Building Accessible Environments for Readers with Disabilities in Academic Libraries: A Case Study of North American Research Libraries (Postprint)

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Abstract

[Purpose/Significance] To summarize and synthesize the current status and characteristics of accessibility environment construction in North American research libraries, with the aim of providing references and insights for the accessibility environment construction of university libraries in China.

[Method/Process] Employing literature survey and web survey methods, this study conducts extensive investigations on North American research libraries from the perspectives of assistive services provided, accessibility facilities, hardware and software assistive devices, and web accessibility, thereby summarizing their characteristics.

[Results/Conclusions] University libraries in China can strengthen their accessibility environment construction through the following measures: formulating comprehensive library service policies, enhancing service awareness for disabled readers, strengthening accessible web design and construction of website sections for disabled readers, improving hardware and software assistive facilities and accessible-format resources for disabled readers, proactively collecting information on disabled readers, and earnestly implementing personalized services for disabled readers.

Full Text

Accessibility Construction for Disabled Readers in University Libraries: Taking North American Research Libraries as Examples

Abstract

[**Purpose/Significance**] This study summarizes the current status and characteristics of accessibility construction in North American research libraries to provide reference for Chinese university libraries. [**Method/Process**] Using literature investigation and network survey methods, we conducted extensive research on North American research libraries regarding assistance services, accessible facilities, hardware and software auxiliary equipment, and web accessibility, and summarized their characteristics. [**Result/Conclusion**] Chinese university libraries can strengthen accessibility construction through the following measures: formulating comprehensive library service policies and enhancing service awareness for disabled readers; strengthening accessible web design and developing dedicated website sections for disabled readers; improving hardware and software auxiliary facilities and accessible format resources; actively collecting information on disabled readers and providing practical humanized services.

Keywords: disabled readers; accessibility; university libraries

In recent years, the number of disabled students admitted to Chinese higher education institutions has increased annually. According to the "Statistical Bulletin on the Development of Undertakings for Persons with Disabilities in China" published annually by the China Disabled Persons' Federation [1], the number of disabled students entering regular higher education institutions rose from 2,166 in 2001 to 12,362 in 2019, while those entering higher special education institutions increased from 585 to 2,053. As more students with special needs enter regular higher education institutions, the demand for equity in education has become increasingly urgent, requiring the establishment of a support and guarantee system for inclusive higher education to effectively protect the educational rights of persons with disabilities. However, apart from special education schools, other regular higher education institutions in China still have significant deficiencies in accessible services for disabled readers. How to promote accessible campus construction, build an institutionalized support and guarantee system, and enable disabled students to enjoy the rich resources and diversified services of libraries like their able-bodied peers has become a common challenge facing many universities.

1 Research Status and Methods

Domestic university library services for disabled readers remain inadequate. In terms of service practice, apart from a few special education institutions, very few university libraries in China provide relevant facilities and services for disabled readers. Regarding theoretical research, using literature investi-

gation in CNKI, Wanfang, and other databases with keywords such as "library/disability/accessibility" (search date: March 31, 2020), we identified the following main research themes: introduction to foreign libraries in the United States [2-5], United Kingdom [6], Canada [7-8], Australia [9], and Japan [10-12]; introduction to experiences in Hong Kong and Taiwan regions of China [13-16]; and introduction to mainland experiences [17-21]. These studies discuss accessibility construction in infrastructure, hardware and software equipment, and services across different regions and library types, with university libraries in Europe, America, Hong Kong, and Taiwan having implemented many positive measures. Overall, accessibility construction in mainland libraries currently exists mainly in public libraries, with virtually no relevant services in regular university libraries. Zeng Xiangqiong [3] once conducted a network survey on disability services (accessible facilities, auxiliary equipment, reference consultation, personalized services) among 113 member libraries of the Association of Research Libraries (ARL) covering North America, though the survey year was somewhat dated.

