Implementing the Americans With Disabilities Act of 1990 in Higher Education

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The purpose of this paper is to provide educators and administrators in higher education with a greater understanding of how the Americans With Disabilities Act of 1990 (ADA) (Public Law 101-336) may affect institutions of higher education and to suggest ways that occupational therapists can assist institutions of higher education to comply with the ADA. When educators attempt to comply with the ADA in systems of higher education, the complexity of universities calls for a model reflective of that complexity. The systems approach to higher education, a model based on the general systems theory, is suggested as such a model. The three essential components of the model—input (i.e., applicants to a university), throughput (i.e., enrolled university student), and output (i.e., the student being graduated)—are acted on by many subsystems of the university. Some of those likely to be affected are application procedures, transportation, housing, dining facilities, and curricula. In planning ways to comply with the ADA, educators in higher education may find that many of these subsystems are required to adapt and make reasonable accommodations for the student with a disability. The model can be used to help identify those subsystems that will be affected by the law and to facilitate planning to comply with the law.

Although occupational therapists most often work with persons to help them adapt to change in their lives, they can also work in systems of higher education and help the systems to plan and implement programs related to the ADA. The most effective programs are usually those that are well planned and designed from a holistic perspective, rather than those that are developed as a reaction to a specific situation or incident, that is, programs that are proactive rather than reactive. By using the systems approach to higher education, occupational therapists can focus on those components and subsystems within a university that may be affected by the ADA and meet the individual needs of a university.

The importance of education to Americans with a disability can hardly be overemphasized. Education, in fact, is often the key to a person becoming self-supporting and is one of two components that determine socioeconomic status in our society (Stevens & Cho, 1985). In comparing working and nonworking persons with a disability aged 16 to 64 years, Louis Harris and Associates (1986) interviewed by telephone 1,000 people who were disabled but not institutionalized. They found that those who work are better educated. They also reported that four times as many Americans with disabilities who work have at least a 4-year college education in comparison with those with disabilities who do not work. Forty percent of the sample did not complete high school. Sixty-six percent of those from the same study who were of working age reported they want to work.
Data suggest that education may be the route out of the poverty and financial dependency that many Americans with disabilities experience. It is clear, therefore, that colleges and universities have an important role in helping Americans with disabilities attain the same opportunities in higher education as Americans without disabilities, thus helping them to become an integral part of American society.

Universities are somewhat unusual when compared with other agencies or businesses in that their functions may include all but one area addressed by the Americans With Disabilities Act of 1990 (ADA) (Public Law 101-336) — telecommunications. Title I, Employment, becomes applicable to universities on July 26, 1992 if the university employs at least 25 faculty, staff, or student workers or a combination of these. If local or state governments offer public services at a site of higher education (as is sometimes done), Title II, Public Services, which became effective January 26, 1992, applies. If a university provides or contracts with others to provide transportation within the university environment, they must begin to comply with the ADA by August 26, 1990. Many other functions of the university are covered under Title III, Public Accommodations and Services Operated by Private Entities. In general, Title III becomes effective January 26, 1992. However, the public accommodations section of the law will be phased in, and the effective date for businesses that have between 11 and 24 employees and have gross receipts of $1 million or less is July 26, 1992. The general rule about discrimination in public accommodations under ADA is that “no individual can be discriminated against on the basis of disability [defined by Title I] in the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations of any place of public accommodation by a person who owns, leases (or leases to), or operates a place of public accommodation” [ADA, Title III, § 302 (a)]. Full and equal enjoyment means that persons with disabilities must be afforded equal opportunity to obtain the identical result or identical level of achievement as nondisabled persons (Law Firm of Ice, Miller, Donadio, & Ryan, 1990).

The law further states that the term public accommodation includes private entities that affect commerce and names 12 broad categories of facilities that are covered under the law. Colleges or universities are covered under Title III, Section 301 (7), which states, “a nursery, elementary, secondary, undergraduate, or postgraduate private school, or other place of education.” However, again because of the nature of universities, their programs and facilities are included under many other categories of public accommodations listed in Title III, for example, places of lodging [§ 301 (7)(A)]; establishments serving food or drink [§ 301 (7)(B)]; entertainment and sports facilities [§ 301 (7)(C)]; places of public gathering [§ 301 (7)(D)]; sales or rental establishments [§ 301 (7)(E)]; service establishments such as offices of health care professionals [§ 301 (7)(F)]; stations used for public transportation [§ 301 (7)(G)]; places of public display [§ 301(7)(H)]; places of recreation [§ 301(7)(I)]; social service centers [§ 301(7)(K)]; and places of exercise or recreation [§ 301 (7)(L)].

The purpose of this paper is twofold. The first purpose is to provide educators and administrators of higher education systems with a greater understanding of how the ADA may affect institutions of higher education. The second purpose is to suggest ways that occupational therapists can assist institutions of higher education to comply with the ADA. To accomplish these purposes, we (a) briefly review general systems theory and present a schema to illustrate it, (b) suggest general roles of occupational therapists working in a system of higher education, (c) present and depict a model entitled Systems Approach to Higher Education based on general systems theory, and (d) suggest ways that universities can apply the model to anticipate and respond to the requirements of the ADA.

