Study of the University of Massachusetts at Amherst faculty's knowledge of disabilities, experience with educating students with disabilities, and attitudes that faculty possess towards students with disabilities.

David William Baggett
University of Massachusetts Amherst

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STUDY OF THE UNIVERSITY OF MASSACHUSETTS AT AMHERST
FACULTY'S KNOWLEDGE OF DISABILITIES,
EXPERIENCE WITH EDUCATING STUDENTS WITH DISABILITIES,
AND ATTITUDES THAT FACULTY POSSESS TOWARDS
STUDENTS WITH DISABILITIES

A Dissertation Presented

by

DAVID WILLIAM BAGGETT

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

May 1993

School of Education
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STUDY OF THE UNIVERSITY OF MASSACHUSETTS AT AMHERST
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And most importantly to my wife, Susan, my children, Lane and Emily, my parents, Guy and Mary Baggett, my brothers, Arthur and Steven Baggett, and my mother and father in-law, David and Jean McLaughlin.
Discriminatory attitudes towards people with disabilities exist today (Cook, 1992). Studies have found a strong association between intolerance toward racial minorities and intolerance towards persons with disabilities. For example, hearing-impaired persons are especially subjected to the same type of stigmatizing experiences as are ethnic minorities and aliens (Cook & Laski, 1980). These attitudes could be linked to the integration of students with disabilities.

In higher education, the success of a student with a disability, even more than that of a student without a specific disability, depends on a match between teacher and student (Marchant, 1990). It is thought that faculty attitudes influence the retention and long term behavioral change of their students (Peterson, 1988). The success of the student/teacher match includes consideration of the teacher's attitude towards students with disabilities which is
determined, in part, by the teacher's knowledge of disabilities and experience with teaching students with disabilities.

The purpose of this research was to assess the University of Massachusetts at Amherst faculty's knowledge of disabilities, experience with educating students with disabilities, and the attitudes they possess towards students with disabilities using a mailed survey and to determine if there is a relationship between the three factors. Guided interviews of eleven selected deans, department heads, and administrators were conducted in addition to the quantitative analysis of the mailed survey.

Nearly one-third of the University's 1,316 faculty completed and returned the mailed survey. Following an initial review of the data obtained from the mailed survey identified the need for increasing faculty awareness of students with disabilities, a qualitative study was constructed to identify the most effective strategies for increasing faculty awareness students with disabilities.

Participants were generally unfamiliar with disabilities, students with disabilities, University disability service providers, and disability law. University administrators had not identified the need to implement a disability awareness training program and very few interventions had been initiated to increase faculty awareness of students with disabilities. Based upon responses to the survey questions, participants of both studies could be seen as being supportive of students with disabilities.
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CHAPTER 1
THE PROBLEM

Introduction

Discriminatory attitudes towards people with disabilities exist today (Cook, 1992). Studies have found a strong association between intolerance toward racial minorities and intolerance towards disabled persons. For example, hearing-impaired persons are especially subjected to the same type of stigmatizing experiences as are ethnic minorities and aliens (Cook & Laski, 1980). These attitudes could be linked to the integration of students with disabilities.

Background of the Problem

Yuker has said, "Attitudes towards disabled persons are complex and multifaceted" (Antonak & Livneh, 1988, p. v). Nowhere is this more apparent than in the competitive, academic environment of higher education. Sichten wrote, "There is relatively little research of attitudes of professors towards students with a physical disability. What little research exists suggests that professors have moderately favorable attitudes towards disabled students on campus but their attitudes are somewhat less positive about having such students in their own department. Experience teaching students with a disability,
however, generally results in more positive attitude and greater comfort with disabled students" (1988, p. 177).

Individuals with disabilities have historically been underrepresented in post-secondary educational programs. In 1987, fewer than 15 percent of special education exiters who were out of school more than one year were reported to have participated in post-secondary education or training in the previous year. In contrast, 56 percent of all non-disabled high school graduates were enrolled in some type of post-secondary education or training (HEATH, 1991). Because of this, university faculty and staff may be unfamiliar with individuals with disabilities and related issues.

Attitudes toward people with disabilities may be conceived as operating in three distinct yet separate social circles or groups. These three groups are: the individual's relatives, friends, and peers; helping professionals, i.e. rehabilitation counselors, professors, physicians; and the general public. Attitudes of these groups influence the development of self-concept and also the socialization of the individual into typical community activities (Altman, 1981). It is important to note that the attitudes of the helping professionals strongly influence not only the development of the individual with a disability, but also the attitudes exhibited by the other two groups (Antonak & Livneh, 1988).

Teachers exert an influence upon the attitude a student shows toward the subject matter that is taught. If teachers exhibit an attitude towards a particular student, or group of students, it follows that those students will develop similar attitudes towards the subjects being taught and the likelihood of the student putting his
knowledge to use is then influenced by his attitude for or against the subject (Mager, 1968). Cook suggests that professionals' (faculty) attitudes are of critical importance in facilitating student success (1992, p. 262).

Studies that have attempted to alter attitudes towards individuals with disabilities can be divided into two types: (1) those aimed at changing attitudes by providing increased contact with individuals with disabilities; and (2) those that have provided increased information about disabilities as a means of attitudinal alteration (Evans, J., 1979).

Statement of the Problem Situation

In higher education, the success of a student with a disability, even more than that of a student without a specific disability, depends on a match between teacher and student (Marchant, 1990). Faculty attitudes influence the retention, and long term behavioral change of their students (Peterson, 1988). The success of the student/teacher match includes consideration of the teacher's attitude towards students with disabilities which is determined, in part, by the teachers knowledge of disabilities and experience with teaching students with disabilities.

Purpose of the Study

The purpose of this research was to assess the University of Massachusetts at Amherst faculty's knowledge of disabilities,
experience with educating students with disabilities, and the 
attitudes they possess towards students with disabilities using a 
mailed survey and to determine if there is a relationship between 
the three factors. A qualitative component was added to the study to 
verify, elaborate, and personalize the results of the quantitative data.

**Definition of Terminology**

The terminology and acronyms listed below in italics, are used 
throughout the thesis and are presented in alphabetical order.

*Americans with Disabilities Act of 1990 (ADA)*

This law guarantees equal opportunity for individuals with 
disabilities in employment, public accommodation, transportation, 
State and local government services, and telecommunications. The 
ADA is the most significant federal law assuring the full civil rights 
of all individuals with disabilities.

*Attitude*

The general tendency of an individual to act in a certain way 
under certain conditions (Mager, 1968).

*Deinstitutionalization*

The trend to place individuals with disabilities in closer contact 
with the community through reduction and elimination of large 
residential institutions.

*Disability*

Any restriction or lack (resulting from an impairment) of 
ability to perform in the manner, or within the range, considered
normal. The reduction of function, or the absence, of a particular body part or organ.

Exceptional children

Children who have physical, mental, behavioral, or sensory characteristics that differ from the majority of children such that they require special education and related services to develop to their maximum capacity.

Handicap

Problems that impaired or disabled people have when interacting with the environment. A handicap is a disadvantage imposed on an individual.

Education for All Handicapped Children Act of 1975

This law mandated a free appropriate public education for children with disabilities, ensures due process rights, mandates education in the least restrictive environment, and mandates Individualized Education Programs, among other things. It is the core of federal funding for special education.

Impairment

Any loss or abnormality of psychological, physiological, or anatomical structure or function.

Individual Education Plan (IEP)

Individual educational plans must be developed for each child with a disability and parents must be part of the team that devises the plan.

Individuals with Disabilities Education Act of 1990 (IDEA)

This law changed the name of EHA to the Individuals with Disabilities Education Act (IDEA) and reauthorized and expanded
discretionary programs, mandated transition services and assistive technology services to be included in a child's or youth's IEP, and added autism and traumatic brain injury to the list of categories of children and youth eligible for special education and related services.

*Integration*

Desegregating and including students with disabilities in the public educational system.

*Least restrictive Environment (LRE)*

One of the mandates of IDEA is that children with disabilities be educated with children who are not disabled. To assure this integrated experience is referred to as the least restrictive environment. IDEA says, "to the extent appropriate, handicapped students are to be educated with nonhandicapped students".

*Mainstreaming*

Educating children with disabilities in the regular classroom as much as possible.

*Regular Education Initiative (REI)*

A proposal urging fundamental changes in the way that students with disabilities are placed and educated. The REI issue entails integrating special education students back into the regular classrooms and, at the same time, providing special services within the regular classrooms.

*Section 504 of The Rehabilitation Act of 1973*

This law provides a comprehensive plan for providing rehabilitation services to all individuals, regardless of the severity of their disability. It also provided for civil rights enforcement and architectural accessibility under Section 504.
Special Education

Specially designed instruction that meets the unusual needs of an exceptional child.

Delimitations of the Study

As with most educational research, problems and limitations in research design are a matter of course. Given this, the following is a list of the delimitations of this research.

1. The conclusions drawn from the data gathered on the population being surveyed may not be generalizable to other institutions. This could be due to differences as influenced by: size, scope, or mission of the institution; demography of the faculty; regional and institutional history; predominant regional religions; racial and ethnic make-up of the region; and the political climate of the institution or region.

2. In registering attitudes towards people with disabilities, people generally do not verbalize, or express, negative feelings (Cook, 1992).

3. The findings are self-reported data and not independently verified by another researcher.

4. A respondent's response may be influenced by what he or she considers to represent the socially appropriate response, a tendency referred to a social desirability (Antonak & Livneh, 1988).

5. The faculty are knowledgeable of survey techniques and instrument design and are not likely to respond to an instrument
whose purpose is to measure their attitudes towards a minority group.

6. Due to the necessity of ensuring respondent's anonymity, it was impossible to identify non-respondents in order to request responses after the return date.

7. The research included all degrees and types of disabilities and the heterogeneous nature of disabilities may have skewed the response of the respondents. A respondent may have been familiar with specific types of disabilities or specific levels of severity of disabilities that could affect the responses.

8. The survey may have sensitized respondents to an "attitude domain of which they have a nebulous view and, therefore, create nonexistent attitudes" that the researcher interprets as significant (Antonak & Livneh, 1988, p. 120).

9. Since the structured interviews followed the mailed survey, the faculty was already aware of the purpose of the study, therefore, subjects may have tailored their responses to protect their privacy or to provide the researcher with the data they think the researcher wanted.

10. The researcher possesses a visible disability which may have affected the way that the subject of the structured interview responded to his interview questions.
Limitations of the Study

Upon completion of the research, several limitations of the study were identified by the researcher. The following is a list of limitations of this study.

1. The mailed survey had a higher representation of females responding compared to the percentage of the sample population. One-third of the respondents were female compared to 22.6 percent of the University faculty being female.

2. Questions 1 and 2 of Section I asked respondents to identify the number and types of students with disabilities that the respondent had taught during the last four years. It should have been noted that some types of disabilities are 'invisible' and the faculty should identify only those students who had disclosed their disability to the instructor.

3. Question 3 of Section I asked respondents to identify the types of disabilities that would prevent a student from entering an occupation related to the faculty members profession. An error in the instrument design was the omission of a category enabling the faculty to respond to the question that "none" of the types of disability would be insurmountable.

4. Question 6 of Section I asked the faculty to identify the level of effort they felt the University provided in recruitment of freshman and transfer students with disabilities. An error in the instrument design was made by not providing a fourth response item labeled "don't know", since many faculty pointed out they they either did not
know the University's policy, or were unfamiliar with University efforts in this area.

5. The researcher was unable to interview a dean or department head from the Faculty of Natural Sciences and Mathematics. All individuals that were selected to be interviewed declined. A representative of the Graduate School is not included in the qualitative study for the same reason.

Organization of the Thesis

The review of literature presented in Chapter 2 summarizes the history of special education and the corresponding integration of people with disabilities into the educational system in order to define the relationship between integration and the nature of attitudes different groups exhibit towards people with disabilities. The purpose of the literature review is to present a representative review of the literature in the areas of special education and attitudinal change. In particular, the literature review investigates the development of our society's attitude towards people with disabilities and the impact those attitudes have in shaping the behavior of people with disabilities. Chapter 2 concludes with a section on attitudinal change.

The literature review serves as background information for Chapter 3, a survey of the University of Massachusetts at Amherst faculty. The survey, conducted in two parts, studied the University of Massachusetts at Amherst faculty's knowledge of disabilities, experience with educating students with disabilities, and attitudes
which they possess towards students with disabilities. The initial part of the study consists of a quantitative survey distributed to each faculty member through the campus mail system. The second part of the study consists of a qualitative survey utilizing guided interviews of selected deans and department heads.

Chapter 4 presents, analyzes and discusses the results of both the quantitative and qualitative surveys. This chapter includes both the statistical analysis of the data from the mailed survey and the thematic presentation of the qualitative data obtained from the structured interviews. The chapter ends with a discussion of the relationship between the data obtained from the two surveys.

The research presented in the dissertation is summarized, conclusions are drawn from the data, and recommendations are made in Chapter 5. This final chapter includes suggested interventions for increasing the faculty's awareness of students with disabilities, policy recommendations, and future research directions.
CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

This chapter summarizes the history of special education and the corresponding integration of people with disabilities into the educational system in order to define the relationship between integration and the nature of attitudes different groups exhibit towards people with disabilities. The literature review serves as background information for two surveys that assess the University of Massachusetts at Amherst faculty's awareness of students with disabilities.

The purpose of this chapter is to present a representative review of the literature in the area of special education. In particular, the literature review investigates the development of our society's attitude towards people with disabilities and the impact those attitudes have in shaping the behavior of people with disabilities.

History of Special Education

Hallahan and Kauffman begin their fifth edition of Exceptional Children by stating, "The study of exceptional children is the study of differences" (1991, p. 2). This statement may be interpreted many different ways, depending upon one's point of view. Certainly, for
those who are unfamiliar with special education, the term
exceptional child would likely be used to describe a child with special
talents, such as those of an outstanding athlete or artist. By
definition, the exceptional child is different in some way from the
average child, but the difference may be that the child has problems
or disabilities.

Each discipline or field of study has its own unique terminology
and jargon. Special education is certainly no different. Prior to
examining the historical development of special education in the
United States, it may be useful to define the terminology which will
be used throughout this paper. It should be noted, however, that one
major drawback to these types of definitions is that they tend to
focus almost exclusively on the negative behavioral characteristics
that such students may possess. Somehow the positive characteristics
of these students and what they can learn have been overlooked in
many definitions (Stainback & Stainback, 1985).

Definitions and Terminology

Exceptional children are children who have physical, mental,
behavioral, or sensory characteristics that differ from the majority of
children such that they require special education and related
services to develop to their maximum capacity. Special education is
specially designed instruction that meets the unusual needs of an
exceptional child (Hallahan & Kauffman, 1991). It is designed to
respond to the unique characteristics of children who have needs
that cannot be met by the standard school curriculum (Blackhurst &
Berdine, 1981). But, special education is a part of regular education and its most important goal is to find and capitalize on exceptional children's abilities.

Three terms most often used to describe children receiving special education services are disabled, impaired, and handicapped. These terms have been used interchangeably for many years by layman, but are, in fact, defined as having very different meanings.

Anthony, Cohen, and Danley (1988) use these three terms in describing the stages in the rehabilitation model as described in Table 1 on the following page. They point out that the impairment of structure or function can lead to disability and limit the person's fulfillment of certain roles, in other words, creating a handicap.
Table 1. Stages in the Rehabilitation Model.

<table>
<thead>
<tr>
<th>Stages</th>
<th>Definitions</th>
<th>Typical Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impairment</td>
<td>Any loss or abnormality of psychological, physiological, or anatomical structure or function.</td>
<td>Treatment focused on alleviating or eliminating pathology</td>
</tr>
<tr>
<td>Disability</td>
<td>Any restriction or lack (resulting from an impairment) of ability to perform in the manner or within the range considered normal human being.</td>
<td>Clinical rehabilitation focused on developing for a client skills and environmental supports</td>
</tr>
<tr>
<td>Handicap</td>
<td>A disadvantage for a given individual (resulting from an impairment and/or a disability) that limits or prevents the fulfillment of a role that is normal depending on age, sex, and social/cultural factors for that individual</td>
<td>Societal rehabilitation focused on changing the system in which individual lives</td>
</tr>
</tbody>
</table>

(From Anthony, Cohen, & Danley, 1988, p. 61)

The term disability is used to refer to the reduction of function, or the absence, of a particular body part or organ. A person who has an arm or leg missing has a physical disability. The terms dysfunction and disorder are frequently used as synonyms for disability (Blackhurst & Berdine, 1981).

Impairment refers to diseased or defective tissue. For example, lack of oxygen at birth may cause brain damage or neurological impairment that will result in cerebral palsy (Blackhurst & Berdine,
1981). An individual may have an intact organism which appears on the surface to be normal, but at the same time, have impairments in functioning (Gardner & Warren, 1978). These impairments, such as hearing loss, are known as 'invisible' impairments, or 'invisible' disabilities.

Handicap refers to problems that impaired or disabled people have when interacting with the environment. A handicap is a disadvantage imposed on an individual (Stevens, 1962).

Although there are many types of disabilities, the majority of disabilities may be included in the following nine groups identified by P. L. 101-476, The Individuals with Disabilities Act (IDEA). Some of the terminology of the original act, P. L. 94-142, is outdated, but the disability groupings are still accurate. The definitions of these groups are presented below in alphabetical order.

**Autism** is a "complex syndrome that is not easily defined or treated", says Knoblock (1987, p. 88). The National Society for Children and Adults with Autism defined autism as a biological syndrome (a complex combination of biological symptoms) manifested before 30 months of age and including disturbances of (1) developmental rates and/or sequences, (2) responses to sensory stimuli, (3) speech, language, and cognitive capacities, and (4) capacities to relate to people, events, and objects. All these states characteristics must be present for the diagnosis to be applied (Ysseldyke & Algozzine, 1990, p. 204).

Until 1981 autism was included in the definition of emotional disturbance, but in that year the Secretary of Education moved autism from the federal definition of emotional disturbance to the
category of other health impaired. IDEA has now set autism apart into its own category.

Infantile autism is characterized as a pattern of severe withdrawal in children (Telford & Sawrey, 1981, p. 501). Early infantile autism is rarely diagnosed until the second or third year, when it becomes apparent that something has gone awry. As autistic children approach school age, their condition begins to resemble mental retardation and they are not infrequently so diagnosed. Affectional and social development are almost absent in autistic children.

Telford & Sawrey (1981, p. 502) emphasize the severity of autism, "The etiology of infantile autism is vague, the symptoms severe and complex, the diagnosis uncertain, treatment not clearly understood, and the prognosis poor."

*Communication disorders* include speech disorders, language disorders, and variations in communication. Examples of communication disorders are difficulties with receptive and/or expressive language. Table 2 on the following two pages clearly defines and classifies the types of communication disorders.
Table 2. Definitions of the Types of Communication Disorders.

Communication Disorders

A. A Speech Disorder is an impairment of voice, articulation of speech sounds, and/or fluency. These impairments are observed in the transmission and use of the oral symbol system.

1. A Voice Disorder is defined as the absence or abnormal production of voice quality, pitch, loudness, resonance, and/or duration.

2. An Articulation Disorder is defined as the abnormal production of speech sounds.

3. A Fluency Disorder is defined as the abnormal flow of verbal expression, characterized by impaired rate and rhythm which may be accompanied by struggle behavior.

B. A Language Disorder is the impairment or deviant development of comprehension and/or use of a spoken, written, and/or other symbol system. The disorder may involve (1) the form of language (phonologic, morphologic, and syntactic systems), (2) the content of language (semantic system), and/or (3) the function of language in communication (pragmatic system) in any combination.

1. Form of Language

   a. Phonology is the sound system of a language and the linguistic rules that govern the sound combinations.

   b. Morphology is the linguistic rule system that governs the structure of words and the construction of word forms from the basic elements of meaning.

   c. Syntax is the linguistic rule governing the order and combination of words to form sentences, and the relationships among the elements within a sentence.

2. Content of Language

   a. Semantics is the psycholinguistic system that patterns the content of an utterance, intent and meanings of words and sentences.

3. Function of Language

   a. Pragmatics is the sociolinguistic system that patterns the use of language in communication which may be expressed motorically, vocally, or verbally

(Continued next page).
Table 2. Continued.

Communicative Variations

A. Communicative Difference/Dialect is a variation of a symbol system used by a group of individuals which reflects and is determined by shared regional, social, or cultural/ethnic factors. Variations or alterations in the use of a symbol system may be indicative of primary language interferences. A regional, social, or cultural/ethnic variation of a symbol system should not be considered a disorder of speech or language.

B. Augmentative Communication is a system used to supplement the communicative skills of individuals for whom speech is temporarily or permanently inadequate to meet communicative needs. Both prosthetic devices and/or nonprosthetic techniques may be designed for individual use as an augmentative communication system.


Hearing impairment is a generic term indicating a hearing disability which may range from mild to profound: it includes the subsets of deaf and hard of hearing. Many variables must be taken into account when attempting to define the degree of hearing loss. Specific variables such as age of loss and degree of language particularly affect such definitions. Neely (1982) explains that one of the most common ways to categorize types of hearing loss is:

Conductive loss—there is reduced or impaired conduction of sound to the sense organ. This type of loss relates to problems in the outer or middle ear.

Sensorineural loss—the inner ear is the basic source of the problem. The presumption is that although sound is conducted normally, the inner ear is not working properly.
Mixed loss—both conductive and sensorineural losses are involved.

The Conference of Executives of American Schools for the Deaf has advanced a simple definition: a deaf person is one whose hearing disability is so great that he or she cannot understand speech through the use of the ear alone, with or without a hearing aid. A hard of hearing person is one whose hearing disability makes it difficult to hear but who can, with or without the use of a hearing aid, understand speech. Other definitions and classification systems may be based on time of onset (congenital or adventitious) or on the acquisition of language (pre- or post-lingual).

The diagram on the following page, Figure 1, illustrates the relationship between speech and language problems (Gearheart & Weishahn, 1980).
Can have accompanying speech or hearing problems

**LANGUAGE DISORDERS**

DELAYED LANGUAGE: marked slowness in the onset and development of language skills necessary for expressing ideas and for understanding the thoughts and ideas one hears or reads.

LEARNING DISABILITIES: something interfering with a child's ability to understand the message that his eyes and ears receive.

APHASIA: loss of speech and language abilities following brain damage sometimes resulting from a stroke or head injury.

**SPEECH DISORDERS**

ARTICULATION: difficulties with the way sounds are formed and strung together; characterized by substituting one sound for another (wabbit for rabbit), and omitting a sound (han for hand), and distorting a sound (shlip for sip).

STUTTERING: interruptions in the flow or rhythm of speech; characterized by hesitations, repetitions, or prolongations of a sound, syllable, word, or phrase.

VOICE: inappropriate pitch (too high, too low, never changing, interrupted by breaks); loudness (too loud or not loud enough); or quality (harsh, hoarse, or breathy).

**HEARING DISORDERS**

CONDUCTIVE: occur in the outer or middle ear. Speech and other sounds may be heard faintly, often muffled.

SENSORINEURAL: occur in the inner ear or auditory nerve and cause one to hear speech sounds faintly and sometimes in a distorted way, words may sound slurred or lacking in clarity.

MIXED: a combination of conductive and sensorineural losses.

Can have accompanying language or hearing problems

Can have accompanying speech or language problems

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Figure 1. Inter-relationship of Speech and Language Problems.

(From Gearheart & Weishahn, 1980, p. 123.)
Mental retardation, as defined by the American Association on Mental Retardation, refers to significantly subaverage general intellectual functioning resulting in or associated with impairments in adaptive behavior and manifested during the developmental period. In this definition 'general intellectual functioning' refers to the results of individual intelligence tests. 'Significantly subaverage' means an IQ score more than two standard deviations below the mean for the test. And 'developmental period' means between birth and the 18th birthday. 'Adaptive behavior' refers to the degree to which the individual meets the standards of personal independence and social responsibility expected of the age and cultural group (Neely, 1982). The AAMD classification system includes four levels of mental retardation: mild, moderate, severe, and profound. Table 3 compares these levels of retardation with the IQ scores generally associated with them, on a test with a mean of 100 and a standard deviation of 15.

Table 3. Classification Systems for Mental Retardation.

<table>
<thead>
<tr>
<th>AAMD</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Profound</th>
</tr>
</thead>
<tbody>
<tr>
<td>American educational System</td>
<td>Educable</td>
<td>Trainable</td>
<td>Profound</td>
<td></td>
</tr>
<tr>
<td>IQ scores</td>
<td>70</td>
<td>65</td>
<td>60</td>
<td>55</td>
</tr>
</tbody>
</table>

(From Neely, 1982, p. 87.)
Specific learning disability, as defined by P. L. 101-476, means a disorder in one or more of the basic psychological processes involved in understanding or in using language spoken or written. This may be manifested in an imperfect ability in writing, spelling, or arithmetic. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include students who have learning problems which are the primary result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

A student has a learning disability if (1) the student does not achieve at the proper age and ability levels in one or more of several specific areas when provided with appropriate learning experiences, and (2) the student has a severe discrepancy between achievement and intellectual ability in one or more of these seven areas: oral expression; listening comprehension; written expression; basic reading skills; reading comprehension; mathematics calculation; and mathematics reasoning (Lerner, 1988).

There are many other definitions of learning disabilities. Lerner has summarized the various definitions of learning disabilities as having the following common elements (1988, p. 9):

1. neurological dysfunction,
2. uneven growth pattern,
3. difficulty in academic and learning tasks,
4. discrepancy between achievement and potential, and
5. exclusion of other causes.
Physical disability is a term used to define a physical or health problem which results in an impairment of normal interaction with society to the extent that specialized services and programs are required. There is a tremendous range and variety of physical disabilities, so much so, that it is difficult to discuss physical disabilities in general. Some examples of physical disabilities are cerebral palsy, muscular dystrophy, polio, spinal cord injuries, cystic fibrosis, asthma, and epilepsy (Blackhurst & Berdine, 1981).

Another explanation of the meaning of term physical disability is "those whose nonsensory physical limitations or health problems interfere with school attendance or learning to such an extent that special services, training, equipment, materials, or facilities are required. This definition excludes children whose primary characteristics are visual or auditory impairments, although some physically disabled children have these deficiencies as secondary problems" (Hallahan & Kauffman, 1991, p. 344).

Emotional/behavioral disorders are extreme social-interpersonal and/or intrapersonal problems. Some of the terms used to describe children with emotional or behavioral disorders include: emotionally handicapped, emotionally impaired, socially emotionally handicapped, emotionally conflicted, having personal and social adjustment problems, seriously emotionally disturbed, and seriously behaviorally disabled.

While there is no universally accepted definition of emotional/behavioral disorders, it is clear that children who have emotional or behavioral disorders are not typically good at making friends. The problem arises "because the social interaction and
transactions between the child and the social environment are inappropriate" (Hallahan & Kauffman, 1991, p. 172).

Some of the common features of current definitions of these problems are:

1. Behavior that goes to an extreme—behavior that is not just slightly different than usual;
2. A problem that is chronic—one that does not quickly disappear;
3. Behavior that is unacceptable because of social or cultural expectations (p. 176).

Public Law 101-476, Section 121a.5 defines seriously emotionally disturbed as:

(i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked extent, which adversely affects educational performance:

(A) An inability to learn which cannot be explained by intellectual, sensory, or health factors;
(B) An inability to build or maintain satisfactory relationships with peers and teachers;
(C) Inappropriate types of behavior or feelings under normal circumstances;
(D) A general pervasive mood of unhappiness or depression;
(E) A tendency to develop physical symptoms or fears associated with personal or school problems.

(ii) The term includes children who are schizophrenic or autistic. The term does not include children who are socially maladjusted unless it
is determined that they are seriously emotionally disturbed (IDEA, 1990).

Many adults who suffer emotional/behavioral problems which seriously impact their lives are described as being psychiatric disabled. Psychiatric disabled, as defined by the Center for Psychiatric Rehabilitation at Boston University, is as follows: the term psychiatric was selected to describe the disability that is the focus of the rehabilitation (i.e, multiple personality disorder, depression). It does not mean that the treatment must be done by psychiatrists or using psychiatric treatment methods. The term rehabilitation reflects the focus be approached on improved functioning in a specific environment, although many different techniques and settings are used in the rehabilitation of persons with psychiatric disabilities (example, social skills training ) (Unger, Danley, Hohn, & Hutchinson, 1987).

*Traumatic brain injury* is newly categorized by P.L. 101-476. Trauma is defined as: "A physical injury or wound caused by external force or violence. Also, emotional or psychological shock that may produce disordered feelings or behavior" (Klienberg, 1982, p. 320). Telford and Sawrey (1981) make the connection between traumatic brain injury and the presence of learning disabilities. They believe a neurological deficit to be the basic cause of the disorder in some individuals (p. 308).

The person with head injury may experience impairment in such functions as memory, cognitive/perceptual communication, speed of thinking, communication, spatial reasoning,
conceptualization, executive functions, psychosocial behavior, motor ability, sensory ability, and physical ability (HEATH, 1991, p. 12).

*Visual impairments* can be categorized by the terms legally blind and partially sighted. A legally blind person has visual acuity of 20/200 or less in the better eye even with correction or has a field of vision so narrow that its widest diameter subtends an angular distance no greater than 20 degrees. Partially sighted individuals have visual acuity falling between 20/70 and 20/200 in the better eye with correction.

Studies have indicated that only a small percentage, 18 percent, of legally blind students are totally blind and that most individuals classified as legally blind see well enough to read large- or regular-print books (Willis, 1976). For this reason, an educational definition of blindness is: blind individuals are so severely impaired they must learn to read Braille or use aural methods (audiotapes and records). Those visually impaired persons who can read print are termed low vision (Hallahan & Kauffman, 1991).

Blindness is primarily an adult disability. Most studies indicate that blindness is approximately one-tenth as prevalent in school-age children as in adults. Hallahan and Kauffman cite U.S. Department of Education studies as indicating that for the 1987-1988 school year the public schools identified .05 percent of the population ranging from 6 to 17 years of age as visually impaired (1991, p. 304).

While the preceding terminology and definitions identifies the population which special educators serve, modern special education theories and practices will be defined and expanded upon elsewhere. It is important to gain insight into the historical development of the
field if an accurate assessment and understanding of the attitudes generated from the integration of these students is to be gained.

**Historical Development of Special Education in the United States**

"There have always been exceptional children, but there have not always been special educational services to address their needs" (Hallahan & Kauffman, 1991). Looking back into the history of special education, the entire concept of educating each child to the limits of his or her ability is relatively new.

Cremins said, "Societal treatment of handicapped citizens has evolved through three distinct stages. First, the handicapped were abused and neglected. They were subjected to exposure in ancient Greece, abandoned by the Romans and ridiculed as fools and jesters during the Middle Ages. Second, (in the eighteenth and nineteenth centuries) the handicapped were segregated and placed in secluded institutions far from the mainstream of society. Third, over the last hundred years there has been a painfully slow process of integration and participation of the handicapped" (1983, p. 3).

Kirk states that there are four stages in the development of attitudes toward the handicapped child which can be recognized. Kirk agrees with Cremins' three stages and adds a stage after Cremins' first stage when during the spread of Christianity handicapped children were protected and pitied (1979, p. 5).

Blackhurst and Berdine further described the historical development of special education as being divided into six distinct periods. These six periods are: 1) Early Practices, 1552 B. C. to A. D.

Regardless of how the history of special education is charted, it is well documented that in the early years of the United States, no public provisions were made for the handicapped. As Kirk explained, "Such individuals were stored away in poorhouses and other charitable centers or remained at home without educational provisions. It was estimated that, as late as 1850, sixty percent of the inmates of the poorhouses consisted of the deaf, the blind, the insane, and idiots" (1979, p. 5). In colonial America people with mental disorders that made them violent were treated as criminals. Those that were harmless were generally treated as paupers. Blackhurst and Berdine explain that during this period, "The retarded, for example, were subjected to one of three treatments, they were either: 1) kept at home and provided partial public support, 2) put in poorhouses, or 3) auctioned off to the bidder who would support them at the lowest cost to the community, in return for whatever work the bidder could extract from them" (1981, p. 15).

Special education in the United States truly began when children with disabilities were considered to be useful, productive, and educable. Early in the nineteenth century, the French physician Jean Marc Itard discovered that mentally retarded children could be trained. Itard's investigations exerted a strong influence on special educators working in the United States and led to the establishment of numerous training schools or asylums.
The first of three significant training programs in the United States occurred in 1817, when Reverend Thomas Gallaudet established the first residential school in America, called the Asylum for the Deaf, in Hartford, Connecticut. In 1829, Samuel Gridley Howe was instrumental in founding the New England Asylum for the Blind, subsequently named the Perkins School for the Blind in Watertown, Massachusetts. In 1959, a residential school for the mentally retarded was established in South Boston, Massachusetts, called the Massachusetts School for Idiotic and Feebleminded Youth. During the period from 1817 to the beginning of the Civil War many states established residential schools for the deaf, the blind, the mentally retarded, the orphaned, and others, as was being done in Europe. Horace Mann, Samuel Gridley Howe, and Dorthea Dix were among the leaders and reformers of that period (Kirk, 1979; Cremins, 1983).

Jean Marc Itard's student, Edouard Seguin emigrated to the United States in 1848. Sequin had become a famous educator of retarded children and his book *Idiocy and Its Treatment by the Physiological Method*, published in the United States in 1866, described in detail his interpretation and elaboration of Itard's methods. Maria Montessori used Sequin's work as a foundation to build her educational philosophy as an educator of mentally retarded children and as an advocate of early education for children. Hallahan and Kauffman credit the following revolutionary ideas of Itard, Sequin, and their successors as the foundation for present-day special education (1991, p. 19):
1. Individualized instruction in which the child's characteristics rather than prescribed academic content provide the basis for teaching techniques.

2. A carefully sequenced series of educational tasks which begin with tasks the child can perform and gradually lead to more complex learning.

3. Emphasis on stimulation and awakening of the child's senses with the aim being to make the child more aware of and responsive to educational stimuli.

4. Meticulous arrangement of the child's environment, so that the structure of the environment and the child's experience of it lead naturally to learning.

5. Immediate reward for correct performance which provides reinforcement for desirable behavior.

6. Tutoring in functional skills, the desire being to make the child as self-sufficient and productive as possible every day.

7. Belief that every child should be educated to the greatest extent possible. The assumption being that every child can improve to some degree.

Table 4, on the following two pages, lists the most important individuals, the years during which they lived, their nationality, and their major ideas which were significant contributions to the field of special education.
<table>
<thead>
<tr>
<th>Initiator</th>
<th>Dates</th>
<th>Nationality</th>
<th>Major Idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jean Marc Itard</td>
<td>1775-1838</td>
<td>French</td>
<td>Single-subject research can be used to develop training methods for mentally retarded</td>
</tr>
<tr>
<td>Samuel Gridley Howe</td>
<td>1801-1876</td>
<td>American</td>
<td>Handicapped children can learn and should have an organized education, not just compassionate care</td>
</tr>
<tr>
<td>Edouard Seguin</td>
<td>1812-1880</td>
<td>French</td>
<td>Mentally retarded children can learn if taught through specific sensory-motor exercises</td>
</tr>
<tr>
<td>Francis Galton</td>
<td>1822-1911</td>
<td>English</td>
<td>Genius tends to run in families, and its origin can be determined</td>
</tr>
<tr>
<td>Alfred Binet</td>
<td>1857-1911</td>
<td>French</td>
<td>Intelligence can be measured, and it is amenable to improvement through education</td>
</tr>
<tr>
<td>Louis Braille</td>
<td>1809-1852</td>
<td>French</td>
<td>The blind can learn through an alternate system of communication based on a code of raised dots</td>
</tr>
<tr>
<td>Thomas Gallaudet</td>
<td>1787-1851</td>
<td>American</td>
<td>Deaf children can learn to communicate by spelling and gesturing with their fingers</td>
</tr>
<tr>
<td>Alexander Graham Bell</td>
<td>1847-1922</td>
<td>American</td>
<td>Hearing-handicapped children can learn to speak and can use their limited hearing if it is amplified</td>
</tr>
<tr>
<td>Maria Montessori</td>
<td>1970-1952</td>
<td>Italian</td>
<td>Children can learn at very early ages, using concrete experiences designed around special instruction materials</td>
</tr>
<tr>
<td>Anna Freud</td>
<td>1895-</td>
<td>Austrian</td>
<td>The techniques of psychoanalysis can be applied to children to help their emotional problems</td>
</tr>
</tbody>
</table>

(Continued next page).
Table 4. Continued.

<table>
<thead>
<tr>
<th>Lewis Terman</th>
<th>1877-1956</th>
<th>American</th>
<th>Intelligence tests can be used to identify gifted children who tend to maintain superiority throughout life.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfred Strauss</td>
<td>1897-1957</td>
<td>German</td>
<td>Some children show unique patterns of learning disabilities that require special training and are probably due to brain injury.</td>
</tr>
</tbody>
</table>

(From Kirk, 1979, p. 6.)

"The beginning of the twentieth century saw progress in special education occur as part of the general movement in public health," said Cremins. "The First World War and its residue of handicapped soldiers in need of rehabilitation gave further impetus to the special education movement. Furthermore, day-school programs, which allowed handicapped children to live at home, were developing early in the twentieth century. Finally, the advent of intelligence testing and the resulting classification of retarded children into specific categories based on scores led to establishment of schools and programs for the mentally retarded" (1983, p. 6).

By 1890 it was generally accepted that the states had the responsibility for providing institutional services for the handicapped, but real progress came at the local level as special education classes were introduced into the public schools. The first day class that was created was one for the deaf in Boston in 1869. It was not until 1896 that the first special class for the mentally retarded was organized in Providence, Rhode Island. It was followed by a class for the crippled in 1899 and a class for the blind in 1900.
in Chicago (Kirk, 1979). Between 1900 and 1910, the New York City Board of Education established ungraded classes, which were known later as classes for children with retarded mental development (Cremins, 1983).

Once these special classes for the handicapped were introduced into the public schools, there arose a need to staff them with qualified teachers. Charles S. Berry established the first teacher-training program for special educators at the Lapeer State Home and Training School in Michigan in 1914. Shortly thereafter, Charles M. Elliot established the first college program in special education at Michigan State Normal College. Elliot's efforts resulted in establishment of the Rackman School of Special Education at Eastern Michigan. For many years, Rackman was the chief source of special educators in the United States (Cremins, 1983).

Prior to the second World War, significant progress was made in developing strategies and techniques for teaching retarded children. The actual number of special programs and educators was, however, smaller than expected. Cruickshank suggest that this delay was due to mixed acceptance and resistance to the concept of special education. Cremins said that, "Resistance came chiefly in the philosophy of progressive education. Progressive educators often advocated unplanned and heterogeneous grouping of children. This led to the demise of special classes and subsequent reassignment of handicapped children to regular classes, where they were mistreated or ignored. The end of World War II saw the demise of progressive education, together with an increase in the status of the teaching profession" (p. 7). From 1949 to 1953 the number of colleges
offering a sequence of courses in teaching exceptional children grew from 77 to 122.

The 1950s were the beginning years of rapid growth and expansion in the field of special education. Increased public awareness, parent activism, demonstration projects, and legislative action increased during the 1950s. Led by the formation in 1950 of the National Association for Retarded Children (NARC), public schools were pressured to initiate programs for the moderately retarded and to expand special education services. These services were supported by federal legislation introduced by Senator Lister Hill of Alabama and Congressman John Fogarty of Rhode Island.

During the period of the early sixties, dramatic changes took place in public education for children with disabilities. Led by President Kennedy at the national level, the shift was from exclusion of the handicapped in public education to inclusion and integration. In 1961, President Kennedy appointed a panel on mental retardation which, in turn, reported that mental retardation was a matter of national concern.

Rothstein points out that financing was one reason that special education was inadequate for many years, "special education is costly and it is burdensome for local school districts to support it. By 1975, state education agencies had taken on a substantial role in special education, both by mandating special education and by allocating funds to help subsidize local school districts" (1990, p. 2). Additionally, Federal legislation was introduced regularly over the following three decades which progressively led to the current state of affairs in special education. Much of the legislation was spurred on
by civil suits, such as *PARC* and *Mills*, in the early 1970s. A detailed examination of these laws and court cases will be presented in a latter section.

Today more than four million students in the nation have been identified in all categories of disabilities, which is about eleven percent of the school population. The distribution of students, ages 3 to 21, with disabilities receiving special education services in 1986-87 is presented in Table 5.