In 2018, ARL conducted a survey on accessibility and universal design for disabled readers among its member libraries and released the report "SPEC Kit 358: Accessibility and Universal Design (May 2018)" [22]. Based on this report, we further employed network survey methods to visit the websites of ARL member libraries one by one, investigating sections related to disabled reader services and policies (survey period: February 12, 2020 to May 10, 2020), to comprehensively understand the current status of accessibility construction in North American research libraries and provide reference for Chinese university libraries to develop services for disabled readers.

2 Current Status of Accessibility Construction in North American Research Libraries

2.1 ARL Accessibility Survey Background

In the United States, approximately 20% of the adult population has one or more disabilities, with recent data showing that 11% of college students have disabilities [22]. Libraries must understand the legal requirements and user needs applicable to their institutions, considering accessibility in physical spaces, reader services, library staff, and vendor products. In 2010, ARL surveyed services provided for persons with disabilities among its member libraries and released the report "SPEC Kit 321: Services for Users with Disabilities (December 2010)" [23]. After nearly a decade of social and technological development, significant changes have occurred in many fields, prompting ARL to conduct a new survey from January 3 to February 6, 2018, to explore the evolving accessibility landscape in ARL member libraries. Sixty-seven of the 125 member libraries responded (a 54% response rate), and ARL published the report "SPEC Kit 358: Accessibility and Universal Design" [22] based on the results, which reveals how ARL member libraries meet the accessibility needs of persons with disabil-

ities and deepens understanding of how libraries implement universal design concepts. This study primarily collected information on libraries' support for assistive technology, services provided to persons with disabilities, staffing and training, resource evaluation, institutional policies and procedures, and included questions about universal design.

2.2 Staff Assistance Services

As shown in Table 1, most libraries provide a range of assistance services for disabled users, including: retrieving books and other materials from shelves, assisting with catalog and online resource usage, helping with facilities and photocopying/scanning/printing services, and assisting with library equipment operation. Over half of the libraries demonstrate how to use library assistive technology to disabled readers. As shown in Table 2, more than 90% of libraries support disabled readers seeking help at any service desk, 87% support disabled readers seeking coordinated assistance through other institutional departments (such as disability services departments), and 81% also support users making advance appointments with library experts via phone or email.

2.3 Library Accessible Facilities, Specialized Hardware and Software Assistive Equipment

2.3.1 Library Accessible Facilities All responding libraries provide some type of workstation equipment for readers. Most have general public workstations with assistive technology, and nearly half have multi-person quiet rooms with assistive technology workstations. However, more specialized facility types (such as accessible/height-adjustable scanners, single-person quiet rooms with assistive technology workstations, and non-fluorescent lighting workstations) are not common, as shown in Table 3.

2.3.2 Specialized Hardware Assistive Equipment As shown in Table 4, the most common specialized hardware equipment provided on assistive technology workstations is scanners with OCR (Optical Character Recognition) functionality, offered by 53 libraries (87%), an increase from 42 (79%) in "SPEC Kit 321: Services for Users with Disabilities." Most libraries also provide speakers and microphones, offered by 40 institutions (66%). As shown in Table 5, 34 libraries (65%) provide desktop video magnifiers or closed-circuit television for readers. In addition to those shown in Table 5, some libraries also provide haptic printers for creating tactile objects and 3D printers for printing Braille, with one library providing a white noise generator and full-spectrum lighting.

For the above specialized hardware equipment, very few libraries provide lending services—only six libraries do so. Sixteen libraries provide lending through other university departments, such as disability student service centers.

2.3.3 Specialized Software Assistive Equipment Specialized software is common in surveyed libraries, with most providing text magnification software

and screen readers. The most popular text magnification software is Adobe Acrobat' s built-in text magnification function (47 libraries, 73%) and ZoomText (46 libraries, 72%), a significant increase from the 55% of respondent libraries offering Adobe Acrobat in the 2010 "SPEC Kit 321: Services for Users with Disabilities." The most popular screen reader is JAWS, provided by at least 50 libraries (83%), twice as many as the second-ranked screen reader Narrator. For scanning systems, 40 libraries (74%) provide Kurzweil. Among the 44 libraries providing voice recognition software, 36 (82%) provide Dragon Naturally Speaking, as shown in Table 6.

