



STUDENTS WHO ARE BLIND OR VISUALLY IMPAIRED IN POSTSECONDARY EDUCATION

Students who are blind or visually impaired are seeking and successfully completing postsecondary education as educational and employment opportunities for people with disabilities become increasingly available. In a recent survey of first-time, full-time freshmen attending four-year institutions, 16 percent of students reporting a disability identified themselves as being either partially sighted or blind. (College Freshmen with Disabilities, 2001). An untold number of students with visual impairments also attend two-year and vocational programs.

Students who are blind or have visual impairments seek and select education after high school based on many of the same considerations as their non-disabled peers. When choosing a postsecondary program—be it vocational, two- or four-year college or university, or graduate—these students must consider whether and how that program best meets their interests, needs, and preferences. Prior to admission, students with disabilities are not required to declare, nor may institutions inquire about the presence of, a disability. However, once enrolled in a postsecondary program, the student with a disability who wishes to receive academic accommodations must notify the appropriate university personnel (usually within the Office of Disability Support Services [DSS]) about his or her needs. The student also must support any such request with documentation of the disability.

This resource paper is intended for students who are blind or visually impaired and who wish to pursue education or vocational training beyond high school. Family members, DSS providers, administrators, faculty, and staff also will benefit from the following discussion. The paper examines the characteristics of blindness and other vision impairments and describes services frequently available to students with such disabilities.

The paper also explains the rights and responsibilities of students who are blind or visually impaired in postsecondary programs and describes available financial aid resources. Concluding the paper are “tips for success” for both students and instructors, and a detailed list of organizations, books, and articles related to postsecondary education for students who are blind or visually impaired.

Characteristics of Individuals who are Blind or Visually Impaired

Vision can be lost at birth, as a result of genetic causes, or through illness or injuries; however, not all persons with visual impairments are totally blind. Many have some usable vision, while others may only be able to perceive light. A student who is considered legally blind still may have a great deal of vision. Such students may be able to see large objects, for example, but may experience difficulty seeing smaller things such as fine print or a needle. Others may have perfect central vision but limited peripheral (side) vision, thus creating the appearance of viewing everything through a tube or straw.

Perfect vision is measured as 20/20 in each eye. To say that a person has a measured vision of 20/200 in a particular eye suggests that, through that eye, he can see at 20 feet what a person with “normal” vision sees at 200 feet. A person is considered visually impaired if her vision is no better than 20/70, with correction, in her better eye. If a person’s vision is no better than 20/200 in the better eye, with correction, that person is considered legally blind. A person also is considered legally blind if the range of his central vision is no greater than 12 degrees.

Students with low vision confront many of the same challenges as those who are blind: They may face problems accessing and effectively operating adaptive technologies; locating large-print materials; getting around in a large, unfamiliar setting; finding transportation; identifying readers for library work, research reports, and short articles; getting recorded textbooks in a timely manner; and participating in recreational or athletic activities.

The visual impairments of students with low vision, which are sometimes less apparent and therefore less easily understood than those of students who are totally blind, can still be quite debilitating. For example, students with low vision may be able to see fairly well in a particular classroom setting but less well in others because of fluctuating vision, or because they simply see some things better than others. Or, a person with a visual impairment may see someone well at a close distance but may be unable to recognize that person when farther away. They also might see less well when ill or tired, or in situations where lighting is poor or glare is an issue. Night blindness also is common among people with low vision.

Each student with a visual impairment is different. Some have a substantial amount of vision and may require only slight modifications. For example, they may be able to read large print for a sustained time without discomfort or difficulty, while others might experience discomfort after reading the same print for only a few moments. It is important to realize and remember that each student is different, and to

consider his or her particular needs and wishes. With proper attitude, training, and modifications, students who are blind or visually impaired can function independently and can participate fully in their postsecondary experience.

Services for Students Who Are Blind or Visually Impaired

Students who are blind frequently use aids such as canes, raised-line drawings, maps, or guide dogs to function independently. They also may choose to have printed materials produced in Braille or recorded on audiotape. Students with low vision may read large print (usually defined as 16– to 18–point boldface type, depending on the typeface used). Because preparing materials in these alternate formats takes time, teachers need to inform students what texts are required and recommended at least six weeks prior to the beginning of class.

Students who read Braille can order translations of print materials from a volunteer Braille service, the **American Printing House for the Blind** (for textbooks), or the **National Library Service for the Blind and Physically Handicapped** at the Library of Congress (for recreational materials). (See Selected Resources at the end of this paper for contact information of these and any other organizations mentioned.)

