private room for testing;
7. Tape recorded lectures;
8. Captioned films and videos;
9. Use of wireless FM systems; and
10. Assigned or arranged classroom seating.

This concludes Section V, Information on Specific Disabilities. Please proceed to Section VI, Resources.

Section VI. Resources

Services and Equipment

The following list contains some of the services and equipment that may be used in accommodating students with disabilities.

Services

- Campus orientation
- Registration assistance
- Taped textbooks

- Referral information
- Proofreading services
- Testing accommodations
- Counseling
- Tutor referral

Equipment

- Tape recorders
- Talking calculators

Information on Accommodated Testing

Students may qualify for various individualized accommodations on exams. The objective is to accommodate the student's learning differences, not to dilute scholastic requirements. Variations in the way a test is administered (i.e. oral exams, reformatted testing) are dependent upon eligibility. Instructors should contact the Student Disability Coordinator if they have specific questions regarding accommodated testing.

Information in Using Note-takers

Note-taking assistance may be provided to some students who have difficulty processing information. Assistance may be provided in one of the following ways:

- Faculty accommodations for notes
 - Provide lecture notes in the course syllabus, on reserve in the library, or on Blackboard
 - Tape record lectures and place them on reserve
 - Make overheads or Power Points available on Blackboard
- Tape recorders
 - Can be effective and permit qualified students to take notes independently
 - In accordance with Section 504 of the Rehabilitation Act of 1973, faculty may not deny a student with a disability the use of a tape recorder for notes
 - It is appropriate to ask the student to provide:
 - Document from the SDC verifying eligibility to tape-record lectures
 - Signed document defining use of tapes and the information in the lecture
- Volunteer note-takers
 - When possible, the SDC seeks assistance of volunteer note-takers who are recruited early in the class, usually during the first few days of the semester
 - Volunteers may be provided carbonless paper and asked to deliver the notes to the SDC
 - Notes may be recorded and copies made as needed

Universal Design for Learning (UDL)

Universal Design for Learning (UDL) is a way of making learning more attainable for all students, including students with disabilities. It may also reduce the need for some individualized accommodations.

Universal Design for Learning refers to the process of making course concepts and skills attainable to a greater number of students, regardless of their differing learning styles, physical, sensory organizational and linguistic abilities. Better than a “one-size-fits-all” approach, UDL stresses flexible delivery of content, assignment, and activities. UDL allows the learning process to be more accessible without singling out students with disabilities. The process emphasizes adjusting teaching practices and information presentation to meet varying educational needs and learning styles.

Examples:

- Using a variety of teaching strategies, such as models, animations, field trips, discussion groups, offer students opportunities to master information through discussion, application, and experience.
- Giving students guided notes, outlines, etc. provides an organizational; and conceptual structure to prepare for class and take better notes. Providing advanced summaries and outlines helps students prepare for new vocabulary and lap out upcoming events.

Suggestions for Improving Student Performance

1. Provide students with a detailed course syllabus. Make it available before the beginning of the semester, if possible.
2. Clearly spell out expectations before the class begins (e.g., grading, materials to be covered, due dates).
3. Start each lecture with an outline of the material to be covered that period. At the conclusion of class, briefly summarize key points.
4. Speak directly to students. Use gestures and natural expressions to convey further meaning.
5. Present new or technical vocabulary on the blackboard or use a student handout. Terms should be used in context to convey greater meaning.
6. Give assignments both orally and in written form to avoid confusion.
7. Announce reading assignments well in advance for students who are using taped material. It takes an average of six weeks to get a book tape-recorded.
8. Allows students to tape lectures.
9. Provide study questions for exams that demonstrate the format as well as the content of the test. Explain what constitutes a good answer and why.

10. If necessary, allow students with disabilities to demonstrate mastery of course material using alternative methods (e.g., extended time limits for testing, oral exams, taped exams, individually proctored exams in a separate room).
11. Permit use of simple calculators, paper, and speller's dictionaries during exams.
12. Provide adequate opportunities for questions and answers, including review sessions.
13. If possible, select a textbook with an accompanying study guide for students.
14. Encourage students to use campus support services (e.g., pre-registration, assistance in ordering taped textbooks, alternative testing arrangements, specialized study aids, peer support groups, study skills, academic tutorial assistance).

Syllabus Statement

"Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Student Disability Coordinator, (provide SDC contact, phone number, and office location) to coordinate reasonable accommodations for students with documented disabilities." (modified from Partnership Grant, The Ohio State University)

Glossary

Accommodation letter or form: A letter or form prepared by the DSO that explains the approved accommodations to faculty and identifies the role of the faculty member in the provision of these accommodations.

