Reference and Instructional Services to Postsecondary Education Students with Intellectual Disabilities

Mirah J. Dow, Bobbie Sartin Long, and Brady D. Lund

This paper presents the results of a survey completed by academic librarians at United States colleges and universities identified on the ThinkCollege.net website, a project of the Institute for Community Inclusion at the University of Massachusetts Boston funded by grants from the Office of Postsecondary Education, US Department of Education. The objective of the study was to learn about the reference and instructional involvement of academic librarians in providing resources, library services, and learning activities with enrolled college students with intellectual disabilities (ID). The results reveal several recommendations for academic libraries and librarians toward improving access to postsecondary education for students with ID.

Introduction

High school graduation and transition to undergraduate college and university programs are fortunately opportunities in reach of individuals with disabilities (ID). As a result of protections in American law, there has been increased enrollment by individuals with ID in higher education.[1] (*Higher education* is defined as educational opportunities provided through colleges and universities.) Neurodiversity in higher education has ushered in implications for how higher education institutions include individuals who experience intellectual differences.[2]

Traditionally, higher education was designed for eligible students who were viewed as those who have high-grade point averages in academic content areas; excellent oral and written communication skills, problem-solving and social skills; above-average confidence and self-determination; and career goals and references who attest to superior involvement in extracurricular and volunteer activities. These views of eligible students have evolved, and educational practices are changing. Broader understandings of eligible individuals include those with characteristics considered to be diverse such as race, ethnicity, nationality, gender, sexual orientation, religion, age, socioeconomic status—and ability. In a contemporary higher education environment, diversity is achieved when traditionally underrepresented groups are included in the learning environment.

Mirah J. Dow is Professor and Director of the PhD program, Bobbie Sartin Long is Assistant Professor, and Brady D. Lund is Graduate Research Assistant and candidate for the degree Doctor of Philosophy, all in the School of Library and Information Management at Emporia State University; email: mdow@emporia.edu, blong6@emporia.edu, and blund2@g.emporia.edu. ©2021 Mirah J. Dow, Bobbie Sartin Long, and Brady D. Lund, Attribution-NonCommercial (https://creativecommons.org/licenses/by-nc/4.0/) CC BY-NC.

The purpose of this study is to learn about the reference and instructional involvement of academic librarians in providing resources, library services, and learning activities with enrolled college students with ID. To determine how many colleges and/or universities offer postsecondary education (PSE) programs and in which areas of the United States programs are located, the researchers analyzed the ThinkCollege.net website, a project of the Institute for Community Inclusion at the University of Massachusetts Boston funded by grants from the Office of Postsecondary Education, US Department of Education. There are currently adult learning PSE opportunities for individuals with ID in 49 states with an array of college and university course types attended by students with and without disabilities including nondegree programs (60), certificate programs (169), and other combinations (56) of options for nondegree, certificate, and degree programs. The authors intend to use the findings of this study to make recommendations for improving postsecondary education for students with ID by strengthening library-related key elements in the areas of awareness, policy, and capacity building.

Literature Review

For this study, it is important to describe ID, review statistics about numbers of students with ID who are eligible for PSE opportunities, identify literature about educational needs of students with ID, clarify standards for inclusive higher education, and review recent literature affirming college and university libraries serving individuals with ID.

What Is Intellectual Disability?

According to the American Association of Intellectual and Developmental Disabilities (AAIDD) website, "[i]ntellectual disability is a disability characterized by significant limitations both in intellectual functioning (reasoning, learning, problem-solving) and in adaptive behavior, which covers a range of everyday social and practical skills. The disability originates before the age of 18."[3] Further, according to the AAIDD website, the term *intellectual disability* (ID) denotes the same population once labeled *mentally retarded* (MR). It has taken time for MR language to disappear in legislation, regulations, names of organizations, and public use. Unlike the diagnosis of MR, ID is not determined by an IQ (intelligence quotient) test; instead, ID is diagnosed by a complex assessment in the areas of intellectual functioning and adaptive behavior, which includes an assessment of conceptual, social, and practical skills. This present research reveals that individuals with ID may also be identified as having nonverbal learning disabilities: learning disabilities, attention-deficit hyperactivity disorder, behavioral/emotional disorders, or Autism Spectrum Disorder.[4]

Postsecondary Education for Individuals with ID

The US Department of Education, National Center for Educational Statistics, *Digest of Education Statistics*, 2017 (NCES 2018-070), Chapter 3 indicates that in 2015–16, 19 percent of male students and 20 percent of female students in PSE (any education beyond high school) reported having a disability, including ID.[5] NCES reports that, between 2000 and 2017, total undergraduate enrollment in degree-granting postsecondary institutions was 16.8 million students. Annually, education after high school has become an opportunity for an estimated 2,000–3,000 students with ID who are eligible for PSE opportunities.[6] Education after high school for the population is extremely important given the research indicating that, when compared with their peers, individuals with ID typically earn less, are engaged in lower skills jobs, experience higher

rates of poverty, and have limited access to employee benefits.[7] Decreasing the high number of unemployed individuals with ID must be a matter of serious concern for all PSE educators and academic librarians who have a stake in the future of higher education.