New technologies have prompted new options for obtaining printed materials in alternate formats. Widely marketed personal computer softwares convert text into voiced, large print, or Braille output, while optical scanners can “read” print.

Students who read by listening to audiocassettes can arrange to have books taped through agencies such as **Recording for the Blind and Dyslexic** (RFBD), or the National Library Service for the Blind and Physically Handicapped. RFBD also can place textbooks and other materials on computer disks so that users can produce Braille, speech, or large-print output on their personal computers.

Many students who are blind or visually impaired may use readers to assist them in class, take notes or tests, or read textbooks.

By law, all postsecondary programs must ensure that all students can access their academic and extracurricular programs and activities. For students who are blind or visually impaired, such access may require readers for classroom assignments and exams, or assistance obtaining materials in alternate format such as on tape, in Braille, or on computer disk. Other accommodations may include allowing a student extended time to read exams or assignments, permitting her to tape-record class notes, or allowing the in-class use of a laptop computer or Braille for notetaking purposes. Students with documented visual impairments typically can arrange for these services through the campus DSS office.

The federally and state funded Vocational Rehabilitation (VR) program is the primary funder for readers or assistants required by students with visual impairments for **personal use or study** (for example, studying or reading textbooks outside of class). If the student is not a VR client, the postsecondary institution assumes responsibility for paying readers, thus ensuring access to its programs. Students, however, are responsible for locating, hiring, and scheduling readers needed for personal use or study. To do so, students can contact the campus DSS or employment offices for lists of available readers, post an advertisement, or contact social organizations such as fraternities or sororities.

New Technology: Options and Boundaries

Personal computers and the Internet have transformed the ways in which postsecondary programs educate and communicate with their students. From online registration and distance education classrooms to computers in dormitory rooms and residence halls, the proliferation of computers and digital technology has created new opportunities and new barriers for students with disabilities. Access to this new realm of information is vital to the success of students who are blind and visually impaired.

Whether a student uses a text enlarger, screen reader, or Braille output program, he must have access to software that is appropriate for his particular needs and compatible with campus

computing systems. Proper training and ongoing support of any software provided also is critical. DSS providers can advocate for the needs of students with disabilities while educating other faculty and administrators to ensure that a campus' long-term technology planning addresses accessibility concerns. **Equal Access to Software and Information**, a program that provides research and guidance about access-to-information technologies for individuals with disabilities, is a particularly good resource for students, faculty, staff, and administrators interested in technological access for students who are blind or visually impaired.

Rights and Responsibilities of Students

A student who is blind or visually impaired is entitled access to all aspects of campus life, be it a foreign study program, a resident assistantship, recreational activities, or career counseling that considers the impact of the visual impairment on future employment. In all instances, campuses must make reasonable accommodations to meet the particular student's special needs.

Services for students with disabilities in postsecondary education are provided under a different authority than those used in elementary and secondary schools. At the elementary and secondary levels, school administrators and parents work together to ensure that students receive an appropriate education through the Individualized Education Plan process, determining their needs, and providing support services for them. These responsibilities are established under P.L. 101-476 of the Individuals with Disabilities Education Act of 1990 (also known as IDEA). (Contact the **National Information Center for Children with Disabilities** [NICHCY] for more information about IDEA and elementary and secondary education for students with disabilities.

In postsecondary institutions, students with disabilities are guaranteed access to programs and services under Section 504 of the Rehabilitation Act of 1973 (P.L. 43-112), and the Americans with Disabilities Act of 1990 (P.L. 101-336) (also known as ADA). Both are civil rights laws designed to

prevent discrimination based on disability in postsecondary education and training. In addition, the ADA protects against discrimination in places of employment, public accommodations, transportation, state and local government services, and telecommunications.

At the postsecondary level, it is imperative that students become effective self-advocates, responsible for planning all aspects of their education, and ensuring that the proper administrators and staff know of their special needs. Any student seeking support services or accommodations based on disability must inform the institution about her disability and request the desired support services, aids, and accommodations. Once a student has provided documentation of his disability and information about the desired services, the postsecondary institution must provide those services or any reasonable alternative.

The student is not required to inform faculty or administrators within the postsecondary program about her disability at any time before or during the application process. However, once admitted, it becomes her responsibility to notify the postsecondary institution if she needs support services.