Alternate format materials: The production of print materials in a format that enables a person with a vision impairment to read the materials using adaptive skills or technologies. Alternate format materials may include large print, audiotapes, electronic text, and Braille.

Americans with Disabilities Act (ADA): Civil rights legislation signed by President George Bush on July 26, 1990. Prohibits discrimination against individuals with disabilities in the areas of employment, state and local government, public accommodations and services, transportation, and telecommunications.

Architectural accessibility: The application of design principles and construction that allows persons with disabilities to use facilities such as buildings, sidewalks, entryways, elevators, restrooms and water fountains with maximum independence and in accordance with current building codes.

Assistive or Adaptive technology (AT): Equipment or software items designed or used to compensate for areas of disability or impairment. It allows persons with disabilities the same access to information and production as their peers.

According to Technology Related Assistance for Individuals with Disabilities ACT of 1988 (Tech Act; P.L. 100, 407), an AT device refers to “any item, piece of equipment or product system, whether acquired commercially off-the-shelf, modified, or customized, that is used to increase, maintain or improve the functional capabilities of individuals with disabilities.” Raskind and Bryant (1996) note that in some instances the device may assist, augment, or supplement task performance in a given area of disability; while in others, it may be used to circumvent or bypass specific deficits entirely.

Attention deficit hyperactivity disorder (ADHD): A neurobiological disorder that interferes with a person’s ability to sustain attention or focus on a task and to control impulsive behavior.

Auxiliary aids: Services, equipment, and procedures that allow students with disabilities access to learning and activities in and out of the classroom. They include, but are not limited to, sign language interpreters, real-time captioning, adaptive technology, alternative media (Braille, tapes, scanned text, enlarged print), readers, and scribes.

Captioning: A process that allows individuals who have hearing impairments to have access to oral information on video or film presentations. Captions are printed scripts of the oral information that appear on the bottom of the screen. Captioning is accomplished with various technologies, including stenography and specialized software.

Closed Circuit Television (CCTV): An enlarging device, used by persons with vision impairments or learning disabilities, composed of a zoom lens and a television screen or computer monitor to enlarge print or visual materials.

Confidentiality: Refers to privacy of medical and academic information. Students in higher education have the right to confidentiality of disability related information. DSO offices may not release medical information to faculty or others without a signed release of information. Faculty should use caution not to disclose information shared by students regarding their disability or accommodations with colleagues or other students.

Eligibility for disability related services: In order to be eligible for accommodations under the Americans with Disabilities Act, students must have a documented disability that severely limits the performance of a major life activity as compared to the average person. The documentation must be professionally credible, comprehensive, and support the necessity of the requested accommodations (see Documentation).

Direct threat: A significant risk or substantial harm to the health and safety of the individual or others that cannot be eliminated or reduced by reasonable accommodation.

Disability (person with): “Any individual who has a physical or mental impairment that substantially limits one or more of the major life activities of such an individual; any individual who has a record of such an impairment; and any individual who is regarded as having such an impairment” (ADA, 1990). Major life activities may include, but are not limited to, walking, hearing, seeing, learning, caring for oneself, breathing, performing manual tasks, and working.

Disability related or functional limitations: Restrictions resulting from a disability that prevent an individual (without accommodations or auxiliary aids) from participating in major life activities including, but not limited to, walking, learning, seeing, hearing, and learning.

Documentation: Comprehensive written validation of a person’s disability and the functional limitations of the disability provided by an appropriate professional qualified to make a specific type of diagnosis. The documentation must be given to service providers before services, accommodations and auxiliary aids can be approved. Faculty generally do not have access to this medical information. (See Confidentiality.)

Dyslexia: One of several distinct learning disabilities. A specific language-based disorder characterized by difficulties in single-word decoding. Dyslexia is manifest by difficulty with different forms of language, including problems with reading and acquiring proficiency in writing and spelling. (Adapted from the International Dyslexia Association.)

Essential functions or requirements: Refers to job duties of the employment position that the person with a disability holds or desires. Within the scope of the ADA, essential functions of the job are those “basic job duties that an employee must be able to perform, with or without reasonable accommodation” (U.S. Equal Employment Opportunity Commission [EEOC], 1991, p. 3). Evidence whether a particular function is essential is based on a number of sources including, but not limited to “an employer’s judgment, written job descriptions, amount of time performing the function, collective bargaining agreements, work experience of past and or present employees in similar jobs.” Essential functions in higher education are discipline specific (p. 84).

Essential skills: The skills that the course is intended to teach so that an individual can gain the competencies of the program or course. Essential skills are critical to the purpose of the course, should not be “watered down”, and are the responsibility of the instructor to determine.

