ABSTRACT
        This paper summarizes research on the attitudes of
college faculty and staff toward students with disabilities and then
offers some practical approaches for improving these attitudes.
Research is reported which has identified factors associated with
different attitudes. These include previous contact with individuals
with disabilities, gender, intellectual discipline, level of
information about individuals with disabilities, and terminology used
to describe individuals with disabilities. Suggestions for improving
attitudes focus on increasing faculty awareness about legal
requirements, disability types, strategies for working with students
with disabilities, and accommodations to increase independence and
productivity. Examples are given from Project DO-IT (Disabilities,
Opportunities, Internetworking, and Technology) at the University of
Washington. This project includes presentations to faculty;
opportunities for faculty to teach students with disabilities; and
distribution of publications, videotapes, and electronic resources. A
sample text for a faculty brochure is attached. (Contains 16
references.) (DB)

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Improving Campus Attitudes About Students with Disabilities

Conference paper presented at AHEAD (Association for Higher Education and
Disability), July, 1994, Columbus, Ohio
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Abstract

Negative attitudes of faculty and staff are often cited as barriers to the

successful completion of academic classes and programs by students with

disabilities. Research on the attitudes of faculty and staff toward students with

disabilities have identified factors associated with different attitudes. They include

previous contact with individuals with disabilities, gender, discipline, level of

information about individuals with disabilities, and terminology used to describe

individuals with disabilities. This paper summarizes research and then presents

practical approaches for improving attitudes about students with disabilities.

Included are ways to increase faculty awareness about legal requirements, disability

types, strategies for working with students with disabilities, and accommodations

which include technology for increasing independence and productivity. Examples

are given from Project DO-IT (Disabilities, Opportunities, Internetworking, and

Technology) at the University of Washington. Funded primarily by the National

Science Foundation, disability awareness act'/.ties of DO-IT include presentations to

faculty; opportunities for faculty to teach sti c'ents with disabilities; and distribution

of publications, videotapes, and electronic resources.

Improving Campus Attitudes About Students with Disabilities

by Sheryl Burgstahler, Ph. D.
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Students with disabilities face many of the same challenges as other students
as they pursue college studies (Brown & Foster, 1990; Burgstahler, 1992; Demos,
Gaines, Lazar, Rogers, & Stirnkorb, 1978; Patterson, Scales, & Sedlacek, 1983).
However, many disabled students sense that others in their college environment
view them negatively (Babbitt, Burbach, & Iutcovich, 1979). They cite negative
attitudes of faculty and staff as barriers to the successful completion of academic
classes and programs. Some students with disabilities are concerned about the lack
of awareness of their special requirements by faculty. They feel that professors often
fail to meet their needs (Moore & Nye, 1986). They are somewhat negative about
services provided to them (Amos, Graham, & Jenkins, 1988). However, students
with disabilities often hesitate to request accommodations (Amsel & Fichten, 1990)
and even feel that it is less appropriate to request special treatment than non-
disabled students. (Amos, Graham, & Jenkins; Boyer-Stephens & Messerli, 1990).

A few studies have explored the attitudes of faculty and staff toward post-
secondary students with disabilities. Professors consider blindness to place the most
serious constraint on college work and deafness the second most serious constraint
(Newman, 1976). They support the integration of students with sensory and
physical disabilities, but are less supportive of the integration of students with
learning disabilities and emotional problems (Leyser, 1990). However, faculty
members have little knowledge of the characteristics and needs of students with
disabilities, especially in the area of learning disabilities (Aksamit, Leuenberger, &
Morris, 1987; Dodd, Fischer, Hermanson, & Nelson, 1990).

Faculty attitudes toward students with disabilities are related to several
factors. These include: 1) previous contact with individuals with disabilities, 2)
gender, 3) discipline, and 4) level of information. High scores on attitude scales

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tend to be exhibited by faculty who have had previous contact with disabled persons (Aksamit et al., 1987; Fonosch & Schwab, 1981; Sedlacek & Stovall, 1983). Female instructors and educators in social sciences and education tend to have high positive attitudes toward disabled students (Fonosch & Schwab). And, faculty with more information about disabilities have more positive attitudes than those with less information (Aksamit et al.). Professors are also influenced by the descriptions of individuals with disabilities, suggesting that many attitudinal barriers can be traced directly to the use of negative terminology (Minner & Prater, 1984). Specifically, the "learning disabled" label significantly and negatively influences faculty members' expectations.

In summary, although some faculty have positive attitudes about including students with disabilities in higher education, they generally have limited knowledge of disabilities and accommodations. The most positive attitudes are possessed by female faculty, those who have had experiences with and knowledge of disabled individuals, and faculty in social science and education disciplines. Attitudes toward students with disabilities have also been found to vary with the type of situation. People are also influenced by the presence of negative labels and descriptions of disabled students. These findings suggest that programs to help increase opportunities for interaction and increase the awareness of faculty about disabled students may positively affect attitudes toward them.

Summarized below are practical approaches used by the DO-IT (Disabilities, Opportunities, Internetworking, and Technology) project at the University of Washington. Based on the research in this area, they are designed to improve faculty attitudes and increase knowledge about students with disabilities. Included are ways to increase faculty awareness about legal requirements, disability types, strategies for working with students with disabilities, and accommodations including technology for increasing independence and productivity.

