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The effects of the FACTS workshop on faculty attitudes toward community college students with learning disabilities

Rob Stewart

To the Graduate Council:

I am submitting herewith a dissertation written by Rob Stewart entitled "The effects of the FACTS workshop on faculty attitudes toward community college students with learning disabilities." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration.

Norma T. Mertz, Major Professor

We have read this dissertation and recommend its acceptance:

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

To the Graduate Council:

I am submitting herewith a dissertation written by Robert Thomas Stewart entitled "The Effects of the FACTS Workshop on Faculty Attitudes Toward Community College Students with Learning Disabilities." I have examined the final paper copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration and Policy Studies.

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We have read this dissertation
and recommend its acceptance:

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Dr. Pat Freeland

Dr. Ralph Brockett

Accepted for the Council:

Associate Vice Provost and
Dean of Graduate Studies

The Effects of the FACTS Workshop on Faculty Attitudes Toward Community College Students With Learning Disabilities

A Dissertation

Presented for the

Doctor of Education

Degree

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Robert Thomas Stewart

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DEDICATION

This dissertation is dedicated to Steve Bean who lived this experience along with me and never let me believe for one moment that I was not capable of seeing it through and to my mother, Margie Bruce Stewart, who always championed the values of dedication, hard work and a good education.

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ABSTRACT

The purpose of this study was to determine the effects of the FACTS workshop on faculty attitudes toward community college students with learning disabilities. The Attitudes Toward Students with Learning Disabilities Survey was used to measure faculty attitudes toward LD students before and after the FACTS workshop, a researcher-designed training intervention. The study examined responses from 264 faculty members from 7 different community colleges in western North Carolina using an experimental group (n = 214) and a control group (n = 50).

The study was guided by two hypotheses. Hypothesis 1 (HO_1) was that there would be no significant differences between the mean gain scores of faculty attitudes before and after the FACTS workshop. To address this hypothesis, a paired-samples t-test was completed comparing the mean pretest and posttest scores of participants. Hypothesis 2 (HO_2) was that there would be no significant differences in attitudes and participants' years of teaching experience, their amount of contact with LD students, the number of LD students in their classes, their gender or academic fields. To address this hypothesis, a non-directional Analysis of Variance (ANOVA) was done.

HO_1 was rejected since there were significant differences in the pre-and post-test scores of the experimental group. HO_2 was not rejected for years of teaching experience, gender or academic field, but was rejected for the amount of contact with LD students and the number of LD students in participants' classes. Significant differences were found between faculty members' attitudes and the amount of contact they had with LD students and with the number of students they typically taught each semester. The more

LD students the faculty had had, and the greater their contact with LD students, the more positive their attitudes toward LD students.

The results of the study confirm that the FACTS workshop significantly improved faculty attitudes toward LD students. Further, the study identified two factors that were positively related to faculty attitudes toward LD students: the number of LD students faculty typically had in their classes and the amount of experience they had working with LD students.

TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

CHAPTER I
INTRODUCTION

Background

Heath Resource Center, a national clearinghouse on students with disabilities in higher education, states that approximately 10% of all college freshmen report having a disability. Of those students, one-third has a learning disability (Heath, 1999). A learning disability is defined as:

> "A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations" (Public Law 94-142, as cited by Jordan, 1996).

Students with learning disabilities (LD) not only make up the largest category of students with disabilities in higher education by far (Barnett & Li, 1997; Jarrow, 1987; Lewis & Farris, 1999), but also are expected to continue to increase in number (Henderson, 1999; Norton, 1997). Several reasons account for this expected increase.

First, the passing of legislation mandating that public schools identify and serve these students has forced schools to identify, test and label students who might not have been identified at an earlier time (Vogel, Leonard, Scales, Hayeslip, Hermansen & Donnells, 1998). Thus, the number of students who have been labeled LD has increased. Secondly, further legislation requiring all recipients of Title IV Funds, including colleges and universities, to provide "reasonable accommodations" to all students with documented disabilities was passed. This legislation, The Americans with Disabilities Act of 1991, opened the door to college for students who had previously been seen as

"unsuitable for college" (Vogel, et. al, 1998). Finally, there has been a movement within public school special education itself to convince students with special needs to firmly and persistently self-advocate (Vogel, et. al, 1998). Such students are deciding to attend college and are demanding the accommodations to which they are entitled.

Community colleges are, in large part, the post-secondary institutions that are selected by these students. More than 75% of LD students who attend college choose a community college (Barnett & Yong, 1997; Kavale & Forness, 1996; Pacific & McKinney, 1997). This means that community colleges and community college faculty have the primary responsibility for meeting and accommodating the needs of these students. Despite this, most faculty members at community colleges are not trained to deal with these populations and find working with them to be difficult and problematic (Aksamit, Morris & Leuenberger, 1987; Schmidt, 1983). Further, faculty attitudes toward students with learning disabilities have been found to be directly related to persistence and overall satisfaction of these students with college (Bourke, Strehorn & Silver, 2000; Deshler, Ellis & Lenz, 1996; Norton, 1997). While some studies have found faculty attitudes toward LD students to be moderately positive (Aksamit, et.al, 1987; Bigaj, Shaw & McGuire, 1999; Houck, Asselin, Troutman & Arrington, 1992; Norton, 1997), most have found them to be negative (Beilke & Yssel, 1999; Bento, 1996; Bourke & Strehorn, 2000; Schmidt, 1983; Scott, 1997; Yuker & Block, 1986). Further, community college faculty have been found to have significantly more negative attitudes toward LD students than those at other institutions of higher education (Whisenhunt, 2001).

Positive faculty attitudes toward LD students have been positively correlated to the amount of knowledge and experience faculty members possess about LD students

(Aksamit, et. al, 1987; Fonosch & Schwab, 1981; Morris, 1987; Schmidt, 1983). Thus, it is reasonable to surmise that providing training for faculty to increase their knowledge and attitudes toward students with learning disabilities (Aksamit, et. al, 1987; Pacific & McKinney, 1997) might lead to the development of more positive attitudes towards LD students and a better understanding of the unique needs of this special population.

Theoretical Framework

Rotter's (1954) Social Learning Theory framed and guided this study. According to this theory, individuals learn within the social context within which they find themselves. A primary tenet of the Social Learning Theory relates to "expectancy." This principle holds that individuals will persist with a behavior if they perceive that "powerful others," believe in their abilities to succeed (in this study, success is defined as course completion). Conversely, they will fail to persist if those external forces do not believe in their abilities to succeed. A belief in an individual's ability to succeed is considered a major component of a positive attitude (Feather, 1982; Fonosch & Schwab, 1981; Yuker & Block, 1985). Teachers have been found to be perceived as such "powerful others" by students (Feather, 1975; Rosenthal, 1973). For example, according to Expectancy Theory, LD students will continue working throughout the semester and will complete the course if the instructor believes in their abilities to be successful in the course (thus, holding a positive attitude toward them). Therefore, for the purpose of this study, social learning theory, and expectancy theory in particular, speak directly to the potential relationship between community college teachers and LD college students. Social Learning Theory framed the study and provided a lens by which to view the

interactions between faculty and LD students. Further, it undergirded the training program developed to influence the attitudes of faculty.

Statement of the Problem

The number of LD students attending college has increased significantly over the past 10 years and is expected to continue to increase (Heath, 1990). Community colleges serve the vast majority of these students in higher education (Barnett & Li, 1997; Kavale, 1996; Pacific & McKinney, 1997). Most studies show faculty hold negative attitudes toward students with learning disabilities (Beilke & Yssel, 1999; Bento, 1996; Bourke, 2000; Schmidt, 1983; Scott, 1997; Yuker & Block, 1995). Since knowledge of LD students has been found to be related to more positive attitudes toward such students, it is reasonable to assume that a carefully crafted, knowledge-based workshop might affect faculty attitudes toward LD students. Yet no such training has been developed or tested (Aksamit, et.al, 1987; Pacific & McKinney, 1997). To remedy this, a researcher-developed FACTS (Faculty and Counselors Together for Students) workshop was tested to determine its affects on faculty attitudes toward LD students. The workshop uses student testimonials, a sensitivity activity and information about LD students.

Purpose Statement

The purpose of this study was to determine the effects of the FACTS workshop on faculty attitudes toward community college students with learning disabilities.

Hypotheses

The null hypotheses (Ho) that were used to guide this study are:

1. Ho_1: There will be no significant differences between the gain scores of faculty attitudes before the FACTS intervention and after the intervention.
2. Ho_2: There will be no significant difference between faculty members' years of experience teaching in higher education, their amount of contact with LD students, the number of LD students in their classes, their gender, or academic field and their attitudes toward students with learning disabilities.

Significance

This study will contribute to the limited knowledge about faculty attitudes toward LD students. While we have studies about faculty's willingness to make accommodations (Bourke, et.al, 1996; Scott, 1997; Vogel, et.al, 1999), faculty attitudes about all disabled students in general (Fonosch & Schwab, 1981; Jarrow, 1987; Newman, 1976), and even reasons for the negative attitudes they hold toward LD students (Aksamit, et. al, 1987; Schmidt, 1983; Walker, 1980), we have few studies of faculty attitudes toward LD students in community colleges, the post-secondary institution of choice for such students. This study will make a valuable contribution to the research literature by focusing on improving faculty attitudes toward LD students in community colleges.

Attitudes toward LD students have been shown to be related to knowledge of and experience with LD students; yet no one has attempted to test the effect on attitudes of providing knowledge-based training for working with LD students. This study will

attempt to test such an intervention on faculty attitudes toward LD students. If the workshop proves effective in improving faculty attitudes toward LD students, it will help Disability Service Providers by providing them with a useful, practical way to positively impact the success of college LD students.

Method and Procedures

Research Design

Given that the purpose of the study was to determine the effect of an intervention on the attitudes of community college teachers toward students with learning disabilities, a quasi-experimental design was chosen as the most appropriate. A survey was administered to participants before and after they participated in a workshop intervention, and pre-post changes were examined using a paired samples t-test. This design was chosen because it is considered to be the standard analysis procedure for a pretest/posttest design (Freed, Ryan & Hess, 1991). Further, a control group of approximately 20 faculty members from a comparable population completed the pretest and posttest surveys without receiving the intervention, and their mean scores were compared to those participants receiving the intervention in an attempt to control for any confounding effects of the pretest (Creswell, 1994).