2.4 Web Accessibility

Libraries need to publicize their services to disabled readers through their websites, making web accessibility particularly important. Although respondent libraries use different standards for web accessibility testing, most explicitly state that they comply with WCAG 2.0 (Web Content Accessibility Guidelines) Level AA (38 libraries, 67%) and Section 508 [25] (34 libraries, 60%), as shown in Table 7. WCAG 2.0 is published by W3C (World Wide Web Consortium) and provides principles and methods for making web content more accessible to persons with disabilities. Section 508 is an amendment to the 1973 U.S. Rehabilitation Act, establishing standards for all federally funded programs and services, emphasizing that all electronic information technology must consider applications for persons with disabilities, and requiring the federal government to develop, procure, maintain, and use electronic and information technology accessible to persons with disabilities. Libraries need to use third-party tools to test website accessibility, with many libraries choosing WebAIM' s WAVE tool [26], and some using more than one tool. W3C has a dedicated page listing tools for evaluating website accessibility [27].

2.5 Publicity Channels

Information about equipment, resources, and services provided by libraries for disabled readers needs to be publicized through as many channels as possible so that those in need can access relevant information promptly. As shown in Table 8, the library website is the publicity channel chosen by most libraries, followed by the university' s disability services department and the university' s service referral department. The university' s service referral department is part of the university' s internal service network, recommending services such as psychological counseling, library services, career planning, and IT to students.

2.6 Universal Design

Universal Design (UD), also known as inclusive design or barrier-free design, refers to products and environments that can be used by all people without the need for adaptation or specialized design. The design philosophy for persons with disabilities has undergone two stages: the first stage of barrier-free design emphasized considering users'convenience and "specialness"(beginning to emerge

in the 1950s), while the second stage of universal design emphasizes maximizing accessibility for all users without particularly emphasizing users'"specialness"(beginning to develop in the 1980s) [28]. Barrier-free design meets the physiological needs of vulnerable groups but carries psychological implications of distinguishing between normal people and vulnerable groups. Although not intentional, such implications have considerable negative effects on vulnerable groups and certain negative impacts on normal people. Universal design is not simply for the elderly and disabled but for everyone—it is a design ideology that stands from the user' s perspective and pursues maximum inclusiveness. After half a century of development, these two concepts demonstrate society' s increasing inclusiveness toward users and the transformation of concepts behind spatial rights. Currently, U.S. libraries are in a transition phase from barrier-free design to universal design, with universal design still being an emerging area of focus.

More than half of the responding libraries (35) indicated that their staff have received training in universal design principles, with 26 libraries stating that the training came from attending conferences and seminars. The application of universal design principles is inconsistent across library construction and renovation, space redesign, furniture and accessory selection, and service design projects. For new construction projects, 16 libraries reported "always" applying universal design, 28 reported "sometimes" applying it, and 7 reported "never" applying it. For furniture and accessory selection, 12 libraries reported "always" applying universal design, 33 reported "sometimes" applying it, and 6 reported "never" applying it. From responses to these questions and information on how accessibility is integrated into institutional collection development policies and procedures, it is clear that some libraries are incorporating universal design principles into their workflows.

3 Characteristics of North American Research Library Accessibility Construction

The library website is an important window for providing information and a direct portal to readers. We investigated the homepages of 125 research libraries one by one, and except for a few links that could not be opened, over 95% of libraries have set up sections related to disabled reader services. Additionally, some university-level disabled reader service center pages also introduce relevant services, demonstrating that disabled reader services are an important component of daily work for university libraries in North America. We selected several representative libraries and summarized their information as shown in Table 9.