Table 5. Students Receiving Special Education Services, Ages 3-21: 1986-87 School Year.

<table>
<thead>
<tr>
<th>Type of Disability</th>
<th>Percentage of Total School Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Disabled</td>
<td>4.80</td>
</tr>
<tr>
<td>Speech Impaired</td>
<td>2.84</td>
</tr>
<tr>
<td>Mentally Retarded</td>
<td>1.61</td>
</tr>
<tr>
<td>Emotionally Disturbed</td>
<td>.96</td>
</tr>
<tr>
<td>Deaf &amp; Hard of Hearing</td>
<td>.16</td>
</tr>
<tr>
<td>Multihandicapped</td>
<td>.24</td>
</tr>
<tr>
<td>Orthopedically Disabled</td>
<td>.14</td>
</tr>
<tr>
<td>Other Health Impairments</td>
<td>.13</td>
</tr>
<tr>
<td>Visually Impaired</td>
<td>.07</td>
</tr>
<tr>
<td>Deaf-Blind</td>
<td>less than .01</td>
</tr>
<tr>
<td>Total</td>
<td>10.98</td>
</tr>
</tbody>
</table>

Philosophical Development of Special Education

"The development of educational philosophy toward handicapped children occurred in several phases", states Rothstein in Special Education Law. "The first phase, in the late 1800s, was a philosophy of relieving stress on the teacher and other children by removing handicapped children to separate, special classes. This segregationist attitude continued in latter years, but the underlying basis emphasized the need to avoid stress on the handicapped child. Eventually some educational programming was provided, first in the form of diluted academic training and later in the form of manual training. Again, the training was still segregated for the most part, and there was a continued concern about avoiding disruption in the classroom. Many children with handicaps never went to school" (p.1).

Alexander added that during these years, "The prevailing view was that education was a privilege, with a wide discretion vested in the school personnel and school boards as to the criteria necessary for each individual to partake of the privilege. Persons deviating from normal were suspect and could be permanently excluded from the public benefit" (Alexander, p. 5. In Rehmann & Riggen, 1976).

Cremins attributes the industrial revolution of the late eighteenth century with the philosophy of labeling people by their disabilities. He says, ". . . caused a great migration of people from rural to urban areas. This great social upheaval led to the establishment of standardized institutions for various types of handicapped people. Interestingly, labeling the handicapped served to legitimize the provision of differential legal, medical, residential,
economic, and socialization care. Labeling was, in fact, a key to more efficient use of resources and care for the handicapped" (1983, p. 5). He continues this by saying that the during the nineteenth century, the goal of American society was "to train the handicapped to function in the institution rather than educating them to function in society" (p. 5). One of the four reasons he gave for this societal philosophy was that 'society preferred to hide its mistakes'.

During the mid 1900s a shift in philosophy had begun. Rothstein explained that, "This was characterized by the recognition of the worth and dignity of a person that led to the goal of teaching self-reliance. It was also at about this time that vocal leaders in education recognized that separation, or segregation, in the educational process was usually inherently negative" (p. 1).

Some credit this philosophical shift to the following events which occurred earlier in the century: 1) migration from rural to urban areas of the United States; 2) a tremendous influx of foreign immigrants to the United States; and 3) industrial expansion. The industrial expansion created a need for workers which attracted the immigrants. Most of these people came to America with a language and culture that was foreign and strange. The so-called melting-pot theory never worked for these people and they were often rejected, ignored, and isolated from society. The children of these immigrants had little chance to succeed. They were handicapped by language, customs, and the color of their skin. They had little educational opportunity, poor nutrition, and inadequate health care. All these factors added to the increasing number of handicapped children at this period of history (Cremins, 1983).
Alexander adds an economic viewpoint to the current philosophy of special education, "The justification for providing educational programs for the handicapped has been established largely on equalitarian or humanitarian grounds. The economic benefits of investing in the handicapped have been disregarded. In other words, the common justification for educating the handicapped has been that the handicapped will personally benefit and the state must provide education because it is legally required or because the state feels sorry for the individual. The point which has largely been ignored is that by educating the handicapped the state and society receive economic and other external benefits which enhance the nation and state generally" (Alexander, p. 6. In Rehmann & Riggen, 1976).

Current Status of Special Education

The present structure of special education is based upon the tenant of least restrictive environment. Although this practice is explained in a successive section on integration, it shapes the way special education is presented in today's schools. The present law requires that every exceptional child be placed in the least restrictive environment so that educational intervention will be consistent with individual needs and not interfere with individual freedom and the development of potential. Today, therefore, most students with exceptionalities are educated in the regular classroom (Hallahan & Kauffman, 1991).
Legislation and Litigation

Legislation concerning services for children with disabilities grew from the philosophical development of special education as established by case law which was based upon principles of the federal Constitution, the primary and basic source of law in the United States. Advocacy and parent groups spurred this legislation by filing law suits on behalf of children with disabilities who they believed were being denied their civil rights.

Figure 2 shows the relationship between the events which have shaped modern special education. Federal and state constitutions set forth the broad political principles that have guided the lawmaking process at both the national and state levels. Administrative rules and regulations usually are written to clarify laws and they have the force of law (Ysseldyke & Algozzine, 1990).
Advocacy Groups

The concept of advocacy has been a vital element in securing optimal service and improving the status of populations with special needs (Burrello & Sage, 1979). As such, the movement to organize
parents of handicapped children was a significant catalyst for change (Cremins, 1983). Hallahan and Kauffman say that much of the progress made over the years in special education has been achieved primarily by the collective efforts of professionals and parents (1991).

Wolfensberger points out that advocacy depends on the actions of persons who are outside the system and are not encumbered by job security concerns and organizational loyalties (1972). It has been pointed out that other researchers, such as Biklen, argue that it is necessary to separate the 'monitor from the monitored', maintaining that it is impossible for an employee of an organization to truly advocate for individuals who are part of the organization's client system (Burrello & Sage, 1979).

Gartner and Lipsky said that, "Parents of children with disabilities were essential contributors in the legislative strategy and took the lead in litigation. Here the parent groups followed the precedent of Brown in its assertion of the essential importance of education" (1987, p. 369). In fact, professional groups were organized first, beginning in the nineteenth century. Effective national parents' organizations have existed in the United States only since 1950.

"The earliest professional organizations having some bearing on the education of handicapped children were medical associations founded in the 1800s.", write Hallahan and Kauffman. "Organization of a professional association devoted to special education did not occur until 1922, when the Council for Exceptional Children was founded" (1991, pp. 20-21). Other prominent professional groups serving as advocates for exceptional children include the American
Association on Mental Retardation and the American Orthopsychiatric Association.

Parents organizations differ from professional organizations in that they are made up primarily of parents who have handicapped or gifted children and the organizations concentrate on issues of special concern to them. Hallahan and Kauffman say that parents organizations serve three essential functions by: 1) providing an informal group for parents who understand one another's problems and needs and help one another deal with anxieties and frustrations, 2) providing information regarding services and potential resources, and 3) providing the structure for obtaining needed services for their children (1991, p. 22). Some of the organizations who have been instrumental in lobbying for special education are the Association for Retarded Citizens, the National Association for Gifted Children, the Association for Children and Adults with Learning Disabilities, and the National Society for Children and Adults with Autism.

Given this background, it is interesting to note that a recent survey, conducted by Louis Harris and Associates (1989) for the International Center for the Disabled, suggests that more children with disabilities appear to be receiving a far better education today than 10 to 12 years ago, and that parents are reasonably satisfied with their children's education. However, many families and professionals have little knowledge about special education laws. According to this report, 61% of the parents surveyed knew little or nothing about their rights under P. L. 94-142 and P. L. 93-112. An even greater number of these parents, 85%, were not aware of P. L. 98-524, the Carl D. Perkins Vocational Education Act of 1984.
Awareness of special education laws, which advocacy groups were instrumental in creating, that assure equal opportunities for people with disabilities is vitally important for the following reasons (NICHY, 1991):

1. Knowledge of the language and intention of these laws empowers families to advocate more effectively for their children and strengthens their ability to participate fully in their children's educational teams.

2. As independence and self-sufficiency for individuals become increasingly important outcomes of special education, it is important that individuals with disabilities understand the law and its implications for making decisions.

3. Knowledge of the law can assist professionals in understanding the entire service delivery system, ensure protection of civil rights, and improve collaboration with other agencies and families.

4. Knowledge of the law can help parents and professionals work together on behalf of children to make the equal education opportunity guaranteed by law a reality.

Civil Rights of the Disabled as Established by the Constitution

The United States has no national system for education. "In fact," says Rothstein, "the Constitution is silent on the matter, however, under its tenth amendment, education is considered to be among the powers reserved to the states. Courts have accepted this interpretation of the Constitution, and the Supreme Court has
repeatedly stated that the federal courts may interfere with the actions of state and local school officials only when such actions somehow threaten a personal liberty or property right protected by the Constitution or violate federal law " (1990, p. 275).

The tenth amendment to the Constitution says, "powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States. . ." (U. S. Const. art. X). All 50 states have provisions in their constitutions, or provided by state statutes, for public education.

Constitutional provisions of major importance to special education are those that provide funds to protect the general welfare and those that ensure due process and equal protection under the law. Funding is generally provided through legislation, such as, the Individuals with Disabilities Act (P. L. 101-476) and Section 504 of the Rehabilitation Act (P. L. 93-112). The Fourteenth Amendment to the Constitution provides that no states shall, "deprive any person of life, liberty, or property, without due process of law. . . nor deny . . . equal protection of the laws." (U. S. Const. amend. XIV).

Since there is no federal constitutional right to education, it is only when the state undertakes to provide education that the Fourteenth Amendment comes into play. Rothstein explains the workings of the Fourteenth Amendment in clear terms, "When states provide education, they must do so on equal terms, and they must not deny this state granted right without due process. In its evaluation of what is meant by equal terms, the Supreme Court has traditionally applied differing degrees of scrutiny in its examination of the practices of (different) government entities. If the individual
affected by the practice is a member of a 'suspect class' such as a racial minority, or if the right at issue is a 'fundamental right' such as privacy, the practice will be strictly scrutinized (evaluated very carefully). Where the classification is not a specially protected class, or if the right is not an important one, the practice will usually be upheld if there is any rational basis for it. Individuals with handicaps have not been held to be members of a suspect class, but education has been recognized as deserving of 'special constitutional treatment,' and an intermediate test of heightened scrutiny has been applied. " (1990, p. 3).

The due process clause of the Fourteenth Amendment requires procedures to be appropriate to the protected interest at stake. Education is recognized as an important property interest by states because without it, it is unlikely that a person can succeed in life (Anthony, 1990).

Civil Rights of the Disabled as Defined by Legislation

Historically, education in the United States has been seen as a local responsibility. It is not spelled out in the United States Constitution that children are guaranteed a free, appropriate education, however, federal statutes passed by Congress must be based on some provision of the Constitution. Federal and state governments have played the major role in educational reform by mandating specific programs in order to ensure that equal educational opportunities are afforded to all students. In Legal and Political Issues in Special Education, Cremins cites Reynolds and
Rosen on page 10 as saying, "Federal legislation has been the single most significant incident in the total history of special education" (1983).

The federal Congress has been largely responsible for creating legislation for the purpose of providing children with disabilities with an adequate education. All states subscribe to the regulations of IDEA, and many state legislatures have refined and enhanced the federal regulations in order to meet the educational needs of their state's student population (Odden & Picus, 1991).

How states implement the requirements of federal laws is covered by the United States Constitution. Federal laws passed by Congress must be based on the provisions of the Constitution. State constitutions and laws must meet federal standards but may go beyond what is provided in federal law, as long as there is no conflict between them, and as long as state laws do not address areas reserved to the federal government, such as providing for the nation's defense (NICHY, 1991). Massachusetts State Law Chapter 766 is an example of a state law which exceeds the standards as set by federal law. The federal law was in fact derived from Chapter 766 (Cremins, 1983).

Congress established a legislative precedent when it passed Title VI of the Civil Rights Act of 1964 in order to ensure that equal educational opportunities not be denied to individuals on the basis of their race, color, or national origin. This was reinforced by congress with the adoption of Title IX of the Educational Amendments of 1972 which states that, "No person in the United States shall, on the basis of sex, be excluded from participation in, or be denied the benefits of,
or be subjected to discrimination under any education program or activity receiving federal assistance..." (P. L. 92-318).

The rights of individuals with disabilities were significantly strengthened with the passage of four federal laws and their periodic amendments. These laws were: P. L. 93-112, the Rehabilitation Act of 1973; P. L. 94-142, the Education of All Handicapped Children Act of 1975 (now known as P. L. 101-476, IDEA); P. L. 98-524, the Carl Perkins Vocational Educational Act of 1984; and P. L. 101-336, The Americans with Disabilities Act of 1990. These four laws and their subsequent amendments, form the core of current protection against discrimination and current guarantees of equal educational opportunities that individuals with disabilities have in our nation (NICHY, 1991).

P. L. 93-112 is critical because it addresses discrimination against persons with disabilities. The law has different sections which refer to different areas of discrimination. Section 501 addresses employment of handicapped individuals. Section 502 details architectural and transportation board compliance. Employment under federal contracts is outlined in Section 503. But Section 504 is the most important aspect of P. L. 93-112 in that it guarantees that no otherwise qualified handicapped individual shall be excluded from participation in a program solely by reason of the handicap. This section of the law prohibits discrimination on the basis of physical or mental handicap in every federally assisted program or activity (USDE, 1980).

P. L. 101-476, IDEA, has been referred to as the Bill of Rights for the Handicapped because it guarantees the right of all children,
regardless of the severity of the handicap, a free and appropriate education through the secondary level. As a result of this law, many disabled students began attending regular high school classes with students who were not disabled. IDEA established a formula for providing financial aid to states and local school districts, based on the number of children with disabilities receiving special education plus related services (USDHE&W, 1975; P. L. 101-476, 1990).

Figure 3 charts the progress of major special education legislation beginning with the Elementary and Secondary Education Act of 1965 through the Individuals with Disabilities Act of 1990. This legislation will be summarized in the section entitled Chronological Listing of Special Education Legislation and Litigation.
Figure 3. The Legislative History of Special Education.

(From NICY, 1991, p. 3.)
The Carl D. Perkins Act, P. L. 98-524, authorizes federal funds to support vocational education programs. One of the goals of the Perkins Act is to improve the access of those who either have been underserved in the past or who have greater-than-average educational needs. Under P. L. 98-524, 'special needs students' include those who have a disability, are disadvantaged, or have limited English proficiency. The law states that individuals who are members of special populations must be provided with equal access to recruitment, enrollment, and placement activities in vocational education. This law was amended by Congress in 1990 and is now P. L. 101-392 (NICHY, 1991).

The landmark Americans with Disabilities Act of 1990, P. L. 101-336, enacted on July 26, 1990, provides comprehensive civil rights protections to individuals with disabilities in the areas of employment, public accommodations, State and local government services, and telecommunications.

Title I of the ADA is a federal antidiscrimination statute designed to "remove barriers which prevent qualified individuals with disabilities from enjoying the same employment opportunities that are available to persons without disabilities" (USEEOC &USDJ, 1991, p. I-1). Like the Civil Rights Act of 1964 that prohibits discrimination on the basis of race, color, religion, national origin, and sex, the ADA seeks to ensure access to equal employment opportunities based on merit. It does not guarantee equal results, establish quotas, or require preferences favoring individuals with disabilities. However, while the Civil Rights Act of 1964 prohibits any consideration of personal characteristics such as race or national
origin, the ADA necessarily takes a different approach. When an individual's disability creates a barrier to employment opportunities, the ADA requires employers to consider whether reasonable accommodation could remove the barrier (FPAS, 1990).

Title II of the ADA strengthens section 504 of the Rehabilitation Act of 1973 which prohibits discrimination on the basis of handicap in federally assisted programs and activities (USEEOC &USPJ, 1991).

The ADA's Title III, Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, requires that all new places of public of public accommodation and commercial facilities be designed and constructed so as to be readily accessible to and usable by persons with disabilities, and requires that examinations or courses related to licensing or certification for professional and trade purposes be accessible to persons with disabilities. Title III will lead to "wheelchair lifts on buses, subway stations with elevators and accessible train cars" (FPAS, 1990, p.7).

Court Cases Which Established Precedents

Although the enactment of IDEA represented a milestone in the history of special education, many factors contributed to its development. No factor was more important to the development of special education legislation than landmark court cases. While many of the rights of students with disabilities have been established by statutory law, the civil rights of people with disabilities were legitimized by the Supreme Court in 1954 by their Brown v. Board of
Education decision which found that racial segregation in public education was a violation of the Fourteenth Amendment.

The United States Supreme Court said, "In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education... Today, education is perhaps the most important function of the state and local governments... Where the state has undertaken to provide it, it is a right which must be made available to all on equal terms" (Brown v. Board of Education, 1954).

The application of the principles set forth in the Brown decision to the education of children with disabilities became a legal theory in more than 30 separately filed cases throughout the country (Rothstein, 1990). Two of these cases culminated in landmark decisions in 1971 and 1972. Hume likened the consent decree handed down by the district court in Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania to a lightening strike (p. 9). By settling a class action for mentally retarded children, Pennsylvania discarded a state law that relieved schools of the responsibility to enroll "uneducable" or "un trainable" children. Reed Martin, an attorney with Advocacy Inc. in Texas, remembered PARC in much the same way, "The ground breaking lightening bolt there was [the notion] that these kids could learn. Up until then we warehoused our kids in institutions, because 'those poor kids aren't educable, God bless them. PARC was a consciousness-raising; it wasn't just a legal decision. It printed the bumper stickers" for disability rights (p. 10).
The PARC case provided the following guidelines for educating retarded children:

1. All retarded children are entitled to a free appropriate education.
2. The definition of education is not limited to academic experiences but is seen as a continuous process by which individuals learn to cope and function in their environment.
3. Placement in a regular class is preferable to any special class for these children.
4. Parents are entitled to a hearing before any change in the educational program for their retarded child is made.
5. Postponement or termination of educational programming is prohibited unless a hearing takes place.
6. Retarded children must be re-evaluated on a regular basis.

Just one year after PARC, the federal district court in Washington, D.C. went further in Mills v. Board of Education. The court declared that,

"free, public program of education and training appropriate to the child's capacity, within the context of a presumption that, among the alternative programs of education and training required by statute to be available, placement in a regular public school class is preferable to placement in a special school (i.e., a class for "handicapped" children) and placement in a special public school class is preferable to placement in any other type of program of education and training. . ." (PARC, 1972).

The PARC agreement and the Mills ruling laid not just the foundation, but some of the building blocks of P. L. 94-142, which Congress passed in 1975 (Hume, 1987).
"Once students with disabilities had gained access to school," said Hume in *A Mandate to Educate*, "by and large, litigation turned to the questions that arose there and the definitions of terms under P. L. 94-142: discipline, payment for private placements, racially discriminatory testing, related services, extended services, the definition of 'appropriate' education and other issues" (p. 11).

**Chronological Listing of Legislation and Litigation**

The following is a chronological list of federal and state statutes and court decisions which either lead to, or defined, the educational and civil rights for children and youth with disabilities.

P. L. 45-186 of 1879.

Provided funds for production of braille materials by the American Printing House for the Blind.


Vocational Rehabilitation services are authorized for World War I veterans.


Vocational Rehabilitation services are extended to civilians.


Mentally retarded and mentally ill become eligible for rehabilitative services.


This landmark decision declared that separate-but-equal facilities are inherently unequal. While specifically referring
to the rights of black children, The U.S. Supreme Court ruled that the opportunity of an education, where the state has undertaken to provide it, is a right that must be made available to all on equal terms.

P. L. 83-531, To Authorize Cooperative Research in Education, 1957. Provided initial research support for study of handicapping conditions. In passing this act, congress acknowledged the need for federal aid to support and encourage appropriate education for children with disabilities. P. L. 85-926 of 1958. Authorized grants to institutions of higher education to train special education leadership personnel and grants to train teachers to work with mentally retarded students.

P. L. 87-276, To make available...specially trained teachers of the deaf..., of 1961.

Established training grants for teachers in education of the deaf. This increased the number of teachers trained under university auspices.


Centralized administration of the captioned films program, expanded teacher-training programs, and established funding for research and development centers. It also established authority for development of mental retardation facilities; expanded categories of handicapped children to include mentally retarded, hard-of-hearing, deaf, speech-impaired, visually impaired, seriously emotionally disturbed, crippled, or other health-impaired children needing special education.

Title VI established a legislative precedent when it declared that equal educational opportunities not be denied to individuals on the basis of their race, color, or national origin.

P. L. 89-10, the Elementary and Secondary Education Act of 1965.

Provided a comprehensive plan for readdressing the inequality of educational opportunity for economically underprivileged children. It became the statutory basis upon which early special education legislation was drafted.

P. L. 89-313, the Elementary and Secondary Education Act Amendments of 1965.

Authorized grants to state institutions and state operated schools devoted to the education of children with disabilities. It was the first federal grant program specifically targeted for children and youth with disabilities.


This law amended Title VI of P.L. 89-10 and established the first federal grant program for education of children and youth with disabilities at the local school level, rather than at the state-operated schools or institutions. It established the Bureau of Education of the Handicapped (BEH) and the National Advisory Council (now called the National Council on Disability).

  Inaugurated the Handicapped Children's Early Education Program.


  This law, known as the Specific Learning Disabilities Act, amended Title VI of P.L. 89-750 and established a core program for local educational agencies. This program is known as Part B. This legislation provided funds for training, research, and program development for children with learning disabilities.


  Authorized state allotments to plan services for developmentally disabled and provided funds for construction of facilities for persons with developmental disabilities. This bill also established funding for university affiliated programs.


  Settling a class action suit for the right to education for retarded children, the U.S. District Court decision stipulated that whenever possible, retarded children must be educated in regular classrooms rather than be segregated from the normal school population. The case overturned a Pennsylvania statute relieving the state of responsibility to

This U.S. District Court expanded the PARC decision to include all handicapped children and in doing so, provided a framework for developing future legislation. The court ordered that if the school system's funds are insufficient for all the programs that are needed and desirable, then the available funds must be spent equitably so that no child is entirely excluded from education consistent with his or her needs and ability to benefit. The financial or administrative inequalities of the school system should not bear more heavily on handicapped children than on non-handicapped children. The court adopted a comprehensive plan that had been formulated by the District of Columbia School Board which included: 1) a free appropriate education; 2) an Individualized Education Plan; and 3) due process procedures.

Chapter 766, Massachusetts State Special Education Law of 1972.

The Massachusetts legislature passes this law which was and continues to be the most comprehensive state special education law in the country. Chapter 766 encompasses all that is in P. L. 101-476, but goes further. Major components of both laws contain the following:

1. Highest priority is given to individuals not currently receiving service or those inadequately served.
2. Guaranteed safeguards of due process rights of parents and children, including the right to protest decisions of school officials.
3. Least restrictive environment.
4. Student evaluation must be racially and culturally non-discriminatory.
5. Individual educational plans must be developed for each handicapped child and parents must be part of the team that devises the plan.
6. If students are placed in private schools, the local district must pay.
7. Students must receive an educational program that utilizes his/her maximum feasible potential. This component makes Chapter 766 what Anthony calls "the most comprehensive state special education law in the country" (Notes from Educ 3856, 1992).


Title IX states that, "No person in the United States shall, on the basis of sex, be excluded from participation in, or be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal assistance...". This piece of legislation provided a foundation upon which the latter, more definitive laws, were based.


This law provides a comprehensive plan for providing rehabilitation services to all individuals, regardless of the
severity of their disability. It also provided for civil rights
enforcement under Section 504. This law was amended by P.L.

P. L. 93-380, the Education Amendments of 1974.

These amendments to the Elementary and Secondary
Education Act contained two important laws. One is the
Education of the Handicapped Act Amendments of 1974. This
law was the first to mention the provision of an appropriate
education for children with disabilities. It also reauthorized
the discretionary programs. The second important law, the
Family Education Rights and Privacy Act, often called the
Buckley Amendment, gives parents and students under 18,
and students 18 and over, the right to examine records kept
in the student's personal file.


Amended head start legislation to require that at least 10%
of the total Head Start enrollment in each state be available
for handicapped children and require that services be
provided to meet their specific needs.

P. L. 94-103, Developmental Disabilities Assistance and Bill of Rights

Required the creation of a protection and advocacy system
to protect the rights of the developmentally disabled.

P. L. 94-142, The Education for All Handicapped Children Act of
1975.

This law mandated a free appropriate public education for
children with disabilities, ensures due process rights,
mandates education in the least restrictive environment, and mandates Individualized Education Programs, among other things. It is the core of federal funding for special education. 

*Battle v. Commonwealth*, 629 F. 2nd 269 (3d Cir.) (1980). Established that educational policies, such as one limiting the school year to 180 days, would violate P. L. 94-142 if such policies denied handicapped students a free appropriate public education.

*S-l v. Turlington*, 635 F. 2d 342 (5th Cir. 19081); cert. denied, 454 U.S. 1030 (1981).

The circuit court ruled that expelling a student for reasons related to his or her handicap is a change in placement, which requires a hearing consistent with P. L. 94-142 due process procedures; that services cannot cease completely even if a student is expelled; and that determining whether misbehavior is related to a student's handicap typically is not within the expertise of school board members.


The U.S. Supreme Court ruled that federal law does not guarantee that handicapped students' individualized instruction will maximize their potential commensurate with the opportunities provided other children, rather it ensures access to a public school education from which a student would derive some benefit.
This law reauthorized the discretionary programs, including the establishment of services to facilitate the transition from school to work for youths with disabilities through research and demonstration projects; the establishment of parent training and information centers; and funding for demonstration projects and research in early intervention and early childhood special education.


The U.S. Supreme Court unanimously held that catheterization is a "related Service" that schools must provide to students who need it during the school day. The court clarified P. L. 93-112 and P. L. 94-142 regulations defining "related services" to include school health services not performed by a licensed physician.

This law authorized funds to support vocational education programs to include youths with disabilities. The law stated that individuals who are members of a special population must be provided with equal access to recruitment, enrollment, and placement activities in vocational education.

This law provides for reasonable attorneys' fees and costs to parents and guardians who prevail in administrative hearings or court when there is a dispute with a school system.
concerning their child's right to a free appropriate special education and related services.


This law mandates services for preschoolers with disabilities and established the Part H program to assist states in the development of a comprehensive, multidisciplinary, and statewide system of early intervention services for infants and toddlers (birth to age 3). This law also reauthorized the discretionary programs and expanded transition programs.


The Supreme Court confirmed the rights children with disabilities, as defined by Sec. 141(e)(3) of P. L. 94-142, to remain in current educational placement pending final decision and disciplinary removal. The Supreme Court affirmed the Court of Appeals ruling that a suspension in excess of 10 days does not constitute a "change of placement" (Rothstein, 1990).


The primary purpose of this law is to assist states in developing comprehensive, consumer-responsive programs of technology-related assistance and extend the availability of technology to individuals with disabilities and their families. Assistive technology device is broadly defined in the law to give the states flexibility in programs to be developed. Assistive technology services under this law include 8
activities related to developing consumer-responsive services with federal funds.


This law is actually a part of a larger federal law, the Children's Justice Act, P. L. 99-401. Title II of this law includes provisions to fund temporary child care (e.g., respite care) for children who have a disability or chronic illness and crisis nurseries for children at risk of abuse or neglect. In 1989, P.L. 101-127 extended and expanded this program for two years and included an increase in funding for these programs from $5 million to $20 million in 1990 and 1991. By July, 1990 87 grants were awarded to states to develop and establish respite care programs and crisis nurseries.


This law, based on the concepts of the Rehabilitation Act of 1973, guarantees equal opportunity for individuals with disabilities in employment, public accommodation, transportation, State and local government services, and telecommunications. The ADA is the most significant federal law assuring the full civil rights of all individuals with disabilities (FPAS, 1990).


This law amended P.L. 98-524 for the purpose of making the United States more competitive in the world economy. This law is closely interwoven with the Education of the

This law changed the name of EHA to the Individuals with Disabilities Education Act (IDEA). This law reauthorized and expanded discretionary programs, mandated transition services and assistive technology services to be included in a child's or youth's IEP, and added autism and traumatic brain injury to the list of categories of children and youth eligible for special education and related services.


This law authorizes grants to support the planning, coordination, and delivery of specialized services to persons with developmental disabilities. In addition, this law provides funding for the operation of state protection and advocacy systems for persons with developmental disabilities. The original law was enacted in 1963 by P. L. 99-164. In 1987, P. L. 100-146 significantly expanded the Act to include persons with mental retardation, autism, cerebral palsy, and epilepsy.

**Relationship Between Regular and Special Education**

Kirk notes that, "special education is not a total program entirely different from the education of the ordinary child. It refers only to those aspects of education that are unique and/or in addition
to the instructional program of all children" (p. 12). For example, the general educational program for a child with a speech disability is carried out in all phases by his or her regular classroom teacher. The special part of that education is the remediation of speech impairment by a speech clinician. It may be carried on for only two hours a week out of a possible thirty hours in the regular classroom.

Gartner and Lipsky (1987) said that the basic premise of special education is that students with deficits will benefit from a unique body of knowledge and from smaller classes staffed by specially trained teachers. The authors explained that this segregated practice of educating exceptional students is misguided and detrimental to the growth of these students. In fact, this is the present relationship of regular and special education, but as will be presented in a subsequent portion of this manuscript, integration of exceptional students will benefit all students in the education system and the segregated relationship will change to a integrated relationship as integration is achieved.

During the 1980s, the relationship between general and special education became a matter of concern to policy makers, researchers, and advocates of special education. Proposals for changing the relationship between general and special education, including radical calls to restructure or merge the two, came to be known as the REI (regular education initiative). This, too, will be addressed in a latter section, but it is a current piece of the relationship between regular and special education.
In 1986, Cruickshank listed the following as being critical issues in special education since its inception:

2. The definition of learning disabilities, or the lack of one.
3. The controversy over issues of special classes versus mainstreaming.
4. Categorical versus non-categorical education and teacher education in special education.
5. Whether or not teacher education should be based on the education of normal children and whether it should be centered at the graduate or undergraduate level in colleges and universities.
6. The appropriate manner for education of the gifted and talented, i.e., integration or mainstreaming versus a fully or partially established special class or special school.
7. The issue of certification and preparation of special education teachers (pp. 5-9).

Table 6 on the following page shows the increase of learning disabled students from 1976 to 1987 and raises the issues of identification and assessment of students with learning disabilities (Learner, 1988). Gartner and Lipsky point to the same issue and say that more than 80 percent of the student population could be classified as learning disabled by one or more of the definitions presently in use (1987, p. 373).

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Identified as Learning Disabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976-1977</td>
<td>797,212</td>
</tr>
<tr>
<td>1977-1978</td>
<td>969,423</td>
</tr>
<tr>
<td>1978-1979</td>
<td>1,135,559</td>
</tr>
<tr>
<td>1979-1980</td>
<td>1,282,559</td>
</tr>
<tr>
<td>1980-1981</td>
<td>1,468,014</td>
</tr>
<tr>
<td>1981-1982</td>
<td>1,627,344</td>
</tr>
<tr>
<td>1982-1983</td>
<td>1,745,871</td>
</tr>
<tr>
<td>1983-1984</td>
<td>1,811,451</td>
</tr>
<tr>
<td>1984-1985</td>
<td>1,839,292</td>
</tr>
<tr>
<td>1985-1986</td>
<td>1,868,447</td>
</tr>
<tr>
<td>1986-1987</td>
<td>1,926,097</td>
</tr>
</tbody>
</table>


Joan Coleman identifies a major educational issue during the 1980s to be "the reconciliation of access and excellence in the face of student diversity, declining enrollments, and scarce resources" (Wilson, 1982, p. 3). She explains that as colleges and universities continue to provide opportunity and quality education to a student population with "a wide range of abilities, learning needs, and backgrounds, they will find it necessary to address fundamental issues relating to the learning requirements of students and to the extent to which these needs can be generalized to the larger student body". Ms. Coleman refers primarily to addressing the needs of students with learning disabilities in higher education.

Hallahan and Kauffman present five key concerns which are the most important present-day issues in special education:
1. Normalization-making the education and the everyday living environment of every student with a disability as 'normal' as possible;
2. Integration-educating exceptional and nonexceptional students together so that students are not separated into ability groups or removed from their 'normal' peer groups;
3. Cultural diversity - recognizing and valuing cultural differences and diversity in the classroom so that 'normal' differences associated with a particular culture are not mistaken for exceptionality;
4. Early intervention- identifying exceptionalities as early in the child's life as possible and providing effective programs of education or other services designed to maximize the child's potential and minimize any disability; and
5. Transition- preparing exceptional students for the world of work and adult living, including continuing education and career opportunities, so that they are able to achieve their maximum level of independence and productivity following their high school years (1991, p. 31).

The current system of special education has proven inadequate, said Gartner and Lipsky, because it is a system that is not integrated, and that we must "learn from our mistakes and attempt to create a new unitary system, one which incorporates quality education for all students" (1987, p. 368).

In addition to the above mentioned issues, the policy issues of the nineties will be focused upon the implementation of the Individuals with Disabilities Education Act (IDEA), P.L. 101-476. This
law requires that the Individualized Education Programs for youths with disabilities include a statement of needed transition services (Rusch et al., 1992).

**Transition from Secondary to Post-secondary Education**

"For persons with disabilities, lack of appropriate career, vocational, and counseling programs; limited parental involvement and work experiences; and lack of cooperative programming and support systems represent well documented obstacles to achieving a successful transition from school to adult life" (Rusch et al., 1992, page 5). The difficulties faced by students with disabilities between the ages of 18 and 25 in transition to employment and adult life are evidenced by an unemployment rate among these young adults exceeding 50% in this country (Wagner, 1989).

The concept of transition from school to adult life has been present in secondary and post-secondary special education and rehabilitation legislation since the early 1980s. At the start of the federal transition initiative, Madeline Will, then director of the Office of Special Education and Rehabilitative Services (OSERS), defined transition as a bridge from the structure of the secondary school setting to employment--the defining characteristic of adult life. This definition was later broadened to include not only the adult outcome of employment, but also community living and social and interpersonal networks (Halpern, 1985). More recently, Wehman, Kregel, Barcus, and Schalock defined transition as an extended process of planning for the adult life of individuals with disabilities.
including the interrelated domains of employment, additional education or training, independent living and recreation; starting early in the secondary school career; and involving the student, parents, school and community agency personnel, and possibly an employer (1986).

The statutory definition of transition services from P.L. 101-476, Individuals with Disabilities Education Act of 1990, is:

A coordinated set of activities for a student, designed within an outcome-oriented process, which promotes movement from school to post-school activities, including post-secondary education, vocational training, integrated employment (including supported employment), continuing education, adult services, independent living, or community participation (Section 602 [A], 20 U.S.C. 1401[A]).

As with all past statutes concerning special education, the transition provisions of P.L. 98-199, P.L. 99-457 and P.L. 101-476 are designed to integrate individuals with disabilities into the mainstream of American life. "However, with the authorization of transition services," says Dale Snauwaert of Adelphi University in Chapter 27, Transition from School to Adult Life, "the scope of related services within the context of special education now encompasses post-public educational services. The overt purpose of this legislation is no longer confined to integration in schools, but includes integration into the community as well. As such, it marks a significant step in the history of special education policy, in that mandating transition services can be seen as an evolutionary
development toward achieving the overarching purpose of special education: integration" (Rusch et al., 1992, p. 512).

Transition services are implemented through the individualized education program (IEP), which must include:

A statement of the needed transition services for students beginning no later than age 16 and annually thereafter (and when determined appropriate for the individual, beginning at age 14 or younger), including, when appropriate, a statement of the interagency responsibilities or linkages (or Both) before the student leaves the school setting (IDEA (1990), Section 602[A], 20 U.S.C. 1401 [A]).

Impact of Special Education Legislation on Education

As pointed out earlier, special education legislation was passed as a result of constitutionally based challenges to the exclusion of children with disabilities from receiving a free, equal, and appropriate education. It cannot be emphasized enough that legislation was critical to the growth and development of modern special education. This section examines the impact that special education legislation has had on various aspects of public education.

Fiscal Impact

The legal rights entitling handicapped students to an appropriate education are quite clear. But, as Odden and Picus state, "The distribution of different pupil needs is not even across all school districts. Students from homes with incomes below the poverty level
tend to be concentrated in large, urban districts and in small, rural, isolated districts; these students are less prevalent in suburban school districts. Likewise, students with physical or mental handicaps are not found in equal concentrations in all school districts; indeed, some suburban school districts that have developed especially effective programs for handicapped children see the percentage of such students rise as parents move to that district for access to the outstanding programs" (1992, p. 209). If this is the case, then some communities bear a greater fiscal burden than others since the cost of educating handicapped students is greater than regular education and local funds provide a large portion of the school budget. This question of equity is a fundamental issue in school finance (Rossmiller, 1987).

It has been estimated that the average expenditure for a student with a disability is about twice that for a regular student, but it must be pointed out that there is considerable variation in special education costs as dictated by handicapping condition, type of educational program, educational placement, type of educational program, and size of school district (Odden & Picus, 1992). Although it is difficult to estimate, the overall costs of providing an adequate education for our nation's 4.3 million handicapped students is high (Anthony, 1991, p. 16).

In 1985, special education costs totaled $11.466 billion. The federal government's share of these costs was $0.87 billion or 7.8% (Odden & Picus, 1992, p. 218). Additionally, Levin estimates that in 1988 the cost to educate the 13 million at-risk students in our nation's schools would require $26 billion. In 1987, the federal
government spent $3.9 billion to fund Chapter 1 of the ECIA, the major national program for at-risk students (1991, pp. 55-56). There is a significant difference between the fiscal need and the commitment of federal resources to adequately fund mandated programs.

Social Impact

Perhaps the greatest impact which special education legislation has had is in the long term social development of the educational environment by encouraging cultural diversity. Integration is a major factor contributing to cultural diversity within the schools. As the educational environment of the 1960s changed with the integration of students of color into the schools, the educational environment of the 1970s changed with the introduction of more students with disabilities into the mainstream of the student body.

Hallahan and Kauffman cite the work of Banks (1988) to define culture and its relevancy to special education. The authors say that, "most contemporary social scientists view culture as consisting primarily of the symbolic, ideational, and intangible aspects of human societies. He suggests six major components or elements of culture: values and behavioral styles; languages and dialects; nonverbal communication; awareness of one's cultural distinctness; frames of reference; and identification as a member of a cultural group. These elements may together make up national or shared culture, sometimes referred to as a macroculture. Within the larger macroculture are microcultures-smaller cultures that share the
common characteristics of the macroculture but have their unique values, styles, languages and dialects, nonverbal communication, awareness, frames of reference, and identity" (1991, p. 65).

An individual may identify with the macroculture and also belong to many microcultures, as shown in Figure 4. The variety of microcultures to which a person belongs affects his or her behavior.

![Diagram showing the overlap of microcultures]

Figure 4. Individuals Belong to Many Different Microcultural Groups.


The microcultures of particular importance for special education are ethnic groups and exceptionality groups. Banks (1988) defines an ethnic group as a group that shares a common ancestry.
culture, history, tradition, and sense of people-hood and that is a political and economic interest group. An ethnic group may be a majority or a minority of people in a given country or region. An exceptionality group is a group sharing a set of specific abilities or disabilities that are especially valued or that require special accommodations within a given microculture.

Ethnicity and exceptionality are two different concepts, and have in the past been mistakenly intertwined. Members of minority ethnic groups are more apt to be identified as disabled because their differences are not well understood or valued by others (Hallahan & Kauffman, 1991; Blackhurst & Berdine, 1981). Many recent changes in special education were a response to the overrepresentation of minority and culturally disadvantaged students in special education (Ysseldyke & Algozzine, 1990).

Multicultural education is a tool for promoting the understanding of microcultures different from one's own and which fosters positive attitudes toward cultural diversity. Gardner and Warren (1979) include, "community attitudes that indicate that the citizens with whom the disabled person must live and work recognize that its all right to be different", in their list of behaviors which aid the individual with a disability to develop compensatory behaviors needed in order to lead a productive life (p. 39).

"The role of special education specific to cultural diverse individuals" explains Atkins, "must be to focus on sensitivity to the way in which disability is viewed by a specific cultural group, and thus by the individual family" (1992, p. 448).
Educational Impact

As is to be expected, the greatest impact of special education legislation is on education. The very nature of this legislation is aimed at the overall improvement of the educational system. Because of the many factors involved, the different systems of education have been impacted in different ways.