Method

A group of community college faculty members were surveyed to determine the effects of the FACTS intervention on their attitudes toward students with learning

disabilities in college. There was a control group of faculty who were surveyed without receiving the intervention and an experimental group of faculty who were surveyed before and after the administration of the FACTS workshop intervention. The mean scores for the experimental group pretests and posttests were compared to determine the effects of the intervention on the participants' attitudes; additionally, the mean scores of the control group were compared to the posttest mean scores of the experimental group to determine if there were any naturally occurring, statistically significant differences.

Organization of the Study

This study is presented in five chapters:

Chapter 1: This chapter presents the background and history of the study, statement of the problem, purpose of the study, Hypotheses guiding the study, significance, delimitations, operational definitions of relevant terms, summary of the methodology, and the organization of the study.

Chapter 2: This chapter presents a review of the literature used in this study.

Chapter 3: This chapter presents a description of the methodology used in this study. Included in this section are: the introduction, the research design, methods and procedures used, data collection and data analysis.

Chapter 4: This chapter provides a presentation of the findings of the study.

Chapter 5: This chapter contains a review of the findings, a discussion of those findings, conclusions, implications and recommendations for further studies.

CHAPTER II
REVIEW OF THE LITERATURE

Introduction

The purpose of this study is to determine the effects of a FACTS workshop on faculty attitudes toward community college students with learning disabilities. A critical review of the related research and literature is presented in this chapter. It is organized into four sections. First, the emergence of learning disabilities as a field of study is traced through the literature. Then, what we know about learning disabilities is explored followed by a consideration of the research and literature about postsecondary education and learning disabilities. Finally, faculty attitudes toward students with learning disabilities are examined.

Learning Disabilities as a Field of Study

While scholars such as the German neurologist, Franz-Joseph Gall, and English neurologist, Henry Charlton Bastian, began defining disorders of language processing as early as the 19th century, by the 1980s more than 200 definitions of learning disabilities existed. Jordan (1996) chronicled the attempts over the past two centuries to categorize and define this complex disorder. Jordan attributed the current term, learning disability, to Samuel Kirk who first used the phrase in 1962 to refer to seemingly capable students who were not achieving up to their potential. Kirk's definition referred to learning disabilities as a set of disorders that interfere with the learning of school subjects due to "...possible cerebral dysfunctions." In 1975, when Education For All Handicapped

Children was passed by federal legislators (Public Law 94-142), the U.S. government defined learning disabilities as:

> Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations.

The current widely accepted definition by members of the field, was adopted by the National Joint Committee on Learning Disabilities in 1988.

> Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span.

As Jordan (1996) explained in the summary of the evolution of the disorder's definition, learning disabilities have been known to exist for more than 200 years. However, only within the last 40 years has the disorder been identified as a field of study. Wong (1996) carefully traced the history of learning disabilities. According to Wong, LD was not recognized as a division within special education until 1965. However, since that time, interest and need have forced the field to grow by "...leaps and bounds."

The field emerged from a meeting of concerned parents who came together in Chicago in 1963 to discuss problems their children were having with learning. Up to this point specialists, including neurologists, physicians and psychologists, had told the parents that their children, mostly boys, had some type of brain injury or dysfunction. Attending this meeting was Samuel Kirk, an exceptional needs psychologist. He listened to the parents and determined that they were describing a new field of exceptional needs. He used the phrase "learning disability" to describe the disorder the parents had seen in their children.

During the 1970s and 1980s scholars debated furiously over its classification as a legitimate disability. The topic became highly politicized and research began to appear in an attempt to both classify and explain this disorder. Achenbach (1974, 1978) completed 2 critical studies in which he examined 1,421 public school LD children ranging in age from 6-17 by surveying their teachers about their experiences with students with LD and from this data grouped common characteristics of LD students. The characteristics Achenbach identified were an absence of organizational skills, poor social skills, often stare intently, and a dependence upon repetition.

In 1981, the National Joint Committee on Learning Disabilities (NJCLD) was formed to promote scholarship and advocacy for students with learning disabilities and used Achenbach's research to create the official definition. The NJCLD was composed of representatives of the major organizations concerned with issues relating to LD (Vogel & Reder, 1998). Once the definition was created, studies began to emerge testing the validity of the definition. One such example cited in Vaughn and Bos (1987) was Kavale and Nye's 1983 study in which the researchers observed LD students in the classroom.

They found that from 307 LD participants, the definition was appropriate and accurately reflected and described the individuals. Lyon (1983) also found with his participant group of 239 LD students that they consistently fell within the range of the official NJCLD definition.

Learning Disabilities

A learning disability is considered a "hidden disability" because it is not always visible to others. Unlike a wheelchair user or a blind person, the learning disabled person may be difficult to see and easy to overlook (Whisenhunt, 2001). However, people with learning disabilities (LD) exhibit several characteristics that distinguish them from the non-disabled population. First, LD students are overwhelmingly male; in fact, 75% of students labeled LD are male (Vogel & Reder, 1998). Further, LD students possess a life-long disability that is incurable and will not disappear or dissipate with time. These conclusions were reached by two separate researchers conducting longitudinal studies of LD students. Aksamit, Morris, and Leuenberger (1987) followed 110 LD students for 4 years (from 11th grade to two years after graduation). She measured the discrepancy between IQ and achievement that designates the disability throughout the course of the research. She found that no changes had occurred in the presence of the disability. Scott (1997) followed a group of 74 LD students from middle school to their senior year in high school by looking at their test scores and surveying the students and their teachers. She, too, found that there was no significant difference in the presence of the disability over time, but did note that some students had acquired advanced compensation skills to make up for their deficiencies. She also found that LD students tended to have great

difficulty with organization skills, time management and attention. In observing 15 LD students in class over a period of two months, Schmidt (1983) found that they tended to stare intently, make inappropriate comments in class and rely heavily on continual repetition more than their non-disabled classmates. Finally, LD students have great difficulty with social skills. In a survey of 1500 public school teachers about their perceptions of LD students, Dooley-Dickey (1991) found that these students were more likely than non-LD students to exhibit behavior problems, have difficulty making friends and suffer social alienation by their peers. Another important characteristic of LD students, identified by a comparison study of the social-emotional adjustments of LD students, is a high degree of anxiety similar to that of post-traumatic stress (Hoy, 1992). The researchers administered the Social Adjustment Scale to 411 LD students and their scores were compared to those of 400 non-disabled students. The social anxiety scores for LD students were significantly higher than those of non-disabled students and were statistically similar to students who had been diagnosed with Post-Traumatic Stress Disorder (PTSD).

In 1975, the prevalence of individuals with learning disabilities was reported to be just over 1% of the general K-12 population. By 1994, that percentage had increased to 5% (Wong, 1996). Two primary reasons were cited by Wong (1996) as the possible causes of this substantial increase. First, public awareness and knowledge about learning disabilities had increased. Such an increase had allowed parents and advocacy groups to encourage testing and identification. Next, testing itself had improved and become more accurate allowing more reliable diagnoses to be made. Today, as described in another of her foundational books on the disorder, Wong (1991) listed LD as the largest field in

special education, comprising more than 47% of the total number of special needs children served in American public schools.

While it is currently considered the largest field within special education, many do not believe it is a legitimate disability. Learning disabilities have been criticized due to the ambiguous nature of the disability. First, an assumption must be made in order for a person to accept LD as a legitimate disability. To receive a diagnosis of a learning disability, individuals are first given an IQ test to determine their ability levels. They are subsequently given an achievement test to determine on what grade level they are functioning. If a significant discrepancy exists between ability and achievement (generally 20 points), they are then considered learning disabled (Wong, 1996). The assumption lies within the discrepancy. To believe that people are learning disabled, one is asked to accept that a neurological impairment is to blame for lack of achieving up to potential. Many critics claim that there could be any number of factors causing the poor achievement such as lack of motivation, poor study skills or lack of quality educational experiences (Vogel & Reder, 1998). Regardless of the questions regarding its legitimacy as a disability, LD is currently classified as a disability, and, thus, institutions are obligated to try and meet the needs of this special population.

Post Secondary Education and Learning Disabilities

Students with learning disabilities have become an increasing concern in higher education. Until the past few years, students with learning disabilities rarely attended college; they were guided away from postsecondary education by their teachers and guidance counselors who had been trained to categorize students as "college material" or

"not college material" based on achievement test scores alone (Scott & Gregg, 2000). For various reasons, including the passage of the Americans with Disabilities Act in 1991 demanding that colleges that receive Title IV funds from the government make accommodations for students with documented disabilities, LD students began to see college as a viable option beyond high school.

Mangrum and Strichart (1988) offered a suggestion as to why the numbers of LD college students have increased so drastically over the past few years: "Learning disabled students could not be clearly identified, often were not prepared for the educational challenges of college, and, generally, were not being served [once they attended college]." However, as their participation in higher education increased, these barriers were challenged and began to disappear. As the number of LD college students increased, research began to focus on them in that unique setting.

Goldberg (1983) attempted to find out more about LD students in college. At a selective university, Goldberg gathered data (questionnaires, a variety of tests and in-depth interviews) about 57 self-reported LD students and found that they reported having great difficulties in memorization, drawing and writing. This finding, she states, offers information to faculty and service providers that may influence instructional design and delivery.

With the passing of the Americans with Disabilities Act in 1991, the focus on college LD students in research expanded to consider faculty attitudes toward LD students and their willingness to make accommodations for them. Researchers began to attempt to determine faculty's degree of willingness to make accommodations required of them under the ADA. Bourke and Strehorn led the way in this research. In their study

(1996) at the University of Massachusetts, Amherst, they surveyed 485 faculty with an instrument created specifically for the study (a 4-point, Likert-type scale) and found that faculty's beliefs and attitudes about LD students in general affected their willingness to provide accommodations. Further, the researchers found that tenure-track professors were less likely to provide accommodations than non-tenure-track faculty, and while they reluctantly agreed to make the accommodations, they believed that such accommodations interfered with the academic integrity of their curricula. An expansion of this study by Bourke and Strehorn (1999) surveyed more than 700 faculty at a variety of universities with the same instrument and found that faculty were more willing to make less-intrusive accommodations such as extended time on assignments and taped lectures, and less likely to allow testing accommodations such as allowing tests to be read to students.

Beilke and Yssel (1999) sought to determine the perceptions of LD students about faculty attitudes toward giving them classroom accommodations. The researchers conducted in-depth interviews with 10 LD students at a midwestern university and found that the participants thought that faculty were generally willing to make accommodations, but treated them negatively in the classroom as a result.