3.1 Emphasis on Library Website Construction

On the one hand, most library website designs comply with WCAG 2.0 standards or Section 508 standards, with Accessibility links in the footer of the homepage explaining the website' s accessibility. On the other hand, library website

navigation basically includes sections for disabled reader services, though specific locations and section names vary. Most are named Disability Services or Accessibility, while some are named Persons/Users/Patrons with Disability. The parent sections are mostly Services or Home root directories, with the University of Oregon Library' s parent section named Diversity and Inclusion. Sub-sections include details on adaptive equipment, adaptive technology, policies, services, resources, buildings, transportation and parking information, emergency evacuation, and accessible contact methods. Website navigation for disabled reader services not only facilitates quick searching and browsing of relevant service content for disabled readers but also reflects the library' s "people-oriented" purpose, which is conducive to the sustainable and healthy development of services for disabled readers [14].

3.2 Comprehensive Accessible Hardware and Software Assistive Facilities

North American research libraries demonstrate comprehensive and advanced infrastructure and other hardware and software assistive equipment, which is highly worthy of study by Chinese university libraries. In terms of infrastructure, accessible parking spaces are available near libraries, with ramps for wheelchair users to enter from outdoors, automatic door openers at entrances, and convenient stairs, elevators, restrooms, handrails, wheelchair spaces, etc., inside, creating a library environment full of care and concern that ensures disabled readers' safety, convenience, and comfort. For example, every floor of Syracuse University' s Bird Library is accessible by elevator, with all elevators equipped with Braille-coded buttons and alarm systems providing strobe lights for hearing-impaired readers. Every floor of Syracuse University' s Carnegie Library has newly built restrooms with disabled access, and restrooms in other branch libraries have large compartments with handrails, with Braille signs posted outside all restrooms [32].

In terms of other hardware and software assistive equipment, the provision is comprehensive—from accessible workstations, magnifiers, Braille typewriters, assistive listening devices to text magnification software, screen reader software, and various other types of hardware and software assistive equipment—to maximize convenience for disabled readers to use libraries for reading, research, and other activities. For example, the biomedical, Powell, and research branch libraries of the University of California, Los Angeles all have public workstations equipped with JAWS (Job Access with Speech, screen reader software) and ZoomText (software that allows text display to be magnified to various sizes). These specialized workstations are installed at tables that can accommodate wheelchairs [33].

3.3 Detailed and Diverse Accessibility Services

North American research libraries provide rich services in academic research support, courses, career development, resource usage, professional consultation,

borrowing, and cooperative promotion. In addition to the services listed in Table 1, many libraries provide alternative format conversion services, which can convert library materials into accessible digital formats upon request, including book chapters, journal articles, library publications, and library instruction materials. The New York Public Library provides different services for different disability groups: for visually impaired readers, it offers book and electronic resource search services; for physically disabled readers, it provides book mailing and selected material digitization services; for hearing-impaired readers, it offers free sign language interpretation or real-time captioning services; for readers with learning, cognitive, or developmental disabilities, the library provides a series of courses for adults ranging from film screenings to computer skills, and sensory-friendly interactive programs for children designed to engage them through music, movement, stories, and sensory activities [34]. The Andrew Heiskell Braille and Talking Book Library under the New York Public Library provides free access to over 50,000 audiobooks, Braille books, or digital format books for visually impaired, physically disabled, or other persons with biological reading disabilities, and can mail professionally narrated audiobooks and specially designed book players to homes.

3.4 Strong Support from Disabled Reader Service Personnel

All services and hardware/software facilities for disabled readers depend on professional personnel support. Michigan State University Library began specifically appointing an accessibility coordinator in 2015 and established an accessibility working group. The accessibility coordinator is responsible for supervising the library' s accessibility initiatives, serving as the primary accessibility contact and advocate for the library, and chairing the library' s accessibility working group. The accessibility working group meets approximately once a month to discuss and report on accessibility activities and plans within Michigan State University Library and across campus, and to provide accessibility education and training opportunities for library staff. Currently, the accessibility working group has nine members, including the accessibility coordinator and library liaison from Michigan State University' s Resource Center for Persons with Disabilities, a digital projects librarian, an electronic resources librarian, a South and Southeast Asian studies librarian, an archivist, a user experience and assessment librarian, a web services manager, a curriculum materials program manager, and a student accessibility staff member [35].