Special Education. Since laws, such as P. L. 94-142, mandated a free, appropriate education for students with disabilities, it is fair to say that special education has benefited most from special education legislation. Much of the current practice in the field has been shaped by constitutional provisions, legislation, administrative rules, and litigation.

Aside from ensuring the civil rights of students with disabilities, perhaps the greatest impact that legislation has had on special education has been in the types of documentation of student progress kept by special educators: keeping detailed records; filling out forms; and meeting with other team members. The emphasis on legal responsibility has attached itself not only to the school districts and schools, but to the educators.

The process that created the laws also had an impact on special education. "That process draws on all kinds of information and opinion in the drafting of new legislation. Here, new teaching techniques and research findings and technologies are examined. Here, parents and educators and psychologists are heard. The end product tends to find a balance between what has come before and
what is possible, dished up with a health portion of common sense and common decency. And that product—the laws that shape special education—has immeasurably improved the delivery of special services to exceptional students" (Ysseldyke & Algozzine, 1990, p. 71).

**General Education.** The impact of special education legislation on general education may be seen as having both positive and negative effects. Many of the positive effects are the result of integration which will be discussed in detail in a latter section on integration.

Gartner and Lipsky say that special education legislation has changed general education in a negative manner. They said, "In a sense, regular and special education teachers have colluded to relieve regular teachers of responsibilities for teaching children functioning at the bottom of their class" (1987, p. 383). These authors maintain that special education has lost to general education in the alleged trade-off between excellence and equity.

When resources are limited, school districts are apt to be advocates for spending money where it will benefit the greater number of students. This would be to the disadvantage of special education and there have been proposals to limit who receives special services, as well as, limits on the extent of services. But, because special education is mandated by law, school districts "find themselves in the difficult position of reducing spending in other school programs in order to finance special education services" (Anthony, 1991, p. 19). "You're only required to provide education to regular kids, but not the best," said Selectwoman Mary Greendale
of Holliston, where regular programs in art, music, home economics, and physical education are being cut while spending on special education services is increasing (Marantz, 1988, p. 18).

When citizens complain about schools, they complain about local schools. This means that the local school committee and administration are most heavily criticized by the taxpayer for educational outcomes. The educational outcomes of special education students are not good. "Only 3 to 4 percent of handicapped students ever return to regular education. Forty-seven percent of all LD students drop out of school. Barely one-third of all special education students earn a regular high school diploma. Fewer than 15 percent of those who do, find full time employment after high school. And finally, one-third of all special education students do nothing after leaving high school" (Anthony, 1991, p. 20; Levin, 1987, p. 47). Is it any wonder that school committees look at high special education funding levels and the corresponding poor educational outcomes and feel it is a waste of money which could be better spent on regular education?

School committees look at the relationship between funding and educational outcomes and see that far too many children are being labeled as special education students and that too many students are being institutionalized at far too great a cost. Also, this is being done at the expense of regular education. School committees feel that while funding for regular education is being cut, special education budgets are increasing. Consequently, the impression is that regular education students are not receiving the quality of
education which the community desires and that special education students are, more or less, being maintained (Marantz, 1988, p. 54).

State education officials are apt to see the Handicapped definition as being both a benefit and a liability in a political sense. That is, they justify the current system of special education on the political grounds that it targets otherwise unavailable resources and personnel to designated students. Although special education is not an instructionally rational system in its current form, it is a politically rational system (Skritic, 1991, p. 156). The issue is difficult for legislators because "if you criticize special education you get a thousand kids in wheelchairs on Beacon Hill," said Edward Moscovitch, director of the Massachusetts Municipal Association (Marantz, 1988, p. 17). It is seen as a political liability because as it is perceived by parents to be adversely effecting regular education programs. "State educators describe cutbacks in regular education programs due to increased special education spending as 'Cannibalization.' The word is applied ominously to a growing perception held by parents of children in regular education"(p. 18).

Vocational Education. A close ally of special education is vocational education. Atkins (1992) explains that vocational educators are equipped to deal with critical elements in the orientation of individuals to the world of work. Some of the services provided in vocational education include occupational information and exploration, classes focused on skill building, and work-school related experiences that help prepare the person for the world of work.
The overall goals of placing students in vocational education programs should be to ensure skill development in a vocational area of interest, fundamental academic skill development for the workplace, and employability skill development. Vocational education programs are generally competency based; thus, students acquire specific skills at their own pace and prepare for employment in an area of occupational training that is commensurate with their abilities and interests. For many students who experience marginal success in academic classes, participation in a vocational program can enhance acquisition of academic skills related to the world of work. Integration of academic and vocational education is a major priority in the Carl D. Perkins Vocational Education and Technology Act of 1990 (Cobb & Neubert, p. 103. In Rusch et al, 1992).

Although the unique problems of the special needs population have been addressed by legislative action for well over a century (direct compensation for disabled veterans was provided in 1865), it was not until 1968 that a piece of vocational education legislation clearly and specifically defined and provided funding for the disadvantaged and handicapped. The term 'special vocational needs' was first widely used with passage of the 1968 Amendments of the Vocational Education Act of 1963. This term has changed to the present 'vocational special needs'.

A 1973 study by the Department of Health, Education, and Welfare cited by Wall (1976), identified more than 50 federal programs providing some type of service to handicapped youths. Most of these programs dealing with the training and education of handicapped children were administered by HEW and for the fiscal
years of 1970-73 had budgets totaling 1.5 billion dollars (p. 139). Wall explains that the 1968 Amendments of the Vocational Education Act of 1963 provided a benchmark for vocational education because it authorized the Bureau of Occupational and Adult Education to administer vocational education funds for the handicapped on a set-aside basis (10 percent of each state's authorized allotment under Part B of the Act is to be set aside for programs for the handicapped) (p. 140). These amendments further increased the extent and funding of rehabilitation programs and services by:

1) the creation of additional appropriations for grants for innovative rehabilitation and research for demonstration and training projects;
2) the establishment of funding programs for public and nonprofit agencies for the recruitment and training of manpower to provide services to rehabilitation programs;
3) the authorization of up to 10 percent of the states' allotment for the construction of new rehabilitation facilities; and
4) the expansion of rehabilitation services to include work by optometrists (Meers, 1987).

Meers says, "The Rehabilitation Act of 1973 (P. L. 93-112) was by far the most dramatic and significant piece of rehabilitation legislation ever passed" (1987, p. 33). In effect, this act superseded all previous rehabilitation legislation. The main thrust of P. L. 93-112 was to provide services to individuals with severe handicapping disabilities. Section 504 of the act made it illegal to discriminate against qualified individuals on the basis of their handicapping
condition in hiring and admission into vocational education programs. It makes discrimination on the basis of handicap illegal, with a penalty of losing all or part of federally funded contracts, grants, or services. Other objectives of the law were:

1) to promote expanded employment opportunities for the handicapped in all areas of business and industry;
2) to establish site plans for the purpose of providing vocational rehabilitation services to meet the needs of the handicapped;
3) to conduct evaluations of the potential rehabilitation of handicapped clients;
4) to expand services to handicapped clients as well as to those who have not received any rehabilitation services or received inadequate services; and
5) to increase the number and competence of rehabilitation personnel through retraining and upgrading experiences (Meers, 1987).

The Rehabilitation Act of 1973 was amended in 1974, 1978, and 1984. These amendments reaffirmed existing programs and services for handicapped individuals and strengthened the original act. The 1984 amendment placed all rehabilitation control under the Office of Special Education and Rehabilitation Services (OSERS).

The third important piece of federal legislation which impacted the way vocational education's services for special needs students is the Carl D. Perkins Vocational and Technical Education Act of 1984 (P. L. 98-524). With initial appropriations in excess of $835 million, this act was designed to,
"assure the individuals who are inadequately served under vocational education programs are assured access to quality vocational education programs, especially individuals who are disadvantaged, who are handicapped, men and women who are entering nontraditional occupations, adults who are in need of training and retraining, individuals who are single parents or homemakers, individuals with limited English proficiency, and individuals who are incarcerated in correctional institutions" (P. L. 98-524).

Miller said that, "Acceptance of special group individuals as individuals is the 'needles eye' that each vocational educator must pass through" (1985, p. 69). He says that an emphasis on sound understanding and constructive attitudes in working with persons in special groups is critical in all vocational personnel preparation programs. But, Evans and Herr (1978) explain that the field of vocational education has neglected special needs students for three reasons: 1) other agencies such as special education and vocational rehabilitation have expertise in working with the handicapped, so it has been easy to let them assume responsibility; 2) vocational educators have not been taught how to deal with their population; and 3) some vocational educators do not want mentally handicapped students because they fear it will lower the image of their program and hence the employability of their graduates (p. 307). Additionally, the field must address the growing number of special needs students who are accessing vocational education programs to ensure adequate vocational instructional support and transitional support services (Cobb & Neubert, p. 110. In Rusch et al., 1992).
In summary, special education legislation has had the impact on vocational education by: 1) increasing the federal funding for vocational education; 2) ensuring equal access to vocational programs for special needs students; and 3) increasing the cultural diversity of vocational education as a result of mandated integration of students with disabilities.

Post-secondary Education. The number of learning disabled students on American college campuses is increasing. In fact, approximately two percent of all entering college freshman possess some type of documented learning disability. This figure is likely to grow as more becomes known about learning disabilities and as children identified as being learning disabled receive special education programming earlier in their schooling (Rothstein, 1986). Since it is thought that as many as five percent of all school aged children are learning disabled (Peterson, 1988), it may be assumed that the number of learning disabled students in higher education could reach or exceed that same proportion.

The implications for public institutions of higher education is obvious during the present period of declining enrollments due to a diminishing pool of applicants. There will be a large increase in learning disabled students applying and being accepted by public colleges.
Integration of the Disabled into Educational Systems

Aside from the legal mandates to integrate children with disabilities into the public schools, the benefits to both disabled and nondisabled students are numerous. This belief is based on the premise that the public school experience should prepare all students for the realities of after-school and post-school life.

Reasons for Integration

Lynas (1986) says that individuals can be integrated into society in different ways, but "In the widest usage 'integration' entails a process of making whole: of combining diverse elements into a unity. One way of unifying diverse elements into a whole is through the process of 'assimilation' or 'normalization'. These terms imply a process of 'making similar or the same', of rendering differences less apparent, of losing as far as possible a distinctive identity, of making 'abnormal' people more 'normal' according to current definitions of normality" (pp. 62-63).

In integrated school environments, nondisabled students are provided unique opportunities to learn firsthand about human differences and similarities and how to approach and interact with people with disabilities. The presence of students with disabilities provides valuable social, emotional, and personal perspectives that cannot be realized in their absence. Generally speaking, nondisabled students who have had opportunities to interact with severely disabled students hold more positive and accepting attitudes toward
them than nondisabled students who have not had such opportunity (Stainback & Stainback, 1985). Such interactions can also reduce nondisabled students' fear of students with disabilities (McHale & Simeonsson, 1980).

Students with disabilities can also profit from interactions with their nondisabled peers. In integrated school settings, students with disabilities are given opportunities for more expanded and normalized learning experiences. Researchers have found that more social initiations are displayed toward students with disabilities in integrated settings than segregated settings and, as a result, students with disabilities themselves often display more social responses in integrated setting than segregated settings (Stainback & Stainback, 1985). In fact, segregation and isolation often deprive students with disabilities of motivation and give them feelings of dependence (Tenth Asian Regional Conference, 1985).

Some feel that integration should be based upon the principle of mutual accommodation. Mutual accommodation suggests that differences between groups are maintained and that members of the groups acknowledge respective differences but go some way to meeting each others needs and demands. An example which Lynas gives of mutual accommodation is when "hearing-impaired children make attempts to communicate by talking to their hearing peers, albeit in a defective way, while normally hearing children, for their part, observe certain rules which they think will aid communication with their hearing-impaired age-mates" (1986, p. 64).

Haller and Strike explain that the role of an educational institution is perform a distributive function: "They are an important
component of a set of social institutions that influence who gets what and determines the rules and conditions under which the competition for social benefits takes place. What happens in educational institutions affects an individual's life chances. Schools can affect the skills a person brings to the competition for social goods and can determine an individual's eligibility for further education or a given occupation. A major concern of the institution is to do this fairly" (1986, p. 11). This distributive function is more effective in an integrated environment.

Haller and Strike also put forth the principle of "equal consideration of interests". This idea reflects the notion that if people are objects of respect, their wants, needs, and interests must be taken seriously. But people cannot have a right to have every need met and every want fulfilled just because they want or need it. "Equal consideration does not imply that everyone is entitled to an equal share of the goods and services a society produces, but it does imply that fair conditions be set so that each person has the equal opportunity to compete for those goods and services" (p. 12). This principle would seem to be an adequate reason for integration of disabled students into the public schools.

Walsh, Sharac, Danley, and Unger (1991) provide insight into the integration of psychiatric disabled adults into post-secondary educational setting. They say that, "Many adults with psychiatric disabilities identify themselves as 'patients' or 'clients' of mental health services. As such, they often experience the differences between themselves and other 'normal' people. As students with severe psychiatric disabilities begin to participate in a 'normal'
educational environment, past experience has shown they begin to assume the identify of 'college student' rather than 'patient'. Their view of themselves begins to come from how they are similar to rather than different from other students" (p. 16).

Deinstitutionalization

As mentioned earlier, the first part of the twentieth century witnessed a growth in the numbers of large residential facilities. Starting in the late 1960s, however, the trend has been to place individuals with disabilities in closer contact with the community. Deinstitutionalization is the term used to describe this movement to reduce and eliminate large residential institutions (Blackhurst & Berdine, 1981; Hallahan & Kauffman, 1991).

Many special educators cite the work of Wolfensberger, who in 1972 wrote The Principle of Normalization in Human Services, as being influential in the movement towards deinstitutionalization and mainstreaming. Wolfensberger's concept of 'normalization' is that every attempt should be made to make a disabled individual's living, working, and playing arrangements like those of the rest of society. He proposed that long-term, total life care institutions be replaced by small, community-based group homes that would permit residents to participate in local activities and be closer to their families. These settings are typically referred to as half-way houses, group homes, or community residential facilities (CFRs).

Hallahan and Kauffman explain that the results of institutionalization has shown that the effects may be quite varied,
depending on the individual's characteristics and the way institutional life is managed. They presented the following conclusions based on reviews of research by Balla, Butterfield, Landesman and Butterfield, and Zigler (1987):

1. Institutionalization can result in a lowering of cognitive abilities. The most likely areas to be affected are those involving verbal and abstract abilities.

2. Whether cognitive deficiencies are due to decreased intelligence per se or are a result of motivational changes is a debatable issue. There is evidence showing that institutionalization can deprive retarded individuals of social reinforcement.

3. Not all retarded individuals are affected in the same way by institutionalization. For example, those who have come from a socially deprived home environment to an institution are less likely to be harmed.

4. Most important, not all institutions are alike. Those that make an effort to provide a noninstitutional atmosphere are more likely to produce positive behavioral changes in the residents. In other words, a restrictive regimen can be harmful; a program offering residents an opportunity to live as normally as possible can be beneficial.

The problems of deinstitutionalization were pointed out by Blackhurst and Berdine. They say that some of the problems of deinstitutionalization are: it is often hard to find qualified staff for group homes; states that have invested large sums of money to build or renovate institutions are reluctant to support moves to other
facilities; and the establishment of group homes is opposed by the communities in which they hope to locate (1981, p. 31).

While there are many benefits of deinstitutionalization, the primary reason is to give the individual with a disability a more normal existence. Special education law also requires this be done by placing the child in the least restrictive environment.

**Least Restrictive Environment.** One of the mandates of P. L. 101-476 is that children with disabilities be educated with children who are not disabled. To assure this integrated experience is referred to as the least restrictive environment. IDEA says, "to the extent appropriate, handicapped students are to be educated with nonhandicapped students" (EAHC, 1975; IDEA, 1990). This means that placement decisions must reflect consideration of the least restrictive environment for each student, or simply, that the child should be segregated from normal classmates and separated from home, family, and community as little as possible. The least restrictive environment is intended to make the exceptional child's life "as 'normal' as possible, and the intervention be consistent with the individual needs and not interfere with individual freedom any more than absolutely necessary" (Hallahan & Kauffman, 1991, p. 12).

But sometimes the least restrictive environment is not the most productive and beneficial environment for the exceptional child. Cruickshank (1977) has pointed out that greater restriction of physical environment does not necessarily mean greater restriction of the child's psychological freedom or human potential. In fact, it is conceivable that some children could be more restricted in the long
run by regular class where they are rejected by others and fail to learn necessary skills than in a special class or day school where they learn happily and well.

Table 7 displays the continuum of alternate placements in special education. It defines the type and characteristics of placements, type of students most likely to be served in those placements, and the primary role of the special educator in the placement setting. This array of educational placements was established in order to meet the varied needs of exceptional students. Factors taken into account in placement decisions include:

1) the benefits to be gained in the least restrictive environment;
2) the student's ability to function in the placement;
3) the individualization and intensity of the intervention needed by the student;
4) the student's level of schooling - primary, secondary, intermediate; and
5) the severity of the disability (Lerner, 1988).

Table 7. Examples of Service Alternatives for Special Education.

(In order of most integrated to least integrated settings)

<table>
<thead>
<tr>
<th>Type of Placement</th>
<th>Major features of placement alternative</th>
<th>Types of students typically served</th>
<th>Primary role of special educator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Class Only</td>
<td>Regular teacher meets all needs of student; student may not be officially identified; student totally integrated</td>
<td>Student with mild learning disability, emotional/behavioral disorder, or mild mental retardation</td>
<td>Monitoring the student through consultation with teacher and through observation</td>
</tr>
</tbody>
</table>

(Continued on next page).
Table 7. Continued.

<table>
<thead>
<tr>
<th>Regular Class with Consultation</th>
<th>Regular teacher meets all needs of student with only occasional help from consultants; student may not be identified or labeled; student totally integrated</th>
<th>Student with mild learning disability, emotional/behavioral disorder, or mild mental retardation</th>
<th>To offer demonstration and instruction and to assist regular class teacher as requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Itinerant Teacher</td>
<td>Regular teacher provides most or all instruction; special teacher provides intermittent instruction of student and/or consultation with regular teacher; student integrated except for brief instructional sessions</td>
<td>Student with visual impairment or physical disability; student with communication disorder</td>
<td>To visit classroom regularly and see that appropriate instruction, materials and other services are provided; to offer consultation, demonstration and referral for regular teacher and assessment and instruction of student as needed; to work toward total integration of student</td>
</tr>
<tr>
<td>Resource Teacher</td>
<td>Regular teacher provides most instruction; special teacher provides instruction part of school day and advises regular teacher; student integrated most of school day</td>
<td>Student with mild to moderate emotional/behavioral, learning, or communication disorder</td>
<td>To assess student’s needs for instruction &amp; management to provide individual or small-group instruction on set schedule in regular class or resource room; to offer advice and demonstration for regular teacher; to handle referral to other agencies for additional</td>
</tr>
</tbody>
</table>

(Continued on next page).
Table 7. Continued.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description第</th>
<th>Services Provided</th>
<th>Goals第</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnostic Prescriptive Center</strong></td>
<td>Special teacher provides most or all instruction for several days or weeks and develops plan or prescription for receiving teacher; student totally integrated while in center but may be partially integrated following diagnosis and prescription.</td>
<td>Student with mild disability who has been receiving no services or inadequate services.</td>
<td>To make comprehensive assessment of student's educational strengths and weaknesses; to develop written prescription for instruction and behavior management for receiving teacher; to interpret prescription for receiving teacher and assess and revise prescription as needed.</td>
</tr>
<tr>
<td><strong>Hospital or Homebound Instruction</strong></td>
<td>Special teacher provides all instruction in hospital or home until student is able to return to usual school classes (regular or special) from which he or she has been temporarily withdrawn; student totally segregated for short period.</td>
<td>Student with physical disability; student undergoing treatment or medical tests.</td>
<td>To obtain records from student's school of attendance; to maintain contact with teachers (regular or special) and offer instruction consistent with student's school program; to prepare student for return to school (special or regular).</td>
</tr>
<tr>
<td><strong>Self-Contained Class</strong></td>
<td>Special teacher provides most or all instruction in special class of students with given categorical label; regular teacher may provide services.</td>
<td>Student with moderate to severe mental retardation or emotional/behavioral</td>
<td>To manage and teach special class; to offer instruction in most areas of curriculum; to</td>
</tr>
</tbody>
</table>
Table 7. Continued.

<table>
<thead>
<tr>
<th>Placement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Day School</td>
<td>Special teacher provides instruction in separate school; also may work with teachers in regular or special classes of regular school; students totally or mostly segregated. Student with severe or profound physical or mental disability. To manage and teach individuals and/or small groups of handicapped students; to work toward integration of students in regular classes.</td>
</tr>
<tr>
<td>Residential School</td>
<td>Same as special day school: special teacher also works with other staff to provide a total therapeutic environment or milieu; student mostly or totally segregated. Student with severe or profound mental retardation or emotional/behavioral disorders. Same as special day school; also to work with residential staff to make certain school program is integrated appropriately with non-school activities.</td>
</tr>
</tbody>
</table>

(From Hallahan & Kauffman, 1991, pp. 10-11.)

Figure 5 illustrates several of the most common placements as explained in Table 7. This figure graphically shows the relationship between the restrictiveness of the environment and the severity of the disability. This model, as presented by Lerner (1988), is a version of the cascade model of the continuum of alternative placements first suggested by Deno in 1970. Each level of the model, beginning with Level I, represents an increasingly restrictive placement in terms of diminishing contact with nonhandicapped students. In terms of severity, students with mild disabilities would...
be likely to receive services in Level I or II and more severely disabled students would be likely to receive services in Level IV or V.

![Diagram of the Continuum of Educational Program Alternatives in Relation to Restrictiveness and Severity.](From Lerner, 1988. p. 137.)

Figure 5. A Model of the Continuum of Educational Program Alternatives in Relation to Restrictiveness and Severity.

Mainstreaming

The practice of mainstreaming stems from the concept of least restrictive environment. Mainstreaming may be defined as the provision of an appropriate educational opportunity for all handicapped students in the least restrictive alternative, based on individualized education programs, with procedural safeguards and
parent involvement, and aimed at providing handicapped students with access to and constructive interaction with nonhandicapped peers (Johnson & Johnson, 1978).

Rothstein noted in *Special Education Law*, "The concept of mainstreaming, or educating the handicapped child in the regular classroom as much as possible, paralleled the movement away from racial segregation and helped lead to the determination that separation of children was adverse" (1990, p. 2).

In 1982, Glass, Christiansen, and Christiansen stated that, "The idea of educating exceptional students in regular classrooms did not emerge in isolation from other social changes. Rather, it is a result of a gradual but fundamental shift in public attitudes towards people who differ from the majority in terms of race, religion, political beliefs or educational needs. The result of this shift in attitudes is a tendency to reject programs that segregate individuals in favor of programs that bring individuals into the political, economic, social, and educational mainstream" (p. 26).

These authors summarized the major concerns expressed by critics of segregated placements: that special class placement on a full-time basis was inappropriate for many students whose needs required only slight or moderate adjustments. Glass, Christiansen, and Christiansen presented the following list of typical criticisms of restrictive placements (pp. 29-30):

1. Many students with mild forms of handicaps showed greater academic growth in regular classrooms than in self-contained classrooms. Apparently, the regular classroom provided greater
expectations and stimulation for some handicapped learners than self-contained classrooms.

2. The self-concept of some exceptional students was adversely affected by placement in self-contained classes. For some students, placement in self-contained classes created feelings of being isolated, different from, and less competent than their regular classroom peers.

3. Disproportionate numbers of Black, Hispanic, Native American, and other minority-group students were placed in self-contained classes for the mentally retarded. Some critics argued that traditional intelligence tests were culturally biased against Blacks, Hispanics, and other minority groups and resulted in the misplacement of large numbers of students into special classes.

4. Placement into self-contained classes sometimes resulted in a loss of educational opportunities in areas such as art, music, physical education, home economics, and industrial/vocational education. In many instances, the special education teacher was left to his or her own devices in offering instruction in these areas.

5. Students in self-contained classes lost contact with well-functioning peers who served as positive role models. For example, it was argued that placing students with emotional and behavioral problems in one classroom all day long provided too many examples of inappropriate behavior and attitudes which the students could model.

6. Students in regular classrooms were denied a unique opportunity to learn, by firsthand experience, how to get along with, accept, and understand their disabled peers. Indeed, it was suggested
that since many disabled and non-disabled people live and work side-by-side in adult society, they should not be segregated in school. This rationale for mainstreaming can be summarized by the following series of factors (Telford & Sawrey, 1977):

1. The failure of research studies to establish the effectiveness of special classes for handicapped.
2. A realization of the inadequacy of medically and psychologically defined diagnostic categories for educational purposes.
3. Evidence that factors irrelevant to education and aptitude, such as social class, race, personality, and manageability, were influencing special class placement.
4. Documentation of the harmful effects of stigmatization.

Many believe that it is when students with disabilities are liked, accepted, and chosen as friends that mainstreaming becomes a positive influence on the lives of both disabled and nondisabled students (Reynolds, 1980; Johnson & Johnson, 1978).

The scope of placements in the least restrictive environment can best be illustrated by showing the percent of students with disabilities being served in the regular classroom. Table 8 presents data showing the percentage of students with four most frequent handicapping conditions who are placed in regular classes. These four categories together account for 95 percent of all students classified as "handicapped" (Gartner & Lipsky, 1987).
Table 8. Percent of Students with Handicapping Conditions in Regular Classrooms.

<table>
<thead>
<tr>
<th>Condition</th>
<th>US. Average</th>
<th>State with Highest Percent in Regular Classes</th>
<th>State with Lowest Percent in Regular Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Conditions</td>
<td>69</td>
<td>90</td>
<td>36</td>
</tr>
<tr>
<td>Learning Disabled</td>
<td>78</td>
<td>99</td>
<td>35</td>
</tr>
<tr>
<td>Speech Impaired</td>
<td>96</td>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>Mentally Retarded</td>
<td>31</td>
<td>84</td>
<td>3</td>
</tr>
<tr>
<td>Emotionally Disturbed</td>
<td>44</td>
<td>88</td>
<td>8</td>
</tr>
</tbody>
</table>

(From Gartner & Lipsky, 1987, p. 371. Source: Seventh Annual Report to the Congress on the Implementation of the EHA, Table 6C3.)

To balance the data presented in Table 8, it has been reported that, overall, 74 percent of special education students are in pull-out or separate programs (Gartner & Lipsky, 1987).

**Regular Education Initiative**

The Regular Education Initiative (REI) is a proposal urging fundamental changes in the way that students with disabilities are placed and educated. The REI issue entails integrating special education students back into the regular classrooms and, at the same time, providing special services within the regular classrooms (Lerner, 1988). The rationale for the REI is that:

1. many youngsters with various disabilities in our schools are currently not eligible for special education services;
2. children are stigmatized by placement in special education programs;
3. special education students are usually identified after serious learning deficiencies are discovered, with little emphasis placed on early prevention; and
4. the special education system may not lead to cooperative school-parent relationships (Will, 1986).

Additionally, Stainback, Stainback, and Forest (1989) point out that regular and special education should be merged because:
1. the instructional needs of students do not warrant the operation of a dual system;
2. maintaining a dual system is inefficient; and
3. the dual system fosters an inappropriate and unfair attitude about the education of students with disabilities (p. 15).

Skritic (1991) says that this same debate took place some years ago and was called mainstreaming. In the case of the mainstreaming debate, the result was that the new practices associated with the EHA and mainstreaming simply reproduced the special education problems of the 1960s in the 1980s.

The significance of the REI debate is that, when read critically, it "provides the grounds to reconstruct special education as a professional practice, which, in conjunction with a critical reading of the discourse on school organization and adaptability, provides the grounds to reconstruct special education as an institutional practice of public education" (Skritic, 1991).
Attitudes Generated From Integration

Mager said the term attitude is used to refer to the general tendency of an individual to act in a certain way under certain conditions (1968, p. 18). An attitude is based on visible behavior. Peoples' attitudes are shaped mostly by the attitudes of the people they encounter, by objects and experiences, and by the consequences of their own actions (p. 29). Teachers exert an influence upon the attitude a student shows toward the subject matter that is taught. If teachers exhibit an attitude towards a particular student, or group of students, it follows that those students will develop similar attitudes towards the subjects being taught and the likelihood of the student putting his knowledge to use is then influenced by his attitude for or against the subject.

Since education can significantly affect a person's outlook and station in society, attitudes effecting equality in the provision of educational opportunities would seem to effect equality in other areas of life. Often when people with disabilities are subjected to discrimination in the provision of educational services and activities, they are underemployed for the rest of their lives.

While providing additional resources to strengthen support services for students with disabilities has become increasingly difficult, identifying attitudes which may inhibit full participation in the higher education of students with disabilities is a meaningful first step in initiating positive change (Rothstein, 1986).
Development of Attitudes

Eisner (1980, p. 17) describes attitudes in a general way, "We all have a rough idea what attitudes are. To say that someone has an attitude towards an object, issue, or person is a shorthand way of saying that he has certain feelings of like or dislike, approval or disapproval, attraction or repulsion, trust or dislike, and so on. We also assume that such feelings will be reflected in the kind of statements the person makes, the way he behaves towards the attitude object, and his reactions to expressions of opinion by other people. Attitudes, in other words, have something to do with feelings on the one hand and behavior on the other".

Yuker & Block (1979) say that attitudes are learned and are basically an emotional reaction to something or someone and they have three components. First, they have an emotional component which can either be positive or negative. Second, they have a belief component. The individual believes certain things to be true about someone or something. The truth or falsity of the belief is not critical in this context. It is simply that the individual has certain beliefs about the person or thing. Third, is that they have an action component. Usually, when you have an attitude towards something, you behave in a particular way towards that thing or person. If you have a positive attitude towards a person, you try to be with the person. If you have a negative attitude towards the individual, there will probably be attempts to avoid him or her. The action component is the only observable part of attitudes since neither emotion nor belief components can be directly observed.
Triandis (1971) based his definition of an attitude on the work of Hovland and others. Triandis said, "An attitude is an idea charged with emotion which predisposes a class of actions to a particular class of social situations. This definition has three components: cognitive; affective; and behavioral" (pp. 22-25). The cognitive component is the idea which is generally some category used by humans in thinking. The affective component is the emotion which charges the idea. And the behavioral component is a predisposition to action. An attitude, therefore, can be conceived as having three interrelated components: (a) the cognitive component-described by the person's categorizations, and the relationships between categories; (b) an affective component-described by the way a person evaluates the objects which are included in a particular category; and (c) a behavioral component-which reflects the behavioral intentions of the person toward the objects included in a particular category.

Figure 6 represents Rosenberg and Hovland's conception of attitudes. The stimuli are grouped in a category that represents the attitude object. The attitude has three aspects, and each aspect is measured by a variety of subject responses.
Rosenberg and Hovland's three-component conception of attitudes is based upon the tenant that "attitudes are predispositions to respond to some class of stimuli with certain classes of responses" (1960, p. 3). This concept of attitudes "is being used to intervene between observable antecedent stimuli and observable subsequent responses" (Eiser, 1980, p. 47).

People's emotions and beliefs do not necessarily conform to their behavior. That is, because, aside from the emotional reaction, beliefs, and behavioral actions associated with attitudes, an attitude is always expressed in a particular context or situation. The
constraints of that context will have a significant impact on the expression of the attitude (Yuker & Block, 1979).

The two major dimensions that underlie behavior toward any kind of object are positive versus negative affect and seeking versus avoiding contact. "This system of dimensions", says Triandis, "results in a typography of behaviors that may be described simply as going toward, against, or away from an attitude object" (1971, p. 12). Figure 7 shows this conceptualization and includes some behaviors to illustrate how they would be positioned in this two-dimensional space.

![Figure 7. The Two Basic Dimensions of Behavior Toward Attitude Objects.](From Triandis, 1971, p. 13.)

When a person experiences a rewarding state of affairs in association with an attitude object, his or her affect toward the object
will become more favorable. Conversely, if the experience is punishing, the person will change his or her affect in a negative direction (Triandis, 1971, p. 94).

Attitudes are inferred from what a person says about an attitude object, from the way he or she feels about it, and from the way he or she say they will behave toward it. This loosely defines the relationship between attitude and behavior.

Role of Attitudes in Shaping Behavior

There is some debate over causality in attitudinal theory. Traditional thinking about the direction of causality assumed that attitudes cause a person's behavior. The opposing view is that behavior causes the attitude. The latter view suggests that attitudes give meaning to behavior and that people explain their behavior to themselves by convincing themselves and others that the social objects that benefitted from the behavior are intrinsically good and worthy of such positive action.

The functions of attitudes are many. The functional analysis of attitudes approach theorizes that attitudes (a) help people understand the world around them, by organizing and simplifying a very complex input from the environment; (b) protect peoples self-esteem, by making it possible for them to avoid unpleasant truths about themselves; (c) help people adjust in a complex world, by making it more likely that they will react so as to maximize their rewards from the environment; and (d) allow people to express their fundamental values (Triandis, 1971, p. 25).
Theorists, such as Bruner, Smith, and White, argue that attitudes may express some aspects of an individual's personality. More importantly, says Triandis, "attitudes help us adjust to our environment, by providing a certain amount of predictability. We have established repertory of reactions to a given category of attitude objects. Once a social object has been classified in that category, we can employ our existing repertory of reactions. This saves us from deciding again, starting from first principles, what our reaction should be to a particular object. To the extent that our system works, it adds predictability to the events of our social environment. If we classified the attitude object correctly and the object behaves the way similar objects have behaved in the past, we can employ our previous experience as a guide and usually be correct about the outcome" (1971, p. 5).

Our attitudes also help us to adjust to our environment by making it easier to get along with people who have similar attitudes. The people who really count, in our social environment, tend to have attitudes similar to ours, and often we bring our attitudes in line with the ones held by these people. Smith, Bruner, and White (1956) also point out that one of the functions of attitudes is to provide some externalization of inner problems. For example, a young man who hates his father may adopt attitudes that are generally inconsistent with those advocated by most authority figures in society.

Katz discussed four functions that attitudes perform for the personality: instrumental, adjustive-utilitarian; ego-defensive; value-expressive; and knowledge function. The adjustment function is
derived from the tendency to maximize the rewards of the external environment and to minimize the penalties. Ego-defensive functions are served by attitudes that allow the individual to protect himself from acknowledged uncomplimentary basic truths about himself. Value expressive functions are involved when the expression of the attitudes give pleasure to the person, because the attitudes reveal some of the basic values held dear. And the knowledge functions are based on the individual's need to give structure to the universe, to understand it, and to predict events (1960).

Figure 8 illustrates the relationship between behaviors and expectations. An expectation is simply a prediction about an event or action. Expectations give us a framework in which to organize our experiences. Our experiences help us form expectations for our own behavior and for that of others. Expectations also affect how others interpret our actions and how they treat us. An example would be if teachers want and expect students to speak out in class, they encourage that behavior; if they expect students to sit back and listen, they encourage that behavior (Ysseldyke & Algozzine, 1990).
Attitude is not a necessary or sufficient cause of behavior, but it is a contributing factor. Behavior often changes attitudes, as people develop attitudes that justify their previous behavior. Finally, it must be pointed out, behavior is the result not only of attitudes but also of norms, habits, and experiences about reinforcement (Triandis, 1971, p. 25).

Prevalent Attitudes Toward Minorities

Minorities represent a wide variety of different types of groups: religious, racial, political, economic, educational, social, and others. In a democracy, political minorities can and do provide a vital force assuring openness in government. "But social, economic, and racial minorities, although protected by fundamental laws of the land, remain oppressed and often must resort to the courts for
protection. Even decisions in their favor by the Supreme Court do not necessarily result in acceptance or in the correction of wrongs on the part of the majority" (Cruickshank, 1986, p. 17).

Lippman (1972) says that the disabled and members of racial minorities have 'disadvantages in common'. The primary 'disadvantage' of which he speaks is social prejudice against both minority groups. His research found that society views these groups similarly, as being inferior and holds certain preconceptions about the lack of ability of both racial minorities and individuals with disabilities (p. 74).

Society fears the unknown. Minority groups represent the unknown. Cruickshank said, "Fears are applied to those with a disability and are allowed to characterize all individuals within the minority group. These accurate or inaccurate characterizations permit the majority to reject the minority. Rejection is essentially synonymous to societal rebuff and unacceptability" (1986, p. 25).

Prevalent Attitudes Toward People with Disabilities

There is one minority group in which anyone may become a member immediately: the disabled. An accident or illness could change one's entire life. It has been suggested that people with disabilities comprise the largest minority group in the world. It is a unique minority in that it crosses all other minority groups-religious, economic, social, racial-and represents no single group (Cruickshank, 1986). Yuker and Block have found that people have attitudes toward people with disabilities as a group, "even though they know
that a blind person is different from a person in a wheelchair, who is different from someone who has cerebral palsy, who is different from someone who suffers from mental retardation" (1979, p. 19).

The Tenth Asian Regional Conference report on Vocational Rehabilitation of Disabled Persons indicated that the question of attitudes is probably one of the most crucial elements determining the success or failure of programs aimed at the social integration of people with disabilities. The report said the general public tend to regard people with disabilities as individuals or a group in the community who are less capable than others, who need pity and sympathy. In effect, greater attention is focused on the disability rather than on the person as an individual with potential skills and abilities. The example used to illustrate their point was the Canadian motto adopted during the International Year of Disabled Persons: "The disabled: Their greatest handicap may be you" (pp. 18-19).

Yuker and Block have found that a common attitude people exhibit toward people with disabilities is, "When most of us meet a disabled person we try to respond as though we don't notice the disability. Very young children and the aged often don't behave this way. A child may blurt out, 'Why doesn't that man have any arms?' An elderly person might more openly ask the question, 'How did you lose your arm?' The young child may not have been yet trained to withhold such statements. The older one may simply be tired of repressing and holding back. But most of us, encountering a physically disabled person whom we don't know presents us with a feeling of uneasiness with regard to how to behave. That negative emotional component tends, again, to lead us into behaviors which
result in avoiding contact with the physically disabled, and such contact is a central component in eliminating barriers to change" (1979, p. 39).

Gartner and Lipsky believe that people with disabilities are neither treated like nor viewed as normal people. "More often", they say, "people with disabilities are treated 'specially' either for their own good or for someone else's, but always according to an externally imposed standard" (1987, p. 380).

The prevalence of negative attitudes toward people with disabilities is an issue of far greater complexity than is generally realized and the inter-relationship between the many factors involved can greatly influence the course of events and the outcome of efforts. While one could readily point an accusing finger at the negative attitudes of the general public, it is also necessary to take into account the attitudes of families of the disabled, of the disabled themselves and those professionals to whom their destiny has been entrusted.

Vacc and Wittmer view society's attitude toward people with disabilities as being, "Society places such a high premium on physical perfection that it views with some doubt, the achievements of any individual who has a disability. It appears that society does not expect people with a disability to function as normal individuals, and it is somewhat hesitant to accept their achievements because it makes for an uncomfortable feeling. Therefore, people tend to cover up by being over-lavish in their praise for the disabled's effort, and indeed often are patronizing as if praising a child or someone from whom such a standard of achievement was not expected. In a way,
some people look on an achievement by the disabled in the same way that Dr. Samuel Johnson did a dog walking on two legs. Dr. Johnson said, 'It is not the fact that he does it well, but the fact that he is able to do it at all that brings praise'' (1980, p. 237).

Gartner and Lipsky (1987) also comment on society's attitudes toward individuals with disabilities and credit special education, in part, for reinforcing and perpetuating those attitudes. They point to professional practice as evidenced by social-psychological literature, where disability is based on the following assumptions:

1. disability is biologically based;
2. disabled persons face endless problems;
3. disabled persons are victims;
4. disability is central to the disabled person's self-concept and self-definition; and
5. disability is synonymous with a need for help and social support (p. 381).

These authors say that similar assumptions hold true in special education where the instruction is 'disability-focused', the child and family are considered impaired, attention to societal issues is often considered too political and not the business of educational institutions, and professional personnel are often trained to work with specific disabilities. They say that the assumptions underlying such beliefs can be summarized as: 1) disability is a condition that individuals have; 2) disability/typical is a useful and objective distinction; and 3) special education is a rationally conceived and coordinated system of services to help children 'labeled' disabled. "This view of students labeled as handicapped adversely affects
expectations regarding academic achievement. It causes them to be separated from other students; to be exposed to a watered-down curriculum; to be excused from standards and tests routinely applied to other students; to be allowed grades that they have not earned; and, in some states, to be permitted special diplomas" (Gartner & Lipsky, 1987, p. 381).