A Systems Model

The complexity of interrelations within colleges and universities and the comprehensiveness of the ADA calls for a model that can guide an appropriate institutional response. General systems theory, which provides a framework for visualizing an organization holistically and comprehensively as it pursues its mission in an environment, represents such a model (Bass, 1951; Hempel, 1951; Jonas, 1951; von Bertalanffy, 1950, 1951a, 1951b, 1951c).

Based on the simple observation that things are related, systems theory is relevant to a dynamic system such as a university, which has many components. Things, according to the theory, whether concrete (such as buildings, classrooms, chairs, atoms) or abstract (such as knowledge, theories, propositions, words), are made up of smaller things. Wholes, themselves parts of larger wholes, are composed not only of their constituent parts (i.e., A + B), but also of qualities that emerge as the result of interactions between and among the parts (i.e., A × B). This synergistic characteristic of wholes means that things are more than just the sum of their parts. An understanding of any system, then, is not possible without an awareness of its basic elements, an awareness of how they interrelate to form the whole, and an awareness of how the whole system relates to its environment, that is, everything outside the system (D. A. Sweeney, personal communication, November 15, 1991).

A system may be said to be a process that acts on something (inputs) to produce something else (outputs). Outputs may be desirable or undesirable. While the input is being acted on, the process is called throughput. Each of the three essential components of the system (input, throughput, and output) has subsystems, that is, more that one thing constitutes the input, the throughput, and...
also the output. Additionally, each system requires a component referred to as a control subsystem, which is designed to maintain acceptable standards for the quantity and quality of outputs. This is accomplished through the comparison of actual output (quality, quantity, rate) with desired output and the generation of information (feedback) to guide corrective action. Quality subsystems guarantee continuity of input (supply), continuity of operation, and continuity of output (demand). Sometimes the control function can be virtually automatic and mechanical, like a thermostat in a room. At other times it may be complicated and more abstract. This information on system performance may also be used prospectively to anticipate aspects of the system's future situations (feedforward) (D. A. Sweeney, personal communication, November 15, 1991).

Every system is also a component of an environment. The system both acts on the environment and is acted on by the environment. The feedforward may be used not only to anticipate future characteristics of the larger environment of which the system is a part, but also to create the future of that environment (see Ackoff, 1979, 1981; Senge, 1990; Senge & Asay, 1988). Figure 1 depicts a schematic drawing of the system described above.

The Potential Role of Occupational Therapists in Higher Education

The ADA mandates that systems of education accommodate their students and employees with disabilities as well as persons with disabilities who visit their campus. This mandate from the federal government requires responses from universities that most may be unprepared to make. To comply with the ADA, universities now have a need for a specific type of expertise. They need experts who can analyze tasks to determine the physical, emotional, cognitive, sensory, and perceptual functioning in order to make appropriate accommodations. They need individuals to help them identify barriers that prevent persons from performing major life activities. They need individuals to suggest alternative ways of accomplishing the same tasks. Universities need help in making adaptive responses.

Although occupational therapists more frequently work with individuals, rather than organizations, to help create change within them, they can help universities adapt to the ADA. By identifying what needs to be changed within a system, occupational therapists can help systems adapt to different conditions or requirements imposed on them by their environment (such as the ADA). Their education in analyzing activities and re-structuring environments make them qualified to help colleges and universities comply with the ADA.

In assisting institutions of higher education to comply with the ADA, the occupational therapist might provide direct service as an employee of the system or serve as a consultant. In either case, the client of the occupational therapist would be the system of higher education.

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Figure 1. A systems model. (Note. Adapted from a drawing courtesy of Donald A. Sweeney, OTR, Associate Director, Texas A&M University, Center for Urban Affairs, College of Architecture, College Station, Texas. Adapted by permission.)
The size of the educational system and its needs in complying with the ADA may determine the specific status of the therapist. As an employee or consultant, an occupational therapist can help institutions of higher education develop an overall plan to comply with the ADA, assist departments to identify essential criteria for students (i.e., establish professional and technical standards), and help the system's personnel department to determine and write essential functions of jobs. Additionally, the therapist can provide sensitivity training to faculty, staff, and students so that persons within the system might become more comfortable interacting with persons who have a disability. Consulting with architects to help identify potential barriers in designs prior to construction of a building is also a role that occupational therapists can perform within a system of higher education. Involving occupational therapists in identifying potential barriers when new facilities are being planned can result in newer accommodations being required at a later period. Occupational therapists might provide service to a university by suggesting specific accommodations to faculty and staff to help individual students with disabilities participate fully in the system of higher education.