Upon examining academic records and faculty surveys, Keim (1996) found a direct relation between LD students' success and faculty's willingness to make the appropriate requested accommodations. While the study was relatively small (n = 125), it began to create the link between faculty's beliefs and attitudes toward LD students and the LD students' success rates. Other studies yielded similar data (Norton, 1997; Scott, 1997; Vogel, Leyser, Wyland & Brulle, 1999).

Faculty Attitudes Toward Students with Learning Disabilities

Early within the LD movement, researchers recognized the importance faculty attitudes played in the success of LD college students. As early as 1980, Moss and Fox, in their groundbreaking work, concluded that positive faculty attitudes were the most important element in the successful teaching of college LD students:

> Historically, generalized negative attitudes in our society have impeded the aspirations and plans of handicapped individuals. Instructors tend to bring their feelings about handicapped students into the classroom. These attitudes often influence their concept of how well handicapped students can function in courses. Often, they are not aware of such attitudes or they might deny the handicapped students equal opportunity for a variety of reasons. Somehow, a way must be discovered to reduce the effects of preconceptions. (p. 46)

At a mid western, land-grant university, Schmidt (1983) surveyed LD students (n = 279) and faculty (n = 114) about their relationships with one another, and he found that faculty had basically four responses to these students being on campus. The first, most widely reported response (by approximately 60%), was that such students had no place in college; that they were not "college material." They described LD students as lazy, unmotivated and unintelligent. The second group of respondents (approximately 15%), what he termed the "mothering" faculty, felt sorry for these students and gave them unwarranted accommodations and held low standards for them. The third group (approximately 15%), held the same standards but provided only the appropriate accommodations. The remaining 10% of respondents were a blend of two or more of the

groups. Students stated that the faculty were overall "negative" toward them (approximately 70% rated them as "negative" or "very negative") and treated them differently than other students by refusing to make eye contact (54% of respondents) and using harsh or sarcastic tones when speaking to them (approximately 65% of respondents). Further, Schmidt found that faculty attitudes toward these students were not merely negative, but often hostile. He found that some faculty (about 20%) viewed LD students as "...an inconvenience, a burden transforming eventually into open resentment." By measuring the amount of contact faculty had with LD students, he found that contact with LD students, coupled with information, had a "...favorable impact" on faculty attitudes.

Aksamit, et.al, (1987) attempted to measure faculty's attitudes and knowledge about LD students. The authors surveyed approximately 1500 faculty at a mid-western, land-grant university. The data revealed that their knowledge of LD students was very limited (only 19% reported a "basic" understanding of the disability) and that their attitudes were generally positive (mean score of 3.8 on a 5 point Likert-type scale).

In a study at a large, mid-western, land-grant university, Houck, et. al (1992) found faculty attitudes to be restricting and uninformed. The faculty surveyed (n=561) believed that learning disabilities limited students' choices of majors (63% of respondents) and impeded them from competing academically (88% of respondents). The authors suggested sensitivity and informational training to improve preconceived negative attitudes.

Benham (1997) utilized a researcher-developed survey to measure faculty attitudes toward LD students and surveyed 662 faculty members in universities across the

United States. She found that while faculty attitudes in her survey were mildly negative (59% ranked as negative), a clear factor correlating to more negative attitudes was found. Faculty who had more (11-20 years) experience tended to have more negative attitudes toward LD students (74%) than those with less experience (51%). The author suggested a closer look at additional factors that may influence or correlate with attitudes of faculty.

According to the Disability Support Services for Community College Students, ERIC Digest (ED409972, 1997), 71% of students who are LD are served by community colleges. Nevertheless, research focusing on community colleges is extremely limited. Whisenhunt (2001) surveyed 18 universities and community colleges across North Carolina using a hybrid form of the Attitudes Toward Disabled Students and a questionnaire developed by Nelson, Dodd and Smith (1990) that measured faculty willingness to provide accommodations to disabled students. The survey was mailed to 1,679 community college and university faculty members across the state, and had a return rate of 51%. The results suggested that while they served most of the LD students in the state, the community college faculty had more statistically significant negative attitudes toward them (mean score of 35.66 out of a possible 44 compared to 36.39 for university faculty). Her study further found that female faculty held more positive attitudes than males (69% labeled as positive compared to 42% of males). Her final finding was that knowledge, contact and professional training increased faculty members' attitudes toward and willingness to accommodate LD students. The results of the survey suggested that statistically significant correlations existed between these factors and attitudes. She suggested that more research be conducted at the community college level to further examine the correlates to improved faculty attitudes.

CHAPTER III
METHODS AND PROCEDURES

Introduction

The purpose of this study was to determine the effects of the FACTS workshop on faculty attitudes toward community college students with learning disabilities. The methods and procedures used in the conduct of the study are presented in this chapter. First, the site and population, the intervention, and the instrument used in this study are discussed. Next, the procedures and data analyses used are discussed. Finally, the limitations and delimitations of the study are explored.

Site and Population

Participants were full-time faculty members (n = 264), representing various academic disciplines and levels of experience, from seven community colleges in western North Carolina invited to host the researcher-designed FACTS workshop. Five community colleges agreed to host the workshop, and participants for the experimental group (n = 214) were drawn from volunteers from these sites. Two community colleges that could not host the workshop served as the source of volunteers for the control group (n = 50).

The FACTS workshop was a portion of a larger workshop which included such topics as informational technologies for disabled students, assistive aids and devices, current legal trends regarding college students with disabilities, current policies and procedures being used and funding sources available to assist in providing services to special populations on community college campuses.

The workshop for the experimental group was publicized at each college and the participants were voluntary attendees. Participants were informed in publicity advertisements before, and verbally upon check-in, that they were taking part in a research project to evaluate the effect of the FACTS workshop on faculty attitudes. Further, it was explained to them that while the results would be reported, the evaluation forms would use numbers, not names, that the data would be aggregated for reporting purposes, and that no individuals could be identified or would be identifiable. The participants were also provided with either a lunch or dinner meal as an incentive to participate in the study. The control group received the same information about the study and their participation, but did not participate in the intervention or receive an incentive for participating.

Intervention

The intervention used in this study was the FACTS workshop. The title is an acronym for Faculty And Counselors Together for Students. The workshop was designed by the researcher in accordance with the findings of researchers in the LD field (Killion & Hirsh, 2001; Duffy, 1999; Schmidt, 1983; Scott & Gregg, 2000; Walker, 1980;) about what makes an in-service program regarding LD students effective for college teachers. According to these researchers, the effective workshop consists of:

- Intensive interactions between presenter and participants
- Testimonials from students who are LD
- Direct application of knowledge and skills to classroom situations they may face
- Materials for the teachers to use in their classrooms

Thus, the FACTS workshop contained those elements listed above. (The workshop presentation, materials and activity used appear in Appendix A). An introductory Power-Point presentation detailed the structure and goals of the workshop and defined important terms to be used during the course of the workshop. It also included a list of some successful, famous people who are/were learning disabled, such as Tom Cruise, Charles Schwab and Winston Churchill (www.schwab.edu, 2002). Secondly, a videotape of LD-student testimonials was shown. The students described their experiences in college and some of the obstacles they have faced in pursuit of their education.

Next, participants took part in a hands-on sensitivity activity in which they tried to decipher meaning from a reading selection that had words and letters missing, similar to the way an LD student may perceive text. They also attempted a mathematical problem without the use of multiplication facts to mock the symptoms of a student who is LD in math. After this exercise, participants were given handouts on specific strategies to use while working with these students in the classroom.

Finally, the workshop concluded with a question-and-answer session. In addition to meeting the requirement of presenter/participant interaction, it also allowed the presenter to clarify and elaborate on any points about which participants were unclear.

The FACTS workshop was given six times to 214 participants on five campuses. Each time the presentation was given by the researcher and every attempt was made to do exactly the same things, in the same way, at each workshop.

Instrumentation

Participants were given the Attitudes Toward Students With Learning Disabilities Survey (ATSLDS) before and after the intervening workshop. This survey was selected because it specifically focuses on faculty attitudes toward learning disabled students in a postsecondary setting, the focus of this study, and is recommended by experts on LD college students to measure faculty attitudes toward such students (Aksamit, Morris & Leuenberger, 1987; Bento, 1996; Fonosch, 1981; Jarrow, 1987). The instrument was developed by Gail Fonosch, and was used to establish the attitudes and knowledge of faculty members toward college students with learning disabilities in various programs (Aksamit, Morris & Leuenberger, 1987), in universities (Fonosch, 1987) and in community college settings (Whisenhunt, 2001).

The ATSLDS (or ATTDS in its original form) was validated by administering it along with a similar, widely-used, established instrument, the Attitudes Toward Disabled Persons (ATDP) (Yuker, Block & Young, 1970). When completed, Fonosch found that the two instruments had a Pearson Correlation coefficient of .34. Using Cronbach's Alpha, the instrument yields a reliability coefficient of .88 (Fonosch, 1987).

The instrument requests basic demographic data (gender of participant, teaching experience and number of years working with LD students), followed by 25 questions to measure faculty attitudes toward LD students. The ATSLDS directs participants to rate the degree to which they agree with various statements about LD college students on a Likert-type scale from one (strongly agree) to six (strongly disagree). One represents the most negative attitude and six represents the most positive attitude toward LD students. For example, one question asks participants to rank the degree to which they agree with

the following statement: "Classroom environments are stifled by students with learning disabilities."

Permission was obtained to use this instrument from Fonosch, and to adapt it as needed from Educational Testing Services. Sandra Peskin at Queensborough Community College, whose adaptation of the original instrument was more current and specific to community college faculty also granted permission to use her version of the instrument. Thus, permission was granted from both the original designer of the instrument and from a subsequent researcher who used an adapted version that is more appropriate for the scope of this study (instrument appears in Appendix B). The only changes made for this study were to substitute the word, "college" for "university" as this study is focusing solely on community colleges.

Procedures

Before beginning the study, approval to conduct the study was obtained from the Institutional Review Board at the University of Tennessee, Knoxville and from each participating college. Upon check-in at the workshop, participants were informed that participation in the training and completion of the survey instrument, while important, were voluntary; and that by completing the survey they were providing their informed consent to participate in the research project. The nature and purpose of this study was explained as well as what would be done with the data gathered. Participants were also told that surveys would not contain their names, but numbers, and that the findings would be aggregated for analysis and reporting purposes to insure confidentiality.

Participants were then given two copies of the ATSLDS on different colored answer sheets. Both surveys for each participant had the same identification number on the front. Participants were instructed to complete one colored survey before the intervention workshop began. These completed surveys were collected prior to the beginning of the workshop. The other surveys were held by the participants until the end of the intervention. After the workshop intervention, faculty members were instructed to complete the remaining colored survey and return it before leaving.