“Has a record of”: ADA provisions protecting those who may experience discrimination based on a history of disability. For example, an individual who has a history of cancer is protected from discrimination.

Interpreter: A trained professional who assists individuals who are deaf with a variety of communication services, including sign language and tactile or oral interpretation of verbally expressed communication.

Invisible or hidden disability: Disabilities that are not readily apparent or observable. Invisible disabilities include learning disabilities, attention deficit disorder, psychological disabilities, medical or chronic health impairments, visual impairments, and hearing impairments.

“Is regarded as having”: ADA provisions protecting individuals who may not have a disability as defined by ADA, but is treated or subjected to discrimination as if they do. For example, a person who has a chronic medical condition but is not limited in any way is protected under ADA from discrimination and harassment

Learning disability: A permanent disorder that interferes with integrating, acquiring, and or demonstrating verbal or nonverbal abilities and skills. Frequently, there are some processing or memory deficits. Individual may have difficulty with reading spelling, written expression, mathematics, problem solving, listening, and oral expression. The disorder is often inconsistent and each individual has his or her unique set of characteristics.

Legally mandated services: Section 504 of the Rehabilitation Act of 1973, as amended, requires that postsecondary institutions provide services and accommodations to qualified students including interpreters for the deaf, note taking assistance, readers, accommodated testing, extended time to complete program requirements, and other reasonable modifications as determined on a case by case basis.

Major life activity: Basic activities that the “average person” could perform with little or no difficulty, including caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

Medical disability: A disability resulting from a medical condition. An individual with a medical disability may exhibit several functional limitations. Conditions that may fall under this category are multiple sclerosis, diabetes, seizures disorder, chronic fatigue, multiple chemical sensitivity, and respiratory conditions.

Professional licensure or certification: The requirements of obtaining a license or certification to practice a trade or profession which is regulated by the profession and applicable legislation in order to provide assurance of the individual’s competency to practice.

“Qualified individual with a disability”: In employment: An individual with a disability who satisfies the qualifications for employment and can perform the essential functions of such position with or without reasonable accommodation. In higher education: Individual who meets the academic and technical standards for admission to or participation in an education program or activity and can, with or without accommodation, perform the essential tasks involved in the course or program.

Real time captioning: An auxiliary aid for students with hearing and other impairments that allows them instant visual access to lectures. The lecture content is typed verbatim by a trained professional as the lecture occurs. Students view the typed captions on a monitor or other display device.

Reasonable accommodations: An adjustment made to assist a student and or employee that allows equal participation in a public service, program, and or employment opportunity. In the workplace, examples of reasonable accommodations include (a) Modification or adjustment to a job application process that enables a qualified applicant with a disability to be considered for the position he or she desires; (b) modifications or adjustments to the work environment or to the manner or circumstances under which the position is customarily performed that enables qualified individuals with disabilities to perform the essential functions of that position; or (c) modifications or adjustments that enable the employee with a disability to enjoy equal benefits and privileges of employment as are enjoyed by other similarly situated employees without disabilities.

In the educational setting, reasonable accommodations may involve modification or adjustments that provide equal access to programs, services and activities of the institution, including classroom access, internships and field experiences, housing facilities, and recreational programs. Access may be achieved through the provision of auxiliary aids, assistive technologies, and modification of instructional and examination practices.

Reasonable accommodations do not include lowering of academic standards, alteration of the fundamental nature of programs, personal services, or accommodations that result in undue financial or administrative burden. Undue hardship is determined based on the total resources of the institution, not the individual resources of a program or department (see Undue Hardship).

Rehabilitation Act of 1973: This law prohibits discrimination on the basis of disability in federally funded programs and activities and in programs and activities conducted by the federal government. Section 504 of the law states: No otherwise qualified handicapped individual in the United States... shall..., solely by reason of his or her handicap, be excluded from the participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance.

Scribe: A person provided as an accommodation to assist in transferring verbally expressed communication to a written form. This is generally used for persons who are unable to write due to their disability.

Section 504 of The Rehabilitation Act of 1973: The first law to specifically address the needs of students with disabilities. It is a civil rights statute intended to prevent discrimination on the basis of disability. Section 504 requires that institutions of higher education provide students with disabilities the same opportunities as nondisabled students.

Syllabus statement: A statement included in the course syllabus regarding your college or university's policies on providing services and accommodations to students with disabilities.

Substantial limitation: Inability or significant restriction in the condition, duration, or manner in which a person is able to perform any basic or major life activity.