Brolin and Kokaska (1979) summarize English's 1971 research article, Combating Stigma Toward Physically Disabled Persons, Rehabilitation Research and Review, as follows:

"The attitudes people have toward handicapped or disabled persons are generally a function of the interaction between a number of demographic, personality, experiential, and behavioral variables. Learning theory would suggest that these attitudes are learned and that negative attitudes represent an aggressive response to a frustrating situation. Psychoanalytic theory would suggest negative attitudes to be a consequence of personality inadequacies developed in early childhood; and the interaction with the handicapped serves to maintain a homeostasis or psychological equilibrium. Role theory would suggest that negative attitudes are a function of one's life experience and the inability to conceptualize what is appropriate behavior in interacting with the handicapped person. In addition to these theoretical views, there are a number of circumstantial events that contribute to the attitudes of the nonhandicapped toward the handicapped: the handicapped person herself may act inappropriately or invite prejudice; family members or human service personnel may interact in a prejudiced or devaluing manner; or mass media may depict various handicapped individuals as the 'heavies' or 'bad guys'."

Attitudes toward specific disabilities appear to exist at least with some groups of people. Blind, deaf, and mildly physically handicapped persons are perceived more favorably than most other
disability groups. Society places much emphasis on intellectual proficiencies, and the retarded individual with limited skill in this area is labeled and, depending on socioeconomic class, is often stigmatized or institutionalized (Ullman & Krasner, 1975). Similarity, the public view of the mentally ill reinforces the label and stigma for life. People who are former mental patients, those who are more obviously mentally retarded, and those who are quite physically involved generally evoke negative attitudes and rejection from a large portion of the population (Brolin & Kokaska, 1979).

Cruickshank said that in contrast to other minority groups, the handicapped is composed of a variety of subminorities, each working in isolation and sometimes in opposition to one another. He believes there is a caste system present in this hierarchy of subminorities with the mentally retarded at the lower end. Cruickshank also said that multiminority status, individuals of color with a disability, represent a minority within a minority and "is a significant factor that has not received attention by sociologists or psychologists" (1986, p. 18).

Lippman said in his book, Attitudes Toward the Handicapped, "There is undoubtedly an element of self-fulfilling prophesy in our dealing with the handicapped. Gunner Dybwad some years ago, in an address to the National Association for Retarded citizens, asked the question, 'Are we retarding the retarded?' A writer on rehabilitation has offered the formulation: 'From a sociological view, a disabled individual is one who, because of his physical or mental handicap, cannot-or is not permitted by community members to-function in his social roles.' It is a social attitudinally determined definition. Does the
converse follow: that if the individual with a physical or mental handicap were allowed to function in society he would not be disabled? And if so, who would be the gainer? So who should take the initiative to institute change?" (1972, p. 94).

Attitudes of Secondary Non-disabled Students. Reynolds has stated, "The full and healthy realization of programs founded on the least restrictive environment principle depends as much upon the receptivity and contributions of students as upon the skills and accommodation capacities of teachers" (1980, p. 2).

Upon completing a qualitative study of the attitudes of secondary students towards deaf peers, Lynas said that "Social perceptions and attitudes are governed by many factors. We have seen, for example, how familiarity can lead to a more natural acceptance of the hearing impaired pupil. Knowledge about the implications of the handicap of deafness can result in more welcoming attitudes among normally hearing pupils and a greater preparedness to offer constructive support. It should be noted, however, that where teachers pay excessive attention to a hearing-impaired pupil and offer him too many special concessions, other pupils may feel resentful about the fact and become possibly less willing to be warmly disposed to that pupil" (1986, p. 163).

Johnson and Johnson explain that negative attitudes toward disabled peers exist before mainstreaming begins and first impressions and the labeling process reinforce such stigmatization; but it is the actual interaction between the student with a disability and the nondisabled student that determines whether a process of
acceptance or rejection will mitigate or strengthen the rejection of the disabled peers (1978). These educators define the process of making social judgements about disabled peers. It can be described as follows:

1. Original negative attitudes are based on the general stigmatization of people with disabilities in society at large.
2. An initial impression is made on the basis of initial actions and perceived characteristics of students with disabilities.
3. Categories classifying the disabled student's characteristics are formed with labels being attached to each category.
4. Interaction with handicapped students occurs; it is of great importance whether that interaction takes place within a context of positive, negative, or no interdependence.
5. Depending on the social context within which interaction takes place, a process of acceptance or rejection occur.
6. The process of acceptance results from interaction within a context of positive goal interdependence, which furthers promotive interaction and feelings of acceptance and psychological safety; differentiated, dynamic, realistic views of collaborators and self; positive cathexis towards others and self; and expectations for rewarding and enjoyable future interaction with classmates.
7. The process of rejection results from interaction within a context of negative or no goal interdependence. Negative goal interdependence promotes oppositional interaction and feelings of psychological rejection and threat, and no goal interdependence results in no interaction with peers. Both lead to monopolistic, static, and stereotyped views of classmates, negative cathexis toward others.
and self, and expectations for distasteful and unpleasant future interaction with other students.

8. With further interaction, the process of acceptance or rejection may be repeated.

This social judgement process is illustrated in Figure 9.

(From Reynolds, 1980 p. 14.)

Figure 9. Johnson and Johnson's Social Judgement Process.
Attitudes of Secondary Teachers and Staff  In order for children to develop a positive self-image and a high level of self-esteem, they need to feel genuinely wanted in school situations. Development of these attributes depend upon caring and skillful teachers who can systematically create healthy emotional environments (Reynolds, 1980).

Gearheart and Wieshahn apply this principle in the negative, "If a teacher rejects a particular student (regardless of whether this student is labeled 'handicapped'), it is very likely that other students will model this attitude and type of interaction" (1980, p. 249). In other words, the manner in which the teacher interacts with a particular student may determine how other students interact with that student. Since the teacher's role is one of the most important models that a child has, the model teachers provide as they interact with exceptional students "appears to be a significant factor in the pervasive tenor of the class" (Neely, 1982, p. 37).

In a review of attitude research, Horne covered studies of teacher attitudes toward handicapped students. These were students whose teachers preferred having them removed from classes, and who were recipients of more criticism and avoidance from teachers. Teachers rated all exceptional children lower in preference as students than gifted and normal children. Reactions of sixty percent of the teachers in one study were negative toward having blind or physically disabled children in their classes (Horne, 1979). Results on attitude change following mainstreaming among teachers were mixed although information about students with disabilities and the level of
contact with them appear to be important factors in attitude development (Berliner & Gage, 1979).

**Attitudes of Post-secondary Non-disabled Students.** In 1987, 1.3 million (10.5%) of the nation's 12.5 million students enrolled in the nation's post-secondary institutions reported having at least one disability. A larger portion of under-graduate students (10.8%) than graduate (8.4%) or first-professional student (7.3%) reported having a disability (HEATH, 1991). In 1991, almost one in 11 full-time freshmen (8.8%) reported having at least one disability (HEATH, 1992). The percent of disabled freshmen and disabled students reporting types of disabilities are listed in Tables 9 and 10 below.

Table 9. Freshman with Disabilities Enrolled in Post-secondary Education.

<table>
<thead>
<tr>
<th>Type of Disability</th>
<th>Percent of Freshmen with Disabilities in 1985</th>
<th>Percent of Freshmen with Disabilities in 1988</th>
<th>Percent of Freshmen with Disabilities in 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partially sighted or blind</td>
<td>28.3</td>
<td>31.7</td>
<td>25.2</td>
</tr>
<tr>
<td>Learning disability</td>
<td>14.8</td>
<td>15.3</td>
<td>24.9</td>
</tr>
<tr>
<td>Health-related</td>
<td>16.2</td>
<td>15.7</td>
<td>14.6</td>
</tr>
<tr>
<td>Orthopedic</td>
<td>12.1</td>
<td>13.8</td>
<td>13.5</td>
</tr>
<tr>
<td>Hearing</td>
<td>12.2</td>
<td>11.6</td>
<td>10.5</td>
</tr>
<tr>
<td>Speech</td>
<td>4.0</td>
<td>3.8</td>
<td>5.4</td>
</tr>
<tr>
<td>Other</td>
<td>16.2</td>
<td>18.5</td>
<td>18.3</td>
</tr>
</tbody>
</table>

Note: Some freshmen reported having more than one disability.

(From HEATH (1992), 11, (2 & 3), p. 1)
Table 10. Percent of Disabled Students Reporting Type of Disability.

<table>
<thead>
<tr>
<th>Type of Disability</th>
<th>Percent of Students with Disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual handicap</td>
<td>39</td>
</tr>
<tr>
<td>Health impairment</td>
<td>24.9</td>
</tr>
<tr>
<td>Hard of hearing</td>
<td>20.1</td>
</tr>
<tr>
<td>Orthopedic handicap</td>
<td>17.6</td>
</tr>
<tr>
<td>Learning disability</td>
<td>12.2</td>
</tr>
<tr>
<td>Deafness</td>
<td>6.1</td>
</tr>
<tr>
<td>Speech disability</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Note: Some students reported having more than one disability.

(From Profile of Handicapped Students in Postsecondary Education (1987), p. 7)

While these figures seem encouraging, fewer than 15% of special education exiters who were out of school more than one year were reported by their parents to have participated in post-secondary education or training in the previous year. In contrast, 56% of all non-disabled high school graduates were involved in post-secondary education or training. Visually impaired students were the largest group to enter post-secondary education after leaving special education (42.1%) and to attend four-year colleges (27.5%). Students with health impairment were the largest group to attend vocational schools (13.2%), while deaf students were most likely to attend two-year colleges (19.3%) (HEATH, 1991).

The above statistics are illustrated in Table 11.
Table 11. Participants in Post-secondary Education or Training.

<table>
<thead>
<tr>
<th>Type of Education</th>
<th>Students with Disabilities</th>
<th>Students without Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Post-secondary Institution</td>
<td>14.6%</td>
<td>56%</td>
</tr>
<tr>
<td>Vocational/Trade</td>
<td>8.1%</td>
<td>10%</td>
</tr>
<tr>
<td>Two-Year</td>
<td>5.9%</td>
<td>18%</td>
</tr>
<tr>
<td>Four-Year</td>
<td>2.1%</td>
<td>28%</td>
</tr>
</tbody>
</table>


Washington and Harvey explain that in order to effect change in attitudes of students toward minorities in higher education, it is critical for college students "to encounter and interact with instructors who are members of various racial and ethnical groups in order to quell effectively the myth about the intellectual and cultural inferiority of minority groups" (1989, p. 3).

Attitudes of Post-secondary Faculty and Staff. Mager has said that the history of an attitude towards a subject is influenced by events that occur in relation to it (1968, p. 8). For most of our nation's history, schools were allowed to exclude children with disabilities. Since the 1960's, however, there has been an abundance of federal legislation that relates directly to people with disabilities. The numerous court decisions rendered, and state and federal laws passed now protect the civil rights of people with disabilities and guarantee that all children receive a free and appropriate, public-supported education (Alexander, 1985; NICHY, 1991).
Because of this legislation, more students with disabilities are graduating from secondary schools and continuing to post-secondary education. In 1988, approximately seven percent of the college freshmen reported having a disability, which is three times the number reported in 1978 (HEATH, 1988). However, the higher education environment is traditionally conservative and has a tendency to maintain the status quo (Bledstein, 1976). Faculty and administrators' attitudes towards students with disabilities may effect, either positively or negatively, the academic success of these students. In fact, a recent study of 761 students with disabilities found that 86% of the students reported that they had encountered barriers to their education because of their disability. In fact, many of the barriers described by respondents were related to services and accommodation needs that were disability specific (West, Kregel, Getzel, Zhu, Ipsen, & Martin, 1993).

Parks et al. concluded from their "Survey of Programs and Services for Learning Disabled Students in Graduate and Professional Schools" that prejudicial attitudes exist among educators and administrators at the post-secondary level. They state that, "While it is clear that prejudicial attitudes may not be changes in the immediate future we, at least, would hope that individuals in higher education would minimally inspect their own values and judgements" (1987, p. 187)

One survey of faculty attitudes found that attitudes toward the learning disabled and students with emotional disabilities were less favorable than attitudes toward students with other types of disabilities (Leyser, 1989). But although most of the faculty
respondents indicated they made adaptations in their courses to meet the needs of students with disabilities and were aware of special education laws, less than half of the respondents used the resources and support services on campus to assist students with disabilities (p. 106). Leyser's study may be suspect because the sample population was 124 faculty members of Northern Illinois University's College of Education.

Sheridan (1991, pp. 291-299) conducted a study at Connecticut College that included a faculty questionnaire which yielded a return rate of 27% (54 faculty responding). Sheridan indicates that "responding faculty expressed concerns about the need to increase campus physical accessibility, and to continue consciousness raising and training for the faculty" (p. 294). Once again, one must question the validity of the study due to the limited scope and content the questionnaire.

Marchant (1990, p. 106) said that "the success of a college student with a learning disability . . . depends on the match between student and instructor. The success of the instructor/student match includes consideration of the teacher's instructional methods, as well as, the teacher's attitude toward students with learning disabilities and the adaptations they require".

Perhaps the quotation of an anonymous faculty member at Massachusetts Bay Community College may best illustrate faculty attitudes toward students with disabilities and a key component of changing existing attitudes (Hicks et. al, 1991, p. 13), "The College Integration Project interested me because I did not feel comfortable teaching learning disabled students mainly because I did not really
understand what a learning disability was. I had heard the term used over and over again but was content believing these students were merely slow or unmotivated.

**Process of Attitude Change**

The study of attitude change is bound with the study of both opinion change and overt behavior change (Insko, 1967). Triandis (1971, p. 146)) says that attitude change is a complex area, where interactive relationships are common, and where change in one variable may have widespread results in many other variables within the system.

Attitude change can occur by first changing the cognitive component (for example, with new information), the affective component (for example, by unpleasant or pleasant experiences in the presence of the attitude object), or the behavioral component (for example, by norm change, or the legal imposition of behavioral changes). It can also change by forcing a person to act or by presenting him or her with a 'fait accompli' (Triandis, 1971, p. 143).

Triandis (1971, p. 145) says that "in analyzing the attitude-change process one must consider the effect of who says what, how, to whom, and with what effect. The who concerns the source of a message. The what is the message itself. The how is the channel in which the message is delivered, the whom is the audience to which the message is delivered, and the effect may include changes in attention, comprehension, yielding, retention, or action". The source, channel, message, and audience are thought of in terms of independent variables of change. They often have interactive effects.
on dependent variables such as attention, comprehension, yielding, retention, and action.

Theories for Effecting Attitude Change

Attitudes are learned, continually open to modifications and change, and both learning and modifications have origins in interaction with other people. Neely (1982, p. 37) lists four procedures for effecting change in an individual's attitudes:

1) Clarifying what the person's problems are by asking the person to describe the problems and the patterns of thinking and behaving that lead to the problems; it is important that the person formulate his own definition.

2) Establishing the conditions for attitude change by building trust and reducing the person's defensiveness, egocentrism, and demoralization.

3) Promoting changes in the person's attitudes by selecting and applying a theory (or combination of theories) of attitude change.

4) Stabilizing the new attitudes by building supports that will maintain them.

Dichter qualifies the possibility of effecting change by saying, "An attempt to change human nature, even if the goal is clearly to achieve better adjustment, is usually resisted" (1971, p. 7). Mager echoed this when he stated, "Once a behavior pattern develops, it is unlikely that it will be reversed" (1968, p. 29). But Dichter also said that resistance to change is best met by simply asking that a change be made.
Yuker (1979) says that although it is often thought that providing information is an important factor in changing attitudes, information has a limited effect in changing attitudes. He explains that if using information to change attitudes is the practice to be employed, then there are three specific ways to do this. First, any message designed to change attitudes should provide new information which tells people something they didn't know before. Second, the message you give should state definite conclusions. And third, the most effective technique is one-to-one communication (p. 51). He says positive attitudes are most likely to be changed in this manner if the person who is communicating the message is a colleague.

Yuker (p. 57) points out that the effects of interaction with individuals with disabilities are influenced by the: type of interaction that occurs; level of intimacy; setting of the contact; and frequency of contact. Societal and institutional support is very important but usually ignored.

Block (1979) says that an effective change technique is to induce a person to think about his or her attitudes toward people with disabilities. He states that there are two considerations in changing attitudes: you can change the disabled person; and you can change the physical environment (p. 57).

Table 12 lists strategies for changing the attitudes of hearing students toward individuals who are deaf or hard of hearing.
Table 12. Activities for Improving Understanding and Acceptance Among Deaf and Hearing Students.

1. Provide multiple opportunities for deaf and hearing students to interact on a regular basis, preferably on joint projects or activities.

2. Give deaf and hearing children the opportunity to discuss openly why they react positively or negatively toward each other.

3. Encourage children to express in what ways their own culture might appear strange to a person from the other group. For example, hearing children should imagine which aspects of spoken language might appear bizarre to a deaf person.

4. Discuss the fundamental ways in which all human groups are similar (kinship, division of tasks, language, prolonged childhood dependency, belief system, use of symbols, tool systems, etc.). Deaf and hearing people are equally 'human' because each group has established its own specific responses to those same needs.

5. Teach children about the processes by which humans develop stereotypes and have them list the ways in which they have seen themselves follow those processes in judging or misjudging deaf or hearing children.

6. Teach students that there is a wide variation of behavior within any culture; thus, stereotyping is bound to be false (e.g., some deaf people use sign language, while others do not).

7. Point out nonstereotypic behaviors of both groups. For example, numerous deaf persons today have earned Ph.D.'s and teach in universities.

8. Teach about the positive contributions to human life by both groups. For example, focus on well-known deaf actors or athletes.

9. Help students to create and analyze a written description of a model culture in order to develop their thinking tools for understanding the deaf or hearing culture.


McLaughlin (1988) draws two important conclusions from his research in The Changing Lives of American Women: attitudinal change did not lead to subsequent changes in behavior (p. 183); and most attitudes among women changed after the associated behavior was already fairly common (p. 190).
Institutional Change

Margolis says, "It is a mistake to view resistance as simply a reaction to the quality of the changes proposed or to the reasoning offered in support of these changes. Reason alone is unlikely to prevail. This is especially true when administrators proposing change and teachers whom change depends operate from different facts, frames of reference, and assumptions" (1991, p. 2).

Despite the primary importance of structural and organizational variables in influencing individual behavior, change is ultimately a personal process (Margolis, 1991).

Combs urged those desiring change should: 1) not impose solutions upon people; 2) concentrate on beliefs and perceptions; 3) emphasize processes and open system thinking; 4) focus on what people think is immediately important and troublesome; and 5) encourage innovation and change with the potential to achieve mutually desired goals (1988, pp. 38-40).

Figure 10, on the following page, lists most of the forces influencing the realization of free, appropriate, public education for the disabled which Burrello and Sage discuss in their text, Leadership and Change in Special Education. The authors categorize the forces that generate change in special education as either 1) those forces external to the school system, or 2) those forces within the school system. They break down the composition of these forces into a number of competing forces. These competing forces cannot be precisely aligned and there is much overlap and a lack of clearly distinguishable relationships. The magnitude of each force is
uncertain and can be expected to vary from one situation to the next (1979).

<table>
<thead>
<tr>
<th>Driving Forces for Change</th>
<th>Restraining Forces for Change</th>
</tr>
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<tbody>
<tr>
<td>General Social Climate</td>
<td>Ideological Factors</td>
</tr>
<tr>
<td>Human rights</td>
<td>Specialized services</td>
</tr>
<tr>
<td>Civil rights</td>
<td>Security of segregation</td>
</tr>
<tr>
<td>Maximum feasible participation</td>
<td>Professionalism</td>
</tr>
<tr>
<td>Activism</td>
<td>Conservation</td>
</tr>
<tr>
<td>Consumerism</td>
<td>Classism</td>
</tr>
<tr>
<td>Tolerance for variance</td>
<td>Bureaucratic Factors</td>
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<td></td>
<td>Organizational maintenance</td>
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<tr>
<td>The Courts</td>
<td>Technical mystique</td>
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<tr>
<td>Insurance of minority rights</td>
<td>Job protection</td>
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<td>Equal protection clause</td>
<td>Unionization</td>
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<td>Right to education</td>
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<td>Right to treatment</td>
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<tr>
<td>Due process</td>
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<tr>
<td>Nondiscriminatory</td>
<td></td>
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<tr>
<td>Legislation</td>
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<td>State and Federal</td>
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<tr>
<td>Zero reject</td>
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<tr>
<td>Mandatory services</td>
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<td>State wide planning</td>
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<td>Advocacy</td>
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<td>Financial reform</td>
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<td>Manpower preparation</td>
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<td>IEPs</td>
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<tr>
<td>Procedural safeguards</td>
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<tr>
<td>Least restrictive</td>
<td></td>
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<tr>
<td>environment</td>
<td></td>
</tr>
<tr>
<td>New service models</td>
<td></td>
</tr>
</tbody>
</table>

Figure 10. Forces Influencing the Realization of Free, Appropriate, Public Education for the Disabled.
(From Burrello & Sage, 1982, p. 67.)

Weick (1979) presents change as being a characteristic of organizations and says "that those forces which produce continuing change are themselves relatively unchangeable laws" (p. 120). In his view, ecological or systematic change provide the enactments or the
active roles we must play in bringing about change in an organization. To bring about long lasting change within a system the following principles or laws of change should be enacted (McLaughlin, 1990):

1. local resources and commitment are important for change;
2. change is the concern of the smallest unit and the daily encounters of the organization's participants;
3. variability will exist in adaptations that are best suited to local resources, customs, etc.;
4. individuals who are required or mandated to change, may become committed to these new changes;
5. reform needs to be systematic and on-going;
6. content is as important as process in change;
7. meaningful networks that involve participants are important to change;
8. participants requested to implement change must also be involved in fact-finding and decision-making to implement change; and
9. all levels of an organization must be involved in change.

Societal Change

In 1971, English said that stigma (negative attitudes) is such a complex problem that in order to effectively change societies attitudes toward the disabled we should identify specific and relatively small scale action projects. Many of the following issues have been addressed, such as integrating physically disabled
individuals into television advertising (for example, McDonalds and Burger King advertisements) and the merit of such an approach for societal change seems self evident. English recommended that human service professionals assume responsibility in dealing with negative attitudes by:

1. presenting the facts about stigma to the disabled individual;
2. increasing the amount of meaningful contact between disabled and nondisabled persons;
3. pressuring mass media, especially television, to present realistic characterizations of disabled persons;
4. designing experimental studies, via the mass media, to manipulate attitudes toward persons with disabilities,
5. influencing families to participate in the disabled person's education and rehabilitation;
6. organizing the political efforts of persons who are obviously physically disabled;
7. disseminating information on stigma to professional and lay groups that will listen; and
8. continuing further professionalization of the human service areas.

Attitude change will disappear unless the environment is supportive of the behavioral change that accompanied attitudinal change (Triandis, 1971, p. 82). If this is true, the movement that developed or encouraged attitudinal change in a society needs to be accompanied, or followed, by an environmental change in order for the change in attitudes to remain in effect.
CHAPTER 3
RESEARCH DESIGN AND METHODOLOGY

Introduction

A quantitative survey was conducted between April 17 and May 21, 1992 in the manner described by this chapter. The results suggested that respondents possessed favorable attitudes towards students with disabilities, but that the respondents were unfamiliar with students with disabilities and issues related to disability. Since some researchers find that qualitative methods are a more valid means of measuring attitudes, this researcher also conducted structured interviews with eleven selected administrators at the University of Massachusetts. The qualitative component of this study served to gather observations of academic deans and department heads concerning their faculty's knowledge of students with disabilities, skills with teaching students with disabilities, and attitudes they possess towards students with disabilities.

Academic Environment and Faculty Attitudes

The term attitude is used to refer to the general tendency of an individual to act in a certain way under certain conditions. An attitude is based on visible behavior. Peoples' attitudes are shaped
mostly by the attitudes of the people they encounter, by objects and experiences, and by the consequences of their own actions.

Teachers exert an influence upon the attitude a student shows toward the subject matter that is taught. If teachers exhibit an attitude towards a particular student, or group of students, it follows that those students will develop similar attitudes towards the subjects being taught and the likelihood of the student putting his knowledge to use is then influenced by his attitude for or against the subject (Mager, 1968). Cook suggests that professionals' (faculty) attitudes are of critical importance in facilitating student success (1992, p. 262).

Figure 11 represents an illustration of the relationship of seven different overlapping environments, including student and faculty environments, at a college or university. The term environment is used broadly to refer to all organizational phenomena within a prescribed boundary. Peterson states that, "Strong, intensive, and positive institutional climates can influence student behavior and attitudes; faculty attitudes, roles, and productivity; the external image of the institution; and many other dependent variables" (1988, p. 23).
Since education can significantly affect a person's outlook and station in society, attitudes effecting equality in the provision of educational opportunities would seem to effect equality in other areas of life. Often when people with disabilities are subjected to discrimination in the provision of educational services and activities, they are underemployed for the rest of their lives.

While providing additional resources to strengthen support services for students with disabilities in higher education has become
increasingly difficult, identifying attitudes which may inhibit full participation in the higher education of students with disabilities is a meaningful first step in initiating positive change (Rothstein, 1986).

Peterson's research (1988, p. 33) on the organizational climate (the current organizational patterns of important dimensions of organizational life, including the members' perceptions and attitudes) and culture of a college or university reveals that the student and faculty climate has been useful in predicting attitude change. Using this model, it is clear that faculty attitudes influence the retention, and long term behavioral change, of their students (p. 33). Figure 12 maps the academic organizational context upon which Peterson has based his research on organizational climate.

Figure 12. Academic Organizational Context.
(From Stark & Mets, 1988, p. 33)
Purpose and Objectives

In order to effect a change in the attitudes which faculty have toward students with disabilities, one must first determine the nature and scope of their attitudes at the present time. It would be a grave error to assume that a group of people possess a certain attitude toward an attitude object without first employing an in-depth study to determine the status of the problem. Therefore, the following research questions were framed for the purpose of identifying those aspects of the problem which were to be the focus of the research.

Research Questions

The purpose of this study is to determine if there is a relationship among the following five factors:
1) Faculty knowledge of disabilities.
2) Faculty experience in teaching students with disabilities.
3) Faculty attitudes toward students with disabilities.
4) Faculty member's academic discipline.
5) Gender of the faculty member.

The study was designed to address the following research questions:
1. Is there a relationship between the faculty's knowledge of disabilities and the attitudes which faculty exhibit toward students with disabilities?
2. Is there a relationship between the faculty's experience in teaching students with disabilities and the attitudes which faculty exhibit toward students with disabilities?
3. Is there a relationship between a faculty member's academic discipline and the attitudes which that faculty member exhibits toward students with disabilities?
4. Is there a relationship between a faculty member's gender and the attitudes which that faculty member exhibits towards students with disabilities?

**Procedures**

Selecting an appropriate information gathering procedure is critical to the success of an assessment process. Stufflebeam and his associates (1985) illustrate a process for selecting the most appropriate information gathering procedure in Figure 13. By using this procedure, it was determined that needed information for this study could be gathered by any, or all, of the following methods: inventory checklists; opinion survey; self-ratings; knowledge tests; interviews; and survey questionnaires.
Once the range of procedures was identified, the next step was to determine the relationship between the procedure and the overall process of gathering information. In Figure 14, the information-gathering process is presented as defined by Stufflebeam and his colleagues. It is designed and conducted in response to general needs assessment questions.

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**Figure 13. Factors That Impinge on Information Gathering Procedures.**

(From Stufflebeam, McCormick, Brinkerhoff, & Nelson, 1985, p. 91.)

---

**Figure 14. Information-Gathering Process.**

(From Stufflebeam, McCormick, Brinkerhoff, & Nelson, 1985, p. 84.)
Stufflebeam et al (1985) state that a "need is relative and can be determined only as the result of a judgmental process that involves knowledge of conditions and factors pertaining to people and organizations. This knowledge, when brought to bear against ideals, desires, hopes, and values, can result in judgements about the nature, magnitude, and significance of needs. The information-gathering step produces this knowledge for decision-makers who then interpret the results and identify needs" (p. 85). Figure 15 illustrates the general process of needs identification.

![Figure 15. Needs Identification Process.](From Stufflebeam, McCormick, Brinkerhoff, & Nelson, 1985, p. 84)

The process as outlined above provided a theoretical framework for conducting this study. The theoretical framework fits into Lindquist's (1978) strategies for change prior to "creating the change message" (p. 1). Figure 16 illustrates this model. Lindquist focuses on the social art of communicating new notions, but prior (and sometimes simultaneously) to delivering the change message, research, development and diffusion must occur.
Population to be Studied

The population being studied is the undergraduate and graduate faculty of the University of Massachusetts at Amherst. Established in 1863 under the original Land Grant Act, the University is largest state institution of higher education in the Northeast. The University offers bachelor's degrees in 92 areas, associate's degrees in eight, master's degrees in 70, and the doctorate in 48 through the following ten colleges and schools as listed below and on the following page:

- College of Arts and Sciences
  - Faculty of Humanities and Fine Arts
  - Faculty of Natural Sciences and Mathematics
  - Faculty of Social and Behavioral Sciences
- School of Education
- College of Engineering
College of Food and Natural Resources  
School of Management  
School of Nursing  
School of Physical Education  
School of Public Health  

More than 90 percent of the 1,300 full-time faculty hold the highest degree in their fields. There are approximately 24,100 matriculating students, made up of 17,700 undergraduates and 6,400 graduates, plus more than 300 students enrolled in associate degree programs (UMASS a. & b., 1992).

At the time the study was conducted, there were approximately 425 individuals with documented disabilities receiving services at the University. Among this population were: 342 students with learning disabilities; 55 mobility impaired persons; 19 visually impaired students; and 9 deaf students (DSO, 1990; LDSS, 1992). Dr. Patricia Silver, Director of Learning Disabled Student Services at the University, expects the number of students with learning disabilities to increase during the next academic year.

Sample Size for Quantitative Study

The sample size for the mailed survey is 1,316, the entire faculty of the University of Massachusetts at Amherst. There were 167 faculty members either on sabbatical or taking an unpaid leave of absence during the time which the study was released. Therefore, 1,149 faculty were on-campus when the instrument was distributed.
Distribution and Data Collection Procedures for Quantitative Study

The instrument was distributed through campus mail on April 17, 1992. This was the final day of counseling week. Pre-registration for Fall semester takes place during counseling week and it is a busy time for faculty. Mailing the study at this time eliminated the possibility of the study being forgotten during the rush of counseling week. It also allowed faculty time to complete the study and return it before the end of the semester on May 21, 1992.

Prior to distribution, a memo was sent to the Deans of the ten schools and colleges. The April 7, 1992 memo requested that when they next met with their department heads, they inform them of the purpose of the study and they encourage their faculty to complete the study and return it prior to May 1, 1992. In addition to the memo, a news article was placed in The Campus Chronicle, the weekly faculty newspaper on campus, explaining the purpose of the study and encouraging the faculty to complete and return the instrument. A photocopy of this news article is presented in Appendix B.

Included with the cover letter and instrument was a raffle ticket which the faculty could return independently of the study. The raffle ticket was complimentary and the value was a gift certificate for merchandise at a local bookstore.

The instrument was designed to be returned through campus mail by simply refolding and taping the paper closed. There were instructions to that effect in the cover letter and also instructions were printed on the instrument. This eliminated use of additional
envelopes and also made it easier for respondents to return the study.

The cover letter also included: the purpose of the study; the time required to complete the study; the return date; a statement insuring respondent anonymity; and information regarding dissemination of the study's results.

The instrument was comprised of three sheets of blue paper and totaled six pages in length. It was organized in the following manner. The cover page identified the researcher, name of the study, funding source, and address and telephone number of the researcher. The inside front cover introduced the study and its purpose, as well as, defined special education terminology. Questions concerning respondent demographics were placed on the third page. Page four consisted of seven questions that was titled Disability Awareness Inventory, Section I. Page five consisted of sixteen questions using a five point Likert scale including a "no opinion" category and was labeled Disability Awareness Inventory, Section II. The back cover contained instructions for returning the completed survey and the mailing address. The survey instrument is contained in Appendix A.

A complimentary raffle ticket was enclosed with each survey with instructions to return the ticket separately so as to insure anonymity. This was a final attempt to increase the number of responses.

The total number of surveys returned was 429 which is 32.6 percent of those mailed. There were 230 raffle tickets returned, or 17.5% of those mailed.
After contacting Donna Marino at the office of the Vice Chancellor for Academic Affairs and Provost, it was found that 142 tenured and tenure track faculty were on sabbatical and 25 faculty members took an unpaid leave of absence. This represents a total of 167 faculty absent from the University during the 1992 spring semester. If this is taken into account, the expected number of faculty available to return the study is 1,149 and the return rate for surveys is 37.33% and the return rate for raffle tickets is 20%.

On May 15, 1992 a news article was sent to the Campus Chronicle thanking the faculty for participating in the study and announcing the winner of the faculty raffle. The winner of the raffle was informed prior to the release of the article and gave permission for her name to be released. Appendix B includes a photocopy of the thank you letter as it appeared in the Campus Chronicle.

Sample Size for Qualitative Study

In conjunction with the quantitative survey, a series of qualitative interviews were conducted to address the question of how to increase faculty awareness of disability. Taylor and Bogdan write, "In qualitative research, an 'N of One' can be just as illuminating as a large sample" (1984, p. 81). The nature of qualitative interviewing calls for a flexible research design. This dictates that the researcher "start out with a general idea of what people to interview and how to find them, but is willing to change course after the initial interviews" (1984, p. 83,).
Eleven deans or department heads of the University of Massachusetts at Amherst were selected as subjects for guided interviews. One participant was selected to represent each college or school at the University.

**Distribution and Data Collection Procedures for Qualitative Study**

One subject was selected from each of the ten colleges and schools at the University for the qualitative study. Subjects were selected using the criteria of knowledge that they possess concerning the status of the faculty in their college or school. Twenty percent of the subjects selected for guided interviewing were female, as that group comprises 22 percent of the University faculty. Efforts were made to include at least one individual with a disability and two persons of color for the qualitative study.

Selected subjects were sent a letter of introduction on October 28, 1992 requesting their participation as subjects for a guided interview. The letter, included in Appendix C, introduced the interviewer; stated the purpose of the study; ensured the participant anonymity; defined the expected time commitment; and explained the interview process. Approximately a week after mailing the introductory letter, the researcher telephoned the selected participants to gain his or her permission to be subjects of the study and to arrange a time and place for the initial interview.

The length and number of contacts involved in conducting the in-depth, guided interviews depended on the comfort and willingness of each participant. It was planned to conduct a one-hour
meeting with each participant. This was too much time for some of the subjects and too little time for others. A key aspect of in-depth interviewing is to be flexible.

Methodology

The methodology section will be divided two different research methods because this study includes both qualitative and quantitative methods for collecting data. Collecting accurate information concerning attitudes is one of the most challenging types of educational research and employing both quantitative and qualitative methods provides the researcher with a broader view of the problem.

Types of Methodology Used for Collecting Quantitative Attitudinal Data

Most quantitative faculty surveys (Leyser, 1989; Matthews, 1987; Sheridan, 1991; Parks, 1987) used a "Yes, No, and Don't Know" format for determining attitudes of the faculty group being studied. While Marchant (1990) used a multiple choice format. Since an existing scale suitable for the purposes of this study was not found, a Likert type scale was employed using the categories: strongly agree; agree; no opinion; disagree; and strongly disagree.

Borg and Gall (1989) explain that, "Most questionnaires deal with factual material, and in many cases each item is analyzed separately to provide a specific bit of information that contributes to
the overall picture that you are attempting to obtain. Thus, it is possible to look upon the questionnaire as a collection of one-item tests. The use of a one-item test is quite satisfactory when you are seeking out a specific fact, such as teacher salary, number of baseball bats owned by the physical education department, or number of students failing algebra. When questions get into the area of attitude and opinion, however, the one-item test approach is extremely unreliable. A questionnaire dealing with attitudes must generally be constructed as an attitude scale and must number the items (usually at least 10) in order to obtain a reasonable picture of the attitude concerned" (p. 432).

One method of dealing with subjects who are not familiar with a particular topic is to include a "no opinion" category as one of the response alternatives for each attitude item. The disadvantage of this, explain Borg and Gall, is that "subjects with little or no information about a particular topic will often express an opinion in order to conceal their ignorance or because they feel social or professional pressure to express an opinion" (1989, p. 433).

Anonymity is sometimes called for if data of a personal nature or data that may be threatening to the individual are requested. This is often the case when dealing with subjects such as sexual behavior. The anonymous questionnaire, however, poses many research problems. Follow-ups are difficult and inefficient because non-responding individuals cannot be identified (Borg & Gall, 1989, p. 434). Many times it is not possible to categorize respondents using demographical information due to the possibility of eliminating anonymity by asking such demographic questions.
Types of Methodology Used for Collecting Qualitative Attitudinal Data

This researcher could find no qualitative surveys of faculty attitudes towards students with disabilities to replicate or model. Therefore, prior to selecting a qualitative method to gather attitudinal data, it was useful to review the types of methodology employed in qualitative research.

Qualitative methodology refers to research that produces descriptive data through recording "people's own written or spoken words and observable behavior" (Taylor, 1984, p. 5). Weinberg explains that qualitative methods for collecting attitudinal data are most desirable and effective. She said, "A face to face interview has traditionally been considered the most reliable method for collecting attitudinal, opinion, and some kinds of factual data from the general population and from some special population groups" (Weinberg, 1983, p. 336). Among the more common methods for collecting quantitative data are participant observation and in-depth interviewing.

Participant observation "involves social interaction between researcher and informants in the milieu of the latter, during which data are systematically and unobtrusively collected" (Taylor & Bogdan, 1984, p. 15). The most common ways to conduct participant observation in a natural setting are overt and covert. Both methods of participant observation involve the passive collection of data through unobtrusive observation. Taylor and Bogdan also advise researchers utilizing participant observation as a method to stay
away from settings in which they have a direct personal or professional stake.

Generally, in-depth interviewing is nondirective, unstructured, nonstandardized, and open-ended interviewing. The purpose of in-depth interviewing is to gather information that will help the researcher gain a better understanding of the subjects' "perspectives on their lives, experiences, or situations as expressed in their own words" (Bogdan & Taylor, 1984, p. 77). There are many forms that in-depth interviewing can take, some examples are: solicited narratives; log-interviews; personal documents; guided interviews; oral life histories; and various degrees of extensive in-depth interviews. The primary difference between participant observation and in-depth interviewing lies in the settings and situations in which the research takes place.

Justification for Selected Methods

A review of the literature on quantitative attitudinal measurement indicated that the most common and acceptable way of measuring attitudes was by using a variation of Likert's scale. By giving the respondent a range of possible responses, there is an increased likelihood of receiving accurate responses to the items presented.

The most desirable way to collect descriptive qualitative data for this research on faculty attitudes is guided interviewing. This researcher has selected guided interviews after using Bogdan and Taylor's criteria for selecting this method. Guided interviews have
the advantage for this research over other types of in-depth interviewing by being able to yield a broad picture of a range of settings, situations and people. They say that in-depth interviewing seems especially well suited in the following situations (1984, pp. 80-81):
1. the research interests are relatively clear and well-defined;
2. settings or people are not otherwise accessible;
3. the researcher has time constraints;
4. the researcher depends on a broad range of settings or people; and
5. the researcher wants to illuminate subjective human experience.

Design of Quantitative Instrument

The design of the instrument may serve two purposes: information gathering; and providing information. Marchant said that "the questionnaire that you design can inform the instructors as well as provide information to you" (1990, p. 108). This strategy was used throughout the design of the faculty study, beginning with the cover letter.

Borg and Gall (1989) have suggested guidelines for the development of a questionnaire. Some of the most important points are:
1. Clarity of the items is essential. In order to gather meaningful data, the items or questions must be interpreted correctly by the respondents.
2. It is important to avoid biased questions that may bias or lead the respondents toward a particular answer. The authors suggest having
a colleague or several colleagues critically read a draft copy of the questionnaire in order to reduce the chances of this problem occurring.

3. Avoid questions that may be threatening. It should be pointed out that the purpose of the survey is only to find out what they know or think.