The participants in the control group were voluntary faculty members at the two community colleges that were unable to host the workshop. Surveys were given to the college's Disability Services Provider (DSP) to distribute to all full-time faculty. An accompanying cover letter explained the study and outlined the voluntary nature of their participation in it (Appendix C). The researcher collected the completed surveys from the DSP's.

Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences 11.0 (SPSS). A Paired Samples t-test was used to compare the pre- and post- mean scaled scores of participants on each of the items of the survey. Then, a non-directional Analysis of Variance (ANOVA) was used to examine the effect of experience with LD students, years of teaching experience, academic field, and gender on attitudes toward LD students. Next, an item-to-total analysis was conducted on the completed surveys to determine if any item, when eliminated, had an impact on the reliability of the instrument as a whole. Finally, a paired-samples t-test was conducted on the mean scaled scores of the control

group and the mean scaled scores of the posttest experimental group to determine if they were statistically different.

Limitations

While attempts were made to minimize threats to the validity of this study, certain limitations must be noted. First, participants were not randomly assigned to groups. For the sake of convenience, participants were those who volunteered to take part in the study. This condition may have influenced the findings of the study, as those who volunteered to attend the workshop may have been predisposed to change (such as participants with family members who are LD). Further, this study examined the attitudes of faculty in community colleges in western North Carolina who agreed to participate in the study. Therefore, the results are limited to the participants and community studied.

Next, the same instrument was used for both the pretest and posttest. This condition may have allowed participants to score higher simply because they are more familiar with the instrument. A control group was utilized to help minimize this threat of repeated tests as well as measure the effect of the treatment.

Another limitation of this study was the operational definition of "success" drawn from the theoretical framework. For the purpose of this study, "success" was defined as "satisfactory course completion." Other definitions for "success," such as "gaining helpful skills," might have resulted in a different interpretation of the questions on the survey. Thus, this study relied on the definition for "success" as defined by the researcher for this study.

Most of the participants had 0-5 years of teaching experience. This skew of experience may have overly influenced the results of the study.

Delimitations

This study examined the effect of the FACTS training on community college faculty attitudes toward students with LD in western North Carolina. Because it focused on a particular population in a particular setting, the findings do not speak to other regions or other populations, although they may be suggestive of what is occurring in other settings and with other populations.

Finally, this study did not examine reasons for faculty attitudes expressed in the survey; it only attempted to measure the effects of the training intervention on those attitudes. Because the study did not examine the reasons for participants' attitudes, it is not clear why they responded to the survey in the ways they did. It is conceivable that respondents' underlying viewpoints, including the possibility of rejecting LD as a legitimate disability, could have colored their answers. Clearly, such people would have responded very differently to the survey questions. Therefore, this study makes no claim as to the interpretation of the meanings behind the answers; it only measures and addresses the answers themselves.

CHAPTER IV
FINDINGS

The purpose of this study was to determine the effects of the FACTS workshop on faculty attitudes toward community college students with learning disabilities. The study utilized a version of the Attitudes Toward Students With Learning Disabilities Survey that was administered before and after the presentation of the FACTS workshop. The findings of the study are detailed in this chapter. It begins with demographic descriptions of the study population (experimental and control) followed by the findings of the study presented in terms of the hypotheses used to guide it, and concludes with analyses related to the study.

Study Population Demographics

The study involved two groups of participants, an experimental group (n = 214), and a control group (n = 50). Data about each group are presented below and depicted comparatively in Table 1.

Experimental Population

Experimental group participants were faculty members from five community colleges across western North Carolina. Of the 214 participants, 59.3% were female and 40.7% were male.

Table 1.

Comparison of Experimental and Control Group Frequencies

Factor	Experimental Group (n = 214)	Control Group (n = 50)
Gender	Female: 59.3% (n=127) Male: 40.7% (n=87)	Female: 84% (n=42) Male: 16% (n=8)
Years of teaching experience	0-5 years: 38.8% 6-10: 13.6% 11-15: 14.5% 16-20: 15.0% 21 and more: 18.2%	0-5 years: 40% 6-10: 18% 11-15: 10% 16-20: 24% 21 and more 8%
Academic Field	Gen Ed: 50.0% Business/HS: 21.5% Applied Tech: 10.7% Allied Health 7.9% Computers 5.1% Environ. Sci 3.3% Design 1.4%	Gen Ed: 64% Business/HS: 14% Applied Tech: 8% Allied Health 8% Computers 6% Environ. Sci 0% Design 0%
Number of LD students typically have each semester	0-5: 3% 6-10: 56% 11-20: 32% <20: 9%	0-5: 8% 6-10: 46% 11-20: 28% <20: 18%
Level of Contact	Never: 3.3% Occasional 48.1% Frequent 48.6%	Never: 6% Occasional 34% Frequent 60%

Most of the participants (38.8%) had less than five years of teaching experience in the college setting. The rest of the participants' years of experience were equally dispersed: 13.6% had 6-10 years, 14.5% had 11-15 years, and 18.2% had 16-20 years.

The participants taught a wide range of academic disciplines. Fifty percent taught general education courses, core courses required of all students regardless of major. Such courses included history, sociology, math, English, art appreciation and public speaking. Business and Human Services (business management, accounting, office systems technology, criminal justice and early childhood education) accounted for 21.5% of the experimental population, Applied Technology fields (welding, auto body repair, auto mechanics, electrician, machining and building construction trades) 10.7%, Allied Health fields (medical assisting, nursing, phlebotomy, dental hygiene, dental assisting and radiography) 7.9%, Computer fields 5.1%, Environmental Sciences (environmental studies, forest management, fish and wildlife management, and horticulture) 3.3% and design fields (architecture and interior design) 1.4%.

The overwhelming majority of the faculty members reported having LD students in their classes on a regular basis. A majority of participants (56%) reported that they usually had between 6 and 10 LD students in their classes each semester. Thirty-two percent said they had from 10 to 20 LD students each semester. Nine percent stated they typically had more than 20 each semester. Only 3% of faculty participants stated they typically had 0-5 LD students in their classes each semester.

In terms of the reported levels of contact with LD students in their classrooms, 48.6% claimed frequent contact, 48.1% claimed occasional contact and 3.3% of participants stated that they had never knowingly had contact with LD students. Although

it appears to parallel the number of LD students in faculty classes, contact may include family members with learning disabilities or contact outside the classroom with LD individuals.

Control Group

The control group involved faculty members who taught at schools that did not participate in the workshops. Eighty surveys were sent, and 50 completed surveys were returned, yielding a return rate of 63%. The return rate for the experimental group was 100%. In contrast to the experimental group, the control group was far less balanced in terms of gender. Of the control group, 84% were female and 16% were male compared to 59.3% female and 40.7% male in the experimental group.

As with the experimental group, the majority of control group participants had 0-5 years of teaching experience in college (40%). Eighteen percent of participants had 6-10 years, 10% had 11-15 years, 24% had 16-20 years and 8% reported having more than 20 years of teaching experience.

The control and experimental groups were similar in terms of academic fields they represented although the control group did not encompass the same range of fields. The academic fields of the control participants included: general education was 64% (compared to 50% in the experimental group), Business, Health and Human Services was 14% (compared to 21.5% in experimental), Allied Health was 8% (compared to 7.9% in experimental), Applied Technology was 8% (compared to 10.7% in experimental) and Computer fields were 6% (compared to 5.1% in experimental group). The two remaining disciplines, Environmental Science and Design fields were not represented in the control

group participants but were 3.3% and 1.4% respectively of the participants' disciplines in the experimental group.

As with the experimental population, the overwhelming majority of participants in the control group reported having LD students in their classes on a regular basis. A majority of participants (46%) reported they usually had between 6 and 10 LD students in their classes each semester (compared to 56% in the experimental group); 28% reported having 11-20 students (compared to 32% in the experimental group); 18% reported having more than 20 LD students in a typical semester (compared to 9% in the experimental group), and only 8% reported having 0-5 LD students in their classes (compared to 3% in the experimental group).

Sixty percent of those surveyed in the control group reported that they had frequent experiences working with college students who are LD (compared to 48.6% of the experimental group); 34% stated they had occasional contact (compared to 48.1% in experimental), and 6% said they had never had an experience with a student who was learning disabled of which they were aware (compared to 3.3% of the experimental group).

Findings

The data were analyzed using the Statistical Package for the Social Sciences 11.0 (SPSS). A Paired Samples t-test was used to compare the pre- and post- mean scores of participants on each of the items of the survey. Then, a non-directional Analysis of Variance (ANOVA) was used to examine the effect of experience with LD students, years of teaching experience, academic field, and gender on attitudes toward LD students.

Further, an item-to-total analysis was conducted on the completed surveys to determine if any item, when eliminated, had an impact on the reliability of the instrument as a whole. Finally, a paired-samples t-test was conducted on the mean scores of the control group and the mean scores of the posttest experimental group to determine if they were statistically different. The results of these analyses are reported in terms of the hypotheses guiding the study.

HO_1: There will be no significant differences between the gain scores of faculty attitudes before the FACTS intervention and after the intervention.

To address this hypothesis, the overall pretest mean score was compared to the overall posttest mean score of the experimental group. This procedure was accomplished by averaging each individual item on each survey to determine the mean for that particular survey. Next, all survey means were averaged together to determine an overall mean score for the group (pretest or posttest). From a possible range of 1-6, with 6 representing the most positive attitude toward LD students and 1 representing the least positive, the pretest yielded an overall mean score of 4.74 for the experimental group. The posttest yielded an overall mean score of 4.90. The overall difference was a positive increase in attitudes of .156. A paired-samples t-test yielded a difference that was statistically significant at the .05 level, as may be seen in Table 2. Further, a paired-samples t-test comparing the control group's mean scaled score (4.72) and the mean posttest scaled score of the experimental group (4.90) was conducted. The results indicated an overall difference of .17, which was statistically significant at the .05 level.

Table 2.

Paired-samples t-Test of Pretest and Posttest Scores

Pretest Mean	Posttest Mean	Difference	Correlation	Significance	N
4.7404	4.8963	.1559	.502	.000	214

Alpha set at >.05 for significance

The difference indicates that there was a difference between participants who had received the intervention and participants in the control group who had not. The FACTS workshop, the intervention, improved faculty attitudes toward LD students, thus, the null hypothesis (HO_1) is rejected.