4 Recommendations for Chinese University Libraries

Through investigation of 137 "Double First-Class" university library websites in China, we found that the current status of disabled reader services in Chinese university libraries is not optimistic. First, in terms of website information construction, not a single library website has sections for disabled reader services, let alone accessible web design. Second, university libraries lack relevant hardware and software assistive facilities, with any provisions at most

limited to wheelchair ramps. No publicly available information indicates that relevant libraries provide more professional assistive facilities such as accessible study rooms, accessible self-service printers/photocopiers, installation of disabled reader assistive software on computers, specialized lighting equipment, or height-adjustable desks. Finally, although university libraries currently provide relatively rich services, very few special services are offered for disabled readers. Therefore, compared with North American research library accessibility construction, Chinese university libraries still have much room for improvement in this area.

4.1 Formulate Comprehensive Library Service Policies and Enhance Service Awareness for Disabled Readers

From the perspective of current Chinese legislation, Article 34 of the "Public Library Law of the People' s Republic of China" implemented in 2018 stipulates that "government-established public libraries shall consider the characteristics of groups such as the elderly and disabled, actively create conditions, and provide literature information, accessible facilities and equipment, and services suitable for their needs." Article 35 of the "Regulations on Libraries in Regular Institutions of Higher Education" issued by the Ministry of Education in 2016 stipulates that "libraries shall provide convenience for special users such as disabled persons to use libraries by strengthening accessible environment construction." Additionally, China implemented the "Regulations on Accessible Environment Construction" as early as 2012 to regulate accessible environment construction. However, the above legislation only provides macro-level initiatives and encouragement, without clearly defining micro-level regulations and policies on what services to provide, how to provide them, what issues to pay attention to when providing services, or how to punish violations.

The International Federation of Library Associations and Institutions (IFLA) published the professional report "Access to Libraries for Persons with Disabilities—Checklist" in 2005 [39], which provides practical tools for various types of libraries, offering specific evaluation indicators and suggestions for libraries from aspects of library physical buildings, hardware and software facilities, collection resources, services, and communication. The Chinese government should solicit opinions from multiple parties to formulate library disabled reader service policies, strictly specify the scope and content of services for disabled readers, and call on and encourage university libraries to issue specific service plans and provide service guides for disabled readers. Additionally, university libraries themselves should enhance proactive service awareness and truly implement national laws and regulations. When formulating and improving library rules and regulations, they should consider the special group of disabled readers, incorporating specific practices for facilitating disabled readers' book borrowing, accessible facility usage permissions, and job responsibilities of full-time librarians for disabled readers into the scope of library regulations to provide rigid institutional guarantees for disabled reader services [40].

4.2 Strengthen Accessible Web Design and Develop Dedicated Website Sections for Disabled Readers

Many people believe that disabled persons do not use websites, but the opposite is true. Many disabled persons use websites as frequently as able-bodied persons for online learning, shopping, and social activities. Everyone and every organization has the responsibility to treat able-bodied and disabled persons equally. Institutions must ensure their services are available to all people (regardless of disability), and this principle also applies to information and services provided on websites. This is particularly important for websites because they can often help disabled persons live more independently and fully realize their potential in a knowledge-based society. In some cases, websites are the only way for disabled persons to access the latest information. When libraries consciously display their accessible facility information on their websites, readers will trust the library more and feel it will provide better services.