4. Keep all items short and simple.

5. Generally speaking, try to avoid negative items.

6. Ask questions that involve information the respondents are likely to know about.

Marchant (1990, p. 107-108) says the following general rules are essential in the development of faculty questionnaires concerning learning disabled students:

1. *Include instructions.* Make sure to indicate whether to check only one response or all that apply. Explain the nature and purpose of the questionnaire in the instructions or a cover letter.

2. *Be specific.* Do not ask if the reading load is light or heavy; opinions can differ as to what constitutes a heavy reading load. Instead ask how many pages are assigned each week.

3. *Be consistent.* Always go from left to right, small to large, or strongly disagree to strongly agree.

4. *Be brief.* The longer the questionnaire the less likely it is to be completed and returned. It might be a better strategy to use two brief questionnaires during the course of an academic year than to use one long one.

5. *Use foresight.* Do not force instructors into giving an opinion that is sure to cause a problem latter. For instance, do not ask instructors if
they want students with learning disabilities in their courses. If they say no and a student has to take one of their course, they might remind you that they had already stated their opinion and not to expect any special favors.


Stufflebeam and his colleagues developed a checklist for evaluating new instruments or for assessing the adequacy of available instruments (1985, p. 104). Table 13 presents their work.

<table>
<thead>
<tr>
<th>Introduction</th>
<th>Directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>( ) There is a clear statement of the instrument's purpose.</td>
<td>( ) Directions are given when necessary.</td>
</tr>
<tr>
<td>( ) The respondent is told how information resulting from the instrument will be used.</td>
<td>( ) The directions are clear and complete.</td>
</tr>
<tr>
<td>( ) Those who will see the data are identified.</td>
<td>( ) The language used is appropriate to the level of the respondents.</td>
</tr>
<tr>
<td>( ) The respondent is told why s/he was selected to complete the instrument.</td>
<td>( ) An example item is provided if necessary.</td>
</tr>
<tr>
<td>( ) The privacy of confidential information is insured.</td>
<td>( ) Directions are provided for responding to items which &quot;do not apply&quot;.</td>
</tr>
<tr>
<td>( ) The anonymity of the respondent is guaranteed (if appropriate).</td>
<td>( ) The respondent is told if other materials are needed to complete the instrument.</td>
</tr>
<tr>
<td>( ) Motivators for responding are supplied.</td>
<td>( ) Directions for returning the instrument are adequate (when, where, and how).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>( ) Individual items are appropriately spaced.</td>
</tr>
<tr>
<td>( ) Items are grouped in a logical order (by content, type, etc.).</td>
</tr>
<tr>
<td>( ) Sufficient space exists for the desired response.</td>
</tr>
<tr>
<td>( ) Instrument is easy to read.</td>
</tr>
<tr>
<td>( ) Instrument is not too long.</td>
</tr>
<tr>
<td>( ) Instrument is &quot;pleasing to the eye&quot;.</td>
</tr>
</tbody>
</table>

(From Stufflebeam, McCormick, Brinkerhoff, & Nelson, 1985, p. 104.)
Format of Quantitative Instrument

The instrument's format is critical to ensuring a legitimate rate of return. Items should be designed to facilitate ease of response (Parks, et al, 1987, p. 181), and the format should be such that it portrays professionalism and planning (Borg & Gall, 1989, p. 430).

Borg and Gall encourage the researcher to make the questionnaire attractive (1989, p. 431). They suggest such strategies as: using colored paper; laying out the front page in an attractive manner; careful composition and the use of white space; and using high quality reproduction methods, such as laser printing.

In addition these authors suggest:

1. organize and lay out questions so the questionnaire is as easy to complete as possible;
2. number the questionnaire items and pages;
3. put the name and address of person to whom form should be returned at the beginning and end of questionnaire;
4. include brief, clear instructions, printed in bold type;
5. use examples before items that might be confusing or difficult to understand;
6. organize the questionnaire in some logical sequence;
7. when moving to a new topic, include a transitional sentence to help respondents switch their train of thought;
8. begin with a few interesting and non-threatening items;
9. do not put important items at the end of a long questionnaire;
10. put threatening or difficult questions near the end of the questionnaire;
11. avoid using the words 'questionnaire' or 'checklist' on your form; and
12. make sure the information asked appears to be meaningful to the respondent.

Construction of Quantitative Items

Construction of items for attitudinal surveys is difficult at best. Eiser said, "The question of how we measure people's attitudes is one of the basic methodological problems of social psychology" (1980, p. 19). In order to ensure that the items were specific, relevant, and measurable, professional from a variety of related fields were enlisted as consultants over a period of six weeks. The items were refined and reviewed using a process of collaboration and consultation with individuals listed in Table 14. The consultants are listed randomly and are not in chronological or alphabetical order.

Table 14. List of Consultants.

<table>
<thead>
<tr>
<th>Staff of SARIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff of the Office of Institutional Studies</td>
</tr>
<tr>
<td>Issac Aisen, Professor, Department of Psychology</td>
</tr>
<tr>
<td>Harry Schumer, Professor, Department of Psychology</td>
</tr>
<tr>
<td>Sharon Kiputz, Dean of Students</td>
</tr>
<tr>
<td>Paul Appleby, Director of Disabilities Services</td>
</tr>
<tr>
<td>Corrine Brennan-Dore, Disability Services Office</td>
</tr>
<tr>
<td>Madeline Peters, Disability Services Office</td>
</tr>
</tbody>
</table>

(Continued on next page.)
Table 14. Continued.

Sally Freeman, Associate Dean of the College of Arts & Science
Ann Hopkins, Center for Counseling and Academic Development
Judy Davis, Center for Counseling and Academic Development
H. Swaminathan, Professor, Educational Statistics
Stanley Scarpati, Professor of Special Education
Russell Carter, Graduate Student, School of Education
Jim Wise, UMass-Boston Director of Disability Student Services
Lisa Risken, Massachusetts Office of Disabilities
Gail Hammond, Massachusetts Bay Community College, Director of Disability Student Services
Nancy Hellman, Associate Dean of the College of Engineering
Neal Anderson, Assistant Professor of Engineering
Linda Enghagen, Assistant Professor of Hotel, Restaurant, and Travel Administration
Michael Schwartz, Undergraduate Dean of the School of Education
John Moran, Assistant Dean of the School of Management
Patricia Anthony, Associate Professor, Educational Administration
Dennis Ryan, Assistant Professor, Department of Landscape Architecture
Hollis Cotten, Massachusetts Coalition of Citizens with Disabilities
Stephanie Chapko, Assistant Director of Transfer Admissions
Joan Stoia, Director of Mather Career Center
Patricia Silver, Professor of Special Education
Ted Slovin, Associate Director of the Center for Counseling and Academic Development
University of Illinois Transition Institute Staff
Susan Pliner, Case Manager, Learning Disabled Student Services
Susan Shellenberger, Case Manager, Learning Disabled Student Services
Statistical Treatment of Quantitative Data

The data was entered with each of the 422 surveys consisting of 72 items using the Systat 5.0 software package on a Macintosh computer. The initial information extracted from the data was frequencies and percentages of responses.

The initial research question was, "What is the relationship between the faculty's knowledge of disabilities and the attitudes which faculty exhibit toward students with disabilities?". To examine this relationship, two sets of representative questions from the study were used for comparison.

The three questions that best represent the level of comfort with disability are from the Demographics Section: Question 10, Items 3, 6, and 10. The respondents were asked to place a check next to all the statements that best described their contact with people with disabilities. These representative categories, in order of sequence of comfort level, are:

3. I have resided at some time in the past with an individual who has a disability (very familiar);
6. I have had interaction with persons who have severe disabilities (familiar); and
10. I have had limited interaction with individuals with disabilities (unfamiliar).

The three attitudinal questions that best represent faculty attitudes toward students with disabilities are from Section II of the Disability Awareness Inventory, Questions 4, 6, and 10. The respondents were asked to indicate the degree of their agreement or
disagreement with each statement using a five point Likert scale labeled: strongly agree; agree; no opinion; disagree; and strongly disagree. These questions, in order of sequence, are:

4. Having students with disabilities in the classroom takes away from the quality of education other students receive;
6. Making educational accommodations for students with disabilities, such as allowing a learning disabled student to take un-timed examinations, compromises the integrity of the curriculum; and
10. Providing special aids and services for students with disabilities in the classroom is likely to impinge upon the instructor's academic freedom.

Comparisons were made between the frequency and percent of response between the three representative comfort groups, the three representative attitudinal questions, and the group mean.

The hypotheses of interest for research question one are: Ho: \( \mu_{1.1} = \mu_{2.1} = \mu_{3.1} \); Ho: \( \mu_{1.2} = \mu_{2.2} = \mu_{3.2} \); and Ho: \( \mu_{1.3} = \mu_{2.3} = \mu_{3.3} \).

The second research question was, "What is the relationship between the faculty's experience in teaching students with disabilities and the attitudes which faculty exhibit toward students with disabilities?".

An analysis of variance on the data was performed to determine the relationship between the faculty member's experience teaching students with disabilities and the response to each of the sixteen attitudinal questions. The hypothesis of interest is that response to attitudinal questions is different between the faculty members level of experience in teaching students with disabilities.
Question 1 in Section I asked faculty to identify the number of students with disabilities that they had taught during the last four years and gave them five levels to choose from: 0; 1-5; 6-10; 11-15; and >16. The null hypothesis is: $H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$ for each of the sixteen attitudinal questions.

The third research question was, "What is the relationship between a faculty member's academic discipline and the attitudes which that faculty member exhibits toward students with disabilities?".

An analysis of variance was performed on the data to determine the relationship between the faculty member's college affiliation and the response to each of the sixteen attitudinal questions. The hypothesis of interest is that response to attitudinal questions is different between the faculty members of the ten different colleges at the University. The null hypothesis is: $H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6 = \mu_7 = \mu_8 = \mu_9 = \mu_{10}$ for each of the sixteen attitudinal questions.

The final research question was, "Is there a relationship between a faculty member's gender and the attitudes which that faculty member exhibits towards students with disabilities?". English (1971) concluded that females have more favorable attitudes toward disability than do males, but that race, age, and nationality are not related to attitudes toward people with disabilities. This is of interest because this survey had a higher representation of females responding compared to the percentage of the sample population.
During the initial examination of the data it was found that one-third of the respondents were female compared to 22.6 percent of the University faculty being female. Also, 47 percent of the female faculty responded to the survey. This could be seen to skew the response to the positive. English's research does negate the influence that age would have on faculty attitudes towards people with disabilities.

The hypothesis of interest is that there is a difference between female and male faculty member's responses to attitudinal questions 4, 6, and 10. (\( H_0: \mu_{1.1} = \mu_{2.1}; H_0: \mu_{1.2} = \mu_{2.2}; H_0: \mu_{1.3} = \mu_{2.3} \)). This hypothesis compares the percentage of response to three selected attitudinal questions by sex. An analysis of variance was performed on the data to determine the relationship between sex and the three selected attitudinal questions.

**Design of Qualitative Survey**

Guided interviews should begin by addressing issues that are most easily understood by the subject. These issues, according to Taylor and Bogdan, are: describing your motives and intentions; insuring the subject anonymity; allowing the informant the final say before releasing any material that may be attributed to the subject; money; and logistics, or the schedule and commitment that the future interviews may require (1984, pp. 86-88). The researcher needs to be concerned to set a positive, trusting tone at the beginning of the interview in order to collect worthwhile data.
Dynamics of the interview situation include: (1) being non-judgmental; (2) letting people talk; (3) paying attention; and (4) being sensitive (Taylor & Bogdan, 1984, p. 93). Corresponding to this, it is important to note that there are differences between the interview situation and those which people interact normally. Some of the differences are: interviewers sometimes have to hold back from expressing their views; the conversation is understood to be private and confidential; the flow of information is largely, though not exclusively, one-sided; and interviewers communicate a genuine interest in people's views and experiences and are willing to listen to them talk for hours on end. Given this, it is beneficial to use the guided interview's questions to keep the interview 'on-track'.

It has been suggested that researchers should begin interviews with questions that ask subjects to describe, list, or outline key events, places, or people in their lives. Using demographic data which is easily answered may be one such way to begin an interview.

As the questions are addressed, it is important that the interviewer encourage the subject to expand upon the details of the related experiences and views by using probing questions. A skillful interviewer will ask questions which encourage the subject to provide details of experiences and the meanings that they attach to them. This may entail asking questions that may jar a subject's memory concerning a specific experience.
Format of Qualitative Survey

A guided interview format was developed based upon conclusions drawn from the mailed survey. The researcher made a reasonable effort to conduct the interview at the subject's office or another location that is preferred by the subject. Since the researcher preferred to tape record the interview, the tone of the interview was to be conversational in nature. Participants were asked in advance if tape recording the interview was acceptable.

Construction of Qualitative Items

The guided interview included seven questions intended to follow-up on conclusions drawn from the mailed survey. In lieu of the sixteen attitudinal questions presented by the mailed survey, a series of specific questions were asked to better gain an understanding of the participant's perceptions and feelings concerning faculty awareness of disability.

These items were constructed to allow the participants to express their views, opinions, and feelings concerning the issue presented by the question. The general questions of interest were:

1. has the college identified the need to implement disability awareness training;
2. what is the college's level of response to increase faculty awareness of disability;
3. what resources would the faculty use to further their understanding of disability; and
4. what methods are best for delivering this information to faculty.

It was the researcher's desire to expand on the subject's interests in any of the above areas and to pursue the interests of the subject along related themes. Therefore, it may be that a minimum of seven specific questions were common to all interviews. Basically, the items of the guided interview were arranged as an outline that the subject could build their discussion around.

Treatment of the Qualitative Data

In qualitative studies, "researchers gradually make sense out of what they are studying by combining insight and intuition with an intimate familiarity with the data" (Taylor & Bogdan, 1984, p. 130). The purposes of adding a qualitative component to the study was to verify and elaborate on the results of the quantitative data and to personalize the quantitative data. The data was coded and organized during the initial treatment of the data. The data is presented by a thematic story line in Chapter 4.

The preliminary codes are included in Appendix C beneath each interview question.
CHAPTER 4
RESULTS AND DISCUSSION

Introduction

Given the subject and nature of the study, one could anticipate a relatively small level of participation for both research methods. Not only was the response unexpectedly high, nearly one third of the faculty returned the mailed survey and eleven of fourteen administrators consented to be interviewed, but the response was spread fairly evenly across campus.

Generally, the quantitative results indicate that the respondents were unfamiliar with students with disabilities, possessed limited experience in working with students with disabilities, and were supportive of making educational accommodations for students with disabilities. The qualitative study revealed that little has been done to increase the faculty's understanding of students with disabilities.

Results of Quantitative Survey

Although there were 429 instruments returned, only 422 were entered into the data base (32 percent of those mailed, or 36.7 percent of those mailed after accounting for faculty on sabbatical and leave of absence). The 422 surveys that were entered were not
completely filled out, resulting in different numbers of responses across the 72 items analyzed.

The Faculty of Humanities and Fine Arts accounted for the highest number of responses with 101 surveys returned. This was 23.93 percent of the total number of instruments returned. Table 15 below lists the ten schools and colleges at the University and the number of their faculty which returned surveys and the overall percentage of returned instruments.

Table 15. Frequency and Percentage of Responses by College.

<table>
<thead>
<tr>
<th>School or College</th>
<th>Frequency</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities and Fine Arts</td>
<td>101</td>
<td>23.93</td>
</tr>
<tr>
<td>Natural Sciences and Mathematics</td>
<td>80</td>
<td>18.96</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>73</td>
<td>17.30</td>
</tr>
<tr>
<td>Food and Natural Resources</td>
<td>67</td>
<td>15.88</td>
</tr>
<tr>
<td>Education</td>
<td>28</td>
<td>6.64</td>
</tr>
<tr>
<td>Engineering</td>
<td>17</td>
<td>4.03</td>
</tr>
<tr>
<td>Public Health</td>
<td>13</td>
<td>3.08</td>
</tr>
<tr>
<td>Nursing</td>
<td>12</td>
<td>2.84</td>
</tr>
<tr>
<td>Physical Education</td>
<td>11</td>
<td>2.61</td>
</tr>
<tr>
<td>Management</td>
<td>9</td>
<td>2.13</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>2.60</td>
</tr>
<tr>
<td>Total</td>
<td>422</td>
<td>100.00</td>
</tr>
</tbody>
</table>

The number of faculty responding from each college may be illustrated by using a bar graph. Figure 17 compares the
representation from the ten schools and colleges at the University using a bar graph.

![Bar Graph]

Figure 17. Bar Graph of Respondents by College.

Faculty had the option of identifying their department. There were 275 respondents from 72 different departments which identified their departmental affiliation. Table 16 identifies the departments with the highest representation.

Table 16. Departments with More Than Two Respondents.

<table>
<thead>
<tr>
<th>Department</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>22</td>
</tr>
<tr>
<td>Forestry and Wildlife Management</td>
<td>12</td>
</tr>
<tr>
<td>Chemistry; and Physics and Astronomy</td>
<td>11</td>
</tr>
</tbody>
</table>

(Continued on next page.)
It is worth comparing the percent of faculty responding with the actual total percent of faculty from each college and school at the University. Table 17 provides the actual number of faculty and the number of faculty responses from each college and school. It also identifies each college's faculty as a percentage of the university faculty.
Table 17. Comparison of Response by College.

<table>
<thead>
<tr>
<th>College</th>
<th>Total College Faculty</th>
<th>Number of Respondents</th>
<th>Percent of College Faculty</th>
<th>Percent of Response</th>
<th>Percent of University Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities and Fine Arts</td>
<td>339</td>
<td>101</td>
<td>29.79%</td>
<td>23.93%</td>
<td>25.8%</td>
</tr>
<tr>
<td>Natural Sciences and Mathematics</td>
<td>173</td>
<td>80</td>
<td>46.24%</td>
<td>18.96%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>295</td>
<td>73</td>
<td>24.75%</td>
<td>17.30%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Food and Natural Resources</td>
<td>176</td>
<td>67</td>
<td>38.07%</td>
<td>15.88%</td>
<td>13.4%</td>
</tr>
<tr>
<td>Education</td>
<td>73</td>
<td>28</td>
<td>38.36%</td>
<td>6.64%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Engineering</td>
<td>102</td>
<td>17</td>
<td>16.66%</td>
<td>4.03%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Public Health</td>
<td>30</td>
<td>13</td>
<td>43.33%</td>
<td>3.08%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Nursing</td>
<td>25</td>
<td>12</td>
<td>48.00%</td>
<td>2.84%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Physical Education</td>
<td>23</td>
<td>11</td>
<td>47.82%</td>
<td>2.61%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Management</td>
<td>60</td>
<td>9</td>
<td>15.00%</td>
<td>2.13%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Other</td>
<td>20</td>
<td>11</td>
<td>55.00%</td>
<td>2.60%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Total</td>
<td>1,316</td>
<td>422</td>
<td>N/A</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

One third, 33.41 percent, of the respondents were female. Nearly half, 47%, of the female faculty responded compared to 27% of the male faculty. Females are overrepresented in this study due to the fact that 22.6% of University faculty are female. Seven respondents did not indicate their sex, 141 faculty identified themselves as female, and 274 faculty, 64.93 percent, identified themselves as being male.

The majority of respondents were employed full time (379 full time compared to 36 part time) and the largest percentage of...
respondents (201, 47.63 percent) identified their academic title as Professor. Sixty-one percent (259) of the respondents listed their primary responsibility as being both teaching and research. An additional 27.25 percent, or 115 respondents, listed their primary responsibility as being teaching.

Over 36 percent of the faculty have been employed at the University of Massachusetts for over 21 years with the mean of 4.419 indicating the average of 13 years. More than 44 percent have been teaching in higher education for over 21 years with a mean of 4.867, or 14 years. The largest age group was those faculty between the ages of 51-60 years. This group accounted for 143, or 33.89 percent of the faculty respondents. The mean for age is 3.329, or 44 years. Figure 18 shows the relationship between number of respondent by age. Figure 19 summarizes the demographic information of the faculty respondents.

Figure 18. Bar Graph of Respondents by Age.
<table>
<thead>
<tr>
<th>College/School</th>
<th>Total</th>
<th>Primarly Responsibility</th>
<th>Yrs Teach Experience</th>
<th>Yrs at UMASS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Teach</td>
<td>Res</td>
</tr>
<tr>
<td>1) Faculty of Humanities and Fine Arts</td>
<td>101</td>
<td>38</td>
<td>0</td>
<td>54</td>
</tr>
<tr>
<td>2) Faculty of Natural Sciences and Mathematics</td>
<td>80</td>
<td>14</td>
<td>3</td>
<td>61</td>
</tr>
<tr>
<td>3) Faculty of Social and Behavioral Sciences</td>
<td>73</td>
<td>18</td>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>4) School of Education</td>
<td>28</td>
<td>10</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>5) College of Engineering</td>
<td>17</td>
<td>3</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>6) College of Food and Natural Resources</td>
<td>67</td>
<td>17</td>
<td>2</td>
<td>37</td>
</tr>
<tr>
<td>7) School of Management</td>
<td>9</td>
<td>1</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>8) School of Nursing</td>
<td>12</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>9) School of Physical Education</td>
<td>11</td>
<td>4</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>10) School of Public Health</td>
<td>13</td>
<td>4</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>422</strong></td>
<td><strong>115</strong></td>
<td><strong>259</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College/School</th>
<th>Total</th>
<th>Sex</th>
<th>Employment Status</th>
<th>Age</th>
<th>Academic Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Full Time</td>
<td>Part Time</td>
<td>&lt;30</td>
</tr>
<tr>
<td>1) Faculty of Humanities and Fine Arts</td>
<td>101</td>
<td>Female</td>
<td>43</td>
<td>58</td>
<td>93</td>
</tr>
<tr>
<td>2) Faculty of Natural Sciences and Mathematics</td>
<td>80</td>
<td>Male</td>
<td>20</td>
<td>60</td>
<td>76</td>
</tr>
<tr>
<td>3) Faculty of Social and Behavioral Sciences</td>
<td>73</td>
<td>23</td>
<td>50</td>
<td>64</td>
<td>9</td>
</tr>
<tr>
<td>4) School of Education</td>
<td>28</td>
<td>13</td>
<td>15</td>
<td>27</td>
<td>1</td>
</tr>
<tr>
<td>5) College of Engineering</td>
<td>17</td>
<td>0</td>
<td>17</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>6) College of Food and Natural Resources</td>
<td>67</td>
<td>17</td>
<td>50</td>
<td>61</td>
<td>6</td>
</tr>
<tr>
<td>7) School of Management</td>
<td>9</td>
<td>1</td>
<td>8</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>8) School of Nursing</td>
<td>12</td>
<td>12</td>
<td>0</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>9) School of Physical Education</td>
<td>11</td>
<td>4</td>
<td>7</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>10) School of Public Health</td>
<td>13</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>422</strong></td>
<td><strong>141</strong></td>
<td><strong>274</strong></td>
<td><strong>379</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

Figure 19. Demographic Information of Respondents.
Item 10 on the Respondent Demographics page consisted of twelve statements which describe the level of contact which faculty have had with people with disabilities. The statements can be divided into three classes of level of contact: very familiar; familiar; and unfamiliar. Faculty could check more than one statement. The results are listed below in Table 18.

Table 18. Type of Contact with Individuals with Disabilities by Number and Percent.

<table>
<thead>
<tr>
<th>Number</th>
<th>Yes</th>
<th>Percent</th>
<th>Category of Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>13.32</td>
<td>I have a disability.</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>13.74</td>
<td>A member of my household has a disability.</td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>13.51</td>
<td>I have resided at some time in the past with an individual who has a disability.</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>13.74</td>
<td>A close friend has a disability.</td>
<td></td>
</tr>
<tr>
<td>112</td>
<td>26.54</td>
<td>A friend has a disability.</td>
<td></td>
</tr>
<tr>
<td>196</td>
<td>46.45</td>
<td>I have had interaction with persons who have severe disabilities.</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>9.72</td>
<td>I have had extensive professional interaction with persons having disabilities.</td>
<td></td>
</tr>
<tr>
<td>119</td>
<td>28.20</td>
<td>I have had moderate professional interaction with persons having disabilities.</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>9.95</td>
<td>I have completed at least one academic course where content emphasized the needs of individuals with disabilities.</td>
<td></td>
</tr>
<tr>
<td>198</td>
<td>46.92</td>
<td>I have had limited interaction with individuals with disabilities.</td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>28.44</td>
<td>I have had limited exposure to persons with disabilities.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>.95</td>
<td>I have never had interaction with a person with a disability.</td>
<td></td>
</tr>
</tbody>
</table>
Fifty-nine percent of the respondents indicated that they had taught between one and five students with disabilities during the last four years. Many faculty expressed concerns that they could not identify all the students with disabilities they had taught since students do not have to disclose their disability. The group mean is 2.227 indicating an average of 6 students taught during the last four years, the variance is .831, and the standard deviation is .912. The following table illustrates the frequency and percent of total for responses to this item.

Table 19. Number of Students with Disabilities Taught During The Last Four Years.

<table>
<thead>
<tr>
<th>Number of Students With Disabilities Taught During Last Four Years</th>
<th>0</th>
<th>1-5</th>
<th>6-10</th>
<th>11-15</th>
<th>&gt;16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>61</td>
<td>251</td>
<td>59</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>Percent</td>
<td>14.45</td>
<td>59.48</td>
<td>13.98</td>
<td>5.21</td>
<td>4.03</td>
</tr>
</tbody>
</table>

The number of faculty identifying experience teaching individuals with specific types of disabilities is displayed in Table 20. Many faculty members pointed out the fact that they could only identify students who disclosed their disability, and since many disabilities are 'invisible', this could skew the numbers to the negative side. Faculty had the greatest experience teaching learning disabled students (64.69 percent) and physically disabled students (40.76 percent). The faculty had the least experience teaching psychiatrically disabled students (13.27 percent).
Table 20. Faculty Experience Teaching Individuals with Disabilities by Type of Disability.

<table>
<thead>
<tr>
<th>Type of Disability</th>
<th>Number Yes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning disabled</td>
<td>273</td>
<td>64.69</td>
</tr>
<tr>
<td>Physically disabled</td>
<td>172</td>
<td>40.76</td>
</tr>
<tr>
<td>Hearing impaired</td>
<td>117</td>
<td>27.73</td>
</tr>
<tr>
<td>Communication disorder</td>
<td>115</td>
<td>27.25</td>
</tr>
<tr>
<td>Vision impaired</td>
<td>109</td>
<td>25.83</td>
</tr>
<tr>
<td>Psychiatrically disabled</td>
<td>56</td>
<td>13.27</td>
</tr>
</tbody>
</table>

Table 21 presents the number of respondents who identified the types of disabilities which would prevent a student from entering an occupation related to the faculty members profession. An error in the instrument design was the omission of a category enabling the faculty to respond to the question that "none" of the types of disability would be insurmountable.
Table 21. Disability Considered an Insurmountable Barrier to a Student's Entrance into Occupations Associated with Faculty's Profession.

<table>
<thead>
<tr>
<th>Type of Disability</th>
<th>Number Yes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatrically disabled</td>
<td>84</td>
<td>19.91</td>
</tr>
<tr>
<td>Communication disorder</td>
<td>69</td>
<td>16.35</td>
</tr>
<tr>
<td>Learning disabled</td>
<td>58</td>
<td>13.74</td>
</tr>
<tr>
<td>Vision impaired</td>
<td>54</td>
<td>12.80</td>
</tr>
<tr>
<td>Hearing impaired</td>
<td>23</td>
<td>5.45</td>
</tr>
<tr>
<td>Physically disabled</td>
<td>18</td>
<td>4.27</td>
</tr>
</tbody>
</table>

In general, greater than half the faculty responding to the study are unfamiliar with University services which would be supportive to students with disabilities. The frequency of the faculty's responses are listed in Table 22.

Table 22. Faculty Knowledge of University Services.

<table>
<thead>
<tr>
<th>Very Familiar</th>
<th>Familiar</th>
<th>Unfamiliar</th>
<th>Very Familiar</th>
<th>Unfamiliar</th>
<th>University Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>59</td>
<td>130</td>
<td>210</td>
<td></td>
<td>The admissions process for students with learning disabilities</td>
</tr>
<tr>
<td>22</td>
<td>129</td>
<td>116</td>
<td>146</td>
<td></td>
<td>The Center for Counseling &amp; Academic Development</td>
</tr>
<tr>
<td>14</td>
<td>97</td>
<td>149</td>
<td>155</td>
<td></td>
<td>The Division of Counseling Psychology Service</td>
</tr>
<tr>
<td>51</td>
<td>167</td>
<td>96</td>
<td>101</td>
<td></td>
<td>Learning Disabled Student Services</td>
</tr>
<tr>
<td>32</td>
<td>170</td>
<td>112</td>
<td>101</td>
<td></td>
<td>Mental Health Services</td>
</tr>
<tr>
<td>46</td>
<td>137</td>
<td>123</td>
<td>109</td>
<td></td>
<td>Mather Career Center</td>
</tr>
<tr>
<td>18</td>
<td>93</td>
<td>133</td>
<td>171</td>
<td></td>
<td>The Office of Disability Services</td>
</tr>
</tbody>
</table>

176
The faculty members which responded to this study have identified their lack of familiarity with special education laws. Table 23 presents the level of knowledge that faculty have concerning five pieces of legislation and the landmark *Brown* supreme court decision. Almost three quarters of the faculty are unfamiliar with Section 504, IDEA, and the ADA.

Table 23. Faculty Knowledge of Legislation and Litigation.

<table>
<thead>
<tr>
<th></th>
<th>Very Familiar</th>
<th>Familiar</th>
<th>Unfamiliar</th>
<th>Very Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislation/Court Decision</td>
<td>52</td>
<td>101</td>
<td>93</td>
<td>159</td>
</tr>
<tr>
<td>Section 504 of the Vocational Rehabilitation Act of 1973</td>
<td>14</td>
<td>47</td>
<td>121</td>
<td>226</td>
</tr>
<tr>
<td>Individuals with Disabilities Education Act of 1990, Public Law 101-476</td>
<td>49</td>
<td>79</td>
<td>85</td>
<td>197</td>
</tr>
<tr>
<td>Massachusetts State Law Chapter 766</td>
<td>28</td>
<td>78</td>
<td>105</td>
<td>197</td>
</tr>
<tr>
<td>Americans with Disabilities Act of 1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The statistics for questions 4 and 5 are presented in Table 24.

Table 24. Statistics for Knowledge Questions.

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4A</td>
<td>413</td>
<td>3.298</td>
<td>.700</td>
<td>.837</td>
</tr>
<tr>
<td>4B</td>
<td>413</td>
<td>2.935</td>
<td>.877</td>
<td>.936</td>
</tr>
<tr>
<td>4C</td>
<td>415</td>
<td>3.072</td>
<td>.739</td>
<td>.859</td>
</tr>
<tr>
<td>4D</td>
<td>415</td>
<td>2.595</td>
<td>.976</td>
<td>.988</td>
</tr>
<tr>
<td>4E</td>
<td>415</td>
<td>2.680</td>
<td>.861</td>
<td>.928</td>
</tr>
<tr>
<td>4F</td>
<td>415</td>
<td>2.711</td>
<td>.955</td>
<td>.977</td>
</tr>
<tr>
<td>4G</td>
<td>415</td>
<td>3.101</td>
<td>.801</td>
<td>.895</td>
</tr>
</tbody>
</table>

(Continued on next page.)
Table 24. Continued.

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>5A</td>
<td>405</td>
<td>2.886</td>
<td>1.145</td>
<td>1.070</td>
</tr>
<tr>
<td>5B</td>
<td>408</td>
<td>3.397</td>
<td>.643</td>
<td>.802</td>
</tr>
<tr>
<td>5C</td>
<td>408</td>
<td>3.370</td>
<td>.802</td>
<td>.819</td>
</tr>
<tr>
<td>5D</td>
<td>410</td>
<td>3.049</td>
<td>1.152</td>
<td>1.073</td>
</tr>
<tr>
<td>5E</td>
<td>408</td>
<td>3.154</td>
<td>.927</td>
<td>.963</td>
</tr>
</tbody>
</table>

Question 6 of Section I asked the faculty to identify the level of effort they felt the University provided in recruitment of freshman and transfer students with disabilities. An error in the instrument design was made by not providing a fourth response item labeled "don't know", since many faculty pointed out they either did not know the University's policy, or were unfamiliar with University efforts in this area. It would also have been helpful to the respondents to have defined the University's commitment to recruiting students with disabilities. The researcher counted such responses and all blank responses and entered them as 'Don't Know'. Although this error invalidates the question, the information is presented in Table 25 with this understanding.

Table 25. Faculty Knowledge of and Attitude Towards The University's Recruitment of Students with Disabilities.

<table>
<thead>
<tr>
<th></th>
<th>Too Little</th>
<th>Adequate</th>
<th>Too Much</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>46</td>
<td>122</td>
<td>1</td>
<td>245</td>
</tr>
<tr>
<td>Percent</td>
<td>10.90</td>
<td>28.92</td>
<td>.24</td>
<td>58.06</td>
</tr>
</tbody>
</table>

The respondents were given the opportunity to identify resources or interventions which would aid them in gaining a better
understanding of students with disabilities. Table 14 lists the number and percentage of faculty which identified the listed resources as being resources they would find helpful. Among the suggestion under the category of other were: discussion at faculty meetings; routing reading materials through campus mail; articles in the *Collegian*; adaptive computer laboratories; mentor programs; communicating with colleagues with disabilities; communicating with students with disabilities; and 'move'.

Table 26. Resources Which Faculty Would Most Likely Use to Gain a Better Understanding of Students with Disabilities.

<table>
<thead>
<tr>
<th>Resource/Intervention</th>
<th>Number Yes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory of services and resources</td>
<td>282</td>
<td>66.82</td>
</tr>
<tr>
<td>Faculty handbook</td>
<td>231</td>
<td>54.74</td>
</tr>
<tr>
<td>Campus Chronicle articles</td>
<td>180</td>
<td>42.65</td>
</tr>
<tr>
<td>Newsletter by service providers</td>
<td>158</td>
<td>37.44</td>
</tr>
<tr>
<td>Campus access guide</td>
<td>139</td>
<td>32.94</td>
</tr>
<tr>
<td>Organizational flowchart of services</td>
<td>102</td>
<td>24.17</td>
</tr>
<tr>
<td>Workshops by service providers</td>
<td>69</td>
<td>16.35</td>
</tr>
<tr>
<td>Open houses by service providers</td>
<td>30</td>
<td>7.11</td>
</tr>
<tr>
<td>Other</td>
<td>22</td>
<td>5.21</td>
</tr>
</tbody>
</table>

The 16 attitudinal questions are listed in Table 27 with the respondent's frequency and percentage of response to each item.
Table 27. Frequency of Responses to Attitudinal Questions.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>No Opinion</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The presence of an interpreter for a student with a hearing impairment is a distraction in the classroom.</td>
<td>8</td>
<td>57</td>
<td>66</td>
<td>145</td>
<td>138</td>
</tr>
<tr>
<td>2. Practitioners and employers in my discipline actively recruit disabled people.</td>
<td>6</td>
<td>42</td>
<td>97</td>
<td>193</td>
<td>75</td>
</tr>
<tr>
<td>3. A greater portion of class time is needed to teach to the needs of students with disabilities.</td>
<td>11</td>
<td>135</td>
<td>95</td>
<td>149</td>
<td>20</td>
</tr>
<tr>
<td>4. Having students with disabilities in the classroom takes away from the quality of education other students receive.</td>
<td>2</td>
<td>18</td>
<td>46</td>
<td>199</td>
<td>148</td>
</tr>
<tr>
<td>5. Additional resources should be allocated to increase the level of support services at the University for students with disabilities</td>
<td>39</td>
<td>117</td>
<td>203</td>
<td>43</td>
<td>10</td>
</tr>
<tr>
<td>6. Making educational accommodations for students with disabilities, such as allowing a learning disabled student to take un-timed examinations, compromises the integrity of the curriculum.</td>
<td>6</td>
<td>27</td>
<td>21</td>
<td>185</td>
<td>176</td>
</tr>
<tr>
<td>7. People with disabilities have fewer employment opportunities than other adults.</td>
<td>90</td>
<td>252</td>
<td>43</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>8. A classroom's location should be changed to provide accessibility for a disabled student.</td>
<td>125</td>
<td>210</td>
<td>46</td>
<td>26</td>
<td>6</td>
</tr>
<tr>
<td>9. The form of an exam should be altered if the testing procedure puts a disabled student at a disadvantage.</td>
<td>89</td>
<td>192</td>
<td>47</td>
<td>63</td>
<td>19</td>
</tr>
</tbody>
</table>

(Continued next page.)
Table 27. Continued.

10. Providing special aids and services for students with disabilities in the classroom is likely to impinge upon the instructor's academic freedom.

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Providing special aids and services</td>
<td>196</td>
<td>153</td>
<td>1.9%</td>
</tr>
<tr>
<td>for students with disabilities</td>
<td>45</td>
<td>10.7%</td>
<td>46.7%</td>
</tr>
<tr>
<td>in the classroom</td>
<td>15</td>
<td>3.6%</td>
<td>36.3%</td>
</tr>
<tr>
<td>is likely to impinge upon the instructor's</td>
<td>4</td>
<td>.95%</td>
<td>academic freedom.</td>
</tr>
<tr>
<td>instructor's academic freedom.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. A student with a speech disorder should be given an alternate assignment to presenting an oral report.

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. A student with a speech disorder</td>
<td>47</td>
<td>8</td>
<td>1.9%</td>
</tr>
<tr>
<td>should be given an alternate assignment</td>
<td>90</td>
<td>21.3%</td>
<td>47.2%</td>
</tr>
<tr>
<td>to presenting an oral report.</td>
<td>199</td>
<td>16.8%</td>
<td>11.2%</td>
</tr>
<tr>
<td>likely to impinge upon the instructor's</td>
<td>71</td>
<td>3.6%</td>
<td>10.7%</td>
</tr>
<tr>
<td>academic freedom.</td>
<td>4</td>
<td>.95%</td>
<td>46.7%</td>
</tr>
</tbody>
</table>

12. Certain college or departmental requirements should be modified for students with disabilities, such as waiving a foreign language requirement for a deaf student, to ensure equal educational opportunity.

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Certain college or departmental</td>
<td>92</td>
<td>19</td>
<td>4.5%</td>
</tr>
<tr>
<td>requirements should be modified for students</td>
<td>68</td>
<td>16.1%</td>
<td>35.1%</td>
</tr>
<tr>
<td>with disabilities, such as waiving a foreign</td>
<td>148</td>
<td>21.4%</td>
<td>47.2%</td>
</tr>
<tr>
<td>language requirement for a deaf student, to</td>
<td>86</td>
<td>21.8%</td>
<td>16.8%</td>
</tr>
<tr>
<td>ensure equal educational opportunity.</td>
<td>47</td>
<td>11.2%</td>
<td>1.9%</td>
</tr>
<tr>
<td>likely to impinge upon the instructor's</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>academic freedom.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. The instructor should alter his or her teaching style to enhance communication with students with disabilities.

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. The instructor should alter his or her</td>
<td>76</td>
<td>8</td>
<td>1.9%</td>
</tr>
<tr>
<td>teaching style to enhance communication with</td>
<td>44</td>
<td>10.4%</td>
<td>47.6%</td>
</tr>
<tr>
<td>students with disabilities.</td>
<td>201</td>
<td>19.7%</td>
<td>18%</td>
</tr>
<tr>
<td>likely to impinge upon the instructor's</td>
<td>83</td>
<td>19.7%</td>
<td>18%</td>
</tr>
<tr>
<td>academic freedom.</td>
<td>4</td>
<td>.95%</td>
<td>46.7%</td>
</tr>
</tbody>
</table>

14. Students with learning disabilities should be enrolled in a discipline other than mine.

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Students with learning disabilities</td>
<td>176</td>
<td>37.4%</td>
<td>41.7%</td>
</tr>
<tr>
<td>should be enrolled in a discipline</td>
<td>7</td>
<td>1.7%</td>
<td>13.3%</td>
</tr>
<tr>
<td>other than mine.</td>
<td>18</td>
<td>4%</td>
<td>13.3%</td>
</tr>
<tr>
<td>likely to impinge upon the instructor's</td>
<td>181</td>
<td></td>
<td>1.9%</td>
</tr>
<tr>
<td>academic freedom.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Background information concerning a student's disability should be provided to the instructor before the course begins.