HO_2

There will be no significant differences between faculty members' years of experience teaching in higher education, their amount of contact with LD students, the number of LD students they typically teach each semester, their gender, or academic field and their attitudes toward students with learning disabilities.

To address this hypothesis, a between-subjects Analysis of Variance (ANOVA) was completed to determine if there were any relationships between the variables (years of teaching experience, amount of contact with LD students, number of LD students

typically taught, faculty gender and academic field) and the experimental and control group participants' mean scores on the pretest survey. As can be seen in Table 3, only the amount of experience participants had with LD students and the amount of contact a faculty member had typically each semester with LD students yielded a significant positive correlation to their attitudes. In terms of HO_2, the null hypothesis is rejected for the amount of experience participants had with LD students and the amount of contact faculty had with LD students, but cannot be rejected for participants' academic field, years of teaching experience and gender. According to this finding, the more contact and experience faculty members had with students they knew were learning disabled, the more positive their overall attitudes toward LD students.

Related Analyses

An item-to-total analysis was performed to determine if any particular items of the instrument yielded responses that varied significantly from responses to the instrument as a whole. For the instrument as a whole, the reliability coefficient was .9029. Overall, the item-to-total analysis yielded no strong anomalies with any particular item; however, three items showed slightly negative impacts on the reliability coefficient of the instrument. If item number 4, "Learning disabled students have fewer employment opportunities than others," of the instrument were omitted, the alpha would raise to .9110. Had item number 8, "All of us are disabled to some degree," on the survey been omitted, alpha would have increased to .9190. If item number 16, "Learning disabled students should not be considered disabled," were omitted, alpha would rise to .9085, making the instrument slightly more reliable if the item were omitted. Omission of other

Table 3.

ANOVA of Variables

Variable	df	Mean Square	F	Significance
Amount of Experience with LD Students	2	3.99	10.76	.00
Number of LD Students Each Semester	2	3.99	10.78	.00
Years of Experience	4	.66	1.77	.14
Academic Field	6	.66	1.79	.10
Participant Gender	1	.72	1.94	.17

Alpha set at >.05 for significance

items would have decreased the reliability of the instrument. Clearly, no single item or items of the instrument greatly influenced the results of the overall instrument. The results of the item-to-total analysis may be seen in Table 4. Finally, a Chi-Square test was conducted to determine the comparability of participants of the control group and the experimental group. Only participants' gender showed a significant difference between the two groups. While the experimental group's gender was within the expected range, the control group's gender was not; only 8 participants were male, and the expected number of male participants was 18. Thus, significantly fewer males participated in the control group than did in the experimental group. This skew reduces the ability of the control group to strengthen the findings of the experimental group. Results from the Chi-Square are shown in Table 5.

Table 4.

Item-to-Total Analysis

Item Number	Alpha if Item Deleted (alpha of instrument is .9029)
1	.9000
2	.8987
3	.8993
4	.9110
5	.8958
6	.9007
7	.8993
8	.9190
9	.8994
10	.8981
11	.8963
12	.8932
13	.8958
14	.8994
15	.8946
16	.9085
17	.8951
18	.8954
19	.9024
20	.8971
21	.9019
22	.8960
23	.8931
24	.8982
25	.8933

Table 5.

Chi-Square Test of Experimental and Control Groups

Variable	Count		Expected Count		Significance
Teaching Experience	Experimental	Control	Exp.	Control	
0-5 years	83	20	83.5	19.5	
6-10	29	9	30.8	7.2	
11-15	30	5	29.2	6.8	.218
16-20	29	12	35.7	8.3	
20+	39	4	34.9	8.1	
Gender	Exp.	Control	Exp.	Control	
Female	127	42	137	32	**.001**
Male	87	8	77	18	
Freq. Of Contact w/LD	Exp.	Control	Exp.	Control	
Never	7	3	8.1	1.9	.164
Occasional	103	17	97.3	22.7	
Frequent	104	30	108.6	25.4	

Alpha set at >.05 for significance.

CHAPTER V
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to determine the effects of the FACTS workshop on community college faculty's attitudes toward students with learning disabilities. There were 2 hypotheses guiding the study:

(HO_1): There will be no significant differences between the gain scores of faculty attitudes before the FACTS intervention and after the intervention.

(HO_2): There will be no significant differences between faculty members' years of experience teaching in higher education, their amount of contact with LD students, the number of LD students they typically teach each semester, their gender or academic field and their attitudes toward students with learning disabilities.

Using a quasi-experimental design, the Attitudes Toward Students With Learning Disabilities Scale was administered to community college faculty members in the treatment group (n = 214) before and after the FACTS workshop intervention, and to community college faculty members in the control group (n = 50) without the intervention. To address HO_1, a paired-samples t-test was used to determine if there were statistically significant differences between the mean scores of the pretests and posttests of the treatment group. To address HO_2, a non-directional Analysis of Variance (ANOVA) was used to determine if there were statistically significant differences between faculty attitudes toward LD students and their years of teaching experience, their amount of contact with LD students, the number of LD students they typically had in their classes every semester, their gender or their academic fields. This chapter provides a

summary and discussion of the findings, followed by conclusions and recommendations for future research.

Summary of Findings

HO_1, there will be no significant differences between the gain scores of faculty attitudes before the FACTS intervention and after the intervention, **may be rejected**. There was a statistically significant difference in the gain scores of faculty before and after the intervention, and the gain scores were toward the more positive side of the Attitudes Scale, suggesting that the workshop intervention had significantly improved faculty attitudes toward LD students.

HO_2, there will be no significant difference between faculty members' years of experience teaching in college, their amount of contact with LD students, the number of LD students in their classes every semester, their gender, or their academic field and their attitudes toward students with learning disabilities, **cannot be rejected** for each of the variables except for contact with LD students and number of LD students they had in their classes. For these two variables, HO_2 **may be rejected,** suggesting that faculty with greater experience and exposure to LD students perceive them in a more positive light than faculty who have less experience and exposure to LD students.

Discussion

This study attempted to determine if a carefully designed workshop could impact community college faculty members' attitudes toward students with learning disabilities.

While the results were modest, .156 on a 1-6 scale, they were statistically significant showing that a workshop intervention could be an effective tool in improving attitudes. Current research shows that faculty attitudes toward LD students are predominantly negative, particularly in the community college system (Beilke & Yssel, 1999; Whisenhunt, 2001). The results of this study provide evidence that faculty attitudes toward learning disabled students can be improved through the use of a carefully designed workshop directed to changing those attitudes. Current research suggests that LD students have a lower persistence rate than non-disabled students (Scott & Gregg, 2000). By improving faculty attitudes, community colleges may well be able to increase the persistence rate of LD students. Expectancy Theory, the theory used to guide this study, suggests that a faculty member's belief in a student's ability to succeed is directly tied to that student's success (Rotter, 1954). The findings of this study suggest that it is possible to change faculty attitudes toward LD students, and in doing so, increase the likelihood of their being successful.

Consistent with prior research (Pacific & McKinney, 1997; Whisenhunt, 2001), the amount of contact faculty members had with students with learning disabilities and the number of students with learning disabilities in their classes positively influenced the instructors' attitudes toward all students with learning disabilities. This finding is important because it offers hope that faculty attitudes may be changed as faculty become more familiar with students who are LD. Further, it may be that the more experience faculty have with LD students, the more receptive they will be to the kind of information and assistance in working with LD students that is provided in interventions such as the FACTS workshop.

In earlier studies, i.e, Benham (1997) and Whisenhunt (2001), significant differences in attitudes toward LD students were found on the basis of field of study and gender respectively. Benham (1997) found that faculty in social sciences held more positive attitudes toward LD students than faculty in business and engineering. Whisenhunt (2001), on the other hand, found that male faculty had more negative attitudes toward LD students than did female faculty. Surprisingly, those were not the findings of the present study. Indeed, no significant differences were found between faculty members' gender or field of study and their attitudes toward LD students. One possible reason for the difference in findings may be the setting in which the studies were conducted. Both Benham and Whisenhunt included universities in their studies, while this study only examined community college faculty. The results raise questions about whether community college faculty may be more student sensitive in their attitudes than are faculty at other colleges and universities, and/or whether gender and field of study are less important influences on the attitudes of community college faculty than in other kinds of institutions.

The FACTS workshop shows enough promise for community college personnel to consider using it. While it would benefit from refining and further testing, it is a first step in possessing an intervention that positively influences faculty attitudes toward LD students.

Conclusions

From this study it seems reasonable to conclude that:

- It is possible to improve community college faculty attitudes toward students with learning disabilities by using a carefully-constructed training intervention.
- The more contact community college faculty members have with LD students, the more positive their attitudes toward them.

Recommendations

There are several areas of further research suggested by this study:

- Replicate this study using the FACTS workshop in other community colleges in other regions of the country to determine if the same results are found.
- Replicate this study using several universities as the study sites to determine how the results compare to this study of community colleges.
- Undertake a study of the relationship between personal factors of faculty members, such as political views, family members with LD and personality type, and their attitudes toward LD students.
- Conduct a longitudinal study to determine if improvements in faculty attitudes toward LD students obtained as a result of training are lasting.

- Use in-depth interviews of community college faculty to examine more deeply their attitudes toward LD students. Particular attention could be given to the informants' reasons for the attitudes they possess.
- Gather and analyze data on LD students and their success rates in courses and compare them to the attitudes of their faculty members.
- Undertake a study to explore faculty's beliefs about LD as a legitimate disability and measure their attitudes to see how the two variables are related.

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APPENDIX

APPENDIX A: WORKSHOP OUTLINE AND MATERIALS

Outline for FACTS Workshop

I. Introduce self and purpose and scope of the study and its part in the workshop; have participants complete pretest survey.

II. Sensitivity Activity as Introduction

   a. Hand out reading passages with random letters omitted to majority; hand unaltered reading passage to 3 participants.

   b. Brag about how quickly the 3 participants are working and criticize the others for "not being as hard working as the 3"

   c. Tell an omitted reader that he is not college material because he just isn't good at academics; perhaps he could work at a carwash or convenience store.

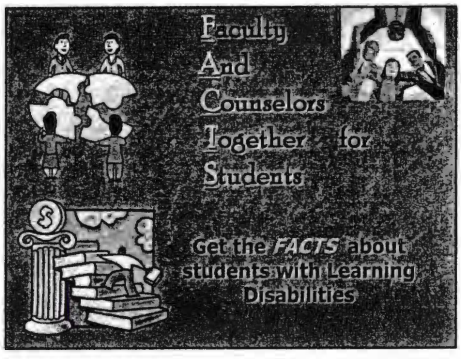
   d. Wrap up by asking how it felt. This is what LD students feel---frustration, panic, hopelessness because they know if they just had extra time they could do the work.