Checklist of Services Requested by Students Who Are Blind or Visually Impaired

While the particular needs of each student with visual impairments are unique, all can benefit from many of the same services in postsecondary education. The following list describes the most commonly provided accommodations:

- Priority scheduling and registration
- Advance notice of books and resources required for each class, allowing the student time to arrange for taped or Braille versions
- Preferential seating to better hear or see what goes on in class

- Permission to use equipment such as tape recorders, “talking” computers, or computer notetaking equipment in the classroom
- Adaptations for regular class, mid-year, and final exams, such as extended time, taped exams, readers, and/or scribes for exam-taking, as needed
- Adaptations in certain required classes (such as physical education), course waivers, or course substitutions
- Orientation to classrooms, buildings, and the campus
- Tactile and large-print maps of the campus and surrounding community
- Adaptations that ensure access to campus shuttle buses, escort services, and other campus transportation
- Textbooks on tape, either through RFBD or a local recording facility
- Access to computers with voice systems, large-print, and Braille keyboards
- Access to Braille printers, scanner systems, and adapted laptop computers
- Access to Optacons (electronic devices that convert print to a raised, tactile finger pad) for students who are blind
- Access to closed-circuit televisions (CCTVs), large-print copiers, large-print books, and computers with large-print software for students with low vision
- Access to talking calculators, raised-line drawing kits, four-track tape recorders, talking spell-checkers, and laboratory equipment for students who are blind or have visual impairments

Financial Aid for Postsecondary Education

The U.S. Department of Education's Federal Student Aid program is the most widely available source of funding for postsecondary education. Aid in the form of grants and low-interest loans is awarded based on financial need as determined by a formula that considers a family's income, assets, and expenses. As many other aid programs refer to the results of the federal formula for need, students are encouraged to complete the federal application, known as the Free Application for Federal Student Aid (FAFSA), as a matter of course.

While federal funding is awarded strictly on the basis of financial need, some organizations award scholarships to high-achieving students who are blind or visually impaired. **The American Council of the Blind, American Foundation of the Blind, Inc., Council of Citizens with Low Vision, and National Federation of the Blind** each award such scholarships. Students seeking financial assistance should contact each organization for details. Also, contact HEATH to request a free copy of *Creating Options: A Resource on Financial Aid for Students With Disabilities—2001 Edition*, which further describes funding options for students with disabilities who are pursuing education beyond high school.

The federal/state VR system also is available to provide services—and in some instances, financial assistance—to adult students with disabilities. To be eligible for VR services, a client must have a disability, the disability must be a barrier to employment, and the provision of VR services must potentially lead to employment. In some instances, VR can assist in paying for tuition and for adaptive equipment for **personal** use such as Braille, CCTVs, and computer technology. (It is, however, the postsecondary institution's responsibility to provide and pay for services that students with visual impairments use in public places. Examples of such accommodations include Braille signs in elevators and major entrances and exits, computers with large-print and Braille output in university computer labs, and Kurzweil Reading machines and Optacons in the college library.) Although it is VR's mandate in every state to provide financial

assistance to facilitate training toward clients' employment, the amount of aid and types of services available will likely vary from state to state.

Although VR rarely pays the full tuition for clients attending college or university, the agency still may contribute the dollars necessary to cover expenses if the student has contacted all other sources of financial aid, but still need support. As part of the vocational rehabilitation process, a VR counselor meets with the student to collaboratively write an Individual Written Rehabilitation Plan (IWRP). Students must ensure that their IWRP identifies all needed campus services. The plan also should state the responsibilities of the student and of the VR agency, and the student should request a copy of the plan. This conference must take place well before matriculation to allow the VR agency adequate time to send authorization to the college/university business office and DSS office. This will prevent delays in the student's enrollment. Request a free copy of HEATH's resource paper, *Vocational Rehabilitation Services: A Postsecondary Student's Consumer Guide*, for a more detailed discussion of VR services and procedures. (Note: In certain states, VR services are provided to individuals who are blind or visually impaired through a separate state's Commission for the Blind.)

Application Time

When students and their families are investigating vocational or two- or four- year degree programs, they will want to ensure that their chosen program of their choice offers enough services to meet their particular needs. Students with vision impairments are encouraged to visit the schools that most interest them at some point during the application process and to talk with a DSS provider. The student also may find it helpful to talk to other students with visual impairments to learn their opinions of the school and the support services they receive. Contact HEATH to request a free copy of the booklet, *How to Choose a College: Guide for a Student with a Disability (1997)*, which provides a step-by-step approach to researching and selecting the best postsecondary program for a given student.

TRANSITION TO POSTSECONDARY EDUCATION

Transition to education after high school for students who are blind or visually impaired involves managing not only the changes faced by all students, but the challenges of learning a new environment and constructing a network of services and support people. The following suggestions aim to facilitate and simplify that transition both for students as well as faculty.