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Background information concerning</td>
<td>26</td>
<td>2</td>
<td>.5%</td>
</tr>
<tr>
<td>a student's disability</td>
<td>153</td>
<td>36.3%</td>
<td>45%</td>
</tr>
<tr>
<td>should be provided to the instructor</td>
<td>190</td>
<td>45%</td>
<td>9.7%</td>
</tr>
<tr>
<td>before the course begins.</td>
<td>41</td>
<td>9.7%</td>
<td>6.2%</td>
</tr>
<tr>
<td>likely to impinge upon the instructor's</td>
<td>2</td>
<td></td>
<td>.5%</td>
</tr>
<tr>
<td>academic freedom.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. Providing additional support services for students with disabilities inhibits the development of self-reliance and independence.

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Providing additional support services for</td>
<td>220</td>
<td>95</td>
<td>22.5%</td>
</tr>
<tr>
<td>students with disabilities inhibits the</td>
<td>78</td>
<td>18.5%</td>
<td>52.1%</td>
</tr>
<tr>
<td>development of self-reliance and independence</td>
<td>18</td>
<td>4.3%</td>
<td>18.5%</td>
</tr>
<tr>
<td>likely to impinge upon the instructor's</td>
<td>4</td>
<td>.9%</td>
<td>13.3%</td>
</tr>
<tr>
<td>academic freedom.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The statistics for the 16 attitudinal questions as presented in Table 27 are given in Table 28 on the following page. The number of responses, mean, variance and standard deviation for each question are presented beside the question number. The number of cases varies because all respondents did not answer each question.
Table 28. Statistics for Attitudinal Questions.

<table>
<thead>
<tr>
<th>Question Number</th>
<th>No. of Cases</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>414</td>
<td>3.841</td>
<td>1.195</td>
<td>1.093</td>
</tr>
<tr>
<td>2.</td>
<td>413</td>
<td>3.700</td>
<td>.866</td>
<td>.931</td>
</tr>
<tr>
<td>3.</td>
<td>411</td>
<td>3.078</td>
<td>.989</td>
<td>.995</td>
</tr>
<tr>
<td>4.</td>
<td>413</td>
<td>4.145</td>
<td>.668</td>
<td>.874</td>
</tr>
<tr>
<td>5.</td>
<td>412</td>
<td>2.680</td>
<td>.763</td>
<td>.874</td>
</tr>
<tr>
<td>6.</td>
<td>415</td>
<td>4.200</td>
<td>.827</td>
<td>.909</td>
</tr>
<tr>
<td>7.</td>
<td>416</td>
<td>2.050</td>
<td>.689</td>
<td>.830</td>
</tr>
<tr>
<td>8.</td>
<td>413</td>
<td>1.978</td>
<td>.798</td>
<td>.893</td>
</tr>
<tr>
<td>9.</td>
<td>410</td>
<td>2.344</td>
<td>1.248</td>
<td>1.117</td>
</tr>
<tr>
<td>10.</td>
<td>414</td>
<td>4.162</td>
<td>.688</td>
<td>.829</td>
</tr>
<tr>
<td>11.</td>
<td>415</td>
<td>2.239</td>
<td>.960</td>
<td>.980</td>
</tr>
<tr>
<td>12.</td>
<td>413</td>
<td>2.627</td>
<td>1.288</td>
<td>1.135</td>
</tr>
<tr>
<td>13.</td>
<td>412</td>
<td>2.522</td>
<td>.951</td>
<td>.975</td>
</tr>
<tr>
<td>14.</td>
<td>414</td>
<td>4.114</td>
<td>.822</td>
<td>.907</td>
</tr>
<tr>
<td>15.</td>
<td>414</td>
<td>1.865</td>
<td>.756</td>
<td>.870</td>
</tr>
<tr>
<td>16.</td>
<td>415</td>
<td>3.925</td>
<td>.673</td>
<td>.820</td>
</tr>
</tbody>
</table>

The information presented in this section has provided a basic understanding of the demographics of the population responding to the study. It has also identified the frequency and percentage of responses to all the items of the survey instrument. The following section will present the statistical analyses of the data.

Statistical Analysis of Data

Much can be inferred by examining the previous tables and summaries of the data using frequency, percentage, and average. But an in-depth analysis of the data is required to determine the nature of the relationships as presented in the research questions. In this section, each research question will be presented followed by the statistical analysis of the data which may best be used to clarify the relationship.
The initial research question is, "What is the relationship between the faculty's knowledge of disabilities and the attitudes which faculty exhibit toward students with disabilities?". To examine this relationship, two sets of representative questions from the study may be used for comparison.

The three questions which best represent the level of comfort with disability are from the Demographics Section: Question 10, Items 3, 6, and 10. The respondents were asked to place a check next to all the statements which best described their contact with people with disabilities. These representative categories, in order of sequence of comfort level, are:

3. I have resided at some time in the past with an individual who has a disability (very familiar);
6. I have had interaction with persons who have severe disabilities (familiar); and
10. I have had limited interaction with individuals with disabilities (unfamiliar).

The three attitudinal questions which best represent faculty attitudes toward students with disabilities are from Section II of the Disability Awareness Inventory, Questions 4, 6, and 10. The respondents were asked to indicate the degree of their agreement or disagreement with each statement using a five point Likert scale labeled: strongly agree; agree; no opinion; disagree; and strongly disagree. These questions, in order of sequence, are:

4. Having students with disabilities in the classroom takes away from the quality of education other students receive;
6. Making educational accommodations for students with disabilities, such as allowing a learning disabled student to take un-timed examinations, compromises the integrity of the curriculum; and

10. Providing special aids and services for students with disabilities in the classroom is likely to impinge upon the instructor's academic freedom.

The following three tables compare the frequency and percent of response between the three representative comfort groups, the three representative attitudinal questions, and the group mean.

Table 29. Two Way Table of Frequency and Percentage of Response - Comfort Levels and Attitudinal Question 4.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Level 3- Very Familiar</th>
<th>Level 6- Familiar</th>
<th>Level 10- Unfamiliar</th>
<th>Group Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>.51</td>
</tr>
<tr>
<td>Agree</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1.02</td>
</tr>
<tr>
<td>No Opinion</td>
<td>6</td>
<td>10.53</td>
<td>13</td>
<td>6.63</td>
</tr>
<tr>
<td>Disagree</td>
<td>26</td>
<td>45.61</td>
<td>96</td>
<td>48.98</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>24</td>
<td>42.11</td>
<td>79</td>
<td>40.31</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>100.00</td>
<td>196</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table 30. Two Way Table of Frequency and Percentage of Response - Comfort Level and Attitudinal Question 6.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Level 3-Very Familiar Number</th>
<th>Level 6-Familiar Number</th>
<th>Level 10-Unfamiliar Number</th>
<th>Group Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>1</td>
<td>1.75</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Agree</td>
<td>2</td>
<td>3.51</td>
<td>10</td>
<td>5.10</td>
</tr>
<tr>
<td>No Opinion</td>
<td>2</td>
<td>3.51</td>
<td>6</td>
<td>3.06</td>
</tr>
<tr>
<td>Disagree</td>
<td>27</td>
<td>47.37</td>
<td>79</td>
<td>40.31</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>24</td>
<td>42.11</td>
<td>97</td>
<td>49.49</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>100.00</td>
<td>196</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 31. Two Way Table of Frequency and Percentage of Response - Comfort Level and Attitudinal Question 10.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Level 3-Very Familiar Number</th>
<th>Level 6-Familiar Number</th>
<th>Level 10-Unfamiliar Number</th>
<th>Group Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>2</td>
<td>3.51</td>
<td>2</td>
<td>1.02</td>
</tr>
<tr>
<td>Agree</td>
<td>0</td>
<td>0.00</td>
<td>6</td>
<td>3.06</td>
</tr>
<tr>
<td>No Opinion</td>
<td>5</td>
<td>8.77</td>
<td>15</td>
<td>7.65</td>
</tr>
<tr>
<td>Disagree</td>
<td>28</td>
<td>49.12</td>
<td>80</td>
<td>40.82</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>21</td>
<td>36.84</td>
<td>88</td>
<td>44.90</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>100.00</td>
<td>196</td>
<td>100.00</td>
</tr>
</tbody>
</table>

The relationship between the faculty's comfort level and attitude, as described by Tables 17, 18, and 19, is not clear. Performing an analysis of variance on the data may enable one to draw conclusions about the relationship. Table 32 presents ANOVA tables for comfort levels 3, 6, and 10 and attitudinal questions 4, 6,
and 10. The hypotheses of interest are: $H_0: \mu_{1.1} = \mu_{2.1} = \mu_{3.1}$; $H_0: \mu_{1.2} = \mu_{2.2} = \mu_{3.2}$; and $H_0: \mu_{1.3} = \mu_{2.3} = \mu_{3.3}$.

Table 32. ANOVA Tables for Representative Comfort Level and Three Selected Attitudinal Questions.

**Comfort Level 3**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Sum of Squares</th>
<th>F-Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 4.</td>
<td>Between</td>
<td>1</td>
<td>1.136</td>
<td>1.136</td>
<td>6.517</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>411</td>
<td>71.658</td>
<td>0.174</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question 6.</td>
<td>Between</td>
<td>1</td>
<td>0.023</td>
<td>0.023</td>
<td>0.130</td>
<td>0.719</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>411</td>
<td>72.830</td>
<td>0.174</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question 10.</td>
<td>Between</td>
<td>1</td>
<td>0.255</td>
<td>0.255</td>
<td>1.447</td>
<td>0.230</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>412</td>
<td>72.549</td>
<td>0.176</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comfort Level 6**

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Mean Sum of Squares</th>
<th>F-Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 4.</td>
<td>Between</td>
<td>1</td>
<td>5.950</td>
<td>5.950</td>
<td>18.891</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>411</td>
<td>112.051</td>
<td>0.273</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>413</td>
<td>115.002</td>
<td>0.278</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question 10.</td>
<td>Between</td>
<td>1</td>
<td>3.674</td>
<td>3.674</td>
<td>13.304</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>412</td>
<td>113.766</td>
<td>0.276</td>
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</tbody>
</table>

**Comfort Level 10**

<table>
<thead>
<tr>
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<th>Source</th>
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<th>Mean Sum of Squares</th>
<th>F-Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 4.</td>
<td>Between</td>
<td>1</td>
<td>0.116</td>
<td>0.116</td>
<td>0.446</td>
<td>0.505</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>411</td>
<td>107.085</td>
<td>0.261</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question 6.</td>
<td>Between</td>
<td>1</td>
<td>0.006</td>
<td>0.006</td>
<td>0.022</td>
<td>0.882</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>413</td>
<td>107.671</td>
<td>0.261</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question 10.</td>
<td>Between</td>
<td>1</td>
<td>0.320</td>
<td>0.320</td>
<td>1.229</td>
<td>0.268</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>412</td>
<td>107.093</td>
<td>0.260</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

After performing an analysis of variance on the data, I have concluded that there is a difference among the means of the three attitudinal questions and comfort level 6. All three relationships are
significant beyond the .01 level. The null hypothesis is rejected for Comfort level 6 and attitude questions 4, 6, and 10. There is at least one linear combination for each of the means that is different than zero. The null hypotheses (Ho: $\mu_{1.1} = \mu_{2.1} = \mu_{3.1}$; Ho: $\mu_{1.3} = \mu_{2.3} = \mu_{3.3}$) is accepted for comfort levels 3 and 10 and attitude questions 4, 6, and 10.

Additionally, the ANOVAs indicate there is a difference among the three comfort levels. Comfort levels 3 and 10 do not show a relationship with the three attitudinal questions while comfort level 6 does influence the faculty's response to the three attitudinal questions. However, the nature of that relationship is not known.

The second research question is, "What is the relationship between the faculty's experience in teaching students with disabilities and the attitudes which faculty exhibit toward students with disabilities?"

Table 33 presents an analysis of variance on the data to determine the relationship between the faculty member's experience teaching students with disabilities and the response to each of the sixteen attitudinal questions. The hypothesis of interest is that response to attitudinal questions is different between the faculty members level of experience in teaching students with disabilities.

Question 1 in Section I asked faculty to identify the number of students with disabilities that they had taught during the last four years and gave them five levels to choose from: 0; 1-5; 6-10; 11-15; and >16. The null hypothesis is: Ho: $\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$ for each of the sixteen attitudinal questions.
Table 33. ANOVA Tables for Number of Students Taught and Attitudinal Questions.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Sum of Squares</th>
<th>F-Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Between</td>
<td>1</td>
<td>15.496</td>
<td>15.496</td>
<td>19.62</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>401</td>
<td>316.722</td>
<td>0.790</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Between</td>
<td>1</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>.987</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>400</td>
<td>330.736</td>
<td>0.827</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Between</td>
<td>1</td>
<td>7.460</td>
<td>7.460</td>
<td>9.147</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>398</td>
<td>324.617</td>
<td>0.816</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>400</td>
<td>322.422</td>
<td>0.806</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Between</td>
<td>1</td>
<td>4.741</td>
<td>4.741</td>
<td>5.804</td>
<td>.016</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>399</td>
<td>325.947</td>
<td>0.817</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>402</td>
<td>326.102</td>
<td>0.811</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Between</td>
<td>1</td>
<td>0.399</td>
<td>0.399</td>
<td>0.485</td>
<td>.487</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>403</td>
<td>331.912</td>
<td>0.824</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Between</td>
<td>1</td>
<td>0.119</td>
<td>0.199</td>
<td>0.143</td>
<td>.705</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>401</td>
<td>332.100</td>
<td>0.828</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Between</td>
<td>1</td>
<td>2.691</td>
<td>2.691</td>
<td>3.264</td>
<td>.072</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>397</td>
<td>327.339</td>
<td>0.825</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Between</td>
<td>1</td>
<td>17.382</td>
<td>17.382</td>
<td>22.140</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>401</td>
<td>314.836</td>
<td>0.785</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Between</td>
<td>1</td>
<td>0.069</td>
<td>0.069</td>
<td>0.084</td>
<td>.772</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>403</td>
<td>332.242</td>
<td>0.824</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Between</td>
<td>1</td>
<td>0.260</td>
<td>0.260</td>
<td>0.314</td>
<td>.576</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>400</td>
<td>331.911</td>
<td>0.830</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>399</td>
<td>327.635</td>
<td>0.821</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Between</td>
<td>1</td>
<td>4.859</td>
<td>4.859</td>
<td>5.953</td>
<td>.015</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>401</td>
<td>327.859</td>
<td>0.816</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Between</td>
<td>1</td>
<td>0.136</td>
<td>0.136</td>
<td>0.165</td>
<td>.685</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>401</td>
<td>332.082</td>
<td>0.828</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Between</td>
<td>4</td>
<td>9.850</td>
<td>2.463</td>
<td>3.047</td>
<td>.017</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>399</td>
<td>322.415</td>
<td>0.808</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After performing an analysis of variance on the data, I have concluded that there is a difference among the means of nine of the questions. Questions 5, 13, 14, and 16 are significant at the .05 level. Questions 1, 3, 4, 6, and 10 are significant to the .01 level. The null hypothesis is rejected for Questions 2, 7, 8, 9, 11, 12, and 15. There is at least one linear combination for each of the means that is different than zero.

The null hypothesis (Ho: \( \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 \)) is accepted for questions 2, 7, 8, 9, 11, 12, and 15. Appendix C presents the statistics for computing hypotheses tests for null hypothesis. While hypotheses tests have not been performed, these statistics may be of help in clarifying the relationship between number of students taught and response to the attitudinal questions.

The statistics displayed in Appendix D describe the relationship in the following way: less than 5% of the variance in the dependant variable (number of students taught) can be predicted by the independent variable (attitudinal responses) indicated by \( R^2 \).

The third research question is, "What is the relationship between a faculty member's academic discipline and the attitudes which that faculty member exhibits toward students with disabilities?".

Table 34 on the following page presents an analysis of variance on the data to determine the relationship between the faculty member's college affiliation and the response to each of the sixteen attitudinal questions. The hypothesis of interest is that response to attitudinal questions is different between the faculty members of the ten different colleges at the University. The null hypothesis is:
Ho: \( \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6 = \mu_7 = \mu_8 = \mu_9 = \mu_{10} \) for each question.

Table 34. ANOVA Tables for Research Question 3-College and Attitudinal Questions.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Sum of Squares</th>
<th>F-Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Between</td>
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<td>23.246</td>
<td>23.246</td>
<td>3.764</td>
<td>.053</td>
</tr>
<tr>
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<td>Within</td>
<td>401</td>
<td>2,476.377</td>
<td>6.176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Between</td>
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<td>5.108</td>
<td>5.108</td>
<td>0.823</td>
<td>.365</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>400</td>
<td>2,482.844</td>
<td>6.207</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Between</td>
<td>1</td>
<td>54.958</td>
<td>54.958</td>
<td>9.003</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>398</td>
<td>2,429.619</td>
<td>6.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>400</td>
<td>2,467.591</td>
<td>6.169</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Between</td>
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<td>3.292</td>
<td>3.292</td>
<td>0.527</td>
<td>.468</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>399</td>
<td>2,493.451</td>
<td>6.249</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>402</td>
<td>2,496.621</td>
<td>6.211</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Between</td>
<td>1</td>
<td>1.027</td>
<td>1.027</td>
<td>0.165</td>
<td>.685</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>403</td>
<td>2,505.615</td>
<td>6.217</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Between</td>
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<td>28.078</td>
<td>28.078</td>
<td>4.560</td>
<td>.033</td>
</tr>
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<td>Within</td>
<td>401</td>
<td>2,469.367</td>
<td>6.158</td>
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<tr>
<td>9.</td>
<td>Between</td>
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<td>29.017</td>
<td>29.017</td>
<td>4.685</td>
<td>.031</td>
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<td>Within</td>
<td>398</td>
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<td>6.194</td>
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<td></td>
</tr>
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<td>10.</td>
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<td>42.091</td>
<td>6.868</td>
<td>.009</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>401</td>
<td>2,457.532</td>
<td>6.129</td>
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<td></td>
</tr>
<tr>
<td>11.</td>
<td>Between</td>
<td>1</td>
<td>47.907</td>
<td>47.907</td>
<td>7.841</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>402</td>
<td>2,456.231</td>
<td>6.110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Between</td>
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<td>0.509</td>
<td>0.509</td>
<td>0.082</td>
<td>.775</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>400</td>
<td>2,486.943</td>
<td>6.217</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Between</td>
<td>1</td>
<td>1.312</td>
<td>1.312</td>
<td>0.211</td>
<td>.646</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>399</td>
<td>2,482.644</td>
<td>6.222</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>402</td>
<td>2,479.912</td>
<td>6.169</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Continued on the next page)
After performing an analysis of variance on the data, I have concluded that there is a difference among the means of six of the questions. Questions 1, 8, and 9 are significant at the .05 level. Questions 3, 10, and 11 are significant to the .01 level. The null hypothesis is rejected for Questions 1, 3, 8, 9, 10, and 11. There is at least one linear combination for each of the means that is different than zero.

The null hypothesis (Ho: $\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6 = \mu_7 = \mu_8 = \mu_9 = \mu_{10}$) is accepted for questions 2, 4, 5, 6, 7, 12, 13, 14, 15 and 16.

The statistics for computing hypotheses tests for research question 3 are displayed in Appendix E. They describe the relationship in the following way: less than 2% of the variance in the dependant variable (college) can be predicted by the independent variable (attitudinal responses) indicated by $R^2$.

The final research question is, "Is there a relationship between a faculty member's gender and the attitudes which that faculty member exhibits towards students with disabilities?". Cook (1992, p. 260) cited research by English (1971) that concluded females have more favorable attitudes toward disability than do males, but that race, age, and nationality are not related to attitudes toward people with disabilities. Sitchen cites additional studies by Stovall and...
Sevecheck (1983), and Fonosh and Schwab (1981) that also concluded that women have more favorable attitudes towards individuals with disabilities than do men (1988, pp. 173-178). This study had a higher representation of females responding compared to the percentage of the sample population. One-third of the respondents were female compared to 22.6 percent of the University faculty being female. Also, 47 percent of the female faculty responded to the survey, as illustrated in Table 35. This could skew the response to the positive. English's research does negate the influence that age would have on faculty attitudes towards people with disabilities.

Table 35. Frequency and Percentage of Respondents by Gender.

<table>
<thead>
<tr>
<th></th>
<th>Respondents Number</th>
<th>Percent</th>
<th>Total Faculty Number</th>
<th>Percent</th>
<th>Percent of Total Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>141</td>
<td>33.4%</td>
<td>298</td>
<td>22.6%</td>
<td>47%</td>
</tr>
<tr>
<td>Males</td>
<td>274</td>
<td>64.9%</td>
<td>1,018</td>
<td>77.4%</td>
<td>27%</td>
</tr>
<tr>
<td>Not Reported</td>
<td>7</td>
<td>1.7%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>422</td>
<td>100%</td>
<td>1,316</td>
<td>100%</td>
<td>32%</td>
</tr>
</tbody>
</table>

The table on the following page compares the percentage of response to three selected attitudinal questions by gender.
Table 36. Comparison of Percentage of Response to Attitudinal Questions by Gender.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Question 4</th>
<th></th>
<th>Question 6</th>
<th></th>
<th>Question 10</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\mu_{1.1}$</td>
<td>$\mu_{2.1}$</td>
<td>Total</td>
<td>$\mu_{1.2}$</td>
<td>$\mu_{2.2}$</td>
<td>Total</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>Female</td>
<td>.71</td>
<td>.36</td>
<td>.47</td>
<td>Female</td>
<td>1.42</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>1.42</td>
<td>5.48</td>
<td>4.27</td>
<td>Male</td>
<td>4.26</td>
</tr>
<tr>
<td>No Opinion</td>
<td>Female</td>
<td>8.51</td>
<td>12.41</td>
<td>10.90</td>
<td>Female</td>
<td>3.55</td>
</tr>
<tr>
<td>Disagree</td>
<td>Female</td>
<td>39.01</td>
<td>51.82</td>
<td>47.16</td>
<td>Female</td>
<td>35.46</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td></td>
<td>48.23</td>
<td>27.37</td>
<td>35.07</td>
<td>48.23</td>
<td>52.48</td>
</tr>
</tbody>
</table>

N = 422 (Female = 141; Male = 274; Non-respondents = 7)

The hypothesis of interest is that there is a difference between female and male faculty member's responses to attitudinal questions 4, 6, and 10. (Ho: $\mu_{1.1} = \mu_{2.1}$; Ho: $\mu_{1.2} = \mu_{2.2}$; Ho: $\mu_{1.3} = \mu_{2.3}$). Table 37 presents the analysis of variance for gender and the three selected attitudinal questions.

Table 37. ANOVA Tables for Gender and Three Attitudinal Questions.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Sum of Squares</th>
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<td>Within</td>
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<td>6.</td>
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<td>405</td>
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After performing an analysis of variance on the data, I have concluded that there is a difference among the means of the female
and male respondents. All three attitudinal questions have calculated F scores that are significant at the .01 level or less. The null hypotheses are rejected. There is at least one linear combination of means that is greater than zero for each of the three groups.

The statistics displayed in Appendix F describe the relationship in the following ways: less than 4% of the variance in the dependant variable (sex) can be predicted by the independent variable (attitudinal responses) indicated by $R^2$; and the three hypotheses tests following the rejection of the null hypothesis are accepted (as indicated by the Significance of P at less than the .01 level).

The above analysis of data seems to confirm English's research findings. There is a significant difference between the responses of female and male faculty to attitudinal questions concerning disability. The response of female faculty was somewhat more positive than that of male faculty. It is difficult to quantify the degree of difference. Both males and female indicated positive attitudes toward students with disabilities, however, the female respondents indicated a higher degree of support for students with disabilities than did their male counterparts.

Results of Qualitative Study

Siedman said, "At the root of in-depth interviewing is an interest in understanding the experience of other people and the meaning they make of that experience" (emphasis added, 1991, p. 3). The qualitative study was planned to follow the initial viewing of the quantitative data gathered from the faculty survey. The purpose of
the qualitative study was to follow-up on Question 7 of the Section I of the Disability Awareness Inventory which asked respondents "to place a check next to the resources which you would most likely use to further your understanding of students with disabilities".

The researcher thought it most likely that deans, department heads and administrators involved with faculty could provide the greatest insight into the issues relating to faculty awareness of students with disabilities and could offer the most relevant suggestions for improving the faculty's level of understanding of disability.

Thirteen individuals were invited to be participants of the qualitative study. Two declined to be interviewed, one dean and one administrator. To protect their anonymity, participants will not be identified by name. However, seven of the respondents were deans, two were department heads, and two were administrators at the University. There was at least one participant representing each of the University's colleges or schools with the exception of the Faculty of Natural Sciences and Mathematics.

The interviews ranged in length from 30 minutes to 75 minutes. All but four of the interviews were held in the office of the participants. Among the participants were two persons of color, two women, and one participant from a discipline that is associated with disability issues.

One of the participants remembered having responded to the quantitative survey. In fact, nine of the participants were not aware that a study of faculty awareness had been conducted. This is presented in light of the fact that there were three news articles
published in the faculty newspaper, The Campus Chronicle, and also a letter sent to each dean prior to dissemination of the survey.

Throughout the following thematic presentation of the data, participants have been assigned the identity of the college or school that they represent. For example, a participant from the School of Management will be referred to as 'Management'. The data from the eleven interview sessions have been organized into the seven thematic groups that follow.

Educational Accommodations

Overall, the participants seemed to understand issues pertaining to providing educational accommodations for students with disabilities. This understanding was exhibited by the participants during the answering of the interview's initial question.

Seven of the participants felt that the faculty members of their school or college were supportive of making educational accommodations for students with disabilities. Most of the participants expressed the opinion that the faculty's reaction would, however, be very mixed, although generally it would be more positive than negative in nature. Two participants were either unaware of the the faculty's perception of the issue, or felt the faculty was unaware of the issue. As one participant said, "It's not a hot subject". Two participants related their perceptions of the problem without directly answering the question.

The following excepts reflect the nature of the respondents' responses beginning with those individuals that identified their
faculty as being supportive and ending with those individuals whose comments indicated that they were unaware of their faculty's attitudes towards making educational accommodations for students with disabilities. It should be noted that most participants qualified their comments.

Public Health's answer was, "I would think that to a person we would be completely supportive of whatever is needed to try to make that possible. Obviously, whenever you talk about accessibility you're talking about cost. And you talk about prioritizing. Given a pie only so large and all of a sudden you have to make accommodations and adjustments, and this means a lot of things, not just in terms of physical space, but changing courses . . . having a course changed from a very desirable classroom because one student in fifty can't get to that classroom. We had that happen often. But, I think that I said, to a person, our faculty recognizes the need for it and I have never heard one of them complain about it (making educational accommodations for students with disabilities). I'd say that they are supportive of making educational accommodations".

Social and Behavioral Sciences felt that, "... generally, the answer I think is that the faculty, that I know of, have been, as far as I can tell, very accommodating and supportive".

CFNR stated, "The knowledge that I have about it, and it's not extensive by any means, is that faculty, as a general rule, are very willing to do whatever is necessary. When I was teaching there were several times Paul Appleby would give me a call concerning a problem with a student and I would try to take care of it. And I think other faculty do so as well".
Nursing's response indicated that the faculty was supportive and provided the following example of that support. "First of all, let me say I don't think my school particularly attracts a lot of people with disabilities. It's just the nature of nursing, I think that probably people select out. But, I think our faculty is very sensitive it the issue of having a disability. And anybody who's applied to the school and is academically qualified has been accepted. So, for example, we have a student now who is profoundly hearing disabled and she reads lips and she tells us right in the beginning that, 'I need to sit in front and if you could please look at me when I talk to you it's better when you talk to us'. And I think people have been pretty accommodating about that.

"Sometimes we forget and she reminds us. I think she's very assertive. She's very direct. She's very smart. And she keeps us on our toes. It's easy to just to lapse. And when we heard her. . I'm just telling you this to describe a few incidences that we've had.

"This year she's had her first major clinical experience with patients. And we didn't say anything to the hospital administration about her disability. She's performed very well for us. The first day the nurses were very reluctant and they actually said that they preferred her not to be on their unit because it was so high tech. A knowledge intensive place dealing with very critical ill patients. They thought she would be a detriment to the function of the unit. In response to that we said, 'Well, why don't you give this person a chance? If there's a problem and the patients safety is in jeopardy, we will take her off the unit'. So, they agreed. Well, a month later they were saying that she is better than some of the practicing
nurses that they have on the unit. She is fabulous. She is doing a
great job. She conversed quite nicely with patients. I think she's just
an extraordinary person in a lot of ways.

"And I think it's funny, I guess she was talking with one of the
physicians who had just come out of surgery. And he was giving her
his opinion about what needed to be done with this patient. And she
said, 'Could you take off your mask because I read lips?'. And he
said, What?'. And she repeated herself. And he said, 'What?'. And she
repeated herself again and finally he realized that and said, 'Oh, I'm
sorry!' He took off his mask and everybody just cracked-up. They
thought it was funny and so did she.

"But, I think a lot depends on how well the student is managing
their own disability as to how faculty responds. And there is a
interaction there. A dance you do that takes place. And she has made
everyone very, very comfortable. And it's too bad in a way that the
person with a disability has to go around making people feel
comfortable, but I've seen that happen in a number of situations".

Physical Education explained that former colleagues set the
tone in the school. This person addressed the question of educational
accommodations with the following discussion, "I have to deal with it
in terms of student behavior and the way the program, which is a
function of the sum of the individual faculty's interest and different
abilities, functions. First of all there's the question of the presence of
people with a variety of impairments of one kind or another, came to
the program, through the program and out, and watch the faculty's
attitude about this. You might expect that in preparing physical
education teachers that (they) are the kind of type that survive, but
it's exactly the opposite that has historically been the case. Partly, it's a function of the influence of personalities. We had Ester Wallace here who ran, for 25-35 years here, what was cheerfully called handicapped swim. Not only did she teach not only all of the children of Amherst and those of every faculty member, including my own, here to swim, and also a lot of the community's children, but but went out and sought aggressively those adults and children who would not ordinarily show up in a pool and saw to it that the door was opened and a time set aside for them. Our undergraduates were drafted into the business of working with them. We put people in that pool that scared me. For the sheer liability problems, and we never lost one! And the amount of gain . . . only they could calculate. You'd have to talk to them. But as an observation, it was an enormous influence to whole generations of our undergraduates who got to go in there and help them into and out of the pool and help them learn their abilities in the water that they really did have. And of course they were always astonished to find the abilities that these people really did have in the water.

"That was one piece. Hunter Brosky, he still is here after taking early retirement, ran 'Fun in the Woods' which was an institution here at the University, not in the school, at the University. It was offered as general physical education course through physical education. If you believe the correspondence and the boxes and boxes of letters that I've seen, the most important experience that happened at the University for an astonishing number of kids. The most important part of going to UMASS was 'Fun in the Woods' with Hunter Brosky, who taught 3 or 4 sections every semester for 20
years. And he welcomed people with a variety of limitations. The very nature of the thing prohibited the use of wheelchairs down there. It simply could not be done. But he had some pretty interesting kids down there including a variety of neurological disturbances, again ones you would not normally associate with programs of this kind. Great stuff. He had to give this up as his own increasing level of pain relative to a degenerative spinal condition. He just couldn't do it. So, 7 to 8 years ago, we switched him into doing our special physical education course. He took it over full time.

"He took it (adaptive P.E.) over in style. He gathered all of the graduates from "fun in the Woods" who are now placed locally (a hearing impaired, vision impaired, neurological, and a couple of paraplegics) and would bring them in and they would teach the course. This is his idea of how you teach this course. Bring them in and let them talk to the students. It became notorious among our undergraduates as an intense experience. That was one of the better parts of what became a distinguished undergraduate programs.

. . . By God, they all knew federal and state law. They all knew what mainstreaming is. They all knew what an individual contract was. They all worked directly hands on with people with a variety of special needs. And they were pleased with that.

". . . Then there are our graduates. We have at least two hearing impaired graduates that did their student teaching at Clarke School for the Deaf in Northampton. Who came equipped with signers. They were a delight to have in the program. This may sound strange . . . they were not notable. They were a matter of course.
"... The funny thing is, we don't really talk about it (having students with disabilities in our classes). People will come and say well, what kinds of unusual students have you had. We just don't think about it.

"My whole memory of the thing is (having students with disabilities in our classes) that it is not remarkable. The thing is that Ester and Hunter set the speed for us. And we all simply cared about them and respected them so much that I think the younger faculty simply said, 'OK, that's how you do it'. It shows the influence of colleagues on each other, particularly older and more respected colleagues. If they take it as a matter of course, it becomes the norm for younger faculty members. Surprising thing about attitudes."

Administrator Two explained, "Yeah, my experience is that they are willing to make accommodations. Certainly, it takes a little bit of getting used to. They're not used to the idea of having to do anything different, they would normally walk into a class and there aren't any people with any problems and suddenly somebody appears. They have to get used to the idea of making accommodations.

"I think the nature of the accommodations... some of them are easier for faculty to handle. For example, if somebody has a disability and needs more time to take an exam, I think faculty... I have never run into anybody who says, 'No, by God, you have to take the exam in 50 minutes like everybody else'. I think that, or if they have trouble writing or they have to get a tape of the exam, or whatever, anything relating to the disability that deals with an exam, I've always found the faculty to be very cooperative. But, the few
times that I think there might be a little bit of modest aggravation is there's somebody in a class in a building, and it's been going OK, and then a student with a disability comes in that causes us to have to move. Because wherever they are is not suitable for somebody. Because we have a lot of places on campus that are (not accessible) hard to get to. That might cause a little aggravation as much to the students as to the faculty member. Because that means we all have to move, etc. But that's just a temporary thing.

"So, I have not seen, I have not had occasion, to see faculty members being difficult to deal with in any way in making accommodations. That's my experience, but I have to tell you, I haven't had lots of experience. In the years that I was Dean, I don't ever recall anybody coming to me and saying, either a faculty member or a student, with a problem that was created by a disability on the part of the student. My main contact with students who have disabilities has been, myself, as a teacher. Where I'll have somebody come up and tell me that they have a problem. I mean, obviously, if you're in a wheelchair you can see the problem, but some people don't have problems that you can see and they will say they need to have somebody with them, or they will tell you what they need. Occasionally they will want to tape the lectures.

"I have been a little bit, in my youth, I was always a little nervous about taping lectures. So, I figured that well, maybe I'd say something against the administration. But now lately, I haven't felt any qualms about taping lectures and so . . . This is not just for disabled students, some students want to have the lectures taped because they find it more convenient than taking notes. I haven't
had any problem with that, although there may be some faculty that don't like the idea of having their lectures taped and then losing, sort of, control over it. And then it's out of their hands. So, I don't think that probably a problem of faculty versus disabled students, but a problem of whether the faculty want to have control of their intellectual property. You know, their lectures . . . somebody walks out of the door with their lectures never to be seen again. So, I don't look upon it, as I say, I don't look upon it as a problem".

Education spoke on the subject of making accommodations for students with learning disabilities. Education felt that the school was receptive to these students, but had concerns for students with psychiatric disabilities, "I really don't know. The few cases that I know of have been, as far as I can tell, have worked well. We have a pretty good competence in our school, not just in our Special Education program but also other faculty, not only with disabled students but helping faculty figure out how to deal with accommodations.

"The interesting thing is that recently there have been some students who have identified themselves as having mental disabilities. And that's tricky, because I think a lot of faculty don't quite know what to do. And if they don't . . . I mean I have a student who describes herself as being a mentally ill patient, I guess her condition is managed through taking medication. And I've watched not just the faculty but students in their interaction it's like they just don't quite know. The issue with mental illness is capacity. Here you're in an academic institution. So, I think most people assume that if you're in a wheelchair that it doesn't affect your
thinking, but when a person has a mental illness it's a different interaction. So they're just wondering, 'Do I talk slower?'.

"As I said, I think we have a long way to go, not only here at the School, but in the academy, in order to figure out what to do".

Engineering differentiated between faculty attitudes towards making accommodations for students with physical and learning disabilities. Engineering explained, "Well, I would distinguish between physical disability and learning disability. Because I think physical disability is something that is obvious. Students that have to get around in wheelchairs who have physical difficulties is something they can relate to. I've had faculty members come that have had a student in their class, for example, and say, 'Well, so and so has trouble getting to class. There is not adequate handicap access. It's hard for him to get to the door to get in. I think we still have problems in the College of Engineering particularly. But, it's better than it was. E-Lab is nearly hopeless. The whole building could use an elevator.

"But, learning disabilities is quite another matter. I think, not just the civil rights aspects of the ADA, but the whole concept of learning disabilities is striking some very unresonant kinds of strains into the hearts of the faculty. Who basically are ill trained to know the difference between the student with the diagnosed learning disability and the problems that go with that disability, and to distinguish that from a student that really doesn't have a learning disability but has the same external evidences of the problem of learning difficulties. So, right away I think there would be some Engineering faculty who are not familiar with diagnosed learning
disabilities and their gut reaction is going to be, 'Well, this is just a student who is trying to get through my course with extra assistance that I wouldn't normally give and I know I shouldn't have to give'. And, I think, that obviously one of the keys here is in diagnosed disability.

"And just during this past year we have already had experience with these issues in this college. Different kinds of issues. But, one student in particular that I remember I had extensive discussions with Patricia Silver and her office about an Electrical Engineering graduate student who had had head trauma. And I can't tell you how many hours I spent, not only with this student, but with the faculty member and Patricia Silver's office. And I think we all learned something out of that. But, I think it's sometimes a hard pill for an engineering faculty member to swallow to realize that they can't just simply lay down . . . here are the rules for the course - here's when the exams are going to be given - here when the final exam and homework is due - and that's it. You know, there is no leaway. That's the way they've always run the course and they never made exceptions for students before. Now they have a student like this one come in a say, 'I'm sorry, I can't do the exam in one hour or even two hours. I need eight hours and I need time out in between.' It's very tough".

On the other hand, CFNR pointed to a faculty member's experiences with a student with a physical disability as an example of a problem in making educational accommodations by saying, "On the negative side, the only real complaints I've heard by a faculty was when the faculty member didn't feel as though the activity was
real suitable for the person. And when it caused . . . For instance, like a field trip situation where they are wondering around in the woods and so forth, like a person that has a handicap (like a person who uses an electric wheelchair) that couldn't make it through the woods very well. Even then, I think the faculty thought as though there were alternative activities that the person could be involved with. But in this one particular instance that stands out most in my mind, the person didn't want to be involved in any alternative activities, they wanted to do the real thing. And there were some difficulties over a situation like that. But other than that, that's the only thing I can recall".

In fact, while Education said there was a variety of faculty attitudes towards providing accommodations for students with disabilities, the view was expressed that there was more of a problem with faculty making educational accommodations for students with physical disabilities, "It's somewhere between willing and begrudging. I think the begrudging part is when it gets to be because the system makes it so hard. Mostly the faculty who, quote, have to deal with disabled people in their class and usually what that means is a moving of the class. And so the way the system is set up you get a class, and then you get a roster, and you find that you have a disabled student in your class. And then you have to go and try to get and figure out who moves the class. Whether it's Scheduling or Disability Services. Eventually they do it, but in most cases, the space that you get is less desirable than the space you had. And so, I think it's a less of a hassle for faculty if there was better accessible
space here. So, that's one thing. Now, all that means though is that if the space issue is taken care of then I think there is not a problem".

**Social and Behavioral Sciences** also gave an example in the course of answering the interview's initial question, "Well, it's hard to know because we've never discussed it as a faculty. In other words, what happens is occasionally someone will comment on it and they may have a case with a student in a class which they have to make some accommodation, and my general judgement of at least the people I've talked to have been very sympathetic and concerned about what they could do. Sometimes they've found themselves in difficult situations because they couldn't find a good solution to the problem. I'm trying to think back now of one particular case just fairly recently where the student came and said, told the faculty member, they had a learning disability. Was asking for some special consideration on the exams because that person had problems with multiple choice exams. The faculty member attempted to offer alternate types of things, but in the end the alternate things, the student found, didn't work any better than the regular exam. And so they ended up pretty much deciding to continue with the regular exam. But I think the faculty member involved felt a little bit inadequate to understand what alternatives might be possible that he, or the student, hadn't thought of. So, I think he's trying to be helpful, but he didn't know enough about the situation to know what could be helpful and the student, obviously, wasn't sure either".

**Management** felt that faculty were simply unaware of the needs of students with disabilities. **Management** said, "I doubt that most of our faculty have had very much significant experience. I
wonder how many occasions they've been requested to deal with students with special needs. My guess is not many. I think, perhaps, some of the faculty members have had students that have said that they are dyslexic, but my guess is that in our school we haven't had many students that have told us that they have special learning problems. And as for students who have other needs, we haven't even seen them. So, I think that the answer to your question is that our faculty have had limited experience. I don't know that they would have had much of an opportunity to have formed an opinion".