There are many different categories of disabilities. The national standard "Classification and Grading of Disabilities GB/T 26341-2010"[41] classifies disabilities into seven categories: visual disability, hearing disability, speech disability, physical disability, intellectual disability, mental disability, and multiple disabilities. (1) For visually impaired readers, since they cannot see computer screens or have difficulty viewing them, websites should be compatible with screen reader software, screen magnifiers, and colors visible to color-blind persons. (2) For hearing-impaired readers, as online video and audio content increases, if information is delivered through sound, alternative channels should be ensured, such as providing transcripts for audio content or captions for video content, which also benefits visually impaired persons. (3) For physically disabled readers, since they cannot use keyboards and mice in normal ways, web pages should be designed with larger buttons for easy clicking, and important items should not be placed too close together to avoid accidental clicks. Additionally, websites should be compatible with assistive technologies such as voice control software, enabling disabled persons to control websites through voice commands. (4) For other cognitively disabled readers such as those with intellectual or mental disabilities, although cognitive disabilities are difficult to define, they generally involve persons with specific learning difficulties or mental illnesses. Compared with ordinary people, these individuals have greater difficulty with cognitive tasks. Even if they do not need any special tools when using websites, they may find website content difficult to understand, which libraries should note when compiling website content.

W3C established the Web Accessibility Initiative (WAI) [42], bringing together information technology professionals, disability organizations, governments, and research institutions worldwide to jointly formulate strategies, standards, and resources to enable disabled persons to access the Web, promoting the adoption of accessible design in websites to facilitate use by disabled persons. Currently published accessibility guidelines include Web Content Accessibility Guidelines, Authoring Tool Accessibility Guidelines, and User Agent Accessibility Guide-

lines. Technical specifications include Accessible Rich Internet Applications, Audio/Video, Evaluation Methods and Tools, and Personalization, covering mobile accessibility and cognitive accessibility. These open-source guidelines and tools can serve as important references for libraries when constructing websites and designing web pages, making websites accessible to disabled readers in their universities and enabling libraries to provide higher-quality services to users.

4.3 Improve Hardware and Software Assistive Facilities and Accessible Format Resources

In recent years, many universities across China have been building new library buildings or renovating old ones. When constructing, renovating, or expanding libraries, in addition to actively responding to the needs of regular students, conscious attention should be paid to disabled student groups to facilitate their use of library resources for academic research, thereby avoiding disabled reader groups giving up opportunities to use libraries for reading and learning due to unmet basic facility needs. Hardware and software assistive facilities are mainly divided into three categories: (1) Hardware infrastructure, including automatic doors, wheelchair ramps, tactile paving, disabled reader-specific reading seats and restrooms, low-level automatic borrowing/returning machines, widened doors in stacks, low-level circulation desks, height-adjustable reading tables, and other service facilities specifically for disabled readers, with libraries with conditions also able to provide dedicated study rooms; (2) Hardware assistive equipment, including magnifiers, book supports, automatic page turners, hearing aids, listening devices, televisions with subtitle decoders, computers with visual impairment functions, assistive readers, and electronic visual aids; (3) Software assistive equipment, including screen readers, magnification devices, and synthetic speech devices equipped on computers, as well as spelling methods suitable for students with dyslexia. The above assistive equipment must strictly implement laws, regulations, industry standards, and design specifications for accessible construction, with humanization as much as possible.

On June 27, 2013, member states of the World Intellectual Property Organization (WIPO) passed the "Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled" (referred to as the "Marrakesh Treaty") [43]. This treaty is a historic treaty in the international copyright system, providing numerous exceptions and limitations to facilitate access to published works for visually impaired persons and persons with print disabilities. It is a human rights-oriented international treaty in the copyright field and a benevolent act to solve the "book famine" problem facing 340 million blind, visually impaired, and print-disabled persons worldwide. The Marrakesh Treaty defines accessible format works as "works in alternative ways or forms that enable beneficiaries to use the work, including enabling beneficiaries to use the work as feasibly and comfortably as persons without visual impairment or other print disabilities."

