Vincent P. Tinerella and Marcia A. Dick

Academic reference service for the visually impaired

A guide for the non-specialist

On a typical day, the staff working the information desk at Northern Illinois University's (NIU) Founders Memorial Library will handle approximately 150 inquiries by telephone and in person, ranging from simple directional questions to more complicated ones requiring evaluation and specialized skills. More often than not, the patron will be assisted by David Kuhn, a visually impaired student, or someone like Kuhn—a special-needs student hired and trained for the specific job of fielding patron questions, providing an answer if possible, or forwarding the inquiry to an appropriate library department or staff specialist.

Founders Library began hiring students with disabilities in the early 1990s as one method of enhancing the undergraduate experience of the university's special-needs students. The library positions provide them with the opportunity to gain meaningful employment, work experience, job references, and every consideration any academic intern can reasonably expect.

Students with special needs like Kuhn are enrolling in the nation's colleges and universities at a rapidly increasing rate. Nearly all (98 percent) four-year public, postsecondary schools and 63 percent of private, four-year institutions enroll students with disabilities, accounting overall for three-quarters of the nation's four-year colleges and universities. According to the most recent survey conducted by the U.S. Department of Education, about 6 percent of all undergraduates attending postsecondary programs in the United States declared some type of disability or health-related limitation, and, of this number, 16 percent reported having a vision impairment. Most institutions have met this challenge by making substantial support services available to help students with disabilities, although it should be noted that accommodations vary widely from institution to institution.

NIU's library for students with disabilities program

NIU, like many schools of higher learning, has made an institutional decision to go beyond meeting the basic antidiscriminatory requirements of the Americans with Disabilities Act (ADA; 1990, PL 101-336) by creating and implementing a flexible, comprehensive program designed to help students with limitations, tailoring the assistance provided to individual students based on each student's particular special need. Hiring visually impaired student workers is just one example of the school's university-wide commitment to full participation and equality of opportunity, and it is an integral part of the University Libraries Services for Persons with Disabilities Program, developed in the early 1980s. NIU's program customizes its services to meet the individual needs of its students, and its staff serves as liaisons between the

Vincent P. Tinerella is coordinator of electronic reference services, e-mail: vtinerella@niu.edu and Marcia Dick is coordinator of services for persons with disabilities at University Libraries, Northern Illinois University, e-mail: mdick@niu.edu

library and the university's academic departments. The program, moreover, has made a commitment to acquiring specialized software and equipment and in assisting its visually impaired students to use these resources so they can become more self-sufficient researchers.

A changing reference environment

At the same time colleges and universities are becoming more inclusive for students with special needs, profound changes have made reference and information services steadily more technical and specialized. NIU is representative of most colleges and universities in the United States. Founders Memorial Library has made a commitment to acquiring specialized online databases and reference sources. The library has, moreover, implemented an extensive bibliographic instruction program to support the university's mission of teaching, research, and service, and to assist its undergraduates in obtaining the skills necessary to navigate this new, more complex reference environment. The library's Web site provides 156 research databases that can be searched remotely using EZ Proxy. Since 1997, the number of hits on the library's Web site have increased from an average of 34,650 per month to 730,020 in 2002. Computer terminals in the building have increased from 196 to 368, and librarians collectively answer more than 150,000 queries from patrons annually.

Despite the university's best efforts, many undergraduates find the number of reference sources, materials, and sheer glut of information confusing, as most anyone involved in reference and bibliographic instruction can attest. Subject-specific databases, full-text and full-image availability, networked printing, a myriad of interfaces, and a whole host of other technological advancements have made database and online catalog searching problematic for many students. For a visually impaired student who must adapt resources and rely on adaptive technologies to process information, finding research materials is an even more daunting, confusing, time-consuming process that will become increasingly more complicated as the academic reference environment continues to evolve.

Adaptive technologies

Visual impairment can include color blindness, tunnel vision, the inability to read standard print, peripheral vision, a combination of vision problems, and the inability to receive any visual clues. The common traits among visually impaired students is that they have difficulty reading or are unable to read text in print or on a computer screen, must rely on auditory or tactile signals to process information, or are dependent on a variety of adaptive technologies to access resources. Adaptive aids are devices and tools that have been adapted to enable visually impaired students to perform sight-related tasks independently, and are generally classified as optical (those that improve the device or object, magnification and the like) and non-optical (those that alter the environment, rather than the object, including illumination, light transmission, reflection control, contrast, and others).

Adaptive aids are constantly evolving and seem to be limited only by the imagination. The more common tools designed to broaden access for students with vision problems include:

• electro-optical devices, such as optical character recognition and screen-magnification utilities;

- magnification software;
- closed-circuit television;
- visual imaging processors;
- scanners;
- low-vision reading systems;

• written communication adaptive devices, such as large-type keyboards and typewriters;

• sensory substitution devices, among them talking books and calculators, audio recordings, speech synthesizers, speech compressors, auditory labelers, and reading machines;

• Braille readers, writers, keyboards, and displays;

- relative size devices that enlarge print, symbols, and other items;
- low-vision optical devices, including spectacles, hand and stand magnifiers, and telescopic and absorptive UV lenses;
- lighting, glare, contrast, and color devices; and
- large-print books and journals.