Factors that may be considered in determining whether there is a substantial limitation include (a) the nature and severity of the impairment, (b) the duration of the impairment, (c) the permanent or long-term impact of the impairment (29 C.F.R. § 1630.2[j]).

Technical standards: All nonacademic criteria that are found to be essential to participate in a course or program.

Unadulterated curriculum: Refers to curricula that have the same expectations and impose the same standards of performance on students with disabilities as other students. Disability accommodations must not water down the curriculum, lower standards, or waive essential skills or knowledge.

Undue hardship: Refers to an accommodation request requiring significant difficulty or expense in the nature and cost of the accommodation in relation to the size, financial resources, and type of employment situation. This is in determining whether an accommodation is reasonable and, whether it must be implemented (see Reasonable Accommodations). Denial of an accommodation based on "undue hardship" must be made by the institution's legal counsel, not by faculty or departmental leadership.

Universal design for learning: As used in education, universal design for learning refers to the process of making the goals of learning attainable by all students regardless of learning style or physical, sensory, organizational, or linguistic abilities. It emphasizes meeting the unique needs of each student by providing a variety of ways for students to access and engage the learning process.

Web accessibility: Defines standards for promoting access to electronic and information technology, including computers, software, and electronic office equipment. It provides technical criteria specific to these technologies and states requirements for making these products accessible to people with disabilities.

Online information.

Association on Higher Education and Disability (AHEAD). www.ahead.org
According to the Association on Higher Education and Disability Website: "The Association on Higher education and Disability (AHEAD) is an international, multicultural organization of professionals committed to full participation in higher education for persons with disabilities. The Association is a vital resource, promoting

excellence through education, communication and training. The association's numerous training programs, workshops, publications, and conferences are planned and developed by its elected officials and governing board and carried out by the full time Executive Director and staff."

Disability Access Information and Support (DAIS). www.daisweb.com

The Disability Access Information and Support (DAIS) Website is a resource for education and training on issues of disability related to higher education. Publications on disability issues are available. The site also houses a bulletin board.

Disability Information for Students and Professionals. www.abilityinfo.com

This is a resource for students and professionals who have disabilities or work with others with disabilities. There is a news ticker that updates current events from around the world concerning disabilities, links to over 200 sites, and a forum for collaboration and discussion.

General information for faculty:

DO IT Prof at University of Washington. www.washington.edu/doit/Faculty/Prof/

The DO IT Prof program has compiled a resource page called "The Faculty Room" for faculty and administrators in postsecondary institutions. It is designed as a ready resource for quick or comprehensive information on topics such as accommodation strategies, universal design principles, rights and responsibilities of students with disabilities and faculty, etc.

Fast Facts for Faculty Publications. <http://telr.osu.edu/dpg/fastfact/index.html>

This Ohio State University site is designed to increase faculty knowledge and awareness. The "Fast Facts for Faculty" are consolidated information sheets for faculty and administrators on the accommodation process, rights and responsibilities, technology's role in effective teaching, designing of accessible syllabi, and universal design for learning concepts.

George Washington University National Clearinghouse on Postsecondary Education for Individuals with Disabilities (HEATH)

The home page for the HEATH Resource Center holds a number of publications that closely examine a broad range of topics on postsecondary education and disability. It also offers answers to FAQs and provides links to other sites.

Promoting Access for Deaf and Hard-of-Hearing Students, Project ACCESS.

Project ACCESS is located at the Rochester Institute of Technology. This website, called Class Act, is intended to improve existing teaching practice regarding "access" to learning for deaf and hard of hearing students in postsecondary classrooms.

Universal design for learning:

Center for Applied Special Technology (CAST).

The CAST Website uses Universal Design for Learning as a blueprint to combine research and technology with effective teaching strategies. It contains information on the development of innovative, technology based educational resources and strategies. An evaluation program can also be found here that will check your website for accessibility. Once the website passes the evaluation, the “Bobby” logo can be displayed on your website.

FacultyWare at University of Connecticut.

FacultyWare is an online resource for faculty on Universal Design for Instruction. This website displays examples of inclusive practices, instructional techniques, or “products,” used by faculty to incorporate these principles. Faculty can view instructional products submitted by other faculty members or submit one of their own.

Universal Instructional Design Project (UID).

This University of Guelph Website provides valuable knowledge and practical solutions for faculty and teacher’s assistants in higher education. The site gives practical solutions for a wide range of course activities such as creating websites, lab work, and assessment. A link entitled “Learning Disabilities and E Learning” also addresses how digital format can benefit students with learning disabilities.