To function within a system of higher education, occupational therapists may need to review such systems. A greater understanding of the essential components of a systems model can help one to understand how change can be created within a system, as opposed to within an individual. When working with any client, the occupational therapist can use a frame of reference or model for assessments and interventions in order to focus on the issues that are important to the client. Use of a frame of reference when helping systems of higher education comply with the ADA can also help the occupational therapist focus on the process itself. A discussion of these tasks is provided below.

The Systems Approach to Higher Education

The systems model shown in Figure 1 has been adapted to a college or university system and is called the Systems Approach to Higher Education. As with adaptation of any other model, several assumptions were made, as listed below:

1. Only qualified persons are admitted to the college or university, including those who have a disability.
2. The right to make academic decisions lies within the province of faculty, and modifications to a degree plan can only be determined by faculty within a specific component.
3. Students who have a disability are responsible for seeking resources to assist them in progressing through the system, and the university has a responsibility to make the resources available.
4. Once admitted to and enrolled in a university, the student represents an investment for himself or herself as well as for the university. Both parties (faculty and student) are responsible for making the experience successful and fruitful.
5. Students with a disability are entitled to the same educational experiences as students without a disability.
6. Students can obtain competencies in academic work successfully by using a variety of methods or routes.
7. A major role of the university is to guide and nurture all students, including those with a disability.

Use of the Systems Approach to Higher Education is not limited to occupational therapists. It can be helpful to administrators of systems of higher education by helping them identify the components and subsystems of their system that must comply with the ADA. The model can be used jointly by occupational therapists and others in collaboration with university personnel, especially in planning. It can help them identify the strengths and weaknesses of components and plan and implement proactive methods to assist students with disabilities. The model can also help individual occupational therapists working within a university in several ways. It can be used to identify those subsystems that must comply with the ADA and provide a process by which a comprehensive analysis of the components of a university can be undertaken. It provides a method to develop recommendations in terms of inputs, throughputs, and outputs. Control components of the system are identified, and the relation of the controls to the hierarchy of the system is shown. Additionally, by understanding the process and the complexities of the system, occupational therapists can obtain a perspective of how the system functions from a student’s point of view. The use of this model can help avoid a reductionist approach to implementation of the ADA.

Components of the Systems Approach to Higher Education

Input

The input may be prospective students with or without a disability who are or are not qualified. The input may also be either prospective graduate or undergraduate students or prospective special students (such as those not seeking a degree). Subsystems that act on the input are the admission’s office of the university and the admissions committee of the university.

Throughput

Throughput consists of all enrolled students. The throughput interacts with (i.e., acts on, is acted on, and reacts to) other subsystems of the university, such as the registrar’s office, financial aid, transportation (if provided by the university), academic components and the faculty who teach and advise, the office for disabled students, the
health center, housing, learning resources, the counseling center, and computer services.

Output

The output comprised those students who leave the system. There are, of course, undesirable and desirable outputs of a university, such as (a) those students who complete their academic programs and are graduated, (b) those who complete a special time-limited program that the university sponsors, (c) students who may attend the university for specific limited purposes, (d) students who leave by choice without completing a program, and (e) students whose academic performance is sufficiently low to require them to leave the system. A subsystem of the university that is designed specifically to affect the output is the career planning and placement office. (The main components of this model are depicted in Figure 2.)

The university system acts on its environment and is also acted on by the environment. From the students’ perspective, the university acts on the environment by releasing educated and trained persons to the community. The environment acts on the university system in many ways. For example, local, state, regional, and national values affect the university through numerous channels, especially through financial and legislative channels. The ADA is an example of the environment (in this case, the federal government) acting on the university system. The law requires a university to alter its concrete and abstract subsystems to ensure that qualified persons with a disability have equal opportunity to obtain an education, which is a civil right of all Americans.

Quality Control

A university system has a control system to ensure its continued functioning. Each essential component of the university system (input, throughput, and output) has a control subsystem designed to maintain acceptable standards regarding the number and quality of the graduates of a university. One way that the university can control for quality is to compare the actual output (i.e., the number of students who have graduated, how long it takes students to go through the academic programs, the level of
Barriers to Qualified Individuals

Barriers to students may occur during the input, throughput, or output stage. Barriers may be abstract or concrete. Abstract barriers involve attitudinal and communication issues. Concrete barriers are either man-made (e.g., inaccessible classrooms, bathrooms, telephones, libraries, and transportation) or natural environmental barriers (e.g., snow, ice, rain).

Components of a University System and Compliance With the ADA

Whether or not someone is admitted to a university, remains in a university, and is graduated from a university depends on the standards established by a system of higher education. Colleges and universities are not required to admit any student who does not meet the criteria that they have established and made known to the public. However, compliance with the ADA will require systems of higher education to alter some of the subsystems that act on the student. This suggests that it is the environment within the system that has the deficit and not the person with a disability (as implied by Kalscheur, 1992). The focus of compliance with the ADA is to help reduce the deficits within the university system so that qualified persons can be admitted to the university, proceed through the system, and become desirable output. The ADA requires that numerous subsystems of the three essential components of the university system—input, throughput, and output—become more deficit-free for persons with a disability.