Students who are blind or visually impaired also should note that several programs are available to help them manage the transition to higher education. For example, the Evansville Association for the Blind and the University of Evansville (IN) co-offer a summer course for high school students who are blind or visually impaired. Participants take regular courses on the university campus while receiving specialized services in career planning and study skills from the association staff. Many state offices for the blind also offer precollege training to students who are blind or visually impaired.

Tips for Students

- Begin investigating colleges and universities in your sophomore or junior year in high school. Contact the DSS coordinator at the college(s) you are investigating to determine the range and type of services offered. Talk with other students who are blind or have visual impairments to get their feedback.
- Once you are admitted, contact the DSS coordinator before your arrival on campus to provide documentation of your disability. Inform them about your need for services.
- If possible, register early for classes so that you will have additional time to secure texts and materials in alternate formats.
- The DSS office is responsible for locating readers or assistants for use **in class** or while you are taking a test. If you need readers in class, contact the DSS coordinator as soon as possible.

- You may want to tape record lecture notes or use a Braille writer or laptop computer to write notes. If you prefer to use a notetaker instead, contact the DSS office to determine if they provide that service. In some cases, it may be necessary to ask a student in class to take notes for you. Talk with the student or ask the instructor to help you select a notetaker.
- For some assignments, such as in science labs or math classes, you might arrange to work with a partner.
- VR is responsible for paying readers that you use for personal reading (for example, studying or reading leisure books). If you are not a VR client, or VR cannot pay, the college or university will incur the costs. **Note:** While students can obtain most classroom reading assignments in alternate format, there will always be last-minute assignments and handouts that require the use of a reader.
- The college or university is responsible for paying for readers or assistants for use in class, for classroom assignments, or while testing.
- You are responsible for hiring readers for your own **personal** use. A student employment office is a good source. Students in fraternities and sororities also may be interested in becoming readers, or you can post an announcement on a student bulletin board, asking interested students to contact you.
- When using readers, treat them as employees. Make a contract with each reader, hold him or her to that contract, and if it is not honored, you may dismiss the person.
- Do NOT allow or encourage others to do things for you that you can do for yourself.

Instead, learn to use adaptive tools and technologies and alternative techniques.

- Meet with faculty and staff as soon as possible to advise them of your unique needs as a student who is blind or visually impaired. Provide them with suggestions regarding how you can use alternative means to accomplish tasks such as reading, writing, or observing—tasks that your peers typically use their vision to perform.
- Be prepared to show and tell faculty and staff about any adaptive tools you use. If you find that certain tools are too large to easily carry to an appointment (for example, CCTVs, reading machines, or Braille embossers) show them a photo brochure that depicts and describes the tool. If you plan to use a talking tool in class, explain to the faculty member that you will use head/earphones to avoid disturbing others.
- Ask faculty in advance for electronic versions of their syllabi, overheads, and handouts, whenever feasible. Let them know that you will treat the materials as copyrighted matter not to be duplicated or quoted without the appropriate citations.
- Order your textbooks early through RFBD. Plan to hire human readers (at least four per semester) to handle any last minute print materials that you receive.
- Follow these guidelines for working with readers: Interview prospective readers; encourage readers to tape record materials (you provide the tape recorder and tapes); dismiss unreliable readers; meet in a neutral, quiet area for reading; take notes while the materials are being read to you or mark your tapes (using tone indexing); establish set times for reading; take frequent breaks; and have a backup plan in the event a reader is unable to help when needed.
- Stay in close communication with faculty, staff, and family members throughout the academic year. If a professor refuses to make a requested accommodation, speak to them directly and follow up your conversation with a written note summarizing the discussion. If there is no change, work your way through the chain of command: speak to your academic advisor, the DSS coordinator, the department chair, Dean of Student Affairs, Ombudsman, and so forth until you have resolved the issue.
- If you are still unable to resolve the dispute to your satisfaction, find out if another professor will teach the course at a later date. If so, wait to take the same course later. In some instances, short of transferring to another postsecondary institution, your best option may be to drop the course entirely, especially if it is not required for graduation.
- When requesting desired services and accommodations, be polite, but firm, and make your needs known.
- Take only as many course hours as you can manage and still make decent grades. Most undergraduates take 15 to 18 credit hours a semester. If you choose to take a lighter course load you will graduate later than many of your peers.
- If you can manage a 12-hour course load and work part-time, that may be a good option. If you can't manage work and school at the same time, consider taking a 15 hour course load and working in the summers. It is critically important that you work. Many young people who are blind go to school for years and years, without obtaining the job experience which working provides.
- To compete for good jobs, you must have both academic skills and work experience. If internships or practices are offered in your course of study, participate.