When addressing the complex layers of Title II of the Americans with Disabilities Act Amended Act (ADAAA), Section 504 of the Rehabilitation Act of 1973, or the Individuals with Disabilities Education Act (IDEA), educational needs of individuals with ID have significant implications for content area faculty, instructional librarians, and learning experiences for students with ID.[8] When writing about the educational needs of individuals with ID, Kelley and Westling state that educational programming beyond high school is "not two-year vacations, respite care, or full-time activity centers," but in contrast, "a postsecondary education program for individuals with ID should intentionally provide the structure, support, and learning opportunities that will be success-oriented and lead to greater independence as an adult."[9] Unlike when educating students without diagnosed disabilities, students with ID should benefit from higher education policies and practices that embrace institutional collaboration with social service agencies and/or school districts to identify, collect, and analyze student evaluation data. Plotner and Marshall assert that, when students are served under the IDEA, PSE programs may be required to collaborate with adult agency partners when planning and delivering courses to improve the likelihood that knowledge and skills gained during PSE will lead to appropriate employment outcomes for students with ID.[10] Sheppard-Jones, Kleinert, Druckemiller, and Ray further point out that, even when adults with ID complete PSE programs, they often require ongoing supports through state and federally funded developmental disabilities waivers.[11]

Under IDEA, two- and four-year public and private higher education institutions often provide programs with federal support for high school graduates with ID, age 18 to 22.[12] PSE programming for individuals with ID is a response to advocacy predominantly by parents who want information and guidance, safety, and a focus on employment for their students. Other disability advocates maintain that federally funded institutions must open their doors to enable individuals with disabilities to benefit from rights to education until their twenty-second birthdays.[13] Until recently, many individuals with disabilities had no choice of where to receive education services guaranteed by the law except to remain in high school. For individuals with intellectual and physical disabilities, remaining in high school until their twenty-second birthday was typically considered unacceptable when compared to typical peers who graduate at age 18. Therefore, though it was an option to stay in high school for three more years, it was not an acceptable option for most.

Standards for Inclusive Higher Education

According to Grigal, Hart, and Weir, the *Think College Standards for Inclusive Higher Education* created at the Institute for Community Inclusion at the University of Massachusetts Boston provides a framework for a model PSE program and guidance for facilitating participation for students with ID on college campuses.[14] Their model includes eight key elements: academic access, career development, campus membership, self-determination, alignment with college systems and practices, coordination and collaboration, sustainability, and ongoing evaluation. Grigal et al. stress that students with ID need access and support to participate in college and university organizations and residential life facilities; to participate in cocurricular activities such as student organizations, practica, and service-learning opportunities; and to use technology devices for communication and completing assignments. Also, individuals with

ID need to engage in social activities with students without diagnosed disabilities who serve as role models and natural supports. The current transition to increased diversity in higher education environments, together with the use of the *Think College* standards, suggests many implications and opportunities for instructional librarians to be directly involved in teaching information literacy skills.

Used together, the *Think College* standards alongside the Association of College and Research Library's *Framework for Information Literacy for Higher Education* can provide instruction and reference services librarians a comprehensive outline for identifying information literacy skills instruction and reference services designed to meet the needs of individuals with ID.[15] Moreover, in academic libraries there are accessible spaces that can be designed to reduce student intimidation, anxiety, and uncertainty about obtaining reference services; using public access computers; and studying for and taking exams in a space that is free from major distractions yet open to all students. It is increasingly common for centers for listening, speaking, and writing to be located in academic library buildings to make available both library faculty instructors and informed student assistants. Academic librarians are prepared to learn from subject faculty about various aspects of course content, assignments, and projects designed for students with ID, and they can serve as instructors online and/or present in the library to communicate with the students.

Standards-based information literacy instruction can be provided when students with ID use the library in person. Additionally, guidance can be provided in accessing needed public or personal transportation, and academic library personnel can answer questions and assist in facilitating bus, taxi, ride-sharing, and other naturally occurring transportation options. Academic librarians can guide and facilitate students' access and communication with disabilities services provided by that college or university office. In addition to library orientation sessions and tours, academic librarians can provide personal instruction or small or group instruction about the use of needed technology such as personal devices to text, email, and access electronic resources and platforms for instructions. Individuals with ID, along with their peers, can use the library to meet with mentors, tutors, and campus ambassadors. And, as Hall, Meyer, and Rose suggest, academic librarians are well positioned to provide education and training to college and university faculty on universal design for learning principles, which are now referred to by name in IDEA and other US laws.[16] Academic librarians can also provide parents and guardians access to information and resources about their rights to participate in their students' PSE programs.