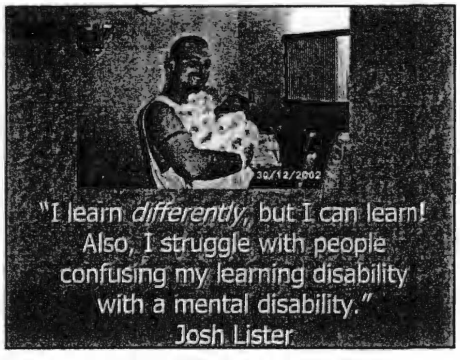
III. Follow Power Point presentation

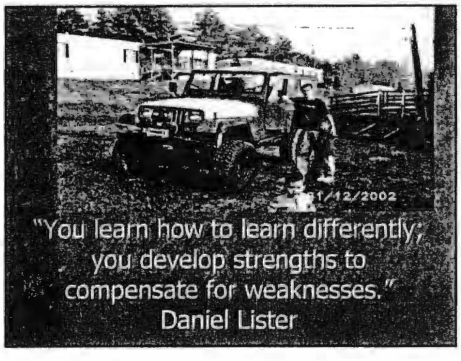
IV. Allow for discussion or questions

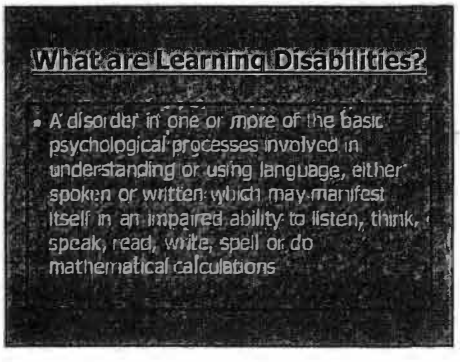
V. Give out handouts

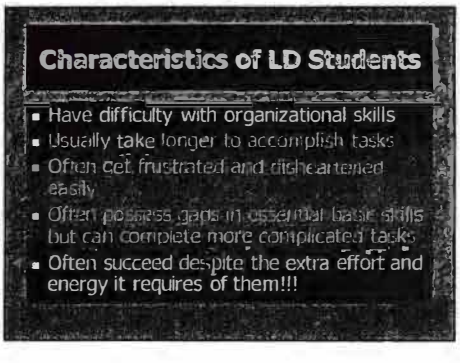
VI. Have participants complete posttest survey

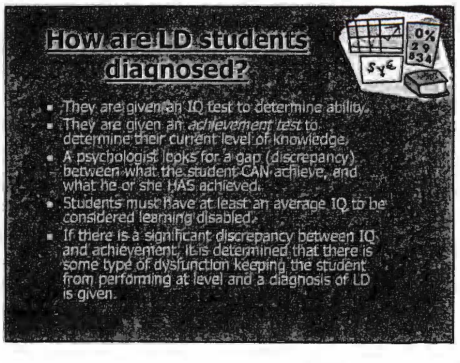

Faculty
And
Counselors
Together for
Students
Get the FACTS about students with Learning Disabilities


30/12/2002
"I learn differently, but I can learn! Also, I struggle with people confusing my learning disability with a mental disability."
Josh Lister


1/12/2002
"You learn how to learn differently; you develop strengths to compensate for weaknesses."
Daniel Lister


What are Learning Disabilities?
A disorder in one or more of the basic psychological processes involved in understanding or using language, either spoken or written which may manifest itself in an impaired ability to listen, think, speak, read, write, spell or do mathematical calculations


Characteristics of LD Students
Have difficulty with organizational skills
Usually take longer to accomplish tasks
Often get frustrated and disheartened easily
Often possess gaps in essential basic skills but can complete more complicated tasks
Often succeed despite the extra effort and energy it requires of them!!!


How are LD students diagnosed?
They are given an IQ test to determine ability.
They are given an achievement test to determine their current level of knowledge.
A psychologist looks for a gap (discrepancy) between what the student CAN achieve, and what he or she HAS achieved.
Students must have at least an average IQ to be considered learning disabled.
If there is a significant discrepancy between IQ and achievement, it is determined that there is some type of dysfunction keeping the student from performing at level and a diagnosis of LD is given.

Some Interesting Facts:

- 70% of all students with learning disabilities are enrolled in community colleges.
- The number of LD students has increased significantly over the past 10 years and is expected to continue to increase.
- A key to learning disabled students' success is college faculty attitudes toward them.
- Without college they will earn less and have significantly less opportunities for employment.

Reasons for Increase in LD Students Attending College:

- Employers are requiring more education than before.
- IDEA legislation was passed requiring aggressive identification of students who are disabled by the schools, so more students are identified than ever before.
- Movement within schools to teach self-advocacy.

Laws and Regulations

- Title IV fund recipients MUST make reasonable accommodations for students with disabilities.
- Student must provide legitimate documentation of the disability.
- Student must disclose disability status and request accommodations to receive them.
- Colleges must provide accommodations unless they can prove either undue hardship or a substantial alteration to the course or program.

Tips for working with LD students in the classroom:

- Be structured.
- Use visual aids, graphics, and diagrams as much as possible.
- Summarize main points frequently throughout lesson.
- Repeat or review assignments and directions.
- See handout for in-depth suggestions.

ACCOMMODATIONS:
What are they, and why do we give them?

- Accommodations are changes given to a disabled student.
- Accommodations "level the playing field" for students. They are not giving an advantage, only an equal chance to succeed much like eyeglasses.
- Common accommodations are extended time, note taker, tutoring, test read to student, calculator use.

Famous People Who Are LD:

- George Washington
- Alexander Graham Bell
- Winston Churchill
- Danny Glover
- Cher
- Gen. George Patton
- Bruce Jenner
- Greg Louganis
- Charles Schwab
- Jay Leno
- Nelson Rockefeller
- Woodrow Wilson
- Albert Einstein
- Thomas Edison
- Tom Cruise

GET THE *FACTS* ABOUT
STUDENTS WITH LEARNING DISABILITIES

FACTS:

FACULTY
AND
COUNSELORS
TOGETHER FOR
STUDENTS

A WORKSHOP FOR HIGHER EDUCATION PROFESSIONALS WORKING WITH STUDENTS WHO HAVE LEARNING DISABILITIES

THIS INTERACTIVE WORKSHOP WILL ADDRESS ISSUES SURROUNDING THE TEACHING OF COLLEGE STUDENTS WITH LEARNING DISABILITIES. YOU WILL:

- Hear testimonials from students with learning disabilities
- Recognize and learn about successful people who are LD
- Learn definitions and vocabulary specific to students with special needs
- Explore current laws and government regulations regarding LD college students
- Participate in a sensitivity activity that will demonstrate what it may be like to be a person with a learning disability
- Collect take-home resources to assist you when working with LD students in the college classroom

Did You Know.....

1. More than 70% of the students with learning disabilities who pursue postsecondary education choose to attend a community college.
2. The number of LD students enrolled in colleges has increased significantly of the past 10 years and is expected to continue to rise.
3. LD students, by definition, have at least average IQ's; many have above average intelligences.
4. Faculty attitudes and understanding of their disabilities are the primary factors in the success rate of LD students.

For More Information, please contact Robert Stewart at:
Haywood Community College
Office of Counseling & Special Services
(828)627-4504
rstewart@haywood.edu

After reading the passage, circle the letter of the best answer to each question.

[1]We all know de are dry places, but just what is by the term *dry*? [2]That is, how much rain defines the bou between and dry regions? [3]Sometimes is defined by rainfall figure, for example, twenty-five (ten inches) of tion per year. [4](*Rainfall* refers to the quantity of that falls in the form rain, snow, etc. in an area in a given amount of time.) [5]However, the of dryness is a relative one that to any situation in which a water deficiency exists. [6]Thus, climatologists define as one in which yearly precipitation is less than the potential loss of water by evaporation. [7]Dryness then is related not only to total annual but also to evaporation. [8]Evaporation, in turn, upon temperature. [9]As temperatures climb, potential evaporation also increases. [10]Fifteen to centimeters of precipitation support forests in northern Scan where evaporation into the cool, humid is slight and a of water remains in the soil. [11]However, the amount of rain falling New Mexico supports only a sparse vegetative cover because evaporation into the air is great. [12]So clearly no amount of precipitation as a boundary for dry climates.

1. In sentence 3, the *precipitation* means
   a. weather conditions.
   b. humidity in the
   c. water that to the earth in any form.
   d. dry places.

2. Scientists who weather consider a climate to be one in which
   a. ten inches of water fall each year.
   b. potential is greater than the rainfall.
   c. there is rainfall all.
   d. it gets hot.

3. The higher the
   a. the greater the
   b. the the rainfall.
   c. the greater the evaporation.
   d. the smaller the potential

4. In the discussion in the temperature is
   a. a cause.
   b. an

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[1]We all know deserts are dry places, but just what is meant by the term *dry*? [2]That is, how much rain defines the boundary between humid and dry regions? [3]Sometimes it is defined by a single rainfall figure, for example, twenty-five centimeters (ten inches) of precipitation per year. [4](*Rainfall* refers to the quantity of water that falls in the form of rain, snow, etc. in an area in a given amount of time.) [5]However, the concept of dryness is a relative one that refers to any situation in which a water deficiency exists. [6]Thus, climatologists define *dry climate* as one in which yearly precipitation is less than the potential loss of water by evaporation. [7]Dryness then is related not only to total annual rainfall but also to evaporation. [8]Evaporation, in turn, greatly depends upon temperature. [9]As temperatures climb, potential evaporation also increases. [10]Fifteen to twenty-five centimeters of precipitation can support forests in northern Scandinavia, where evaporation into the cool, humid air is slight and a surplus of water remains in the soil. [11]However, the same amount of rain falling on New Mexico supports only a sparse vegetative cover because evaporation into the hot, dry air is great. [12]So clearly no specific amount of precipitation can serve as a universal boundary for dry climates.

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   c. water that falls to the earth in any form.
   d. dry places.

2. Scientists who study weather consider a dry climate to be one in which
   a. ten inches of water fall each year.
   b. potential evaporation is greater than the rainfall.
   c. there is no rainfall at all.
   d. it gets very hot.

3. The higher the temperature,
   a. the greater the rainfall.
   b. the smaller the rainfall.
   c. the greater the potential evaporation.
   d. the smaller the potential evaporation.