Students who are blind or visually impaired need to learn as much as they can about their disability and the options available to them so they can be active, effective decision-makers when planning for postsecondary education. They should seek advice from high school counselors, VR counselors, postsecondary advisors, and professionals who are themselves blind or visually impaired, family members, and friends. Students need to know their own skills and needs in order to become the best possible self advocates in their postsecondary education.

Tips for Students and Instructors

- For classes in which students require materials in alternate format, students and instructors should remain in contact about when and if all texts have been prepared.
- Meet with each other before classes begin, or as early as possible, to discuss the strategies and modifications the students will need in class. You may, for example, want to discuss alternate teaching strategies such as saying out loud what is written on the board. Or, you may need to arrange alternate means or advance preparation for taking tests and in-class assignments.
- Students may want to tape record lecture notes or use a Braillewriter in class. If the DSS Office provides notetakers, you both can arrange for one to be in class, or arrange for another student in the class to take notes.
- If you, the professor, use a blackboard extensively, you may need to say aloud what you are writing. You both could also arrange for a student to write down or repeat what is written on the board.
- If students are required to do an in-class assignment, and it is not practical to do it with another student or with the adaptations used in class, you might arrange with each other to do it at a different time or location.

- Discuss beforehand alternate methods for taking tests. You may want to arrange with each other to take the test orally at a separate time, have the test dictated, or type the answers in another room. You could also arrange for the exam to be taken through the DSS office.

Additional Tips for Instructors

- Do not make any assumptions about a student's needs and abilities. Remember to ask the student how you can be of assistance.
- Announce at first several class meetings that students with disabilities can have a separate meeting with you to discuss any modifications or adaptations they need.
- Identify yourself when greeting a student who is blind. Let the student know whenever you are leaving the room.
- Speak directly to a student, not through a third party. Look at the student when you are speaking. It is helpful to maintain eye contact.
- It is all right to use words and phrases such as "look," "watch," "I'm glad to see you," and "Do you see what I mean?" It is not necessary to raise your voice when speaking to a student who is blind or visually impaired.
- Provide a thorough orientation to the physical layout of the room, indicating the location of all exits, desks, raised floors, low-hanging objects, lecture podium positions, and other objects in the room.
- Provide reading lists or syllabi at least six weeks in advance of the first class meeting to allow the student time to have the materials Brailled, taped, or put in large print.

- Give front-row or preferential seating to students who are blind or have visual impairments. They need to be able to see and hear everything that is going on.
- Allow students permission to use adaptive equipment in class such as tape recorders or computer notetaking devices.
- If necessary, assist the student in arranging for notetakers or class partners.
- Face the class when speaking.
- Describe clearly what you are writing on the blackboard, and whatever visual aids or graphics you use. Use specific descriptions. For example, say “two plus two equals four,” rather than “this plus that equals this.”
- If requested, provide large print copies of classroom handouts by enlarging them on a photocopier.
- Make sure that handouts are legible; mimeographed or ditto copies are hard to read.
- Prepare and inform students about assignments well in advance so they can arrange to have them adapted to the format they need.
- Inform students about field trips in advance so they can make necessary arrangements.
- Allow the student to tape-record lectures. The DSS office can provide a release form that will safeguard copyrighted information. All taped materials are erased at the end of the semester.
- Establish ground rules for group discussions. Ask the student who is talking to identify himself or herself by name. When asking a student to respond to a question, identify that student by name.
- Students with visual impairments will most likely need extended time for taking tests, and may need a scribe or reader to assist them in reading or writing. You can provide these accommodations, or the DSS office can assist you in providing them.
- Other adaptations in class may be useful, such as using raised line graphs, tactile graphs, or large print illustrations. (See Selected Resources for information on how to obtain them.)
- Provide extended time for assignments and tests if requested.
- Do not pet guide dogs when they are in harness. They are working for the student and petting will distract them from the task.
- If your class needs to be moved on a given day, steps must be taken to notify a student who is visually impaired of the new location. Leaving a written note on the door of the classroom will not be sufficient. Personally, or by delegating the duty to a student or departmental secretary, locate the student who is visually impaired to inform them of the new class site.
- Keep in mind that you do not need to rewrite your entire course; simply modify the presentation of materials to make them accessible to students with visual impairments.
- Also keep in mind that your standards for academic credit should not be modified. All students must meet the required level of understanding and performance competencies for the course. You may need to modify the evaluation or testing method, but content should not be changed.
- Contact available resources to assist you in working with the students. Resources include

the DSS office, faculty who have worked with students who are blind or have visual impairments, professional and state organizations (some are listed in Selected Resources section of this paper), and students with visual impairments themselves.