Input

Applicant Pool

The input of a system of higher education consists of its pool of applicants. Of this pool, only a small percentage will have a disability. However, a wide variety of disabilities will be represented, including sensory (primarily hearing and visual deficits), emotional, learning (perceptual and cognitive), physical, and chronic medical problems. Some of the disabilities of potential students will be obvious, whereas others may be invisible, such as those resulting from chronic medical problems, from learning disabilities, or from emotional difficulties. In the past, many persons with disabilities were discouraged from considering college as an option, and many of those persons became dependent on society. Such persons are visualized in the model as currently being in the warehouse within society because their skills and talents are stored and not used in the community. It may be that some of them will become applicants and will be accepted to a university. In that case, those persons would move from the warehouse into the system itself.

Applicants With a Disability

Applicants with a disability apply to the university along with other students. Such applicants may have any combination of the problems mentioned above. In fact, applicants do not have to have a specific diagnosis to qualify as being disabled under the ADA. A strength of the ADA is that rather than naming specific diagnoses that qualify persons as being disabled, the law defines disability in functional terms. Anyone who has a physical, mental, or emotional problem that interferes with a major life activity qualifies as being disabled (see ADA, Title I; Rybski, 1992). Persons who have a disability may not wish to identify themselves when they apply and are not required to do so by the ADA. However, if the admissions process requires any type of performance from them which, in order to compete to the best of their ability, requires accommodation, only those who identify themselves as being disabled can be accommodated.

University Subsystems That Act on Applicants With a Disability

Concrete and abstract subsystems of the university that subsequently affect an applicant with a disability and are ADA-specific to the input of the university are medical examinations, the applicant pool, admission testing (including the format of the tests and the location of the testing), academic standards, the affirmative action office, professional or technical program standards, the admission interview, the application packet, catalogs of the university, and a brochure listing resources for disabled students. Several of these are discussed below, particularly those accommodations that can be implemented with assistance from an occupational therapist.

Medical examination. If a university requires students to have a medical examination, a person with a disability must also comply and is not exempt by virtue of the fact that he or she has a disability. Unless the results of a medical examination demonstrate that an applicant is not qualified for the program (i.e., according to standards previously identified and made available to all applicants), these results cannot be used to deny him or her admission. As in employment settings, this information must be on separate forms apart from the application file, and confidentiality must be maintained.

Testing. An applicant with a disability must meet the same expectations for admission to the university as any other applicant. However, as with employment, if applicants are required to take tests, they are entitled to accommodations so that their ability to perform is not compromised. In addition, if a specific program within the
must also meet those qualifications. Some professional programs, for example, have established minimum psychomotor, cognitive, or psychosocial skills for acceptance into the program. Those criteria are equivalent to managers identifying essential job functions under the ADA. Specifically, professional programs (such as occupational therapy and physical therapy) may identify specific skills that are essential to persons in order to successfully complete the program and to gain employment in that discipline. The performance criteria should be those essential to performing the functions of the profession, as opposed to technical or marginal elements associated with performing professional responsibilities. Academicians can see this as an opportunity to help them identify the essential professional responsibilities of their discipline.

Application packet. A university may need to alter its application method to accommodate persons with a disability, for example, by allowing applications to be completed by telephone.

Interviews. The admission interview must accommodate the applicant with a disability. For example, the location of the interview must be accessible to the applicant with a wheelchair, the form of communication must accommodate the applicant with a communication deficit, and temporal adaptations must be provided for the applicant who speaks slowly or awkwardly. The applicant with a disability must identify his or her needs to the interviewer or scheduler prior to the interview in order for accommodations to be made.

Quality control. One way of ensuring a steady flow of qualified students is to develop specific marketing programs targeted at those persons with disabilities who are outside of the university environment. For students with a disability, catalog information that addresses the desire of the university to restructure aspects of its programs for qualified students with a disability could promote good public relations for a university and encourage qualified persons with a disability to become part of the applicant pool.

Barriers to applicants. As a student begins to search for the right university, barriers often appear that may interfere with or prevent entrance to a program of higher education. Although man-made barriers are usually identifiable, abstract barriers, which are less identifiable but often more discriminating than architectural barriers, may affect the process. Examples of abstract barriers are admission personnel with personality or attitudinal barriers within the college or university system (e.g., misconception, stereotyping, intolerance, condescension, discomfort, ignorance, insensitivity). An occupational therapist can develop and present workshops to faculty, staff, and students to help educate them about Americans with disabilities, thus reducing stereotyping, discomfort, insensitivity, and misconceptions. The workshops could also help people recognize and understand the barriers that prevent those with disabilities from functioning at their full potential within the university.

Proactive Response to the ADA

In the input stage, a system of higher education can proactively respond to the ADA in various ways. Two of these ways are described below.