4. In the discussion in the passage, temperature is
   a. a cause.
   b. an effect.

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LEARNING DISABILITIES IN THE COLLEGE SETTING: A DIFFERENT BALL GAME THAN HIGH SCHOOL

by Stephen S. Strichart

I am frequently surprised to find how many high school students with learning disabilities, and their parents, think that college is just a slightly more difficult version of high school. From this perspective, the major challenge is to get accepted into college. I don't agree with this perspective. I've found that given a little persistence, and in some cases a lot of money, most LD students can get into a college somewhere, albeit not always one of their first choices. The major challenge is not that of being accepted, but of being successful. Unfortunately, LD students are often poorly prepared for the increased demands of college.

IMPORTANT DIFFERENCES BETWEEN HIGH SCHOOL AND COLLEGE

1. **Public Law 94-142 no longer applies.**

In high school, PL 94-142 mandates a free and appropriate education delineated in an IEP that spells out specific services. LD students receive these; they don't have to seek them out. This law does not apply at the college level. Instead, there is Section 504 of the Rehabilitation Act of 1973, a far reaching, but rather nonspecific law. To gain access to accommodations and services through this law, LD students must document and make their disability known, and in many cases, identify the assistance they need to succeed in college, and then self-advocate to get this assistance.

2. **There is much less structure**

Programs for LD students at the high school level are extremely structured and supportive. Students take a specified schedule of classes that is the same each day. The same group of peers are in most of their classes. Teachers consistently review their expectations and monitor student progress. This is not the case in college, where each day's schedule can vary widely, and each class consists of a different group of students. College professors rarely take attendance, check to see if reading assignments are being done, or concern themselves with the quality of the notes being taken by students. Students have to analyze each class and professor to determine what will be required for success. This varies from class to class.

3. **There is greater academic competition.**

Unlike going to high school, going to college is a voluntary matter. Poor achievers and unmotivated students rarely reach the college campus. Consequently, students moving on to college find themselves in a "bigger pond" where peers have higher abilities and drive, and teachers have higher expectations. Memorization may have carried the day in high school, but high level analysis and synthesis is what is needed now. In terms of both the quality and the quantity of their work, LD students must be more productive than they have ever been before.

4. **There is a need for greater independence.**

The nature of high school LD programs tends to foster dependence in students.

gather and organize the materials and resources they need for each course.

Planning and consistency become crucial. Students must develop and stick to an individualized study plan for each of their courses. This plan must be responsive to the academic calendar and the due dates for all exams and assignments. Students must plan ahead to allow sufficient time to complete all work as and when required.

3. Increase your effort.

College requirements are both quantitatively and qualitatively greater than those experienced by students in high school. Consequently, LD students must apply themselves in a concerted and efficient manner if they are to succeed. Students used to an hour or so of homework each night must now be committed to spending two to three hours in preparation for each hour of class. While memorizing and repeating information in written or spoken form may have sufficed in high school, most college professors require students to demonstrate the ability to analyze, synthesize, and apply information to solve problems.

LD students should strive to improve their skills in a number of areas. They will need to develop an effective textbook reading strategy, devise effective study routines, and become more effective test takers. They will need to make full use of the library as a learning resource and become adept in the use of resources such as the dictionary, thesaurus, and encyclopedia. Certainly, they will benefit by developing word processing skills. Overall, LD students must become "active" students who rewrite their lecture notes, take written notes from their texts in their own words, and integrate information from a variety of sources. Further, LD students should seek help from their peers as appropriate. Teaming with a student who is doing well in a course can be very helpful when reviewing notes, writing and editing papers, and preparing for tests.

4. Become independent.

The college experience involves far more than just continued academic preparation. It is a time when LD young adults must make important personal decisions about their career and life goals. At first, LD students should not attempt to make decisions completely on their own.

Seeking the advice of a faculty advisor and utilizing career counseling services can help students to begin to identify the appropriate bases for the important decisions they must make. As they begin to make choices about a major and course of study, LD students initiate the process of becoming full independent adults. Each time they make decisions regarding which electives to take, how to manage time between classes, and with which groups and organizations to become involved, these students move further toward independence. LD students must become increasingly willing to make decisions on their own, ultimately claiming full ownership and responsibility for their decisions. LD students will undoubtedly find college to be more difficult than high school. But by being prepared for the differences between high school and college, and taking steps to accommodate to these differences, LD students can not only succeed in college--they can excel.

Stephen S. Strichart, Ph.D., is Professor of Education in the Department of Educational Psychology and Special Education at Florida International University. He is co-author with Charles T. Mangum, Ed.D., of Peterson's Guide to Colleges with Programs for Students with Learning Disabilities, now in its third edition.

Learning Disabilities

A learning disability is a permanent neurological disorder that affects the manner in which information is received, organized, remembered, and then retrieved or expressed. Students with learning disabilities possess average to above intelligence. The disability is demonstrated by a significant discrepancy between expected and actual performance in one or more of the basic functions: memory, oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematical calculation, or mathematical reasoning.

Accommodations may include:
(Students may not need all of these accommodations. Specific accommodations should be based on the diagnostic information.)

- Tape recorders and/or laptop computers
- Copies of classmate's and/or instructor's notes or overheads
- Extended time for tests
- Testing in a quiet, distraction-minimized environment
- Frequent breaks allowed during tests
- Test given by page or by section
- Clear arrangement of test items on paper
- Calculator, spellchecker, thesaurus, reader, and/or scribe during tests
- Alternative form of test, such as an oral test or an essay instead of multiple choice format
- Use of blank card or paper to assist in reading
- Extended time to complete assignments
- Taped texts and classroom materials
- Use of handouts and visual aids
- Extended time for in class assignments to correct spelling, punctuation, and/or grammar
- Word processor with spell check and/or voice output to provide auditory feedback
- Concise oral instructions
- Instructions and demonstrations presented in more than one way
- Syllabus provided before the start of the semester

Considerations and Instructional Strategies:

Instructors who use a variety of instructional modes will enhance learning for students with learning disabilities. A multi-sensory approach to teaching will increase the ability of students with different functioning learning channels--auditory, visual and/or kinesthetic--to benefit from instruction

SURVIVAL SKILLS
FOR THE
LEARNING DISABLED STUDENT

The special needs student must also take charge of the situation as well as ask for help. Here are some tips for success.

1. Your commitment to college must be deep and genuine. It must be a high priority in your life.

2. Start early to seek career counseling so your choice will be compatible with your strengths and you can plan how to reach long range goals.

3. Use your family as a support system. Some family members are readers, typists, or sounding boards.

4. Approach professors before classes to ask about what kinds of tests are given, how many papers are required, the grading criteria, class size, number and size of texts, and extra help from teaching assistants.

5. Take fewer classes each quarter (6-9 cr. hrs.) and balance easy classes with more difficult ones. Plan on the possibility of more years to finish.

6. Use compensatory techniques such as tape recorders, auditing classes before registration, tutoring, student study groups, notetaker, consolidating class locations, and purchasing texts in advance.

7. Deal with writing problems early as writing demands are heavy. Learn word processing on the computer.

8. Have a written summary of your diagnostic history. It is helpful for those with a knowledge of learning disabilities when advising you.

9. Organize your time - study skills classes teach this skill - and allow lots of extra study time.

10. Meet with your instructors and special services counselor on a weekly basis even if it is just to say hello.

11. Document your actions if there are problems with classes, instructors, etc. and contact the special services counselor in Student Services.

12. Be prepared for disbelief and lack of awareness by professors and fellow students.

Tips For Faculty

Many teaching strategies that assist students with disabilities are known to also benefit nondisabled students. Instruction provided in an array of approaches will reach more students than instruction using only one method. The following are some dos and don'ts to assist students in an academic setting.

DO...

- write key terms or an outline on the board, or prepare a lecture handout
- create study guides
- assign advance readings before the topic is due in the class session
- briefly review the previous lecture
- use visual aids such as overheads, diagrams, charts, and/or graphs
- allow the use of tape recorders
- emphasize important points, main ideas, and key concepts
- explain technical language and terminology
- speak distinctly and at a relaxed rate, pausing to allow students time for note-taking
- leave time for questions
- administer frequent quizzes to provide feedback for students
- give assignments in writing as well as orally
- treat an individual with a disability the same way you would treat anyone--with dignity and respect

DON'T...

- turn your back to the class when speaking
- embarrass a student with a disability by drawing attention to the disability in front of the class
- assume that certain professions or majors are more suited to persons with disabilities
- assume a student with a disability does not belong in a certain major or program
- assume a student with a disability cannot perform well in your class
- make medical judgements
- feel apprehensive about discussing the student's needs as they relate to the course

- Lord Addington
- Hans Christian Anderson
- Leslie Ash (British Actress)
- Sir Francis Bacon
- David Bailey (British Photographer)
- Michael Barrymore (Br comedian/TV host)
- Harry Belafonte
- Nicholas Brady (US Secy Treasury)
- Joyce Bulifant (Actress)
- Nicholas Bush (Son of President/Oil Exec)
- Darcy Bussel (British Ballet soloist)
- Lewis Carroll (Author)
- Julius Caesar
- Stephen J. Cannell
- Roy Castle (British Actor)
- Richard Chamberlain
- Cher
- Agatha Christie
- Sir Winston Churchill
- King Constantine of Greece
- Tom Cruise
- Dr. Harvey Cushing (father of modern brain surgery)
- Leonardo DaVinci
- Charles Darwin
- Walt Disney
- Thomas A. Edison
- Albert Einstein
- Whoopi Goldberg
- Duncan Goodhew (Br. swim champion)
- Susan Hampshire (British Actress)
- Sir Phil Harris (of Harris Queensway)
- Michael Hesetine (British MP)
- Margaux Hemmingway
- Nicola Hicks (British Sculptress)
- Bruce Jenner
- Ben Johnson
- Greg Louganis
- Dexter Manley (Pro Football)
- Michaelangelo
- Sarah Miles (British Actress)
- David Murdock (Financier)
- Rob Nelson (Pro Baseball)
- Napoleon
- Nicholas Parsons (British Actor/Television Host)
- General George S. Patton
- Pablo Picasso
- Alexander Pope
- Raphael
- Oliver Reed (British Actor)
- Beryl Reid (British Actress)
- Sir Joshua Reynolds
- John Rigby (British Theme Park Owner)
- Nelson Rockefeller
- Auguste Rodin
- Richard Rogers (British Architect)
- Franklin D. Roosevelt
- Anwar Sadat
- Peter Scott (Br. wildfowl author/painter)
- Tom Smothers
- Jackie Stewart (British champion race driver)
- Mark Stewart (British actor/Jackie's son)
- Paul Stewart (British race driver/Jackie's son)
- Don Stroud (Actor/International surfing champion)
- Mark Twain
- Vincent VanGogh
- Lindsay Wagner
- George Washington
- Margaret Whitton
- Willard Wiggins (British sculptor)
- Robin Williams
- The Earl of Yarmouth
- Woodrow Wilson
- Henry Winkler
- William Butler Yates
- Loretta Young
- The King of Norway
- Stanley Antonoff, D.D.S.
- M.C. Escher "Graphic Designer" (Optical Illusionist) NEW NAME

- Amy Lowell
- A. Lawrence Lowell
- Billy Banks (Tae-Bo the Fitness of the future)
- Chuck Close " Photo Realist " NEW NAME

Teaching Students With Learning Disabilities

A learning disability is a disorder which affects the manner individuals with normal or above normal intelligence take in, retain and express information.