SELECTED RESOURCES

Information and Advocacy Organizations

American Council of the Blind (ACB)
1155 15th Street NW, Suite 1004
Washington, DC 20005
(800) 424-8666
(202) 467-5081
info@acb.org
www.acb.org

ACB is an information, referral, and advocacy organization with 52 state and regional affiliates. The goals of ACB are to improve the well being of people who are blind or visually impaired through legislative advocacy; to encourage persons who are blind or have visual impairments to develop their abilities; and to promote a greater understanding of people who are blind or have visual impairments. ACB also has a student chapter, National Alliance of Blind Students (NABS).

American Foundation for the Blind (AFB)
11 Penn Plaza, Suite 300
New York, NY 10011
(800) 232-5463
(212) 502-7600
afbinfo@afb.net
www.afb.org

AFB provides information and consultation in the areas of education, rehabilitation, employment, and special products. AFB publishes *The Journal of Visual Impairment and Blindness*, which is available on a subscription basis. A Technology magazine, *Access World*, is published six times a year. AFB also has a career database and an adaptive technology database. Six regional centers around the

country provide advice, technical assistance, and referral to local services and agencies.

Association on Higher Education and Disability (AHEAD)
P.O. Box 54066
Waltham, MA 02454
(617) 788-0003 (V/TTY)
www.ahead.org

AHEAD is the professional and advocacy organization for disability support service providers. The organization provides advice and technical assistance, publishes the *Journal of Postsecondary Education and Disability*, a newsletter (*Alert*), and various other publications. AHEAD also holds an annual conference, and sponsors various special interest groups, including a group for students who are blind or visually impaired, and professionals who work with them.

Council of Citizens with Low Vision International (CCLVI)
1155 15th Street NW, Suite 1004
Washington D.C. 20005
(800) 733-2258
www.cclvi.org

CCLVI is a membership organization composed of individuals with low vision, professionals with low vision, and/or who are working with individuals with low vision, and families and friends of individuals with low vision. CCLVI serves as a clearinghouse on low vision, and promotes education, research, legislation, and the elimination of barriers to individuals with low vision.

Mississippi State University Rehabilitation,
Research and Training Center
on Blindness and Low Vision
P.O. Box 6189
Mississippi State, MS 39762
(800) 675-7782
(662) 325-2694
(662) 325-8693 (TTY)

www.blind.msstate.edu/irr

The only research, rehabilitation, and training center focusing on blindness and low vision, the Center identifies, assesses, and augments services to facilitate the employment and career development of persons who are blind or visually impaired.

National Clearinghouse on Disability and Exchange (NCDE)

P.O. Box 10767
Eugene, OR 97440
(541) 343-1284 (V/TTY)

info@miusa.org
www.miusa.org

NCDE educates people with disabilities and disability-related organizations about international educational exchange opportunities, promoting the inclusion of people with disabilities in all types of exchange, community, and volunteer service programs. NCDE also provides advice and technical assistance to international exchange organizations and colleges and universities on how to include people with disabilities in their exchange programs.

National Federation of the Blind (NFB)

1800 Johnson Street
Baltimore, MD 21230
(410) 659-9314

www.nfb.org

NFB is a consumer group that can answer questions about blindness, refer people to appropriate resources or adaptive equipment, and send a publications list. NFB has a number of scholarships available for students in postsecondary education. It also publishes *The Braille Monitor*, and sponsors Job Opportunities for the Blind (JOB), a job listing and referral service. NFB also operates a student chapter, **National Association of Blind Students**.

National Information Center for Children and Youth with Disabilities (NICHCY)
P.O. Box 1492

Washington, DC 20013-1492

(800) 695-0285

(202) 884-8200

www.nichcy.org

NICHCY is a non-profit, national information and referral clearinghouse that responds to questions about children and youth ages 0-22 on all issues of disability.

For Students

National Alliance of Blind Students (NABS)

1155 15th Street NW, Suite 1004

Washington, DC 20005

(800) 424-8666

(202) 467-5081

http://uranus.spaceports.com/~nabs/nabs_html/nabs.html

NABS provides a national voice for students with visual impairments. It sponsors an annual convention, a listserv, and a magazine, *The Student Advocate* (available on tape or in large print to NABS members). The staff also performs scholarship searches.