To build a website:**Web Accessibility Initiative (WAI).**

The Web Accessibility Initiative strives to ensure equal access of all Internet sites. This site contains information on legal policies for access, tips on constructing a site, news about universal access, and resources for website evaluation.

Center for Applied Special Technology (CAST).

The CAST Website uses Universal Design for Learning as a blueprint to combine research and technology with effective teaching strategies. It contains information on the development of innovative, technology based educational resources and strategies. An evaluation program can also be found here that will check your website for accessibility. Once the website passes the evaluation, the “Bobby” logo can be displayed on your website.

Georgia Tech Research on Accessible Distance Education (GRADE).

GRADE provides research, training, technical assistance, and information on improving the accessibility of distance education for students with disabilities at universities and colleges throughout the nation.” A free, ten-module online tutorial about making distance learning accessible for students with disabilities is available.

WebAim, Web Accessibility in Mind.

Web Accessibility In Mind (WebAIM) deals with topics relating to the expansion of the Web's potential for people with disabilities. It offers specific information on how to design web pages that are more accessible to people with special needs and describes the regulations that are now in place.

General disability resources:**disABILITY Information and Resources at Jim Lubin.**

This website is a collection of links to disability resource and information. There are sections for political issues and newsgroups on current topics.

Apple, Special Needs.

According to Apple Computer's Disability Resources Website: "Since 1985, when we created the industry's first Disability Solutions Group, Apple Computer has been at the forefront of making computer technology that meets the special needs of children and adults with disabilities around the globe. It is our belief that computers do not just make people more productive, but that they have an almost magical way of increasing an individual's independence, self expression, participation, choices and self esteem."

Assistive Technology, Inc.

According to Assistive Technology, Inc.'s Website: "We provide innovative solutions to help people with learning, communication, and access difficulties lead more independent and productive lives." This site provides services, products, information, training, and technical support in the area of assistive technology.

Legal issues:**Americans with Disabilities Act.**

This is the Department of Justice's homepage on ADA and all its components. The site keeps track of all the latest lawsuits and proposals concerning the ADA. It also offers downloadable versions of manuals that facilities can use to aid the compliance to federal law.

Specific disabilities:**Attention Deficit/Hyperactivity Disorder (ADHD):**

Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD).

www.chadd.org

This site is an excellent resource for learning about Attention Deficit/Hyperactivity Disorder (ADHD). It covers legislative information and provides results for various research studies.

Learning Disabilities:

LD Online. www.ldonline.org

This site is an interactive community for parents, teachers, and students to share information on learning disabilities. The sections include first person perspectives and message boards with emerging issues to date. There are several suggestions for teaching techniques and ideas on how to assess a student with Learning Disability. Overall, the site gives background information on Learning Disabilities and provides collaboration for those that work with Learning Disabilities.

The Literacy and Learning Disabilities Special Collection, National Center for Adult Literacy and Learning Disabilities. <http://ldlink.coe.utk.edu/home.htm>

This is the site of the National Adult Literacy and Learning Disabilities Centers. Its purpose is to improve adult education for people with disabilities. Assessment and improving performance are among the topics that this organization addresses.

Parent advocacy and postsecondary education:

Parent Advocacy Coalition for Educational Rights (PACER).

This website is an extensive resource for parents and students with disabilities on a wide variety of topics. Therefore, to reach the specific information on postsecondary information, check the ASD Website for an updated page address.

Diversity bulletin board:

Diversity Web, An Interactive Resource Hub for Higher Education.

This website promotes systematic changes in universities and institutions regarding diversity issues. It also houses "diversity web" which is a search engine for diversity issues in colleges nationwide. It is an excellent resource for systemic change and implementing systemic change in colleges.

Links to useful websites:

DRM, Disability Resources Organization.

According to the Disability Resources' Website: "Disability Resources, inc. is a nonprofit organization established to promote and improve awareness, availability and accessibility of information that can help people with disabilities live, learn, love, work and play independently." One section (<http://www.disabilityresources.org/LD.html>) provides links to LD websites.

Illinois Assistive Technology Project.

The Illinois Assistive Technology Project helps people find the types of assistive technology they need. This site has information and assistance staff to answer questions and help people find fun

Thank you for completing the accommodating students with disabilities training. You will be receiving an invitation to complete the post-training test in the near future. You may also be contacted and invited to participate in a post-training interview. I hope you will consider implementing some of the accommodations presented and find the information useful in your teaching.