Handbook. Although not required by the ADA, administrators of institutions of higher education may want to develop a handbook for students with a disability. The catalog could contain a statement that if an applicant has a disability, information may be obtained upon request from the office for disabled students. The handbook might inform potential students with a disability of their rights, of procedures to follow if they require accommodations in the classroom, in housing, with transportation, or in recreational facilities. It might also provide a list of resources to help students proceed through their university experience more smoothly. The handbook should be available in alternative formats, such as on audiotapes and videotapes, in large print, in an electronic file on computer disk, and through an electronic bulletin board. An occupational therapist can provide input for the content of the handbook.

Affirmative action. An important part of recruiting students who have a disability may be to identify those disabilities that may on the surface appear to exclude persons from pursuing a university degree. Occupational therapists can help the affirmative action officer identify persons for whom reasonable accommodations can be made and could give workshops to school counselors that can help the counselors more easily identify high school students with a disability who could succeed in college once appropriate resources are available. An occupational therapist could develop and present workshops at the university to potential students with a disability. A program could be developed and implemented at the university to recruit students with a disability. For example, prospective students with a disability could be invited to a week-long program at the university to see how well they get along in the university setting.

Throughput

The Enrolled Student With a Disability

The enrolled student with a disability is the throughput who is affected by the concrete and abstract elements of a university. These students must be qualified and must maintain the same academic standards as nondisabled students, but they face additional burdens because they must cope with the manifestations of the disability during the process of gaining an education. Because the definition of a disability is any condition that interferes with a major life activity, it may be minor and require little or no
accommodation or it may demand many accommodations to produce a productive educational experience. In the past, the demands made on students with disabilities to accommodate, and not their lack of ability, often made a college education an impossibility. The effect of the college experience on the student with a disability will vary among students. The ADA provides the basis for the student with a disability to request accommodations as needed to enhance learning.

University Subsystems That Act on Enrolled Students With a Disability

There are many throughput subsystems of the university that affect a student with a disability and are themselves acted on by ADA. The concrete subsystems include financial assistance, transportation, the office for disabled students, the health center, housing, learning resources, classrooms, computer labs, and the counseling center. Other concrete subsystems affected by the ADA but not discussed include dining facilities, recreational facilities, areas of public display, entertainment facilities, and bookstores. Some of the abstract subsystems of the throughput are curricula requirements; faculty advisement; scheduling of classes; and the attitudes of faculty, administration, and support personnel.

Financial assistance. Being enrolled in a university is expensive, and the cost is often higher for a student who has a disability. Such accommodations as note takers, aides to assist with activities of daily living, tape players, and talking personal computers are expensive but often essential for some students with a disability to be successful in an academic setting. Therefore, financial assistance is crucial for all but a few students with disabilities to progress successfully through the system. A number of financial resources may be available from external sources such as the Department of Vocational Rehabilitation and from private organizations designated for students who are disabled. Most financial aid departments at universities also arrange for work-study programs. Under the ADA, students with disabilities who work at the university are entitled to the same rights as others who work. An occupational therapist could be an asset to any department that places students for employment because of skills in determining if a person’s ability fits the essential functions required for a job.

Transportation. Often, one of the most difficult aspects of being disabled is traveling from one location to another and arriving in a timely manner in order to fulfill the occupational roles required to be a successful college student. If a university provides transportation on the university grounds (which is common on large campuses), the vehicles must accommodate those who are challenged physically by their environment. Environmental factors, such as weather conditions or parking facilities, may also hamper students’ mobility. The intent of the ADA is that persons who have a disability be provided access to transportation that is equivalent to that provided to other students. The transportation must be readily usable and readily accessible by persons with a disability. For example, a person using a wheelchair must be able to enter, exit, and safely and effectively use a vehicle that provides transportation to the public. An occupational therapist can assess whether transportation services are accessible to a particular student with a disability.

The office for disabled students. Although administration is not specifically discussed in this paper, the influence of this abstract subsystem is unquestionable. For example, the office for disabled students must be directed by a person who has knowledge of the ADA, holds a degree in a field related to disability, and can teach or train adults. The office personnel can (a) serve as a liaison between faculty and students with a disability, (b) direct students with disabilities to resources for their particular needs, and (c) provide information on financial assistance for needs other than college expenses or help students obtain physical assistance, readers, and note takers. Personnel from this office serve as a resource center for faculty to obtain information on disabilities and possible alternative testing methods. The office personnel may also refer individual students to health care personnel, as needed. Continuing education courses on disabilities and the ADA for faculty and staff can be offered.

Housing. Universities that provide housing for students must also provide housing accessible to students with a disability. All public areas of student housing must be accessible to those who have a disability as well, including common areas such as halls, laundry rooms, and recreational facilities. Although not all student rooms must be accessible to students with a disability, those students must be integrated with other students. Under the ADA, separate accommodations are not considered equal.

Learning resources. A learning resource laboratory may be extremely beneficial to students with a disability. Resources for students with a disability may include computer-assisted instruction, computers with voice feedback, textbooks that have been transcribed into audiotapes, page-turning devices, word processing assistance, books in large print, books in braille, audiovisual materials, and other specialized devices.