National Association of Blind Students

1800 Johnson Street
Baltimore, MD 21230
(410) 659-9314

www.nfb.org

The Student Division of the National Federation of the Blind is an organization devoted to considering and acting upon issues concerning students who are blind. The Student Division is a self-support group for students who are blind and a mechanism for political action. It serves as the voice of organized students who are blind in America.

DB-LINK, The National Information Clearinghouse

on Children who are Deaf/Blind

345 N. Monmouth Avenue

Monmouth, OR 97361

(800) 438-9376
(800) 854-7013 (TTY)

dblink@tr.wou.edu
www.tr.wou.edu/dblink/about.htm

DB-LINK is a federally funded information and referral service that identifies, coordinates, and disseminates information related to children and youth who are deaf-blind.

Recordings, Books, Videos, and Tapes in Alternate Formats

American Printing House for the Blind (APH)
1839 Frankfort Avenue
P.O. Box 6085
Louisville, KY 40206-0085
(800) 223-1839
(502) 895-2405
www.aph.org

APH, established in 1858, manufactures materials for people who are blind. Reading materials include textbooks and magazines in Braille and large print. APH records books, and produces educational tools such as Braille writing and embossing equipment, computer software and hardware, educational games, low vision aids, Braille and large type paper, binders, and notebooks. APH also sells tape recorders designed to record taped publications.

Descriptive Video Service
WGBH
125 Western Avenue
Boston, MA 02134
(617) 300-5400
dvs@wgbh.org
www.wgbh.org/wgbh/access/dvs/

The Descriptive Video Service adds voiced descriptions to videos, feature films, and numerous productions of the Public Broadcasting System, for use by individuals who are blind or visually impaired.

National Alliance for the Visually Handicapped (NAVH)
22 West 21st Street
New York, NY 10010
(212) 889-3141
www.navh.org

NAVH offers services for persons with low vision to individuals low vision, professionals, paraprofessionals, and families. People can order free large print materials through NAVH's Loan Library.

National Library Service for the Blind and Physically Handicapped (NLS)
Library of Congress
1291 Taylor Street, NW
Washington, DC 20011
(202) 707-5100
(202) 707-0744 (TTY)
nls@loc.gov
<http://lcweb.loc.gov/nls/>

NLS provides, free of charge, recorded and Brailled recreational materials to persons with documented visual impairments. NLS also can produce a list of participating regional libraries upon request.

Recording for the Blind and Dyslexic (RFB&D)
20 Roszel Road
Princeton, NJ 08540
(800) 803-7201
(609) 452-0606
www.rfbd.org

RFB&D is a non-profit service organization providing recorded textbooks, electronic books, library services, and other educational services to individuals who cannot read regular print because of a visual, perceptual, or physical disability. Registering as an RFB&D member requires documentation of disability and a one-time only registration fee of \$50. There is also a \$25 per year membership fee. Annual institutional registration

costs from \$300-800 depending on how many books the college or university borrows.

Adaptive Technology Resources

American Printing House for the Blind
1839 Frankfort Avenue
P.O. Box 6085
Frankfort, KY 40206-0085
(502) 895-2405
www.aph.org

The Bartimaeus Group
1481 Chain Bridge Road, Suite 100
McLean, Virginia 22101
703-442-5023
adapt2c@bartsite.com
www.bartsite.com/

Closing the Gap
Resource Consortium
P.O. Box 68
Henderson, MN 56044
(507) 248-3294
info@closingthegap.com
www.closingthegap.com/

EASI (Equal Access to Software and Information)
c/o TLT Group
P.O. Box 18928
Rochester, NY 14618
(949) 916-2837
easi@tltgroup.org
www.rit.edu/~easi/

IBM Accessibility Center
11400 Burnet Road
Mailstop 9150
Alston, TX 78758
(800) 426-4832
(800) 426-4833 (TTY)
snsinfo@us.ibm.com
www.ibm.com/able

National Technology Program
American Foundation for the Blind
11 Penn Plaza, Suite 300
New York, New York 10001

800-232-5463
212-502-7642
techctr@afb.net
www.afb.org

Rehabilitation Engineering and Assistive
Technology Society of North America (RESNA)
1700 North Moore Street, Suite 1540
Arlington, VA 22209-1903
(703) 524-6686
(703) 524-6639 (TTY)
info@resna.org
www.resna.org

Tactile Access to Education for Visually Impaired
Student (TAEVIS) Online
Purdue University
1149 South Campus Courts, Building E
West Lafayette, IN 47907-1149
(765) 496-2856
taevis@purdue.edu
www.taevisonline.purdue.edu