DO-IT

DO-IT, primarily funded by the National Science Foundation, is designed to increase the participation of students with disabilities in science, engineering and mathematics academic programs and careers. An important goal of DO-IT is to improve the campus climate for students with disabilities in order to increase their successful participation. A specific objective is to improve faculty attitudes and knowledge about students with disabilities. Disability awareness activities of DO-IT include presentations to faculty; opportunities to teach students with disabilities; and distribution of publications, videotapes, and electronic resources.

Teaching Students with Disabilities

DO-IT hosts a yearly live-in summer program for high school students with disabilities. Each year DO-IT gives faculty members opportunities to teach labs to these DO-IT Scholars. Their disabilities include blindness, low vision, mobility impairments, hearing impairments, learning disabilities, health impairments, and attention deficit disorder. Although most faculty members express concerns about addressing this audience, responses to post-program evaluation instruments are overwhelmingly positive. All participating faculty have indicated they would like to teach in the program again and rated student performance very high when compared to that of other students they have worked with.

Presentations

DO-IT staff delivers disability awareness presentations to UW faculty and staff at regular departmental meetings. The purpose of the presentations is to improve attitudes towards disabled students and provide creative and practical approaches for ensuring access to educational opportunities. Attendees are given an informational brochure, Working *Together: Faculty and Students with Disabilities,,* (see attachment) which lists legal requirements for accommodating students with disabilities, examples of accommodations, specific suggestions for faculty, and campus resources. A 9-minute videotape, funded by U.S. West Communications, is

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shown. It introduces viewers to faculty and post-secondary students with disabilities demonstrating successful techniques (using computers, adaptive technology, networks, and other accommodations) that allow the students to participate more productively and independently in academic programs and careers.

Printed Publications and Electronic Resources

Through printed publications, DO-IT communicates information to a diverse and growing audience. Methods and materials developed by DO-IT are shared with others who often use them to develop similar programs and materials. Publications include *Working Together: Faculty and Students with Disabilities*, (see attachment), *Adaptive Technology that Provides Access to Computers*, *Guidelines for DO-IT Summer Program Instructors*, *DO-IT Snapshots*, *Use of the Internet*, and *DO-IT News* newsletters. Publications help increase the awareness of the potential contributions and accommodation needs of individuals with disabilities in an academic setting.

The Working *Together* videotape is made available nation-wide. NEC Foundation of America provided funds to create and distribute disability awareness workshop materials, including the videotape.

Electronic tools on the Internet network allow DO-IT to extend its reach world-wide. An electronic list is used to distribute DO-IT newsletters and facilitate communication between people interested in helping students with disabilities succeed in higher education, particularly in science, engineering, and science. An electronic gopher server distributes DO-IT publications and provides links to useful resources on the Internet.

Conclusion

Negative faculty attitudes are often cited by students with disabilities as barriers to higher education. Research documents several factors that are related to faculty attitudes. Practical approaches, such as those demonstrated by the

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DO-IT project, have the potential to ultimately increase the successful

participation of individuals with disabilities in academic programs and careers.

For more information about DO-IT or to receive printed publications or

videotapes, contact DO-IT, JE-25, University of Washington, Seattle, WA 98195.

To access the DO-IT electronic information, access the gopher server at

hawking.u.washington.edu

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Working Together: Faculty and Students with Disabilities

LEGAL ISSUES

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 prohibit discrimination against individuals with disabilities.

According to these laws, no otherwise qualified individual with a disability shall, solely by reason of his/her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity of a public entity.

Qualified with respect to post-secondary educational services, means a person who meets the academic and technical standards requisite to admission or participation in the education program or activity, with or without reasonable modifications to rules, policies or practices; the removal of architectural, communication or transportation barriers; or the provision of auxiliary aids and services.

"Person with a disability" means any person who 1) has a physical or mental impairment which substantially limits one or more major life activities [including walking, seeing, hearing, speaking, breathing, learning, and working], 2) has a record of such an impairment, or 3) is regarded as having such an impairment.

Disabilities covered by legislation include (but are not limited to) AIDS, Cancer, Cerebral Palsy, Diabetes, Epilepsy, head injuries, hearing impairments, specific learning disabilities, loss of limbs, Multiple Sclerosis, Muscular Dystrophy, psychiatric disorders, speech impairments, spinal cord injuries, and vision impairments.

SUGGESTIONS FOR THE CLASSROOM, LABORATORY, EXAMINATIONS AND FIELDWORK

Classroom

- Include a statement on the class syllabus inviting the student to discuss academic needs with you. For example, "If you have a documented disability and wish to discuss academic accommodations with me, please contact me as soon as possible."

- Inquire about special needs in classroom, in labs, in fieldwork and on field trips. Work with the student and Disabled Student Services (DSS) to determine appropriate accommodations.

- Select course materials early and distribute syllabi, assignments, and reading lists in advance and in electronic format (e.g. disk, network) to facilitate translation to audio-tape, Braille, and large print.