Curricula requirements. Curricula requirements for an academic unit rest ultimately with its faculty. In some cases, course substitution may be an appropriate way to accommodate students with a disability. A student in a wheelchair may have difficulty meeting the requirements for physical education classes. This requirement can be met by having the student participate in community wheelchair intramural sports. Some physical education classes can be adapted, for example, bowling, swimming, and karate. Foreign languages may also be a problem for students with certain disabilities. For example, those with
cerebral palsy or motor planning problems may find it almost impossible to speak a foreign language. As an accommodation to all students who find languages difficult, computer literacy may be substituted for a language requirement. Another possible substitution could be use of the computer to speak the language through student input.

Classrooms. Doorways must be wide enough to accommodate a wheelchair and have no seal, thus making maneuvering of the wheelchair easier. Desks must be high enough for wheelchairs to fit beneath them. Aisles must be wide enough for a wheelchair to pass through. Electrical outlets must be convenient for plugging in tape or video recorders. Overhead projection must be visible for students with a visual impairment. Any voice or sound projection must accommodate a student with a hearing problem.

Computer labs. Computer accessibility is a necessity, because many students with a disability can use computers to be tested or to complete assignments. Computers that have voice simulation or braille computers may be needed by persons with visual impairment.

The counseling center. The counseling center may wish to establish group sessions for students with a disability and have workshops for faculty and staff to make them more aware of and more sensitive to the needs of students with a disability. Counselors may find it productive to have workshops for students with a disability that focus on their becoming stronger advocates for themselves.

Academic advising. Academic advising has several components. When advising any university student, a faculty advisor needs to be familiar with resources available within the university community. To provide students with disabilities the most sound advice, faculty may need to be familiar with the ADA, which may be viewed as a resource. An instructor of a course also plays a role in academic advising. As such, he or she needs to be familiar with those resources available to the student who requires that a disability be accommodated. All faculty members must also be aware of those resources available to them to accommodate a person’s disability.

Supportive personnel. Supportive personnel are persons who assist the student with a disability in such activities as note taking, reading, and taping of classes. The university is not responsible for assisting students with a disability in obtaining supportive personnel for their activities of daily living (i.e., dressing, bathing, and other personal care). However, the university may be required to provide the services of supportive personnel if an accommodation requires such assistance.

Quality control. Testing is a thread that affects the quality of the students who enter the university, helps faculty determine which students are sufficiently qualified to be retained, and evaluates students to determine who is ready to be graduated. Testing provides quality assurance to ensure that a person with a degree of credentials offered by a university has completed the requirements within specified standards. Discussions of, workshops about, and investigations of testing accommodations that will not compromise the standards of each discipline are needed for faculty in the immediate future.

Barriers. Students spend most of their time in the higher education system proceeding through the throughput stage. The majority of the university’s components interact with students with disabilities at the throughput stage. The throughput stage is complex because of the complexity and interrelations of the components. It is easy for barriers to go unrecognized during a student’s throughput stage because they may be perceived as belonging to some other component’s domain. Disabled persons experience numerous barriers every day. So much time may be spent overcoming barriers that little time may remain for studying.

Faculty may be said to be on the front line of a person’s struggle to attend college. Faculty may believe that the standards for their program are being lowered. However, it may be that faculty have difficulty ascertaining which components of their discipline are essential professional responsibilities and which functions are marginal, nonessential tasks often performed by professionals in their field. Often, communication barriers cause difficulty for students with a disability. For example, a classroom may be changed unexpectedly and the disabled student cannot get to the rescheduled class. Attitudes of other students, support staff of the university, faculty, and visitors can make attending college extraordinarily difficult for a person with a disability. Often, such persons just feel uncomfortable being around someone with a disability and do not know what to do or how to act.

Proactive Response

There are numerous proactive ways an occupational therapist can assist university administration and students to be responsive to the ADA. Several proactive responses of a university administration would be as follows: (a) the formation of a committee to respond to the needs of students and employees with disabilities, (b) the development of guidelines for work-study programs for students with disabilities, (c) the identification of private sources that provide scholarships for students with disabilities, (d) the formation of an office for students with disabilities and delineation of its responsibilities, (e) the identification of concrete, abstract, and natural barriers to persons with disabilities. An occupational therapist can assist in planning and implementing a number of such proactive responses.

University committee. A committee responsible for overseeing the planning and implementation of programs to ensure compliance of the university with the
ADA would be composed ideally of faculty, staff, students, and members from the community who have an interest in advocating for the rights of the students with a disability and who have a strong commitment to the mission of the university. If possible, some members of the committee will be persons with a disability. The committee will monitor plans for new buildings to determine if their designs are in compliance with the intent of the ADA. Each university may wish to develop specific procedures for students to follow in identifying and documenting that they have a condition that interferes with their major life activities within the university system. The responsibility for developing such guidelines may be assigned to such a university committee.

Financial assistance. Occupational therapists could work with those in financial aid offices to identify possible private scholarship sources for students with disabilities and develop guidelines for work-study programs using the ADA.