Appendix J

Letter to Survey Participants

Dear Colleagues,

As many of you know, I am preparing to conduct research for my doctoral dissertation here at Virginia Wesleyan. I am investigating the impact of on-line training on college faculty attitudes towards and knowledge of students with disabilities. Participants in this research will be asked to complete a Scale of Attitudes Toward Disabled Persons, a Disability Knowledge Questionnaire, read an on-line training manual, and agree to be interviewed after the training to discuss their impressions of the training and any experiences they have had with students with invisible disabilities. Completion of these instruments should take no more than 45 minutes.

Participants will be asked to read an on-line training manual related to the provision of accommodations for students with learning disabilities and Attention Deficit Disorder. Completion of the training manual must be concluded within a two-week period and can be read in one sitting or during multiple sessions. Participants should be able to read the entire manual in 45 minutes. You were selected to participate in this study because you hold faculty status at Virginia Wesleyan.

While the data collected will be analyzed and used to complete my degree requirements, it more importantly will provide you with valuable information about students with disabilities, as well as appropriate accommodations that may be used in and out of the classroom.

The survey does not ask for any information that will identify you as an individual, and your responses will remain completely anonymous. At the conclusion of data collection a buffet reception will be provided as a small token of appreciation for your participation.

If you would like a copy of the results of this study, or have any questions that need clarified, please feel free to contact me at wpollock@vwc.edu or x-3369. I am extremely grateful for your willingness to assist me with my research.

Sincerely,

Wayne Pollock

Wayne M. Pollock
5028 Gatehouse Way
Virginia Beach, Virginia 23455
(h)(757) 460-0121
(w) (757) 455-3369

wpollock@vwc.edu

EDUCATION

Doctoral Student, Educational Leadership 5/01 to present
Old Dominion University

M.S. Recreation Administration/Rehabilitation Counseling, 1983
University of North Carolina-Chapel Hill

B.S. Health and Physical Education, 1974
West Chester University

EXPERIENCE

Instructor 8/00 to present
Virginia Wesleyan College
Norfolk/Virginia Beach, Virginia

Coordinator, Recreational Therapy 9/86 to 3/97
Coordinator, Recreational Therapy & Counseling Services 3/97 to 8/00
Durham Regional Hospital
Durham, North Carolina

- * Plan, coordinate, implement, recreational therapy programs for Behavioral Health Service
- * Prepare, manage, administer budget
- * Develop, write, review, monitor policies and procedures
- * Recruit, train, supervise staff, students, volunteers
- * Deliver and supervise direct patient care via group therapies and 1:1 counseling
 - * Monitor compliance with Joint Commission for Accreditation of Healthcare Organizations standards
- * Plan, coordinate, and conduct continuing education programs
- * Conduct educational presentations to community agencies
- * Manage and direct all aspects of counseling services

Instructor 8/96 to 12/96
University of North Carolina - Greensboro
Greensboro, North Carolina

North Carolina A&T State University 1/98 to 5/98
Greensboro, North Carolina

University of North Carolina - Chapel Hill 8/98 to 12/98
Chapel Hill, North Carolina

Coordinator, Project LIVE 1/85 to 8/86
Raleigh Vocational Center
Raleigh, North Carolina

- * Developed and implemented federal grant project
- * Counseled severely disabled adults in leisure, fitness, and nutrition
- * Initiated community contacts for resource development community reintegration
 - * Prepared annual federal reports and grant applications
- * Delivered numerous presentations on program development and evaluation

Mental Retardation Habilitation Coordinator

10/82 to 12/84

Murdoch Mental Retardation Center

Butner, North Carolina

- * Managed total program for residents with mental retardation and physical disabilities
- * Reviewed and monitored programs
- * Chaired interdisciplinary treatment team meetings
- * Supervised Developmental Technicians and Educational Specialists
- * Coordinated individualized resident treatment plans

Teacher/Coach

8/78 to 6/81

Guy B. Phillips Middle School

Chapel Hill, North Carolina

- * Taught health and physical education
- * Coached soccer, basketball
- * Supervised student teachers

Camden County Vocational Technical High School

9/74 to 6/78

Pennsauken, New Jersey

- * Taught health and physical education
- * Coached soccer, basketball
- * Organized intramural program
- * Initiated club programs
- * Advised class officers

PROFESSIONAL CERTIFICATIONS

Certified Therapeutic Recreation Specialist (CTRS) # 14504

National Council for Therapeutic Recreation Certification

PROFESSIONAL MEMBERSHIPS

American Therapeutic Recreation Association

American Therapeutic Recreation Foundation

Virginia Therapeutic Recreation Association

Virginia Recreation & Park Society
 North Carolina Recreation Therapy Association
 Rho Phi Lambda, Honorary Professional Recreation, Park, and Leisure
 Service Fraternity