The condition has only recently been identified and still often goes undiagnosed. That is why LD is often misunderstood by people with learning disabilities themselves, as well as others as intellectual deficiency which it emphatically is not. Documentation of the disability is required not only to establish the need for special services but also to determine the kind of special services that are indicated. Students who are believed to have a learning disability that has not been previously or reliably identified should be referred to Academic Support. While a learning disability cannot be "cured," it can be circumvented through instructional intervention and compensatory strategies. In general, a variety of instructional modes enhances learning for students with learning disabilities, as for others, by allowing them to master material that may be inaccessible in one particular form.

Characteristics Of College Students With Learning Disabilities

Reading Skills

- Slow reading rate and/or difficulty in modifying reading rate in accordance with material's level of difficulty
- Uneven comprehension and retention of material read
- Difficulty identifying important points and themes
- Incomplete mastery of phonics, confusion of similar words, difficulty integrating new vocabulary
- Skip words or lines of printed material
- Difficulty reading for long periods of time

Written Language Skills

- Difficulty planning a topic and organizing thoughts on paper
- Difficulty with sentence structure (e.g., incomplete sentences, run-ons, poor use of grammar, missing inflectional endings)
- Frequent spelling errors (e.g., omissions, substitutions, transpositions), especially in specialized and foreign vocabulary
- Difficulty effectively proofreading written work and making revisions
- Compositions are often limited in length.
- Slow written production
- Poor penmanship (e.g., poorly formed letters, incorrect use of capitalization, trouble with spacing, overly large handwriting)
- Inability to copy correctly from a book or the blackboard

Oral Language Skills

- Inability to concentrate on and to comprehend spoken language when presented rapidly
- Difficulty in orally expressing concepts that they seem to understand
- Difficulty speaking grammatically correct English
- Difficulty following or having a conversation about an unfamiliar idea
- Trouble telling a story in the proper sequence
- Difficulty following oral or written directions

Mathematical Skills

- Incomplete mastery of basic facts (e.g., mathematical tables)
- Reverses numbers (e.g., 123 to 321 or 231)
- Confuses operational symbols, especially + and x
- Copies problems incorrectly from one line to another
- Difficulty recalling the sequence of operational concepts
- Difficulty comprehending word problems
- Difficulty understanding key concepts and applications to aid problem solving

Note Taking: Some students with learning disabilities need alternative ways to take notes because they cannot write effectively or assimilate, remember, and organize the material while they are listening to a lecture.

- Allow note-takers to accompany the student to class.
- Permit tape recording or make your notes available for material not found in texts or other accessible sources.
- Assist the student, if necessary, in arranging to borrow classmates' notes.

Participation: It is helpful to determine the student's ability to participate in classroom activities. While many students with learning disabilities are highly articulate, some have severe difficulty in talking, responding or reading in front of groups.

Specialized Limitations: Some students with learning disabilities may have poor coordination or trouble judging distance or differentiating between left and right. Such techniques as demonstrations from the student's right-left frame of reference and the use of color codes or supplementary symbols may overcome the perceptual problem.

The Science Laboratory can be especially overwhelming for students with learning disabilities. New equipment, exact measurement and multi-step procedures may demand precisely those skills that are hardest for them to acquire.

- An individual orientation to the laboratory and equipment can minimize student anxiety.
- The labeling of equipment, tools and materials is helpful.
- The student's use of cue cards or labels designating the steps of a procedure may expedite the mastering of a sequence.
- Specialized adaptive equipment may help with exact measurements.

Behavior: Because of perceptual deficiencies, some students with learning disabilities are slow to grasp social cues and respond appropriately. They may lack social skills, or they may have difficulty sustaining focused attention. If such a problem results in classroom interruptions or other disruptions, it is advisable to discuss the matter privately with the student and a counselor.

Evaluation: A learning disability may affect the way a student should be evaluated. If so, a special arrangement may be necessary.

- Allow students to take examinations in a separate, quiet room with a proctor. Students with learning disabilities are especially sensitive to distractions. Testing services are available through the testing center.
- Grant time extensions on exams and written assignments when there are significant demands on reading and writing skills.
- Avoid overly complicated language in exam questions and clearly separate questions in their spacing on the exam sheet. For a student perceptual deficits while transferring answers, avoid using answer sheets, especially computer forms.
- Try not to test on material just presented since more time is generally required to assimilate new knowledge.
- Permit the use of a dictionary, computer spell checks, a proof reader or, in mathematics and science, a calculator (no programmable calculators!). In mathematics, the student may understand the concept but may make errors by misaligning numbers or confusing arithmetical facts.
- When necessary, allow students to use a reader, scribe, word processor, tape recorder or typewriter.
- Consider alternative test designs. Some students with learning disabilities may find essay formats difficult, and a student with a perceptual impairment will always have trouble with matching tests.
- Consider alternative or supplementary assignments that may serve evaluation purposes, such as taped interviews, slide preparations, photographic essays or hand-made models.

APPENDIX B: SURVEY INSTRUMENT

FACTS Survey

Please rate your frequency of experience working with students who have learning disabilities.

____never ___occasional ___frequent

Your Gender ____female ____male

Teaching experience at the college level:

____0-5 years___6-10 years ____11-15 years ____16-20 years ____21+ years

Field in which you teach: _____

Read the following statements and respond by circling the one response which best represents your opinion using the following scale:

1	**Strongly Agree**
2	**Agree**
3	**Tend to Agree**
4	**Tend to Disagree**
5	**Disagree**
6	**Strongly Disagree**

1.	It is unfair to spend more money educating learning disabled students than other students.	1 2 3 4 5 6
2.	Classroom environments are stifled by the presence of learning disabled students.	1 2 3 4 5 6
3.	Learning disabled students tend to feel sorry for themselves.	1 2 3 4 5 6
4.	Learning disabled people have fewer employment opportunities than others.	1 2 3 4 5 6
5.	I do not believe that interactions with LD students can be very rewarding.	1 2 3 4 5 6
6.	I feel uncomfortable around disabled people.	1 2 3 4 5 6
7.	Learning disabled people are mentally retarded.	1 2 3 4 5 6
8.	All of us are disabled to some degree.	1 2 3 4 5 6
9.	Learning Disabled people take more from society than they give back.	1 2 3 4 5 6

10.	LD students should be exempt from college graduation requirements.	1 2 3 4 5 6
11.	Learning disabled students all respond to the same type of accommodations.	1 2 3 4 5 6
12.	Few LD students will succeed in college.	1 2 3 4 5 6
13.	A student who is learning disabled and wishes to pursue a professional career should be discouraged from doing so.	1 2 3 4 5 6
14.	Having LD students in the classroom takes away from the quality of education other students receive.	1 2 3 4 5 6
15.	It is unacceptable to spend additional funds to make this college accessible to LD students.	1 2 3 4 5 6
16.	Learning disabled students should not be considered disabled.	1 2 3 4 5 6
17.	Learning disabled students are lazy and simply want an "easy ride."	1 2 3 4 5 6
18.	LD students should not be allowed to utilize taped books, notetakers & extended time on tests and assignments.	1 2 3 4 5 6
19.	To be realistic, college standards should be different for LD students.	1 2 3 4 5 6
20.	Poor academic performance of LD students is most likely a result of inadequate student effort.	1 2 3 4 5 6
21.	I can recognize a learning disabled student.	1 2 3 4 5 6
22.	College accommodations for students with LD tend to delay their development, self-reliance and independence.	1 2 3 4 5 6
23.	It is impossible to effectively teach an LD student at the college level.	1 2 3 4 5 6
24.	All learning disabled students will respond to the same method of instruction.	1 2 3 4 5 6
25.	Accommodations compromise the integrity of coursework.	1 2 3 4 5 6

APPENDIX C: PERMISSION LETTER

Dear College Administrator:

I would like to request your permission to provide a free workshop on working with college students with learning disabilities to your faculty. This innovative workshop will include testimonials from LD students, current relevant laws and regulations, activities to raise awareness and sensitivity, and many take- home resources that faculty can use in the classroom with this growing special needs population. The presentation is entitled, "Get the FACTS About Students With Learning Disabilities," and is about 2 hours in length.

FACTS is an acronym for "Faculty And Counselors Together for Students."

This presentation is part of my doctoral dissertation at the University of Tennessee, Knoxville. I would like to administer a pre-workshop survey and a post-workshop survey to measure the effectiveness of the training tool in educating faculty on LD students. The surveys should take approximately 15 minutes to complete.

If you will graciously allow the faculty to take part in this training, please sign and complete the information below. Thank you for your kind consideration.

Sincerely,

Robert Stewart,
Coordinator of Counseling & Special Services

I grant permission to have the FACTS workshop and its evaluation presented on our college campus.

_____ _____

(name) (title)

_____ _____

(signature) (date)

_____ You may use my college's name in the study; I understand that no individual's name will be collected or reported.

_____ Please do not use my college's name in the study. (In this case, the data collected from your college will be referred to anonymously)

VITA

Robert Thomas Stewart was born in Copperhill, Tennessee. He attended public schools in both Hickory and Murphy, North Carolina. He graduated from Caldwell Community College in Hudson, N.C., with an Associate of Arts in college transfer and then went on to receive his B.S. in elementary education from Appalachian State University.

After teaching for 5 years in the public schools, Robert returned to Appalachian State University where he earned his Master's degree in Community Counseling. While employed as the Coordinator of Counseling and Special Services at Haywood Community College, he entered the doctoral program in Educational Administration and Policy Studies at the University of Tennessee, Knoxville where he received his Doctor of Education degree in December, 2003.