The office for disabled students. The responsibilities of an occupational therapist or other appropriate person as director of this office would be to serve as a liaison between the office and the students and to present workshops or informational meetings for faculty and staff on methods for presentation of content and of testing of students with disabilities. The occupational therapist in this role could also train student workers to be note takers and assistants of students with disabilities during class or could form a student group to establish a network to integrate students with disabilities.

Housing. An occupational therapist could work with the housing office to set up several types of rooms to accommodate students with disabilities—one for students with physical disabilities, one for students who are blind, and one for students with learning disabilities. The occupational therapist could work with the resident advisor staff and plan training sessions on assisting the student with a disability.

Curricula requirements. An occupational therapist could work with faculty committees to identify appropriate substitutions. The therapist could work with faculty in professional programs to identify essential components of future jobs.

Classrooms. An occupational therapist could work with the building maintenance staff, for example, making sure each laboratory room has at least one table low enough for a person in a wheelchair to work comfortably. A therapist could work with personnel in audiovisual aids to have a variety of devices available to faculty and students for classroom use.

Faculty. Individual faculty members can play a primary role in advocating for students with a disability. If students have not identified themselves initially as needing accommodations, doing so may be very difficult for them. One strategy that can be used by individual faculty members to help students feel more comfortable with identifying the need for accommodations is to include a pertinent statement on the syllabus of each class. An appropriate statement might be, “If because of a disability, any student in this class requires accommodations, such as test-taking or note-taking modifications, please feel free to come and discuss this with me.”

Accommodations. It is during the throughput stage that an occupational therapist can provide the greatest assistance. The occupational therapist can work with the learning center to identify testing options for students with disabilities and their implementation. The therapist can work with faculty to identify who needs to be tested in an adaptive manner and how to do it without compromising academic standards or students’ rights. Additionally, the therapist can help faculty determine appropriate accommodations in teaching methods. For example, oral rather than written examinations can be given to students with perceptual or visual deficits. Substitution of an oral examination for a written examination for students with visual impairment may be obvious to most professors; whereas substitution of an oral exam for a written exam for students with perceptual impairments may not be so obvious. Suggestions for areas in which the occupational therapist can function as a staff person or consultant to a college or university include test taking, classrooms, the office for disabled students, financial aid, housing, and curricula requirements.

Output

Each university and its subsystems, often in mission statements, identify what is expected of students and develop an image of how graduates should be perceived by the environment. A faculty and departmental responsibility is to articulate the desired end product, that is, what is expected of persons who have majored in their academic component.

The Graduate With a Disability

Expectations for graduates with a disability are the same as those for graduates without a disability—to become employed or pursue further study. To make this output a reality, the university must have provided sufficient resources while the student with a disability was enrolled. However, that alone may be insufficient for most disabled graduates to become employed. College graduates with a disability may have less flexibility than those without a disability and may not become employed easily. Graduates with a disability may need assistance to develop a variety of strategies when looking for a job.

Subsystems That Affect Graduates With a Disability

Several subsystems of the university affect the graduate. The site of the graduation ceremony is a concrete ele-
ment, whereas other elements, such as the career planning or placement office and the faculty, are primarily abstract.

Career planning or placement office. Personnel in this office must be knowledgeable about Title I of the ADA in order to provide guidance to students with a disability about their rights when obtaining employment. The student with a disability must be provided the same service given any other student. The companies offering opportunities for interviews to students on campus must open the interviews to all students regardless of a disability. Tips on the best ways to interview for a job may be the deciding factor for the student with a disability to gain employment. Personnel in the placement office can be extremely beneficial as liaisons between recruiters and the students with a disability. An occupational therapist can provide consultation to career services when company recruiters come to campus by establishing a positive environment for the interview between a recruiter and a student with a disability. An occupational therapist can also assist career placement personnel in identifying the student’s transferable skills.

Faculty. Faculty references are extremely important for the graduate with a disability. The credential, degree, or diploma may indicate a certain standard, but the abilities to complete tasks or assignments on a timely basis, communication skills, appearance, or other characteristics may need to be assessed for the potential employer by faculty. An occupational therapist can provide workshops to help faculty identify the essential functions of jobs that students with a disability can perform and learn how to write letters of reference without referring to a student’s disability.

Quality control. Individual faculty members within a department and personnel in the registrar’s office or graduate office are part of the quality control process in determining if a student is ready to be graduated. If competency testing is required of students who are being graduated, an occupational therapist can determine if a student has a disability that requires reasonable accommodations before the student can perform at his or her best. If competency testing is required before graduates of a program can practice in a field, faculty need to consider the nature of the credentialing or licensure exams and whether any of their students with a disability will require accommodations. The graduate with a disability will not gain entry into a profession if the certification examinations that he or she is required to take cannot be accommodated for a particular disability. An example of this type of situation would be a licensure examination in a particular state for a physical therapist that requires psychomotor skills that cannot be performed from a wheelchair.