PROFESSIONAL INVOLVEMENT/ACCOMPLISHMENTS

Numerous presentations at local, state, regional, and national professional
 conferences

American Therapeutic Recreation Association
 Chapter Affiliate Representative, 1990
 Professional Practice Coordinator, 1993-94
 Presidential Award, 1994
 Specialty Workshop Coordinator, 1995

Mid-Eastern Symposium on Therapeutic Recreation
 Evaluation Committee, 2001

National Council for Therapeutic Recreation Association
 Passing Score Committee, 2001
 Test Item Committee, 2007

North Carolina Recreation and Park Society
 Therapeutic Recreation Week Committee, Co-chair, 1986, 1987
 Therapeutic Recreation Division, Chair, 1988

UNC-CH Project LIFE, Advisory Board, 1987, 1988

North Carolina Recreation Therapy Association
 President, 1991
 Professional Development Committee, Co-chair, 1991, 1993, Chair,
 1992
 Newsletter Co-Editor, 1992-95
 Conference Committee, 1993-95, Co-chair, 1992
 Distinguished Member Award, 1993
 Presidential Award, 1992, 1993, 1995

North Carolina Therapeutic Recreation Certification Board
 Board of Directors, 1994-97, Vice-Chair/Treasurer, 1995-
 96
 Professional Conduct Committee Chair, 1995-97,
 1999-2000

Southeast Therapeutic Recreation Symposium
 Board of Directors, 1994-2009, Secretary, 1995-96, Chair, 1998-
 99, 2006-07

University of North Carolina - Chapel Hill
Practitioners Advisory Committee, 1996-98

INSTITUTIONAL INVOLVEMENT

Teaching

Courses taught:

Introduction to Recreation and Leisure Studies
Leadership & Analysis of Recreation
Leadership and Analysis of Recreation Lab
Design and Maintenance of Recreation Facilities
Pre-Internship Seminar
Introduction to Therapeutic Recreation
Therapeutic Recreation Program Principles
Internship Preparation
Treatment Techniques in Therapeutic Recreation
Clinical Skills for Therapeutic Recreation
Freshman Seminar

Advising:

Provide academic advising for undergraduate students
Annually supervise undergraduate students enrolled during their internships

Institutional Service:

Interviewer, VWC Scholarship Competition, 2003, 2005, 2007 - 2009
Member, Disability Awareness Committee, 2000 - present
Advisor, Recreation Majors Club, 2000 - 2004
Interim representative, Community Review Board, 2003
Community Review Board, 2004-present
VWC Neighborhood Outreach Advisory Board, 2003
Member, Faculty Standards & Welfare Commission, 2003
Educational Programs Commission 2004-2007, fall 2008
Alternate, Honor's Council, 2003-2006
Honor's Council, 2007-2009
Committee on Academic Standing, 2006-2007

Professional Speaking Engagements:

Administering the Leisure Diagnostic Battery
Greensboro Area Health Education Center
Moses H. Cone Rehabilitation Center, Greensboro, NC
September 26, 1986

Administering the Leisure Diagnostic Battery
 North Carolina Recreation & Park Society
 Therapeutic Recreation Division Workshop
 Dorothea Dix Hospital, Raleigh, NC
 October 20, 1986

Therapeutic Recreation in North Carolina: What Do Our
 Organizations Offer?
 North Carolina Recreation & Park Society
 Therapeutic Recreation Division Annual Conference
 Ramada Inn, Winston-Salem, NC
 October 4-5, 1990

Relaxation Training
 Nursing In-service Durham Regional Hospital
 Durham, NC
 June 25, 1992

Assertiveness Training: Leadership Series
 Durham Regional Hospital
 Durham, NC
 January 13, 1993

Interpersonal Communication Series
 Ambulance Division, Durham Regional Hospital
 Durham, NC
 January 15, 1993, January 29, 1993

Interpersonal Communication: Necessary Skills (Series)
 Structure House
 Durham, NC
 June 13, 1993, September 26, 1993, November 27, 1994

Interpersonal Communication: Necessary Skills for the
 Therapeutic Recreation Specialist and
 other Healthcare Workers
 North Carolina Recreation Therapy Association Annual
 Conference
 Friday Center, University of North Carolina
 Chapel Hill, NC
 November 2, 1993

A Funny Thing Happened on the Way to Quality
 Keynote Address
 Southeast Therapeutic Recreation Symposium

Asheville, NC
July 28, 1994

So What Do I Do Now? Resources for Recreational Therapists
North Carolina Recreation Therapy Association Annual
Conference
Friday Center, University of North Carolina
Chapel Hill, NC
November 7, 1994