Trace Research and Development Center
University of Wisconsin-Madison
5901 Research Park Boulevard
Madison, WI 53719-1252
(608) 262-6966
(608) 263-5408 (TTY)
web@trace.wisc.edu
trace.wisc.edu

Manufacturers of Adaptive Equipment

Arkenstone is a leading provider of reading and writing software designed for people with visual and reading disabilities. www.arkenstone.org

Blazie Engineering researches, designs, manufactures, and distributes Braille and notetaking instruments for use by blind people. The note takers have an audio “voice” so information can be heard, and/or they have refreshable Braille cells, so information can be read in Grade 2 Braille. www.blazie.com/

GW Micro, Inc. manufactures screen reading software for Windows and other applications.

www.gwmicro.com

Henter-Joyce manufactures screen reading and magnification software for computer users who are vision impairments or related disabilities.

www.hj.com/

Kurzweil Educational Systems manufactures screen reading software for individuals who are visually impaired or have other special learning needs that preclude access to comprehension of screen text. www.kurzweiled.com/

Access to the Study of Math and Science

American Association for the Advancement of Science

1200 New York Avenue, NW
Washington, DC 20005
(202) 326-6670

www.aaas.org

www.entrypoint.org

Disability, Opportunities, Internetworking, and Technology (DO-IT)

University of Washington
Box 354842

Seattle, WA 98195-4842

206-685-DOIT (3648) (V/TTY)

doit@u.washington.edu

www.washington.edu/doit/

Science Access Project

University of Oregon
Department of Physics

301 Weniger Hall

Corvallis, OR 97331-5607 USA

(541) 737- 4631

<http://dots.physics.orst.edu/index.html>

Teaching Math to the Blind Tips

Texas School for the Blind and Visually Impaired

1100 W. 45th Street

Austin, TX 78756

(800) 872-5273

(512) 454-8631

(512) 206-9451 (TTY)

www.tsbvi.edu/math/

Books and Publications

Auxiliary Aids and Services for Postsecondary Students with Disabilities: Higher Education's Obligations under Section 504 and Title II of the ADA. 1998. Describes both student responsibility and postsecondary institutional obligation towards students with disabilities under federal law. Free. Contact the U.S. Department of Education, Office of Civil Rights, Mary E. Switzer Building, 330 C Street SW , Washington, D.C. 20202, or go to www.ed.gov/offices/OCR/docs/auxaids.html.

College Freshmen with Disabilities—2001: A Profile of Students with Disabilities Attending Baccalaureate Colleges and Universities in 2000.

HEATH's biennial statistical survey of first-time, full time college students with disabilities attending four-year degree granting institutions. Contains charts, graphs, tables and discussion analyzing the presence of students with disabilities in four-year postsecondary programs. Contact HEATH Resource Center, 2121 K Street, Suite 220, NW, Washington, DC 20037, (800)544-3284 (V/TTY), or www.heath.gwu.edu.

Creating Options: A Resource on Financial Aid for Students with Disabilities-2004 Edition. Outlines the main sources of financial aid available to help students with disabilities finance education beyond high school. The paper explains federal financial aid programs, describes state operated vocational rehabilitation services, and lists available grants and scholarships. Free. Contact HEATH Resource Center, 2121 K Street, Suite 220, NW, Washington, DC 20037, (800)544-3284 (V/TTY), or www.heath.gwu.edu.

Directory of Services for Blind and Visually Impaired Persons in the United States and Canada. 2001. Revised and updated guide lists and describes services for people who are blind or visually impaired throughout North America, including residential schools, state vocational rehabilitation agencies or commissions for the blind, library services, and local or regional support groups. \$99. Contact the American Foundation for the Blind

Press, Customer Service Department, P.O. Box 1020, Sewickley, PA 15143, (800) 232-3044, (412) 741-0609 (FAX), or www.afb.org.

Funding For Students with Visual Impairment. Describes over 250 funding opportunities awarded to students with visual impairment for a variety of activities and programs. Available in large-print (\$30) and diskette (\$50), plus \$5 shipping. Contact Reference Service Press, 5000 Windplay Drive, Suite 4, El Dorado Hills, CA 95762, (916) 939-9620, or go to www.rspfunding.com.

Skills for Success: A Career Education Handbook for Children and Adolescents with Visual Impairments. 1998. Details activities and strategies to help young students with visual impairments prepare for independent daily living and job success. \$37.95. Contact the American Foundation for the Blind Press, Customer Service Department, P.O. Box 1020, Sewickley, PA 15143, (800) 232-3044, (412) 741-0609 (FAX), or <http://www.afb.org>.

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