- Write key phrases on the blackboard. Face the class when speaking. Hand out assignments in writing. Provide written summaries of demonstrations in advance and use captioned films if you have a hearing impaired student in class.

- Describe visually presented material carefully and consistently if there is a student with a vision impairment in class. For example, you might say, "The 3 inch square cube of iron on the left," rather than "this cube."

Laboratory

- Provide raised-line drawings and tactile models of graphic materials for visually impaired students. Use adaptive lab equipment such as talking thermometers, and calculators, and computers with Braille or voice output.

- Use alternate, adjustable-height work and storage spaces, such as a portable lazy susan or a storage cabinet on casters, for students with mobility impairments.

- Discuss safety concerns with the student and Disabled Student Services (DSS). Ensure that safety equipment is adapted with Braille markings, lengthened pull chains, and/or visual warning systems depending upon the disability.

Examinations and Fieldwork

- Measure knowledge rather than physical performance of a task when monitoring a student's understanding of material.

- Allow extra time to complete exams. If you give double time on a two hour test, consider giving the student half of the test on two days.

- Ask student how s/he might be able to do specific aspects of field work. Attempt to include student in field work opportunities, rather than automatically suggesting non-field work curriculum alternatives.

- Plan field trips in advance and arrange for accessible transport vehicles.

EXAMPLES OF DISABILITY ACCOMMODATIONS

Low Vision

Large print course and lab handouts
Closed circuit TV to enlarge printed materials
Computer equipped to enlarge screen characters and images
Large print lab signs

Blindness

Computer with optical character reader, voice output, Braille screen
    display and printer output
Adaptive lab equipment (e.g. talking thermometers, calculators, light
    probes, and liquid level indicators)
Describe visually presented material in detail
Audio-taped or Brailled lecture notes, handouts, and texts
Raised-line drawings and tactile models of graphic materials
Braille markings on lab equipment

Hearing Loss

Face student when speaking, make sure face is well lit
FM system for lecturer and student
Present information and descriptions of processes visually
Deaf Interpreter, note taker
Use of electronic mail for class discussions
Visual warning systems for lab emergencies

Learning

Extra exam time
Note taker
Taped class materials
Computer with voice output, spell checker, and grammar checker

Mobility Loss

Relocate classrooms, labs, and field trips to accessible locations
Lowered tables, basins, and other lab equipment
Computer equipped with special input device (e.g., voice, Morse code,
    alternative keyboard)
Note taker/attendant to assist with lab work (or use a group-
 oriented lab structure.)

Health

Flexible attendance requirements and extra exam time
Note takers

UNIVERSITY OF WASHINGTON CAMPUS RESOURCES

• Access Guide for Persons With Disabilities
543-3535 ext. 289. Call the Facilities Management Office for a guide to
accessible routes and buildings.

• Access Problems
685-1411. Call the Physical Plant Trouble Number to report problems with
the operation of University facilities, such as automatic doors and
elevators.

• Adaptive Computer Technology
685-4144, atl@cac.washington.edu,
G16 HUB. Specialized equipment and software in the Adaptive Technology Lab
gives those with disabilities access to computing
resources.

• ASUW Disabled Students Commission (DSC)
543-7503, 543-8725/TT, 302A HUB.
This student commission increases the awareness of disability-related
issues, voices the needs of students with disabilities, and provides peer
support.

• Braille Service
685-4144, G16 HUB. Printed materials can be Brailled in the Adaptive Technology Lab. Electronic mail requests for transcription can be sent to braille@u.washington.edu.

• Classroom and Laboratory Relocation
543-1080, 209 Schmitz. Contact Room Assignments to move a classroom or laboratory to an accessible location.

• Dial-a-Ride
685-1511. Dial-a-Ride provides on campus shuttle service for students, faculty, and staff.

• Disabled Student Services (DSS)
543-8925 Voice/TT, 448 Schmitz Hall.
Assists with the provision of academic accommodations, i.e., test access and sign language interpreters.

• Field Trip Transport
685-1566. Contact Motor Pool to make special transportation arrangements for students with disabilities.

• Furniture Changes
543-6277. Contact David Hall in Classroom improvements to request the removal of stationary furniture or the provision of adaptive tables.

• Non-Course Related Disability Arrangements
543-6450, 543-6452/TT,
access@u.washington.edu. Contact the Office of the Americans With Disabilities Act Coordinator to request disability accommodations for a non-course related activity or employment.

• Study Skills
543-1240, 401 Schmitz. The Student Counseling Center offers classes on academic skills, time and stress management, and test anxiety.

• Telephone Communication With Deaf Students
1-800-833-6384. To converse with a deaf individual by phone when only one person has a TT (teletype) device, call the Washington Relay Service for a mediated conversation.

ADDITIONAL INFORMATION

This publication was funded by the National Science Foundation as part of Project DO-IT (Disabilities, Opportunities, Internetworking and Technology). DO-IT recruits students with disabilities into science, engineering and mathematics programs, making extensive use of computers, adaptive technology and electronic networking.

For further information about DO-IT, to be placed on the DO-IT mailing list, or to request this publication in an alternative format, contact:

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