So What Do I Do Now? Resources for Recreational Therapists
North Carolina Recreation Therapy Association
Student Issues Forum
Friday Center, University of North Carolina
Chapel Hill, NC
March 31, 1995

Holiday Stress Management
Baptist Retirement Home
Winston-Salem, NC
December 12, 1995

Interpersonal Communication Skills
Brown Bag Series; Durham Regional Hospital
Durham, NC
March 12, 1996

Body Language & Communication Skills, Part I
BASF, Research Triangle Park
Durham, NC
April 12, 1996

Body Language & Communication Skills, Part II
BASF, Research Triangle Park
Durham, NC
May 22, 1996

Intervention Techniques and Resources
North Carolina Recreation Therapy Association Annual
Conference
Friday Center, University of North Carolina
Chapel Hill, NC
October 22, 1996

Life Management Skill Training
Leadership Academy, Durham Regional Hospital

Durham, NC
February 6, 1997

Balancing Life Stressors: Just for the Health of It!
North Carolina Recreation & Park Society Annual Conference
Sheraton Inn, Raleigh, NC
February 27, 1997

Life Management Skills: Assertive Communication & Stress
Management
Health Services Center, Durham Regional Hospital
Durham, NC
March 19, 1997

Assertive Communication
Leadership Academy, Durham Regional Hospital
Health Services Center
Durham, NC
February 5, 1997; May 8, 1997

Leisure & Recreation
Wellness Institute, Durham Regional Hospital
Durham, NC
May 14, 1997

I Wish I'd Have Said That!: Assertive Communication Skills
Southeast Therapeutic Recreation Symposium
Wilmington, NC
June 6, 1997

Intervention Techniques & Strategies
North Carolina Recreation Therapy Association Student Issues
Forum
UNC Hospitals
Chapel Hill, NC
April 3, 1998

Social Problems in America; Substance Abuse
Appalachian State University
Boone, NC
February 9, 1999

Life Management Skills: Just for the Health of It!
Novartis AH USA
Greensboro, NC
May 19, 1999

Intervention Techniques & Resources for Recreational Therapists
 Southeast Therapeutic Recreation Symposium
 Pigeon Forge, TN
 July 15, 1999

I'm Sorry, Perhaps You Didn't Weren't Listening; My Head is on
 Fire
 Effective Communication Skills & Potential Barriers to
 Communication
 Therapeutic Recreation Workshop
 Longwood College, Farmville, VA
 October 27, 2000

Importance of Play
 Cook Elementary School
 Virginia Beach, VA
 November 1, 2000

Intervention Techniques & Resources for Recreational Therapists
 North Carolina Recreation Therapy Association Student Issues
 Forum
 East Carolina University
 April 6, 2001

So What Do I Do Now?
 Intervention Techniques & Resources for Recreational Therapists
 Mideast Symposium on Therapeutic Recreation
 Williamsburg, VA
 May 7, 2001

I Wish I'd Have Said That
 Behavioral Medicine Competency Track
 Southeast Therapeutic Recreation Symposium
 Charleston, SC
 July 18, 2001

Employment Trends in Therapeutic Recreation
 Virginia Recreation & Park Society Annual Conference
 Williamsburg, VA
 December 9, 2001

Teamwork
 Virginia Wesleyan Leadership Course
 Virginia Wesleyan College
 Norfolk, VA

February 19, 2002

Professional Image
Mideastern Therapeutic Recreation Symposium
Williamsburg, VA
May 17, 2004

Essentials of Effective Communication & Helping Relationships
Southeast Therapeutic Recreation Symposium
Greenville, South Carolina
July 14, 2004

Effective Methods to Handle Stress
Southeast Therapeutic Recreation Symposium
Greenville, South Carolina
July 14, 2004

Faculty Reflection: Fitness & nutrition in My Life
Virginia Wesleyan College
Portfolio class
November 8, 2005

Working with Resistance
Southeast Therapeutic Recreation Symposium
Duluth, Georgia
July 19, 2007

Essentials of Effective Communication & Helping Relationships
American Therapeutic Recreation Association
Teleconference
July 26, 2007

Adapting Activities
Virginia Recreation & Park Society
Summer Survival Training
Norfolk, Virginia
June 7, 2008

Behavior Management
Virginia Recreation & Park Society
Summer Survival Training
Norfolk, Virginia
June 7, 2008

Working with Resistance II
Southeast Therapeutic Recreation Symposium

Gatlinburg, Tennessee
July 17, 2008

Processing the Experience: The Therapeutic Value of Experiential
Learning
Southeast Recreational Therapy Symposium
Myrtle Beach, South Carolina
April 8, 2009