A difficult process

Because most reference sources appear in print and must be transformed into audio or tactile forms, visually impaired students learn that they must depend to a large extent on support networks to assist them. While many universities have made a commendable effort in providing resources and making adaptive technology available, few librarians have been trained to provide reference services for the visually impaired or have any experience or skill operating adaptive aids and software.

Dawn, a visually impaired student, explained some of these difficulties, relating that while most of her classmates were able to use the time between classes productively to study or conduct research, she and her colleagues were required to physically visit the adaptive lab because that was the only place in the library that had the devices and software they needed to see and to adapt resources. As a result, Dawn felt she had to plan her research visits well in advance because the specialized study room might not be open, the disability specialist might be unavailable to assist her, or the particular piece of adaptive equipment she needed might be in use.

Recommendations for librarians

Visually impaired students who have demonstrated the courage, independence, and motivation to embark on the responsibility of becoming college students should expect that their schools will provide them with every opportunity to achieve success. Thus, it is vital to create a welcoming atmosphere in the academic library, one in which students with vision problems are confident

Visually impaired students who have demonstrated the courage, independence, and motivation to embark on the responsibility of becoming college students should expect that their schools will provide them with every opportunity to achieve success.

that they can ask for assistance, whether or not a specialist is available, or whether or not a particular adaptive resource is in use or unavailable. With a few low-cost accommodations, academic librarians and library administrators can provide the best research support possible for their visually impaired students. Individual librarians can:

- act naturally, it is important not to over-compensate;
- realize that, like all students, people with visual impairments are unique, and each student will require individual levels of service;
- realize that a person may have a visual impairment that is not obvious and be prepared to offer assistance if asked, for example, by reading to the student;
- talk directly to the student;
- inform the student of their presence (Say hello and offer to help. Do not automatically assume the person needs or wants help);
- offer an arm if a student needs to be guided, rather than taking his or her arm. (The blind need their arms for balance. Be specific if warning about an obstruction);
- let students know if you must leave for any reason, and be sure to leave them at a landmark—a desk, wall, or table;
- introduce others if in a group;
- never ask a student directly about a disability;
- be patient, most things will take longer;
- never pet or disturb a guide dog (The dog is working and must concentrate. Walk on the side opposite the dog);
- be very specific when giving directions;

- let the student know when discontinuing a conversation;
- offer to do small tasks not ordinarily considered for a sighted student—retrieve a book, make a photocopy, or print a journal article;
- if a subject specialist or a bibliographer, offer to act as a liaison with the department that serves students with disabilities, consider purchasing materials in adaptive formats and offer to serve as a liaison with academic departments;
- if an instruction librarian, ensure that visually impaired students receive formal bibliographic classroom instruction. If involved in teaching, offer to work with the disability coordinator to provide instruction.

Recommendations for administrators

Library administrators can ensure that:
- clear policies are in place for the use of specialized study rooms and adaptive equipment and software;
- there is bright lighting available in a designated place in the general reference area and on each floor of the library;
- Braille signs are placed appropriately throughout the library;
- large, bright, directional signs are in place;
- book cases have large, bold call numbers;
- stairways have a bright strip affixed to the first and last stairs;
- computer and database labs have at least one computer workstation with specialized software and magnification;
- hand magnifiers are available for checkout;
- each floor of the library has at least one computer workstation equipped with specialized software and magnification;
- library staff are aware of new policies implemented and specialized equipment and software purchased;
- two or three staff members are trained in using specialized software and adaptive aids;
- orientation sessions are available for new, visually impaired students;
- there is a strong campus-wide network with other units serving visually impaired students;
- a staff member is trained to repair specialized equipment;
- the library is represented on committees dealing with issues important to visually impaired students;
- campus-wide advocacy programs are in place.

Conclusion

People with special needs often feel isolated and are sensitive to the perception that they are different. With a positive attitude and a few minor considerations, academic librarians can help students with vision problems overcome these fears, serve to make the library a welcoming place for all, lend their individual talents and skills in an increasingly complicated reference environment, and help make the research process easier and more productive for students who find so much of it so difficult.

If academic libraries are going to meet the challenge of providing first-rate reference service and research support for their increasing number of special-needs students, then librarians must reevaluate their role in the process and work collectively to make those services the sighted take for granted routinely available for the visually impaired.

Equipping a specialized study room and having staff trained to serve the information requirements of special-needs students is an important necessity, but if the academic library is truly committed to full inclusion and equality of opportunity, then the energetic participation of the entire reference staff is essential. ⁊