**Humanities and Fine Arts** could not identify the faculty's view of making education accommodations. This participant said, "Truly, no. The subject doesn't come up and the only places or times that I can remember it coming up has been in context of accommodations for specific individuals who turn up in your class. I've never heard anybody . . . It's not a hot subject".

**Administrator One** offered this perspective, "Well, I think it's (faculty attitudes towards making educational accommodations) very mixed. I think there are some faculty who are extremely sensitive, who are knowledgeable and go out of their way to make accommodations. And that's probably on one end of the distribution. There are other faculty who are probably do not want to go out of their way for anybody for any purpose and will feel irritated when they have to do anything else. They'll do it if there is a law or a requirement and they are probably just difficult people. They may be difficult for a person who is disabled because they have to do one more thing. They don't want to move their classroom. They're used to teaching in this particular room and they don't want to make
accommodations. But, they’re also difficult for other students who get sick and want to make-up an exam.

"Then there is the kind of middle group, which might be the group that you can mostly work with. They're just sort of naive and they don't have a lot of information unless a person with a disability is in their class and they're forced to learn about it because of the particular student who is there. They haven't thought about it before. And they just don't know what to do. What am I supposed to do? They're probably people of good will, but they're not knowledgeable.

"If you're a student, you're in sort of a vulnerable position to start with. Confronting faculty . . . and before getting into the classroom causes bad feelings. It's not a good way to start a course here".

**Needs Identification**

It can be said that the respondents, all of whom are administrative leaders at the University, have not identified the need to implement disability awareness training for faculty. While seven participants stated that they had not identified the need for faculty training, only Engineering had formally identified the need for such training. Education also stated that the need had been identified, although in an informal way.

Engineering was the only participant that stated the College has formally identified the need. This individual said of the faculty's need for training, "And so, I think in general that it's going to be easier for Engineering faculty to understand an accommodation for
physical disability than for an accommodation for a learning
disability. And I think there will have to be some education and so
on. In fact, I'm hoping that sometime during the Spring Semester to
have some seminars put on for faculty that they could go to and
learn what their responsibilities are".

Education acknowledged the need and said, "I know that
there's a need around disability awareness, around racial awareness,
and gender awareness. Faculty tend not to think of themselves as
needing much training. And so it's hard to raise the issue. After the
Clarence Thomas-Anita Hill fiasco, sexual harassment was a big thing.
I took the opportunity to have a session with all the department
heads And it was interesting because they hadn't thought in terms of
being trained.

(Speaking of the ADA) "My own attitude is that compliance is
necessary, but not sufficient. Yeah, there is a need. We have
identified the need".

Nursing said that the school had not identified the need and
discussed the possible reasons for not having done so, "No, we
haven't. And I think that's because we just haven't had that many
students with disabilities. But, last year for example one of our
faculty brought in an article that I read the results of to the faculty
assembly, that had to do with a study, I believe that was from a
study conducted at the University of Iowa, educating and employing
persons with disabilities and the contributions they made. A very
nice little study. And I think there is a lesson for all of us in nursing.
And so I reported that at faculty assembly and I think people were
very agreeable with that".
Physical Education's response was somewhat similar to that of Nursing's, "The answer is no. Only framed in the notion that if you as someone from Nebraska about UMASS they'll say, 'Oh yes, UMASS, that's the equity program.' That's our bag. Equity in the gym. It means that you have to think carefully about a whole variety of issues, gender, motor ability, sexual preference, would dispose one to try to think carefully about these things. But it hasn't been an explicit (effort to identify needs for faculty awareness training)."

Although Management stated the school has not identified the need for awareness training, this individual is conscious of the need through having a colleague with a recently acquired disability. As Management explains, "No. I don't think we have. Although, we've had lately a chance to work . . . one of our senior faculty members (name) was dean of the college, a tenured full professor and dean of the college, and a really admired and loved faculty member here, and still is, he had a stroke over the summer and he is wheelchair bound. So, a lot of us are coming to grips for the first time with what it means to have a friend and a colleague who need to have some special needs accommodated.

"This building (SBA) is supposed to be designed to be wheelchair accessible, and it is to some extent. And it is more than most. I think it was built to be that way. But for example, we don't have a handicapped accessible john here. And the doors are not that easy. In very real terms in the past few weeks and months we have come to realize we need to think about it. Because it's not a student who, it's not merely a student, and a student is very important to us, but here is someone that is a colleague and a long term player here
and is not two years or one year that he's going to be here. It's we hope for a long, long time and we're not really equipped to make him feel as comfortable as he deserves to feel comfortable. And we don't quite know what to do. So, I think although the issue for many of us . . . we haven't confronted it as much as we might with students, we're in very real terms confronting it with a friend".

Public Health said, "Well, we haven't done it. Now whether or not there is a need for it . . . I suspect there is always a need, you know, for something like that but often it's not recognized until problems arise. You know, when problems arise and you say, 'OK, what are the solutions', then often the solution involves some sort of awareness. We as a small faculty, as issues have come up involving the disabled, we tend to make it work. And in most cases make it work so it's advantageous to the person involved, the student (with a disability). So that we haven't had any major problems . . . although as I'm talking, I do recall a problem back in the mid-seventies, with a student who was deaf and wheelchair bound. And there was a personality clash with one of the faculty . . . but it was hard to differentiate whether it was just personality or whether there were other issues as well having to do with her disability. And that could have been an opportunity to implement sensitivity training.

"But, I can't think of a context where we would say, 'Let's have sensitivity training'. But . . . it's the same kind of issue as if you asked me if there is a need for sensitivity training among race issues. And my reaction would be, 'Yeah, I think there is'. Now, I'm saying that more or less from a first hand observation of various attitudes. But attitudes that I don't see similarly expressed with regards to the
disabled. But, I'm a lot closer to the nature of the race issue than to disabled issues".

CFNR said, "No, we haven't. I guess I've assumed that the University office that handles this is sufficient".

Social and Behavioral Sciences was very direct in saying, "No. We have not. We haven't talked about that at all. Zilch".

Administrator Two separated access from other disability related issues, "Not that I know of. If you're talking about people out there identifying needs in terms of accessibly to buildings and such, then we certainly do have people wandering around trying to do that".

Administrator One added this perspective to the issue, "Well, I don't think we have, but as you know, each of us is compartmentalized. So I don't know what's been done in Human Relations through Grant Engle. I don't know what goes on. I'm not aware that we do any specific training around disability awareness. As far as I know we don't do it. But it would be a good idea, yes. Do we have a plan to do it? I'm not aware of one.

"You think about it, and the part is how much can you put on faculty at a given point in time with all of the issues that you're trying to deal with? Right now we're dealing with awareness around the racism issue. And maybe we deal with it all at once, and we do a training program. But the other thing is to say when . . . I think about the LD program, a lot of it comes when an LD student is accepted, he's in a class, and we need to make accommodations. A lot of the information is conveyed when the student comes in or when you have calls from this (LDSS) office to the faculty member and
there's explanation about the student about the particular problem. But you're educating the faculty member. And can you get faculty to focus on a particular issue if it doesn't effect them at the point of time that you're attempting to educate them. If you're teaching a graduate course and haven't seen a students with disabilities in ten years and there's not one in your class now, how much time and effort - how much focus are you going to have on that issue when maybe the issue for you is the grant that is due next week. Are we going to get that faculty member to a training session? So, one of the questions I have, and I'd like some evidence on it from other schools, is how effective are general faculty training sessions on any issue. My experience is 1) you can't get them there, and 2) if you send them a memo, and they look at and it doesn't effect me. So how do you get their attention? We can do the training, that's not the problem. Not that we have it, but I think we can do it.

"Most people would say, 'Well, it's obvious we have a student with a disability and I have to accommodate them'. And then they don't go any further than that. And part of it, I think, is that it does matter what the disability is. It does matter what the individual needs are. So that there is a lot of specific accommodations you can't teach in a general session. And part of it just social consciousness raising about this issue and how you handle the situation in a way that you don't cause bad feelings between you and the student. And, of course, there's a lot of embarrassment around the issue of how you deal with a student with a disability. Do you ignore it. Does a person want to be treated sort of special. When do you intervene? When do you deal with the student? And that's what you really want
to get at. There's where the personal dynamics that go on. Isn't that what part of what the training is. This is what you do. And most people don't want to talk about it because they feel uncomfortable it. It's part of it. If you went in and said, 'We're going to train you on fire safety precautions in your lab.' They'd be all excited about that, because that's practical. It doesn't threaten them in any personal way. But when say, 'Oh, let's talk about students with disabilities who might be in your class in your class, or issues of racism, or learning styles'. People get uncomfortable. It's not something they know much about and it leads to personal embarrassment. So that's something that your fighting. And I don't know how effectively you deal with it. I think that's part of the reason you can't get faculty to do things is that they're busy and if it doesn't affect them immediately. It's just something they push off like all of us.

"I've tried on the campus to do intervention for organizational change in the teaching area. And the way we did that was to try to get people from departments who we gave fellowships to be trained in teaching. And then they go back to departments and maybe give and they begin to have impact on their colleagues. I don't know that it works.

"Have we identified, do we have a list of faculty with disabilities that are on-campus?"

Humanities and Fine Arts simply said, "No".
Efforts to Date

Drawing from the responses to the previous question, it is not unusual that most respondents indicated nothing had been done to increase the faculty's knowledge of the needs of students with disabilities. In fact, four participants indicated in a very brief fashion that nothing had been done in this regard. All together, eight of the people interviewed indicated that there has been relatively no effort made to date to increase the faculty's knowledge of disability.

Engineering not only has identified the need for training, but has taken some steps towards helping the College's faculty understand the needs and rights of students with disabilities. Engineering said, "Well, the first thing we've done, at least, we have the ADA Training Manual in all of the five departmental offices. And I've sent out a note to all engineering junior faculty and staff that it's there. And I also, in that same note I invited them to go to the training session that was held a week or so ago. But frankly, when they got it they probably didn't have time to arrange to go, even though it was the lunch hour. But, I thought it would be even better yet to have a special sessions for Engineering faculty, because of our traditions and requirements, our academic requirements are sometimes different than those in other colleges on campus and our approaches to learning styles are I think in some ways more traditional. However, in some ways it can be fairly forward looking. For example, we use some computer aided instruction and the faculty are often in the vanguard of using these computers. And there are
some real possibilities out there for the use of computers. Especially for instruction of learning disabled students".

Nursing described their efforts in response to the previous question. This individual presented the results of a study at faculty assembly and continued the discussion by saying, "Just that kind of thing. I don't think . . . you know, we're a health care faculty and so we're pretty sensitized to those issues. And I think our faculty is very well prepared. I don't think it's a problem. I think where we need, if we need a lesson at all, it would be in presenting the case of the student with a disability to the larger arena. Because, so much of our education takes place outside the University walls. So, I think the question then becomes how do we support this student so she, or he can learn".

Administrator One examined the University's efforts in this area and said, "Obviously, the LDSS program has made big improvements in dealing with people - students - with learning disabilities. Your program wasn't here when I first came to the University. Establishing a Learning Disabled Student Services office for supporting that population and the intervention with faculty and departments has educated a lot of faculty. I think that has been the tremendous change on this campus. I think we did the right thing to put someone with academic credentials as director of the office, because we had an office before that. But that was not looked upon as a professional and competent operation. . . . it certainly was not perceived that way. So, I think Trish (Silver) has made a big difference. I think she has educated a lot of faculty."
"I do think that that's a model, because as running an effective program means that you have students that are succeeding with learning disabilities, and faculty are seeing them succeed because faculty make the accommodations. They see the effect of the accommodations and they are then convinced that the students with learning disabilities . . . that you can positively intervene and by making accommodations and they are more likely to do it in the future. And secondly, they're more likely to be convincing to other colleagues. So, I think that program has been effective.

"Now, if you look at physical disabilities, part of it is I don't know what happens in that office, because that office is Paul Appleby's which is Student Affairs. It doesn't report to us and it doesn't show up in the same way as learning disabilities which is academic tutoring. I'd be interested in what Paul is able to do in the way of education through his interventions and what happens. I don't know that . . .

"One of the possibilities here is that the professors are notified and are given, not required, but are given an opportunity to attend a small workshop on working with students with disabilities. Because now they have an incentive to learn something. They may not choose to not do it, but if they feel there are people of good will and want to do a good job, they may say, 'Yeah, I'd like to attend this workshop.' And then they will be given some information ahead of time so that it's not something they have to do on the spot when they are dealing with something else. Sometimes faculty get very frazzled. Like on the first couple of days of class and they don't know a student is coming in a wheelchair and a student is trying to get through this door and it
just causes . . . and they're embarrassed and embarrassment leads
to tension. The student is embarrassed. And if they knew ahead of
time. . . I think that it's an intervention I'd like to see. I don't know
if Paul can do it, but certainly running a little workshop around
physical disabilities for faculty who actually have these students, I
think is a good idea. And they could actually do it ahead of time, like
in January for the Spring. Late summer for the Fall. You could even
run them occasionally. I don't think it would take a couple of hours -
two or three hours to go through some of the basic issues and some
of the problems that could occur. I think it could be very powerful".

In replying that nothing had been done in this area, Public
Health said, " I would say basically, no overt efforts other than,
when you live with these issues, and we teach these issues in our
classes, it's a little bit different than . . . we deal with disability. We
have a speech and hearing clinic, we have an audiology testing area,
we have a clinic that runs everyday, we've got people with
disabilities coming in here week to week. We have to be alerted to
the issues, not necessarily to say that we're most knowledgeable
about disability issues, but . . . ".

Social and Behavioral Sciences said, once again, that not
only had nothing been done, but that the need had just not been
discussed, "Nothing. We haven't even addressed it as a group.
Typically, just so you understand, I meet on a monthly basis with the
department chairs. I have started this year meeting with
departments at department meetings in the fall and spring just for
chit-chats. But, in none of this have we discussed the issues of which
we speak".
Management is just now identifying the need to provide disability awareness training for the faculty of the School of Management. This participant said, "I don't think, other than when the ADA was passed, informing people through some brochures and so on, but not in a serious way. But again, I come back to our friend and it's just happened. And he's back now for his first few weeks. And so it's ironic that we're having this conversation and I realize that you're asking me about students, but here's . . . but I think this an issue of awareness. And now we're aware. It's an unfortunate thing that's happened to him, but we're fortunate to have him here with us. And we're going to have to, and we want to come to grips with what we can do to make him a fully participating member of the faculty again because he is our buddy. And our colleague. And there's no reason we shouldn't. It's a real adjustment in the way we think about is everything that's happened and that everything is something for him and we want to help, but we don't know all the some things yet. Little things that we never thought of before become some things. How do you get, if the bus drops him off in front of the school, how does he get from in front of the school to here".

Humanities and Fine Arts qualified nothing with, "All that I can think of, again, is occasional pieces in the Chronicle, or Massachusetts Magazine. And people read them. Are we unusual?".

Administrator Two explained that although there have been no formal efforts that constituted a training program made in this, the University has made an effort to provide support services. Administrator Two said, "No. I don't think that we have a training
program that I'm aware of for faculty as a whole about these issues. Perhaps we should. But, I don't think we have a regular session. On a case by case basis we will get something from Trish (Silver, Director of Learning Disabled Student Services), or somebody else, explaining to the faculty member what the situation is and what she wants the faculty member to do and how to behave and so on and so forth. But, I don't believe that we have a regular training program for new faculty that says you're liable to have students with certain disabilities and this is what you could do. We do not have that. And I'd be curious, in your own thesis, whether you think that is something that is sensible to do. It sounds sensible to do it, but on the other side of it is that when you have these sort of general meetings with lots of information and no real life example, it very often goes in one ear and out the other. Where if I get a call from Trish Gillespie that says I'm sending you a student that has A, B, and C of a problem and I think you ought to do A, B, and C. That has much more immediacy for me than a general training program".

Possible Interventions

Administrator Two, Education, Humanities and Fine Arts, and Nursing did not identify any additional strategies that could be employed to further educate faculty about disability and related issues. Five other participants identified traditional types of strategies that could be used for this purpose. There was no intervention of choice identified by the participants. Each response
seemed to be tailored to the specific needs of the school or college that the participant represented.

Engineering said, "Well, I think one think that would be helpful is if the faculty could learn, maybe through a manual, or some summary where specific examples are given and how they are dealt with. Not only here, but at other universities. Any of the problems of access; of reasonable accommodations; of the civil rights of students; that kind of thing that are, of course, common to the entire university. But, I think it would also be very interesting to Engineering faculty to see how other Engineering faculty at Purdue, or the University of Texas, or Georgia Tech would handle specific, anecdotal instances of what happened, how it involved the disability, and what the faculty member did to accommodate the student. How the system worked for them.

"So, I suspect that just knowing how these things go with the federal statutes in particular, we're all sort of feeling our way along here. But, I would guess within a year or two you will see quite a number of ADA related sessions at conferences in individual disciplines. In fact, I wouldn't be surprised at our hundredth, centennial anniversary of the American Society of Engineers next June in Urbana, that there probably will be at least one session on ADA as it relates to our profession".

Public Health demonstrated an understanding of the problem, "I think initially the faculty have to be made aware that there are issues. And I think that those issues need to be (explained). What kinds of problems are there for the handicapped. Identify what they are, perhaps categorize them in some way. So now you get a
sense, kind of captured the issues and problems, and then if the question comes in, 'How can you as a faculty address, possibly alleviate, the problem'. And in that context, I think then that the faculty becomes at least aware, and perhaps even participants, in bringing about a solution. But, I think it has to be done in a way that they are kind of hit between the eyes with having to do this. That you don't have to deal with this issue we realize, that you are very comfortable in your ivory tower, but there are some problems here. Tell them what they are and once they know what they are then you have succeeded".

Social and Behavioral Sciences explained that, "Probably one useful thing that could be used that would work is to have, departments have both regular and irregular faculty meetings, and it probably would be valuable to have some representative of the (disability ) office to come in and explain the services and to orient the faculty to different kinds of disabilities that they might encounter and come to understand how to deal with them differently. I don't think, generally, faculty understand, I don't think I do, the difference between learning disabilities and physical disabilities and emotional disabilities. The whole range. So that an educational program for the faculty, and graduate students who are TAs, probably would be of some value.

"How to work that in is tricky, given everybody's time limitations, but very often our efforts to do something of this nature,that is issues regarding policy, issues regarding facilities we don't know about, we sometimes have this person come to the Chairs meetings. At least that's the way I do it. And they share the
information with their faculty. But this is more complex. It strikes me we need to go from the bottom up. What we could do, in one meeting is to get the Chairs and explain, 'Chairs, if you'd like to do this here's somebody who could tell you what this is all about'. And then the Chairs could organize it within their departments.

"I don't know how else to do it. And you need to capture the faculty while there is some other business. We tried to hold a sexual harassment workshop with the help of the people from the Affirmative Action Office, and we basically set up a special meeting for that . . . and basically no one showed up.

"So, if they (faculty) have to come to do other business, usually people will at least be there to listen. Put it on the agenda. Then, people at least will know where to go. Give some handouts, so people will know where to go. People will know where to go - where to turn".

CFNR thought the traditional method of arranging for students with disabilities to meet with faculty members would be useful, "I think part of the main thing that can happen is that the faculty can to get to know them, people with disabilities. I think the main problem that people have in dealing with people with disabilities is they don't know how to deal with people with disabilities, that they have never done it before. They don't know what to say. They're afraid they're going to say something wrong. When you see on TV programs for instance, there will be a deaf person on the program, and every other word has something . . . the person saying, 'Oh, my goodness, I shouldn't have said that' you know? And . . . things like that. And I just think that people, basically it's a lack of experience
and understanding in dealing with people with disabilities. More than anything else. And so as the opportunity arises for them to have some experience, to gain some experience, in working with people that have a disability, then I think things are bound to get better".

Administrator One offered perhaps the most insightful solution. Administrator One said, "I believe in the kind of multilayered approach. I think if we could raise it to the University as a whole, maybe through an article or two in the Campus Chronicle. Give it a different twist every semester. Maybe even feature a student who has a disability. What their experience has been. Some of the positive aspects of it. Some of the negative aspects of it. Classes they feel comfortable in. Accommodations that have been made. Difficult situations. Doesn't have to name names, where you can just talk about . . . that's a way, without giving the ten commandments, you know, it's a way of sensitizing people to the issue. Do a little feature story in the Chronicle, and then maybe Appleby could be interviewed one time.

"I think you have to, to be honest with you, if you're going to get anything accomplished on your agenda, you're going to have to be assertive about it. So, somebody has to organize the kind of constant publicity campaign. So, that's one thing I would do, I'd just have some articles in the Chronicle: Appleby's office; what it does; an emphasis on students with different types of disabilities; one a semester; once a year; whatever. And then I would do workshops with faculty that happen to have with students coming into the classes. And maybe I would do one with the students as well. I don't know how Paul does it. He may do that already. How to deal with
faculty. Some of the tensions faculty are operating under. And there are tremendous pressures on faculty and how they could respond in a way, that's not really as bad as it seems, but it can hurt you a lot at the time and get faculty on the other side. Maybe get the two together as a part of a workshop".

Physical Education not only identified the graduate students as a target for awareness training, but also brought up the question of recruiting for diversity. This participant stated, "It's interesting that you raise that point. We've thought about it. We talked about it. The TAs are a part of our program very much. (Paraphrase)In our graduate seminar, we talk about what we would do different in our program. We talk about trying to recruit for diversity. We have talked about strategies. We've talked about employing other people's strategies. And . . . explicit in that, at some points, has been to think in terms of diversity of abilities, as well as, diversity in other terms. We've talked about that and how we need to be aggressive in bringing people in who would look at physical education from vantage points other than that of white, lower middle class, male, or females.

"We are much more conscious now that we would prefer to have become more different than we were. And that means everything to more people in wheelchairs . . . to Hispanics. . . we see it as an issue of diversity rather than a focused issue on (individual students with various limitations)".

Although Management offered no ideas, this participant did identify an important factor that must be addressed prior to offering any sort of disability awareness training for faculty. Management
said, "I think we're in the business of education here, so maybe we need to educate each other. It could be done in a number of ways. But I often wonder, not just around this subject but around anytime you want to raise an issue, it has to be real to the faculty. They'd say 'Why should we be investing our time in this'. It has to be relevant to them".

Preferred Interventions

When asked what resources the faculty would most likely use to further their understanding about students with disabilities, three participants did not identify anything. Of the three, the participant from CFNR said, "Yes, if I had the answer to that I'd be doing more things (to educate faculty) myself. I have a hard time with it. I, for instance, have tried to put on our teaching improvement seminars over the last three years. And nobody comes. It's not that they're not interested in teaching, because a lot of them are. They have other things to do and our faculty are busy. They... I'm always surprised, when I get to these things, that there are so few people there. And so, I think if it's not something that directly effects the faculty member at that particular moment in time, no matter what you do, you're not going to get their attention".

Eight of the participants either identified resources that they thought the faculty might be most likely to use, or discussed the types of approaches that they believed might be successful. Although one participant from Humanities and Fine Arts qualified her
comments in saying, "Well, again, it's clearly nothing I have given any attention to at all. If this is really an issue,. . .".

Engineering provided this insight, "Well, I would think . . . maybe to break it into two parts. One is understanding the federal statutes which relates to the ADA. But the second and maybe more important is an understanding, a real understanding, of what it's like from the student's perspective. They are quite apart from the laws. The faculty member who's never had a disability is going to have more difficulty relating to it than one who has had a disability. And if it's a physical disability it could be somebody who goes up the ramp over here at Marcus Hall and finds out they can't open the door. It might not occur to somebody who's never used a wheelchair and finding out they can't do that. That is something, that fortunately, I have an Associate Dean in the College, Duane Cromack, who is really quite skilled in handling and works very closely with physical plant, so things that having to do with physical barriers to access and so on, he is on top of.

"But the learning disabilities, is going to be a slower process. I think it's just going to take a lot of discussion. I think there is always going to be this old, conservative, dyed-in-the-wool faculty that are not going to change their mind. And there will obviously be some faculty that will never believe there is any such thing as a learning disability. I don't care what the law says, or whatever,. . .

"Fortunately, I think that's a real minority of faculty. I think that most faculty do begin gradually to understand these things, but they may not know how to deal with them and have real difficulty determining what's fair. Obviously, the issue from their point of view
is fairness. So, does accommodating a student with a diagnosed learning disability and giving that student eight hours to take a test, is that fair when requiring all the other students, and maybe including a few in there that do not have a learning disability but are having problems and could use extra time to take the test, but are given only two hours to take the test. It's a tough question. It will take a lot of education around this issue.

Nursing thought, "... it's best to hear from students with disabilities. I think we don't... it's not that students don't have a voice. It's just that we're not hearing it. And, I think some of their stories... like, I mean I was going to call in the story of this student that we have to University Press and have them do an article on her. Because, I think that she serves as a roll model for other students with different disabilities, it doesn't have to be hearing impaired. But, and not only for other students and faculty and know that they can negotiate and you can push people that probably we might separate out some people and they themselves don't recognize. That we should just... limits have to be set. That we should just let the person with a disability separate themselves out. We shouldn't do that. So I think that we need to see more people with disabilities that have been successful in negotiating these limitations."

Humanities and Fine Arts continued by saying, "... we could certainly have... somebody could come and talk to the Heads and Chairs. And from there it can be brought to the departments. And I know, for example, Everywomen's Center had various concerns around violence against women. And they asked me to send out a
letter in the summer saying here are the things that we did and if it fits into your class, by all means, feel free to get in touch with these people, because this is a real serious issue. I was happy to do that. I thought it would have absolutely no effect, but it apparently did have an effect. So, if there were a program like that I would certainly be willing to send out a letter.

"Now, my understanding is that the law has changed recently, or it is changing over, so we probably do need to be? Because I was at a meeting yesterday of the Five Colleges, but they are going to ask Sally (Freeman, Associate Dean of the College of Arts and Science), at least, to come and talk to them. I mean a whole range of things, learning disabled and certainly questions could come up about access, greater access for handicapped students. And it came up, not so much for me, but for private colleges, so . . . I mean look at the building I work in, South College, is to me one of the models of the University's approach. This giant ramp, and you open the door and then you see this giant flight of stairs".

Public Health thinks that the effort needs to advocated for by the University leadership, "I really feel that's a difficult one (question). Many things that I get in the way of printed material may end up in my file 13. I glance over it and I immediately say that, 'Well, I'm pretty much aware of that', or 'I need to look more closely at this'. Often I don't go beyond a very superficial read . . . I'll stop unless something gets my attention.

"Another way for it to happen is to just enforce it. And that is to have it happen from the top down. A process where the powers to be, the Chancellor and the President, identifies this as an important
issue. So, by virtue of power of their position they orchestrate certain kinds of activities (intended to create awareness) to the Faculty Chairs. It goes out to the Chairs and then the Chairs have to impose it on their faculty who participate in some of these activities. Now, when it's forced like this you don't have willing participants and you don't have a necessarily the kind of broad, general participation, well not really participation, but you might not get the results that you're looking for because they're forced to take the pill.

"But on the other hand, I've often found that any of these kinds of sensitivity awareness sessions are often attended by the converted. Only the people who want to know something about it are the one's who are there. But you want to get the one's who are not there. And I've often said that for that to happen there has to be a 'carrot and stick' kind of combination".

Physical Education felt that the school would most likely use consultants to further their understanding of students with disabilities, "It's strange, physical education turns up a fair number of dyslexics. And we have become somewhat aware of the campus' capacity to provide back-up counseling in this area and I think our first reflex would be to go to resources like the services (LDSS) on campus and we are aware that they're there and if we needed to think about that in some systematic way then that is how we would do it".

Administrator Two said that existing services need to be better utilized, "We have Trish (Silver, Director of LDSS) out there working with the students and writing memos to interested faculty and so on. And we have some other people on campus who are
involved with the whole question of disability of various kinds. I wouldn't, I don't know, I'd have to see the material to see if it made sense. In the abstract it sounds good. You say we ought to tell everybody about their obligations and what they ought to do in this case or that case. I'd like to see it in writing and then I could say, 'Yeah, that'll work, or that won't work'. I've seen too many examples where we write up some stuff and nobody pays attention to it. I don't know how to get their attention. This is just one out of many problems out there that need the attention of faculty. And I don't know whether at the beginning of the year you have a meeting in which you say here are the things that you all need to pay attention to, or you do it in some dramatic way so that it sticks".

Education says that workshops are the intervention of choice, "I'm pretty sure workshops. Long workshops would be hard.

"And the faculty need to have a relationship with the other participants. I mean the faculty of the School of Education is as big as some small colleges. So, in order to get the faculty of the School of Education together is unrealistic. At least this way they have a common experience, and hopefully it will be a good experience".

Management also advocates workshops as a part of a multilayered approach for presenting the information to the faculty, "Workshops. Maybe, build in some incentives to attend the workshop. Maybe there are a variety of topics that are covered in a day. And one of those topics would be this subject.

"I think there are a whole host of things people are interested in. I come back to the workshops, I think that if you construct a day when there are five or six different subjects that are interesting at
least to some people, there is more incentive to come to such a workshop.

"I think you have to have a rich variety of (techniques for presenting information) available. I think it's akin to the business of attracting and retaining students on this campus. How do you attract students to come to this campus and once they're here, how do you retain them. There are a lot of reasons why people do not come to this campus. (Listing of various reasons) There are a million reasons why someone may not come to this school. I think the same is true for the disabled. People are all different. The fact that you are in a wheelchair says nothing about you except for the fact that you are in a wheelchair. You could be a very shy or very outgoing. The fact that you are in a wheelchair has nothing to do with anything, except that some people are shy and some people are outgoing. What I mean is that you've got to try lots of different things because different things attract different people.

"Attracting students here always bothers me as only the first step. It's retaining those students, too. It bugs me because we build up a false statement about what we're all about. A student will get a false impression about what their experience here at the University is likely to be. You know, we can't fool people, we do have big classes here during the freshman and sophomore years. The introductory psych class is going to be huge. The introductory accounting class is going to be huge. To tell students they will be experiencing something different than that is just false. And it isn't going to be easy in Marhar auditorium if you're in a wheelchair, or if you're blind. And it isn't going to be very easy either if you have some kind
of a learning disability on this campus. We have a lot of resources here. But that doesn't mean you're going to know about them or that they're going to be easy to get to or that you're going to have them when you wish you had them. Every eighteen year old has problems up the kazoo. Just growing up. I mean that's part of going to college is growing up. On top of the special problems, this University sometimes helps, and sometimes doesn't.

"My main point is that students with disabilities are just like other students in most respects. My point being that we try lots of different things. We try a lot of different things. Sensitizing students to each other is also important".

Effective Interventions

Most participants pointed out various, traditional methods for presenting the information to the faculty, such as Education's point that, "Every school has regular faculty meetings". While only two participants did not offer ideas about how to present material to faculty, nearly all of the other respondents suggested different types of preferred methods for presenting information to faculty.

Engineering examined the problem and offered this perspective, "Well, I guess my experience with faculty in trying to transmit to them new material, and here they already have a pretty full plate, and you're asking them to learn about something more is, there is no substitute for repetitive exposure by as many means as you can bring the information to them. Having a seminar is good. Having a workshop is good. Having something on E-MAIL is good."
Having all of the above is good. And basically they are like anybody else who has a full plate of things to do everyday.

"I think that the right strategy with most faculty is to do it because it's the right thing to do and not because it's the law. Do it because a person, through no fault of their own, had a car accident and had head trauma. Before they had no problem and then this happened. Just think about it for a moment. What would you do if it happened to you? How would you react to it? I would approach it from this point of view rather than if you don't do this the law says I'm going to do that.

"There undoubtedly will be some people because of their mean cantankerous, ill-spirited, nature may have to be dealt with by the law. But, again, that is a very small minority and the majority of faculty would respond rather well to learning more".

Nursing felt that it would be beneficial for students with disabilities to present written accounts of their experiences (successes, failures, problems, compensating strategies) to promote the faculty's understanding of disability. Nursing stated, "I think so. it's my understanding that the building next door to Arnold House has been designed for students with disabilities. And it seems to me that we must have enough students with disabilities that there's probably fifty stories that need to be told, at least. I mean, I don't even know how many students we have on this campus with disabilities. The learning disabilities are probably the most hidden".

Once again, Physical Education supported the concept of bringing in consultants to present the information to the faculty, "Where we get special information, we've done that. Bring somebody
in. We've had a history of our faculty that goes way way back of finding ourselves in trouble and bringing in somebody to help. . . . several occasions we've found ourselves in deep difficulty and we've simply hired ourselves a gun . . . to help ourselves get out."

**Education** suggested the information be presented through short workshops, "Yes, the workshop format, see the trick is to have it during the regular course of business. Which means, like during a faculty meeting . . . ."

**Humanities and Fine Arts** offered the most traditional model for presenting information to faculty, "That (distribution of information to the department heads) would be one way, the departments also have regular meetings and if folks want to meet with departments individually, that could be set-up. I mean . . . I could call a meeting with the faculty of the whole college, but I don't know if people would come. You know, and then you could do mailings, and you'd never know about the mailing either . . . ."

**Administrator Two** discussed experiences gained as a faculty member, "So far as I can tell, when a disabled student with any kind of a problem that requires some special accommodation, if a faculty member, and maybe the chair of that department, is notified at that point when it's about to happen so that the faculty, rather than a generalized thing, I think, my guess is that it works better. Certainly, it worked better for me as a faculty member. I've had several students that had this kind of a need, a need for tape, or a need to sit in a special place, or a need for special exams, or what have you. I always accommodated them. But I always knew this was coming down the pike. I was prepared for it. And I had advice from
somebody out there who knew something as to what the problem is and what the best way to handle the problem.

"I really do think that's better, now that I think about it. What happens if somebody comes into class unannounced and the faculty member's got a big class, 200 kids or whatever, and somebody comes up and says, 'I have this problem I need to do X, I need to do Y'? I think it would be better if there was some system, whereby, if there was such a problem the faculty member could be notified in writing that there was such a student in class and to take the following steps.

"Because, that way at least you know what to do. And somebody is giving you advice on what to do. Rather than just sort of winging it. And the person shows up and you say, particularly if it's something really out of the ordinary. Some of the disabilities are a little trickier. If somebody's only disability is one of accessibility to the building, and once they get there, once they're located there, they can do anything that anybody else can do. That's one thing. That's easier to handle. But if anybody has other disabilities: hearing; sight; this; or that. I had one student who could hear, but couldn't hear well enough, and so she wanted to taped. And I had to speak into a special microphone that was tied up to the person, so she had to sit in the front row. It was a fairly elaborate thing. And I would of. . . It would be good if I knew about these things so that I know what I'm supposed to do.

"I feel like it would be better if someone like Trish (Silver, Director of LDSS) would say, 'This is the kid's problem, we have analyzed it and we have diagnosed it. The best way to do it is this.
Would you please cooperate? I think that the powerful inclination is to cooperate.

**Administrator One** warned that, "I think the least effective idea is to go around from department to department and sort of lecture them on the Disabilities Act (ADA) and what we are required to do by law. And I don't think faculty will respond well to that".

CFNR did not offer any ideas for presenting the information, but felt that E-MAIL was a poor medium for spreading the message. CFNR said, "You mentioned E-MAIL. I try E-MAIL and do E-MAIL with various things. And most people I send E-MAIL to don't read their E-MAIL or don't have it. And at this point in time, it isn't effective on this campus, I don't think. There are a few situations, for instances the Registrar's Office uses it and I think most of the people who are involved within the department who deal with that office have access to E-MAIL. And they probably read it and see it.

"It's not a general good system on this campus. One of the reasons is that there are four different E-MAIL systems on this campus. So, if I wanted to E-MAIL someone over in the Graduate Research Tower, I'd have to send it to Princeton University and back again to get to them. You know, it doesn't take long. It's not a problem, but it isn't as simple as it (could be). If I wanted to call someone in the Registrar's Office, I'd just type in their name and it goes there. But, if I wanted to send it there I'd have to type in their name and their E-MAIL address, and a lot of other things, and I wouldn't know for sure if it got there or not".
Anticipated Faculty Response to Interventions

At least seven of the participants felt that the faculty of their college, or school would respond positively to disability training activities. Only one felt that, overall, there would be a negative reaction by the faculty. Each participant that anticipated a positive reaction qualified their remarks and set conditions that would have to be met in order to ensure that the response was indeed positive in nature.

Nursing expected a positive reaction from the school's faculty and said, "Oh, I think they'll respond favorably. And some of the faculty could give those classes. Could organize them. I mean we have faculty who have been working with people with long term disabilities for a lot of faculty are interested in and various mental So, I think my faculty will respond well. But it will probably have to be a fairly sophisticated program for them because it would have to build upon their existing knowledge. Or, it would have to be very directed, like the kind of thing I was talking about. How do you integrate a person with a disability to the larger community. Or, how do you modify your teaching. For example, this student who needs us to talk to in a way that she can see our lips. And that sort of thing. And how do we make ourselves conscious of that? Even if students . . . and create an open environment so that students can feel free to interject and say, 'Hey, wait a minute. You know. Remember me? I need you to do such and such'. So, we'll respond to that, but we forget".
Perhaps Humanities and Fine Arts assessment of the faculty's response is the most accurate: "I don't see how it could be negative. I could be wrong, but I don't see why it would be negative. So, it would be somewhere between positive and apathetic. It just tends to be . . . people tend to react to the individual student and the individual circumstance. Unless they have some other reason for thinking more broadly".

Management said now is a good time to implement disability training activities. This participant said, "Right now they would be very open to it (because of the newly acquired disability of a colleague). It's awful. It's ironic. But that's the way it is. He's one of our buddies. He's one of our best buddies".

Once again, Engineering separated disabilities into two categories and tied those to different responses by faculty, "I think it would be positive in varying degrees. I think that the most difficult cases are where the disability is not apparently evident, if it's a learning disability . . . "

"And actually what I think would happen is that if you got a cadre of people within a department who have had some experience with working with learning disabled students, and they have come to understand themselves about the nature of this problem, and they have come to realize they have a personal responsibility in educating this student, then that begins to carry a good bit of currency with your colleagues".

Physical Education's discussion of this question was very thought provoking, "... If somebody came to us at the same time and said that they have this program to increase awareness of
faculty to the possibilities and to the kinds of accommodations that can be made, we'd say 'Well, that fits our agenda, get yourself over here and let's talk about it'.

"It's hard to say what our faculty would do to if the institution were to undertake obligatory faculty training. This, as you know, is an interesting political issue which is now up on a number of fronts. ... (We) know how dicey that is. And I can't tell you how it would fall out. If it were disconnected from our own commitments as a faculty ...  

"If it was, in some sense, imposed as a function of what was perceived to be a University commitment, in which we all nominally share, I don't know ...  

"If we find ourselves in the situation where the training makes sense, then you welcome the training. You solicit it.  

"I'm sure we may come soon to the day, when the notion that a faculty has by a natural right the power to resist any kind of special training for carrying out the agenda of the University may be coming to an end. And we may see, and not far from now, a day which that assumption is tested and set aside. We're a community and we do have commitments and obligations to the state. And if it's determined that whether it's homophobia, or whether it's ableism, it may be that the faculty can say you can no longer do that to me. Awareness carries a lot of freight here".

One participant identified a "universal interest" in disability. Social and Behavioral Sciences said, "Well, perhaps, it's hard for me to say. My guess is that there might be, actually, more interested in this than, let's say, sexual harassment issues. Because, more of the
faculty have actually encountered these problems. People would then be, at least it would be more real - potentially more relevant. So, my guess is probably a little more interest than in some other issues, because it does affect them. I don't think or believe interest would be overwhelming. I mean, right now for instance . . . you'd think issues more universal and more threatening to us all are issues regarding race on campus. There are just a lot more of them going on and even there it's hard to mobilize faculty interest. I mean they're concerned, but whether they will do anything about, it I don't know.

"But at least this issue comes closer to home."

Administrator One said faculty response would depend on the method of presentation, "It's . . . like I said, just a series of articles, informational, written in a way that humanizes the problem, teachers, people. I think people respond very positively to them. I think we can see that in the democratic campaign, in the Clinton campaign, that he has the ability to talk to people. I saw it yesterday on the news. He can't help get to you. I mean he was sitting there with this black community and just talking to them. I mean, we know it's PR. We know it's politics, but on the other hand, he can do it. And I think that's what works for people. If you meet somebody, or you read about them as a person, you understand and identify with them. So, I think the human, interpersonal, side of things are a way of getting people aware of, to take interest in this issue. And I think that's effective.