Education plays a crucial role in society and has an immeasurable impact on a

person's life. Access to accessible format educational materials is a key factor enabling persons with print disabilities to obtain educational opportunities. Only when educational institutions are equipped with accessible format materials can they provide services to persons with print disabilities. Therefore, university libraries should have a certain proportion of accessible format resources in their collection procurement, reasonably purchasing traditional paper resources such as Braille books, large-print books, and Braille publications that meet the needs of disabled readers in their libraries, while also emphasizing the construction of digital resources, such as audiobooks, audio descriptions, audio tapes, CDs, DAISY (Digital Accessible Information System) format books, accessible video materials, and accessible movies. Among these, the audiobook category includes not only audio tapes, CDs, and MP3 formats but also talking books with detailed chapter and paragraph prompts for visually impaired persons and network audiobooks (eAudioBooks) [8]. Through library assistive equipment and technology, such as Braille automatic converters and Braille embossers, required resources can be format-converted, transforming ordinary resources into formats easily usable by disabled readers.

4.4 Actively Collect Information on Disabled Readers and Provide Practical Humanized Services

Universities may contain various types of disabled readers except those with intellectual disabilities. Libraries should step out of their buildings to actively participate in university activities, go deep into disabled reader groups, comprehensively understand disabled readers' family, learning, and living situations, and change from passive to active services. First, libraries can contact student affairs offices to obtain basic information on disabled readers, establish special files for disabled readers, and build detailed information databases based on these files (including name, gender, age, hobbies, specialties, library visit times, types of information needed, chosen service methods, and ideological and psychological states) to carry out targeted services. Second, given that student affairs personnel are more likely to grasp the situation of disabled readers and communicate with them, libraries should cooperate with party committee deputy secretaries, counselors, and other frontline student affairs staff in various schools to deeply understand the difficulties disabled readers face in using libraries, their opinions on improving library services, and the help they most need, in order to carry out targeted services [7]. Finally, privacy protection for disabled readers must be emphasized while carrying out the above work. Once individuals feel their privacy is violated, they will develop defensive, hostile, or even resistant attitudes toward others, their environment, and society. Specifically for library readers, they will develop dissatisfaction and distrust toward management personnel and management systems, which is not conducive to library work. Respecting readers' privacy is respecting their personal dignity, establishing an equal and trusting relationship between the library and readers, narrowing the psychological distance between librarians and readers, making readers trust the library more, and using the library more.

With the diversification of enrolled disabled student types, how to provide them with personalized and systematic support has become a new issue facing libraries. On the one hand, libraries should actively meet the needs of disabled students, seriously treat each visit by disabled students, reach out to them, invite disabled readers in, and quickly grasp their needs in interactions with them to provide targeted and personalized services [21]: (1) Establish dedicated disabled student service offices or special working groups, equip specially trained librarians, and guide student party member volunteer teams to continuously provide one-on-one assistance for disabled students' lives and studies; (2) Conduct vocational education for disabled readers, cultivate professional skills, and carry out information literacy training to cultivate their information awareness and abilities, narrowing the information gap with others; (3) Provide door-to-door services. Since some disabled readers have mobility difficulties in borrowing relevant books, journals, and other resources from the library, university libraries can set up dedicated phone numbers or email addresses to handle requests from disabled readers, with library staff or student assistants delivering books, journals, or other resources to disabled readers.

On the other hand, more spiritual care and support should be given to disabled students, facing them with an equal attitude and helping them find self-worth and a sense of achievement. Libraries can offer interest classes in calligraphy, traditional Chinese painting, sketching, etc., for impoverished students, encouraging disabled students with skills to become instructors or teaching assistants for interest classes and providing certain compensation. Additionally, disabled volunteer teams can be organized to conduct "human library" activities for everyone, allowing regular students to learn from the role models of disabled students and enabling disabled college students participating in volunteer services to truly change from recipients to providers of help. As an important component of the university, libraries should fully play their role in funding education, helping them build confidence and cultivate sound personalities.

Persons with disabilities are also valuable human resources. Making it convenient and easy for them to receive higher education and master certain professional skills is an important way to help them return to society and realize their life values.

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Note: Figure translations are in progress. See original paper for figures.