Barriers at the graduation ceremony. During a graduation ceremony, students with a physical disability are often unable to reach the stage to receive their diploma. Some students in wheelchairs who were seated on the stage and not with their peers during the graduation ceremony have found this to be psychologically uncomfortable and even insulting. Additionally, lifting persons to a platform is not treating them as adults or as able persons. It is now illegal to separate a graduate from his or her peers throughout the graduation service, because such behavior is not treating the graduate equally.

Proactive Response

Universities may wish to establish services to help the disabled student learn how to obtain a job. In their survey, Louis Harris and Associates (1987) found that 68% of persons with a disability obtained a job as a result of their own initiative through hearing of a job from friends or by word of mouth. This suggests that it could be important for career planning or placement offices to develop programs that would help students with a disability develop skills in searching for a job. An occupational therapist can proactively assist the higher education system in this task.

Regarding graduation, an occupational therapist can work with the planning committee to identify graduates with disabilities, contact those students, and assess their needs for graduation day. Members of graduation committees can walk through the graduation service to ensure that no concrete barriers obstruct or interfere with a student who has a disability. In certain cases, these committee members may want to provide supportive staff to help disabled students walk through the service to ensure that these students are able to progress to the stage to receive their diploma.

Conclusion and Recommendations

Universities are complex systems with many departments that interrelate to each other at various levels in the organizational structure. Use of the Systems Approach to Higher Education to examine which subsystems within a university can affect students with a disability may provide a clearer understanding of how different parts of a university system can be influenced by compliance with the ADA. When using a systems model as an analogy for an organization, one must remember that things are more than the sum of their parts. When one subsystem makes accommodations for a student with a disability, it is more than meeting the basic requirements of the ADA; it is reflecting a willingness of those within the university to ensure that all of us are allowed the same opportunities to pursue an education and the opportunities an education might bring about.

One of the assumptions of the Systems Approach to Higher Education is that a major role of a university is to guide and foster the development of all students, including those with a disability. Just as any investment must be nurtured to increase its worth, students admitted to a
university also require nurturing. Whereas students with a disability may require more support through reasonable accommodations than those without a disability, such investments may produce greater dividends for the students, for individual faculty members, for the university as a whole, and for the society at large.

Initially, as with any changes imposed on a system that has been dominated by traditions, numerous persons connected to a subsystem that requires changes may resist change. Accommodations in testing for students with disabilities may appear to some faculty members to be a compromise of academic standards. Research on alternative testing methods as well as innovative ways of teaching and learning that are oriented toward the needs of employment in today’s society could benefit all of society by making educational experiences more relevant to societal needs.

When planning an overall program to comply with the ADA, universities may require the expertise of occupational therapists who are educated to help both dysfunctional and nondysfunctional persons find ways to perform the essential functions of their occupational roles. Several places within the hierarchy of a university might be appropriate for the location of the services of an occupational therapist. One such place might be in the office of the chief executive or another administrative office. This would be appropriate, especially during early planning and implementation of the ADA. Occupational therapists might also be located within the office for disabled students. The health center is another subsystem in which an occupational therapist could function, but placement there suggests some limitations on the focus of what the role of an occupational therapist in a university can rightly be. If occupational therapists perform their functions through a university health care facility, a tendency may develop for some within the system to view the students as patients instead of students. For example, the therapist might soon be making a splint for someone with a rheumatic condition, rather than dealing directly with ADA regulations. An occupational therapist employed with the university would not focus only on the student but also on accommodations of the environments, such as classroom, housing facilities, computer labs, parking facilities, and libraries. The occupational therapist could also be a consultant for faculty who teach persons with disabilities. As a consultant to faculty, the occupational therapist would assist in informing the faculty about the specific disability and possible methods to teach and test those persons. Wherever occupational therapists are located within an academic setting, their roles within that arena will be more specifically defined once occupational therapists become an integral part of the subsystems.

Other professionals, such as physical therapists, speech pathologists, audiologists, psychometric testing specialists, and psychologists, may also have valuable input that can enhance the educational experiences of disabled students. We suggest that a university either employ or contract for occupational therapists or others whose role will be to help develop and implement programs designed to bring the university in compliance with the ADA, rather than relying on faculty whose focus may differ. Universities are viable and dynamic organizations. We anticipate that as university personnel become more experienced with students with a disability, accommodations that now may seem to be major will be considered minor. Systems of higher education can be an innovative practice arena for occupational therapists, who assess the needs of a system of higher education, recommend system changes to make the university environment accessible to persons with disabilities, and participate in implementing those changes within the system. Many other professionals, such as physical therapists, speech pathologists, audiologists, psychometric testing specialists, and psychologists, may also have valuable input that can enhance the educational experiences of students with disabilities. We anticipate that as university personnel become more experienced with students with disabilities, they will come to think of many accommodations that now may seem to be major obstacles as minor adaptations. During this transitional period, occupational therapists can play a pivotal role in helping university systems adapt their subsystems so that students with disabilities have equal opportunities within the university as do those without disabilities.

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References


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