"And I think the possibility of bringing people together in small groups for workshops would be effective. And I think faculty would respond to that. The other thing is, of course, that they have to see
that it is a problem that they are facing. If they're not facing it, then there is no reason to do anything".

Public Health was somewhat neutral in saying, "It's very difficult to say. Again, for my own faculty, they might think that it is something that they don't really need. On the other hand, if they were presented with information that appeals to their own interest in certain issues, then they might be more receptive to participate. That's why I say to begin with information that establishes why this is important and the arguments are convincing enough, people may very well follow through. But if it's just a nice thing to do, then it might not be enough."

CFNR did not envision success and said, "It's really hard to say how faculty are going to react to something. Well, as I think back over the years on the campus, when we've had . . . this racial problem that's going on now is not the first time this has happened, it's happened before. And there have been all awareness events, and mini-courses, and seminars. And some people go, and probably the ones that need to go don't go. The ones that go are the ones that are already convinced. So, it's always a problem no matter what the issue is to try to get people, who are either busy or think they're too busy, to get involved in that sort of thing".

Administrator Two said, "I don't know. I think there are a lot of faculty who are good, solid citizens. Who will go to anything you tell them to do. You know, whatever the hell it is. If you show up, they show up. But then there'll be some grouses. They'll say, 'Why do I have to go to that damn thing. I ain't never had any disabled students, and if I did, I'd know what to do. And I don't need
this. And I don't need that.' I think there would be a fair number of
grousing about this. Just as there are when we have little gatherings
about drug use in the workplace. And there are a lot of issues out
there that we are hitting on the faculty about.

"And I've always had trouble with faculty in terms of
mandatory anything. They're just an independent lot. You know, they
don't show up if you make things mandatory. I don't know how I'd
do it. I literally don't know how I could make something mandatory.
Honestly, if I said, 'If you don't show up you won't be paid.' I couldn't
get away with that.

"So it would have to be voluntary. And then if it is voluntary,
then you'd have to ask yourself what is the most effective way to do
it. You may want to do a pilot program with a small group like the
Deans. Try it in the Deans. Whatever the project is, try it on the
Deans, and if the Deans like it try it one the Department Heads. And
then let it go. Let the Chairs do the job. You've got thousands of
faculty out there. It's a big project and you only have ten Deans and
fifty to sixty Chairs. So, that's a more manageable group. And in some
ways, the Deans are willing to listen to anything. They're a member
of the team. And then the quality of what's offered will tell the tale.
If it's something that really is well done, and seems to be related to
the problem at hand, then the Deans will probably say, 'That's good'.
And if they like it enough will say that this is something that the
Department Chairs should see. To get the average faculty member to
show up I think that would be tough. That would be hard. Even
counter productive.
"It almost reminds me of the arguments going on right now concerning racism and civility. Should we have a mandatory course? One course that everybody in the whole University has to take, including all faculty, staff, and students. Well, I think that there is a tendency on the part of people to say either this is propaganda, or to say that they're not coming, or to say one course, a magic bullet, you have a kid that's been a disaster for twenty years, what are you going to do? You inject him with one course and suddenly he's going to be wonderful?

"I rather think of these things as continuing things. You gotta keep at it all the time. You gotta remind people about disability. You gotta remind people about the problems of accommodation. And not, say, at the beginning of the year you hand the guy the piece of paper and say I've done my job and that's the end of it. I don't think that's going to work. I think you've gotta keep at it. Keep talking about it all through the year and year after year. Until you get into the heads of people what this is all about.

"And it's not just a question of faculty. It's a question of staff and counselors. In some ways the counselors are a more problematic lot than the faculty. Because a student has a problem and comes to drop a course late, you know these rules that we have, and Trish Gillespie Silver says that, 'Yeah, this is the way we ought to go', Very often the counselors will say it has to be clear that the judgment that people like Trish are making is really an expert, professional judgment, rather than a kind of opinion about whether or not the kid could finish the course or not finish the course. Because otherwise the advisors, whether they are faculty advisors or full time
professional advisors, find themselves on a kind of collision course with Trish (Silver) and her office in terms of saying, 'We're the ones that have to enforce the rules. And we will make allowances for these rules on the basis of your expert testimony or expert judgment as to whether the kid has this or that problem with learning, but we're not going to enforce the rules if we think it's just your opinion versus our opinion'. That's trick stuff. And it's not something that we've solved, exactly. It's a different problem.

"Take your situation. You're in a wheelchair. So no one is going to say, if you say, 'I have trouble getting around', no one's going to say, 'Bullshit, you don't have trouble getting around'. We know that. But if somebody comes in and says, 'I can't learn Spanish 110. I can't learn it. No way on God's earth can I learn it.', and then Trish says he has a marginal Dyslexic problem if he worked real hard at it he could learn it. And then you get into these gray areas and faculty and counselors have trouble".

Education offered this advice, "I think that some kind of inside-outside team (should be employed). There are somethings that an insider can present that an outsider can't. And vice-a-versa".

Discussion

The breadth of the mailed survey facilitated the narrowing of the focus for the topic to be explored during the structured interviews. While the mailed survey was originally intended as the primary research effort of the study, the qualitative research added an unforeseen depth to the research and provided valuable
information necessary for formulating recommendations for increasing faculty awareness of disability. The mailed survey essentially identified the problem and the qualitative interviews then focused upon the problem and looked for possible solutions for effecting change as proposed by the study's participants.

An element common to both research methods was that the research effort became an intervention for increasing faculty awareness of disability. I believe that in a university setting, this notion of 'research as an intervention' may prove to be valuable in the future. The mailed survey was designed, not only to collect information that would address the study's four research questions, but also to disseminate information concerning disability. Although the qualitative study was not designed to heighten awareness of disability, it was very apparent before, during, and after each interview that the interview was an intervention. By simply bringing up these issues and discussing them, it seemed that each participant exhibited an 'ah-ha' moment of understanding. The point should not be overlooked, or undervalued, that the participants of the qualitative study are also administrator within the university organization who may have the ability to initiate change strategies.

The difficulty of changing faculty attitudes toward individuals with disabilities may lie in the fact that faculty members belong to their own professional organizations and have professional identities separate from the university structure. They may not attend to the University as an entity and they may not attend to the professional bureaucracy of a university (Hardy, 1991).
Change in faculty attitudes and knowledge of disabilities may not be possible until the time comes when faculty need to learn about the ADA vis a vis their professional constituents, e.g., engineers, hotel managers, etc. Also, not until exposure to people with disabilities in the professions is widespread will faculty note the need to train those with disabilities to enter their discipline. The ADA will probably have a large effect on professional schools for this reason.

It may be worthwhile to note that faculty engage in collegiality or professional authority (Hardy, 1991). However, the administrators who initiate change in such an organization tend to establish adhocracy committees that study the issues and make recommendations, a slow process that often results in little change from the status quo. A more effective method for affecting change may be for disability service providers to view the university as an entity unto itself that will require a multimodal planning process for change, via the central administration, the adhocracy (e.g., the affirmative action committee), employee unions, the faculty senate, departments, advising practices, and individual faculty.

Quantitative Survey

At first glance, the response to the mailed survey seems very positive. Upon reflection, it produces some very disturbing questions for service providers at the University. Three primary areas of concern are: the level of knowledge, experience, and attitudes of the faculty that did not respond to the survey; the information that the
respondents did not know; and the manner in which respondents wish to obtain further information regarding disabilities.

It may be that faculty members who possess prejudicial attitudes towards individuals with disabilities would not respond to a survey such as this, or that respondents may provide data that they think the researcher seeks (Antonak & Livneh, 1988). By not responding, faculty may have in effect shown either a lack of interest in individuals with disabilities, or a concern that they may not possess the current socially desirable attitudes towards individuals with disabilities. It could also be that non-respondents did not want to bothered with completing the survey because of time constraints or other reasons.

The fact that there was a disproportionate number of female faculty responding is troublesome because they are also a minority in most departments on campus and particularly so in the sciences where many students with disabilities seem to encounter problems with faculty. Also, it may be that female faculty are more understanding of students with disabilities because, they too, have experienced discrimination.

Sichten (1988) wrote, "There is relatively little research of attitudes of professors towards students with disabilities. What little research exists suggests that professors have moderately favorable attitudes towards disabled students on campus but their attitudes are somewhat less positive about having such students in their own department" (p. 177). This finding was echoed by Houck, Asselin, Troutman, and Arrington (1992) in their study of faculty and
student perceptions of learning disabilities at Virginia Polytechnic and State University.

Although the responses to the attitudinal questions were generally positive, the respondents were not familiar with students with disabilities or services that provide support for students with disabilities. If respondents were truly supportive of students with disabilities, perhaps, they would make an effort to become more familiar with support services.

It appears that in the quantitative study the respondents choose the most passive and impersonal interventions and activities that would provide them with more information concerning disabilities, such as newspaper articles and newsletters. The choice of written information may stem from the fact that faculty are most accustomed to requesting and dealing with information in this manner. But, these interventions may not affect attitudinal change or increase familiarity with individuals with disabilities. The majority of respondents were not willing to actively engage in learning more about individuals with disabilities and faculty do not seem to be attending to the information since many of the interventions already exist (e. g., 33% of the respondents would like a campus access guide that is presently available). Also, information about services is already printed in the undergraduate and graduate catalogs, the campus telephone book, and in the newspapers on an on-going basis. It appears that these means have not increased the faculty's knowledge of disabilities and related services.

As a compliment to the discussion based upon the analysis of the quantitative data, it will prove useful to examine selected faculty
comments obtained from the survey instruments. These items of qualitative data were unsolicited and will give additional insight as to the status of faculty awareness of students with disabilities.

A subject addressed by many respondents was that of making educational accommodations for students with disabilities. These comments reflected the attitude that it is an unacceptable inconvenience for faculty to be expected to make full educational accommodations for students with learning disabilities. As one respondent said, "Learning disabled students sometimes require a great deal of 'one-on-one' time outside the classroom. Obviously, this takes time away from other professional activities, or an investment of personal time by the instructor. Either represents a personal sacrifice by the instructor and, therefore, should be a reasonable amount". Another respondent wrote, "Faculty are grossly overworked as is. Please don't demand that we do more!".

The question of waiving, or modifying, academic requirements for students with disabilities was addressed by one respondent. "I strongly believe that all students should have the same level of requirements. No exceptions. It is for the institution to be resourceful enough to find ways to satisfy them. No waivers whatsoever", states one faculty member from the French Department.

Most respondents who made comments expressed their opinions of learning disabled students. This is not surprising given the fact that at present, students with learning disabilities account for nearly eighty percent of the population of students with disabilities on campus. These comments were primarily negative, such as, "There are now LD kids who are taking unfair advantage of
the system". A survey returned on July 2, 1992 said, "A degree awarded to a learning disabled student means something different than a degree awarded to another student. If LD students are required to meet the same standards as other students (and they probably are not) they would require quite a bit of individual assistance to get there, and probably would not retain as much. Therefore, the degree as a measure of learning ability and accomplishment probably doesn't mean the same thing as other degrees awarded". The problems for students with learning disabilities at the University will only worsen if this is a widely held view among faculty on campus, because the number of students with learning disabilities on campus will likely continue to increase over the course of the next decade.

A respondent from Resource Economics made this comment, "I wonder sometimes about the expectations of disabled students once they have received their degrees. If they expect to have the same opportunities as other students they are likely to be disappointed because their disabilities will limit somewhat the range of things they can do effectively, and I believe most employers are still learning about the potential of disabled persons". This is a very perceptive comment considering that the unemployment rate for people with disabilities approaches 70 percent. But, it could be argued that this is the type of perspective that perpetuates the high unemployment rate by discouraging students with disabilities from entering specific occupations or fields of study.

Among the other troubling comments of respondents is one from a professor of Spanish, who wrote, "Teachers should have more
time, training, and compensation in order to teach to disabled people". Once again, this attitude reflects a type of segregationist attitude that if the University is going to allow these people to study here, then extra compensation should be allocated to those faculty involved in this noble effort.

While most written comments were negative, many faculty wrote a variation of the following message next to Question 3 in Section I that asked faculty to check which types of disability they considered to be insurmountable barriers to a student's entrance into occupations associated with their profession, "None are insurmountable". It is the hope of this researcher that this is the most prevalent attitude of faculty at the University.

Qualitative Study

Among the most important findings that the qualitative study identified was the diverse nature of the faculties of the different colleges and schools on campus. This may be seen as both an advantage and as a problem. The advantage is that efforts to increase the faculty's understanding of disability may be more effective if tailored to the personality of the target group. The disadvantage is that one must employ more than one strategy in order to be effective and, because of that, the effort would be more time consuming and costly.

Not only do colleges and schools possess different 'personalities', but it also may be that each department must be addressed separately. As Social and Behavioral Sciences noted,
"There are various kinds of different atmospheres. One thing that's really struck me is how different the departments are. And I'm sure the same thing happens with the Deans. And you have to deal with them each in their own context".

By consensus, the participants believed that a need must be identified by the college, school, or university in order for the faculty to become interested. In order for a program to be initiated and then to become effective, faculty must recognize the need for acquiring information. Therefore, the process of need identification by departments or college must be undertaken prior to the start of a stated training program. This identification of the need by colleges and schools for training has largely not been made to date.

Many of the participants, particularly the university administrators, mentioned the role the Learning Disabled Student Services (LDSS) has played in providing services for students with learning disabilities. There seemed to be a sense that the University has created and funded an LDSS and that alone should solve the problem of students with learning disabilities. The implication seemed to be, in effect, that having a LDSS is an adequate response by the University in meeting the needs of students with learning disabilities.

On the other hand, the general feeling was that the LDSS was 'accepted' by academic colleges, departments, and faculty because of its location within an academic unit (the College of Arts and Sciences) of the University. Learning disabilities were seen as being more legitimate because of the perceived expertise of the LDSS personnel in interpreting the medical diagnoses of the students and in
recommending educational accommodations based upon the diagnostic information.

There was an obvious difference between the two participants from the University administration and the representatives of the colleges and schools. The administrators viewed the overall efforts made by the University, while the other participants limited their perspective to their own experiences with colleagues within their own college or school.

The concept of the importance of colleagues surfaced repeatedly during the interview sessions. In fact, the notion of encouraging a peer advocacy network within the departments was made by one participant. Public Health said, "If you can reach just five percent of the faculty with your message and help them become more aware of the issues, then that's o.k. This will place a few advocates within each department around campus that can work within the departments to effect a change in the level of understanding shown by their colleagues". At present, this is being done in one department on campus and has seemed to be a very effective way of increasing faculty understanding of disability. In the Department of Hotel, Restaurant, and Travel Administration, there is faculty member whose role is that of an unofficial resource person who acts as an advocate, mediator, and advisor on issues relating to educational accommodations for students with disabilities in that department.

Some participants drew a distinct line separating physical and mental disabilities. It seems that faculty are more accepting, and have a greater understanding, of students with mobility, vision, and
hearing problems, and are less knowledgeable and accepting of students with learning and psychiatric disabilities. In fact, at least three of the participants identified people with psychiatric disabilities as being a very disturbing problem for them to address. The mailed survey identified the same lack of acceptance and understanding of students with learning and psychiatric disabilities. This may be directly related to the fact that in an academic setting, intelligence is seen as a requirement for success. Most people probably view both of these disabilities as affecting the cognitive abilities of the individual. Because these disabilities may prevent individuals from acquiring and retaining information in the 'normal' way, faculty may perceive them as not being capable of learning and, therefore, not worth expending effort on their behalf.

Most participants were aware of the ADA and the potential risks and benefits of using that legislation as a motivational tool for heightening awareness of disability on-campus. It was thought that the ADA may be a vehicle for introducing issues related to disability, but presenting information in a legal, threatening manner may be counterproductive.

Participants were not unaware of the power of self-advocacy. One participant posed the question, "To what extent can the students themselves represent what their problem is?". Presently, self-advocacy is encouraged by the disability services providers on campus. It may prove beneficial to train faculty to encourage their students with disabilities to become self-advocates.

The qualitative study showed that there is no 'cookbook approach' for improving faculty understanding of students with
disabilities in higher education. It is insufficient to address these issues in the manner of developing set of X, Y, and Z strategies. The preferred method would be to adopt a multimodal approach for continuous use on a daily basis.
CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

Summary of the Study

In higher education, the success of a student with a disability, even more than that of a student without a specific disability, depends on a match between teacher and student (Marchant, 1990). It is thought that faculty attitudes influence the retention and long term behavioral change of their students (Peterson, 1988). The success of the student/teacher match includes consideration of the teacher's attitude towards students with disabilities which is determined, in part, by the teacher's knowledge of disabilities and experience with teaching students with disabilities.

The purpose of this research was to assess the University of Massachusetts at Amherst faculty's knowledge of disabilities, experience with educating students with disabilities, and the attitudes they possess towards students with disabilities using a mailed survey and to determine if there is a relationship between the three factors. Guided interviews of eleven selected deans, department heads, and administrators were conducted in addition to the quantitative analysis of the mailed survey.

Nearly one-third of the University's 1,316 faculty completed and returned the mailed survey. After an initial review of the data obtained from the mailed survey identified the need for increasing
Conclusions

This study's participants were generally unfamiliar with disabilities, students with disabilities, University disability service providers, and disability laws. At the time that the study was conducted, the University had not identified the need to implement a disability awareness program and very few interventions had been initiated to increase faculty awareness of students with disabilities. However, based upon the responses to the survey questions, participants of both studies could be seen as being supportive of students with disabilities.

Participants were most familiar with students with learning disabilities. Also, participating faculty and administrators were concerned with making educational accommodations for students with learning disabilities.

Quantitative Survey

Overall, one would interpret the faculty response to the attitudinal questions contained in the survey as being supportive of students with disabilities. The results of the study proved inconclusive for answering three of the research questions.
The following is a list of general conclusions one may draw from the data collected by the May 1992 Study of Faculty Awareness of Students with Disabilities:

1) the respondents have had limited experience in teaching students with disabilities (75% have taught five or fewer students with disabilities over the past four years;
2) respondents are most familiar (over 64% of those who have taught students with disabilities) with teaching students with learning disabilities;
3) respondents are most accepting of wheelchair users and individuals with hearing impairments, and are most concerned about individuals with psychiatric disabilities and individuals with communication disorders entering their professions;
4) between 50 and 75 percent of the respondents are unfamiliar with the different University services which may help students with disabilities;
5) the respondents are unfamiliar with special education legislation and litigation (based upon the following percentage of respondents that identified themselves as being unfamiliar, or very unfamiliar with the following laws and court rulings: 62% - Brown; 89%- Section 504; 85% - IDEA; 69% - Chapter 766; and 74% - ADA);
6) female respondents had more favorable attitudes towards students with disabilities than did their male counterparts; and
7) based upon the percentage and mean scores of the attitudinal questions, respondents are very supportive of making educational accommodations for students with disabilities.
Qualitative Study

The nature of this qualitative research makes it difficult to draw general conclusions from the participants responses to the questions asked during the structured interviews. The eleven participants expressed varied opinions to the seven questions posed to them during the course of the interview sessions. However, one may draw conclusions based upon data that reflected the opinions or experiences of the majority of the participants. Given this, the following observations and conclusions have been drawn from the data.

1. Participants possess a basic understanding of issues pertaining to providing educational accommodations for students with disabilities. Also, participants felt that the faculty members of their school or college were supportive of making educational accommodations for students with disabilities.
2. The respondents, all of whom are administrative leaders at the University, have not identified the need to implement disability awareness training for faculty.
3. Most participants indicated nothing had been done to increase the faculty's knowledge of the needs of students with disabilities.
4. Interventions, or strategies, that could be employed to further educate faculty about disability and related issues should be tailored to the specific needs faculty of each school or college.
5. A multimodal approach should be adopted for presenting information concerning disability to the faculty. This is based upon the fact that most participants suggested a variety of types of
preferred methods, many that would be deemed traditional, for presenting information to faculty.

6. Most faculty would respond positively to disability training activities if they have identified the need to learn more about people with disabilities.

Recommendations

In order to effect a change in an higher educational environment, all participants must exhibit an interest in the change effort. The groups most effected in this situation are: students with disabilities; students without disabilities; faculty; professional staff; and university administrators. The following interventions and policies have been developed with this in mind.

Interventions to Increase Faculty Awareness

One of the respondents suggested during the qualitative interview that a multilayered approach should be employed to increase awareness of disability. By this, the person meant that information should be presented to all level of employees at the University. Taking this concept one step further, training should be offered to university personnel utilizing a variety of methods, or modes. Components of this multimodal approach may include the following interventions.

1. **Identifying and training colleague advocates within each department.** One way of doing this could be to send a letter to each
department head requesting 1) voluntary participation, or 2) appointment of a knowledgeable faculty member. Training could be ongoing through an advocacy network newsletter and include a general meeting each semester for the purpose of providing advocates with updated information concerning legislation or program changes. An important component would be to publicize the existence of the network and to encourage both faculty and students to utilize the expertise of the advocates as both resource persons and mediators. University administrators should be included in the training program.

2. **Introducing faculty concerns to students with disabilities by disability services providers.** Included in this effort should be educating students with disabilities to the variety of faculty attitudes that they may encounter, the daily responsibilities that faculty have, and the stress that faculty undergo at different times during year. Discussions could include such topics as how faculty may view a student's self-disclosure. This training could take place annually and be offered by both the disability service providers and the Provost's Office and may also include a peer advocacy component.

3. **Round table discussions by representatives of disability services to be conducted during department meetings.** This intervention could be seen as a 'get acquainted' type of activity. The format should be informal in nature with the purpose of informing faculty of the types of services available to students and faculty, the service provider's philosophy, policy, and procedures for delivery of services to students, and providing faculty an opportunity to ask questions concerning disability related issues. Since there are nearly
one hundred departments at the University, these discussions may be only be held every two or three years. But, if each office that provides services for students with disabilities undertakes this effort, then it could be that each department could host a round table discussion by one of the offices each year.

4. Creation of an E-Mail bulletin board for disability related information and consultation. Although this median is presently not universally in use, it will be in the future. This may be a very effective strategy for relaying information in an inexpensive and modern way.

5. Arranging for graduate students with disabilities to present disability related issues at orientation programs for TA's and RA's. Many problems for students with disabilities have come from teaching assistants and residential advisors. These problems stem from a lack of knowledge about disabilities rather than an unwillingness to understand. Enlisting graduate students with disabilities to provide training during graduate teaching seminars may prevent many problems.

6. Publishing articles in the faculty and student newspapers personalizing disability issues and experiences by faculty and professionals with disabilities. This intervention personalizes disability for the faculty. It is an effort to help faculty members understand the impact that disability has on the lives of students.

7. Creating and distributing a Faculty Handbook on Disability. This handbook could include such information as a description of services and the delivery of those services to students and a description of disabilities and accommodations that enable the
student to compete 'on a level playing field' with their peers. The handbook should be distributed to all faculty and administrators to be used as a reference.

8. **ADA workshops.** Perhaps, a series of monthly, hour-long, workshops could be offered to interested faculty. Enrollment should be limited to encourage audience participation.

9. **Creation of a University Committee on Disability.** Representatives from departments, service providers, and administrative units should meet biannually for the purpose of planning policy for increasing faculty awareness of disability. The following should be represented: Architectural Access Board; Learning Disabled Student Services; Disability Services; Provost's Office; Office of the Vice Chancellor of Student Affairs; Affirmative Action; Special Education Department; Communication Disorders Department; Mental Health; Housing; Auxiliary Services; Faculty Senate; Graduate Employees Union; Undergraduate Admissions; and a student representative.

**Policy Implications**

In order for any recommendations to become effective interventions for changing the level of faculty awareness of students with disabilities, the university administration must publicly acknowledge the need for such training and then support the implementation of such efforts. This acknowledgement and support must be initiated from the highest level of management and would be most effective if it included the entire university system.
This policy should not take the form of an understood, or implicit, commitment, but should be undertaken as a written commitment by the University. This commitment should include an annual financial commitment and an identified delivery system.

Future Research Directions

Houck, Asselin, Troutman, and Arrington (1992, p. 283) presented the following issue, "If faculty perceive themselves as more willing to make educational accommodations than students who have sought such accommodations perceive them as being, the basis of these disparate views needs to be addressed". This mirrors this researcher's recommendation that future research should be directed towards assessing students with disabilities' perceptions of faculty attitudes towards students with disabilities. This study asked faculty how they felt about disability, but how do students feel they are being treated by faculty? Also, it may prove beneficial to explore the attitudes students without disabilities possess towards disability. Are students with disabilities comfortable with their non-disabled peers?

Looking back at Figure 11 on page 137, Stark and Mets (1988, p. 25) illustrated their concept of the university environment that consisted of an interaction among the following six environments: faculty; student; external; administrative; technical; and curricular. This study explored one of the six environments identified by these researchers, the faculty environment, and examined that environment as it impacts students with disabilities. It may be of interest to educational researchers to focus future research efforts
towards the other five environments that may impact a student's success. A possible research question is: Are these six environments different for students with disabilities and students without disabilities?
April 16, 1992

Dear Professor,

The attached study is a research instrument created by the staff of Project I CAN (Initiating Career Achievement Network). The project is sponsored by the Center for Counseling and Academic Development of the College of Arts and Sciences to develop career counseling networks for students in higher education who have disabilities. This three year project has three phases: 1) development and implementation of a model career development plan; 2) demonstration of a model career counseling program for the University and other higher education institutions; and 3) dissemination of model activities.

The information gained from this study will provide a foundation upon which to build a model career development plan for students with disabilities. The enclosed instrument has been developed to ensure anonymity and to make it possible for us to obtain important information while requiring a minimum amount of your time. The average time required by faculty members who completed this survey instrument was 8 minutes.

It will be appreciated if you will complete the enclosed study as soon as possible, but no later than May 1st. The instrument may be returned via campus mail. Other phases of Project I CAN depend upon the analysis of the study data.

In appreciation for your cooperation and participation in this study, the attached raffle ticket may be returned for a chance to win a fifty dollar gift certificate to the Jeffery Amherst Bookstore. Please return the raffle ticket in a separate envelope by May 1st. A drawing will take place May 11th and the winner will be sent the gift certificate to his or her home address.

We welcome any comments or suggestions that you may have concerning Project I CAN. A summary of the study’s results will be given to the Campus Chronicle for dissemination. Thank you for your cooperation.

Sincerely,

David Baggett, Project Director

enc.
Project I CAN: Initiating Career Achievement Networks
The University of Massachusetts
at Amherst
Center for Counseling and Academic Development

A Study of Faculty Awareness of Students with Disabilities

Funding Provided By
The United States Department of Education
Office of Special Education and Rehabilitation Services

Questions regarding Project I CAN are welcomed.
Interested faculty may contact:
David Baggett, Director
Project I CAN
115 Berkshire House
545-0109
INTRODUCTION

PROJECT I CAN

Project I CAN, an acronym for Initiating Career Achievement Networks, is a three-year grant sponsored by the US Department of Education’s Office of Special Education and Rehabilitation Services. The project's main purpose is to create a network of model integrative services in career education and counseling for students with disabilities in higher education.

DESCRIPTION OF PURPOSE

Making the transition from secondary to post-secondary education is a key issue for all students. Students with disabilities entering an institution of higher education face additional challenges. Once students with disabilities have successfully adapted to the post-secondary environment, an equally demanding task is identifying and preparing for a productive and satisfying career.

The initial effort of Project I CAN is focused upon assessing the level of understanding and experience which university faculty have concerning people with disabilities. Our premise is that the faculty's knowledge of disabilities, skills in working with students with disabilities, experience with teaching and counseling students with disabilities, and attitudes towards students with disabilities are significant factors which may contribute to the academic success of students with disabilities.

DEFINITION OF DISABILITIES

During the pre-test of this instrument, it was observed that many respondents were unable to differentiate between various disabilities. The following special education definitions and terminology have been included to help you respond to the questions presented in the study.

Special education is designed to respond to the unique characteristics of students who have needs that cannot be met by the standard school curriculum.

Disability refers to the reduction of function, or the absence, of a particular body part or organ. A person who has an arm or leg missing has a physical disability. The terms dysfunction and disorder are frequently used as synonyms for disability.

Handicap refers to problems that impaired or disabled people have when interacting with the environment. A handicap is a disadvantage imposed on an individual.

Impairment refers to damaged or defective tissue. For example, lack of oxygen at birth may cause brain damage or neurological impairment that will result in cerebral palsy.

Communication disorders include speech disorders, language disorders, and variations in communication. Examples of communication disorders are difficulties with receptive and/or expressive language.

Hearing impairment is a generic term indicating a hearing disability which may range from mild to profound; it includes the subsets of deaf and hard of hearing.

Mental retardation, as defined by the American Association on Mental Retardation, refers to significantly subaverage intellectual functioning resulting in impairments in adaptive behavior and manifested during the developmental period.

Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or using language spoken or written. This may be manifested in reading, spelling, or arithmetic. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include students who have learning problems which are the primary result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

Physical disability is a term used to define a physical or health problem which results in an impairment of normal interaction with society to the extent that specialized services and programs are required. Examples of physical disabilities are cerebral palsy, muscular dystrophy, polio, spinal cord injuries, cystic fibrosis, asthma, and epilepsy.

Psychiatric disability. The term psychiatric was selected to describe the disability that is the focus of the rehabilitation. It does not mean that the treatment must be done by psychiatrists or using psychiatric treatment methods. The term rehabilitation reflects the focus on improved functioning in a specific environment, although many different techniques and settings are used in the rehabilitation of persons with psychiatric disabilities (example, social skills training).

Visual impairments can be categorized by the terms legally blind and partially sighted. A legally blind person has visual acuity of 20/200 or less in the better eye even with correction or has a field of vision so narrow that its widest diameter subtends an angular distance no greater than 20 degrees. Partially sighted individuals have visual acuity falling between 20/70 and 20/200 in the better eye with correction.
RESPONDENT DEMOGRAPHICS

INSTRUCTIONS

The questions below provide information about different groups of respondents. No attempt will be made to identify individual faculty members. This assessment has been constructed to ensure anonymity and to encourage accurate and honest responses.

Write the number which corresponds to your response in the blank beside each question.

1. **Academic title:**
   1) Lecturer  2) Assistant Professor  3) Associate Professor  4) Professor  5) Other

2. **Employment status:**
   1) Full time  2) Part time

3. **Primary responsibility:**
   1) Teaching  2) Research  3) Teaching/Research  4) Administration  5) Advising  6) Other

4. **Years of teaching experience in higher education:**
   1) less than 1  2) 1-5  3) 6-10  4) 11-15  5) 16-20  6) 21-25  7) more than 26

5. **Years at the University of Massachusetts at Amherst:**
   1) less than 1  2) 1-5  3) 6-10  4) 11-15  5) 16-20  6) 21-25  7) more than 26

6. **Sex:**
   1) Female  2) Male

7. **Age:**
   1) 30 and younger  2) 31-40  3) 41-50  4) 51-60  5) 61-70  6) 71 and older

8. **College:**
   1) Faculty of Humanities and Fine Arts  2) Faculty of Natural Sciences and Mathematics  3) Faculty of Social and Behavioral Sciences  4) School of Education  5) College of Engineering  6) College of Food and Natural Resources  7) School of Management  8) School of Nursing  9) School of Physical Education  10) School of Public Health

9. **Department:**
   (Optional) I am a faculty member of the ____________________________ Department

10. **Place a check by all statements which describe your contact with people with disabilities.**
   1) I have a disability.
   2) A member of my household has a disability.
   3) I have resided at some time in the past with an individual who has a disability.
   4) A close friend has a disability.
   5) A friend has a disability.
   6) I have had interaction with persons who have severe disabili ties.
   7) I have had extensive professional interaction with persons having disabilities.
   8) I have had moderate professional interaction with persons having disabilities.
   9) I have completed at least one academic course where content emphasized the needs of individuals with disabilities.
   10) I have had limited interaction with individuals with disabilities.
   11) I have had limited exposure to persons with disabilities.
   12) I have never had interaction with a person with a disability.
**DISABILITY AWARENESS INVENTORY**

**SECTION I**

**INSTRUCTIONS**
Place your response in the right hand column in the manner requested.

1. Circle the number of students with disabilities whom you have taught during the last four years.

2. During the past four years at UMASS, I have taught students with the following disabilities. Place a check next to the type of disability.

3. Place a check next to the disability which you consider an insurmountable barrier to a student's entrance into occupations associated with your profession:

   3. (check one)
      - communication disorder
      - hearing impaired
      - learning disabled
      - physically disabled
      - psychiatrically disabled
      - vision impaired

For questions 4 and 5, circle the number from 1 to 4 beside each item to indicate your level of knowledge about the the item.

4. University services which may help students with disabilities are provided by:
   a) the admissions process for students with learning disabilities.
   b) the Center for Counseling & Academic Development.
   c) the Division of Counseling Psychology Services.
   d) Learning Disabled Student Services.
   e) Mental Health Services.
   f) Math Career Services.
   g) the Office of Disability Services.

5. The following legislation and litigation ensure students with disabilities equal access to higher education:
   b) Section 504 of the Vocational Rehabilitation Act of 1973.
   c) Individuals with Disabilities Education Act of 1990, Public Law 101-476.
   d) Massachusetts State Law Chapter 766.

6. Circle the descriptor which identifies the level of effort provided by the University in recruitment of freshman and transfer students with disabilities.

7. Place a check next to the resources which you would most likely use to further your understanding of students with disabilities.

<table>
<thead>
<tr>
<th>Very Familiar</th>
<th>Very Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiar Unfamiliar</td>
<td></td>
</tr>
</tbody>
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<table>
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<th>Familiar</th>
<th>Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiar Unfamiliar</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Too Little</th>
<th>Adequate</th>
<th>Too Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

273
## DISABILITY AWARENESS INVENTORY
### SECTION II

**INSTRUCTIONS**
Circle the number from 1 to 5 beside each statement to indicate the degree of your agreement or disagreement with each statement. The meaning of each number is given at the top of each column.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>No Opinion</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The presence of an interpreter for a student with a hearing impairment is a distraction in the classroom.</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Practitioners and employers in my discipline actively recruit disabled people.</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. A greater portion of class time is needed to teach to the needs of students with disabilities.</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Having students with disabilities in the classroom takes away from the quality of education other students receive.</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Additional resources should be allocated to increase the level of support services at the University for students with disabilities.</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Making educational accommodations for students with disabilities, such as allowing a learning disabled student to take un-timed examinations, compromises the integrity of the curriculum.</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. People with disabilities have fewer employment opportunities than other adults.</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. A classroom's location should be changed to provide accessibility for a disabled student.</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. The form of an exam should be altered if the testing procedure puts a disabled student at a disadvantage.</td>
<td>9</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Providing special aids and services for students with disabilities in the classroom is likely to impinge upon the instructor's academic freedom.</td>
<td>10</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. A student with an speech disorder should be given an alternate assignment to presenting an oral report.</td>
<td>11</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Certain college or departmental requirements should be modified for students with disabilities, such as waiving a foreign language requirement for a deaf student, to ensure equal educational opportunity.</td>
<td>12</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. The instructor should alter his or her teaching style to enhance communication with students with disabilities.</td>
<td>13</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. Students with learning disabilities should be enrolled in a discipline other than mine.</td>
<td>14</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. Background information concerning a student's disability should be provided to the instructor before the course begins.</td>
<td>15</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. Providing additional support services for students with disabilities inhibits the development of self-reliance and independence.</td>
<td>16</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Please return by May 1, 1992.
Return via campus mail.
Faculty Surveyed on Awareness of Students With Disabilities

A survey of faculty members' awareness of students with disabilities is beginning this week under the auspices of Project I CAN (Initiating Career Achievement Networks) of the College of Arts and Sciences' Center for Counseling and Academic Development.

According to David Baggett of Project I CAN, the anonymous survey was scheduled to be sent to all faculty by campus mail on April 17. The form can be completed in about eight minutes and should be returned by May 1.

Baggett said the study is focused on determining the level of faculty members' understanding and experience concerning people with disabilities. The premise of the research is that the faculty's knowledge of disabilities, skills in working with students with disabilities, experience with teaching and counseling students with disabilities, and attitudes towards students with disabilities are significant factors that may contribute to the academic success of students with disabilities.

Making the transition from secondary to post-secondary education is a key issue for all students, Baggett said. Students with disabilities entering an institution of higher education face additional challenges. Once students with disabilities have successfully adapted to the post-secondary environment, identifying and preparing for a productive and satisfying career can be an equally demanding task, he said.

The study is part of a three-stage project funded by a grant from the U.S. Department of Education's Office of Special Education and Rehabilitative Services.

The initial phase of the project, said Baggett, which began Oct. 1, focuses on the development and implementation of a model career plan for students with disabilities in higher education.

The second phase is the demonstration of a model career counseling program for the University and other higher education institutions. During phase three, project staff will disseminate model activities through conferences, research, and technical papers.

Questions and comments about the project may be directed to David Baggett, 115 Berkshire House, 5-0333.

Project I CAN Thanks Survey Respondents

On April 21, Project I CAN distributed a research instrument to 1,350 faculty members at the University. The intent of the study was to determine the level of knowledge and experience which faculty have about individuals with disabilities.

As director of Project I CAN, I would like to thank the 413 faculty who completed and returned the questionnaire. This return rate represents 30 percent of the faculty. The 228 individuals who participated in the complimentary raffle may be interested to know that Rachel Clifton of Psychology was the winner of the $50 gift certificate to the Jeffrey Amherst Bookstore.

As always, questions, comments, and suggestions concerning Project I CAN are welcomed.

David Baggett
director, Project I CAN
Last spring I conducted a Study of Faculty Awareness of Students with Disabilities at the University. In addition to that quantitative survey, I am interviewing deans and department heads from each school or college to further examine issues related to students with disabilities on this campus. I would welcome your participation in this research study.

The structured interview's purpose is to elicit your ideas and opinions related to developing strategies that would enable faculty to work more effectively with students with disabilities. I guarantee that your identity as a participant will not be disclosed. The participant's remarks and observations will be developed into themes and included in my doctoral dissertation.

The interview will take about an hour and I would like to tape record the interview session so that I may make an accurate transcription of the conversation. I hope to begin conducting the interviews in November and continue throughout the rest of the semester.

I understand that your participation in this study will take an hour away from an already busy schedule, but this research will prove to be beneficial to students with disabilities on campus. I will be calling you in the near future to inquire as to your willingness to participate in this study. Thank you.

Sincerely,

David Baggett
Guided Interview Questions

* Do you want your quotes to be presented as anonymous in any manuscripts that are produced as a result of this interview?

1. How does your faculty view educational accommodations for students with disabilities?
   Codes: favorable, unfavorable, unaware

2. Has your school or college identified the need to implement disability awareness training for its faculty?
   Codes: formally identified, informally discussed, have not identified

3. What has been done to increase the faculty's knowledge of the needs of students with disabilities and related issues? What are some examples of past efforts your college has made in this area?
   Codes: activities, discussions, other, nothing

4. What are some additional strategies that you think would work towards educating your faculty about disability and related issues?
   Codes: insightful ideas, traditional strategies, other types of ideas, no ideas

5. What resources would your faculty most likely use to further their understanding about students with disabilities?
   Codes: identified innovative resources, identified traditional resources, other resources, no resources identified

6. What are the best and most effective methods for presenting this information to your faculty?
   Codes: insightful ideas, traditional methods, other types of ideas, no ideas

7. How do you think your faculty will respond to disability awareness training activities?
   Codes: positive, negative, neutral, other
APPENDIX D

STATISTICS FOR COMPUTING HYPOTHESES TESTS
FOR RESEARCH QUESTION 2 - NUMBER OF STUDENTS TAUGHT
(DEPENDENT VARIABLE) AND ATTITUDINAL QUESTIONS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number</th>
<th>Multiple R</th>
<th>R 2</th>
<th>Adj. R2</th>
<th>Stand. Error of Est.</th>
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<td>0.044</td>
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<td>0.908</td>
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### APPENDIX E

**STATISTICS FOR COMPUTING HYPOTHESES TESTS FOR RESEARCH QUESTION 3 - COLLEGE (DEPENDENT VARIABLE) AND ATTITUDINAL QUESTIONS**

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APPENDIX F

STATISTICS FOR COMPUTING HYPOTHESES TESTS FOR SEX (DEPENDENT VARIABLE) AND THREE ATTITUDINAL QUESTIONS

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