Library, Librarians, and Students with ID
A review of published literature reveals that, while librarians have continuously improved physical access to library spaces and access to content, there are only a few, yet some significant, publications about how pre- and in-service librarians are active and involved in addressing the learning needs of enrolled students with ID. For example, Albertson and Whitaker reported that an LIS master's student service-learning project provided access to technology and training contributing to personal empowerment in individuals with ID. The master's students gained insights about the learning needs of individuals with ID.[17] Advocating for college students with learning disabilities, Nall at East Carolina University (ECU) asserted that the principles of Universal Design for Learning by academic librarians should be used to build a comprehensive response to a wide variety of learning needs.[18] According to Kavanagh,

Webb, and Hoover, also at ECU, academic librarians in Joyner Library used Universal Design for Learning elements to review an existing biology LibGuide and revise it to include audio, visual, kinesthetic, and text methods of instruction.[19] They reported that using "a systematic approach to tutorial design that uses both the instructional design process of ADDIE and the design principles of UDL to differentiate means of representation of information will result in a positive educational experience for all students, not just those with learning disabilities."[20] At the Cushing Memorial Library and Archives, Texas A&M University, academic librar-ies found positive results from using the font Open Dyslexic in creating library exhibits, an open-source font designed to increase the level of access to objects and explanatory text for all including students with Dyslexia.[21]

Brannen, Milewski, and Mack reported that the University of Tennessee (UT) Knoxville formed an Assistive Technology and Accessibility Committee with the mission to assess and make recommendations about UT Libraries' practices for serving college students with disabilities using library-owned instructional materials and technologies.[22] They also recom-mend incorporating universal design when planning for library instruction and outreach to college students with ID. Anderson reported evidence that librarians' awareness of Autism Spectrum Disorder through educational opportunities is the first step in tailoring the library environment, providing access to resources, and creating special interest group opportuni-ties for social interactions for individuals who are otherwise typically alone.[23] Conner and Plocharczyk provided evidence that the academic library can successfully offer book clubs for learning and socializing aimed at college students with ID.[24] Kowalsky and Woodruff cre-ated and published a guide for creating inclusive library environments.[25] Murphy, Amerud, and Corcoran stated that, although partnerships between academic libraries and institutions' disability services vary across North America, it is encouraging that interunit partnerships exist to provide opportunities for enhanced student services and learning supports promoting success for individuals with ID.[26]

Research Questions

To learn about academic librarians' involvement in serving students with ID at the colleges and universities identified on the ThinkCollege.net website, following a series of demographic questions, our study was designed to answer three central questions:

1. What instruction and/or reference service accommodations are made by academic librarians for students with ID?
2. What professional preparation have instruction and reference service librarians had for serving students with ID?
3. What would help academic librarians to better serve students with ID?

Methods

Questionnaire design was used for this study. Questions were developed by the researchers based on best instructional practice suggestions for students with disabilities discussed by Carter in 2004 including adapting teaching styles, clarifying, making information more acces-sible, and sensitivity to users' needs.[27] The researchers also used their knowledge of the learning and support needs of individuals with intellectual disabilities as well as their knowledge of academic library operations and services. These questions were further refined based on the feedback provided by academic library professionals affiliated with the researchers but not

part of the research team. Qualtrics, an online survey platform, was used to build the questionnaire. The final questionnaire consisted of 21 multiple choice/multiple answer questions about the demographics of the respondent (where, geographically, they work; their educational background; their experience with individuals with disabilities), their opinions on library services to students with intellectual disabilities, and their opinions about modifications to reference and instructional services. A copy of the questionnaire is provided as an appendix.

The population for this questionnaire was librarians at institutions identified on the ThinkCollege.net website that offer programs for students with intellectual disabilities. Librarians were identified from these institutions' websites, and their email addresses were collected. Questionnaires were delivered as an anonymous link via librarians' email addresses. The first invitation to participate was sent via email on April 24, 2020, with follow-up emails on May 4 and May 14. In total, potential respondents were given approximately one month to complete the questionnaire.

Following the data collection, an analysis was performed among both the aggregate findings and all demographic groups and based on distinctions among groups. For the latter analyses, chi-square tests were used to identify any presence of a statistically significant deviation in responses to service-related questions based on responses to demographic questions. Those analyses that yielded statistically significant results are included in the results section.
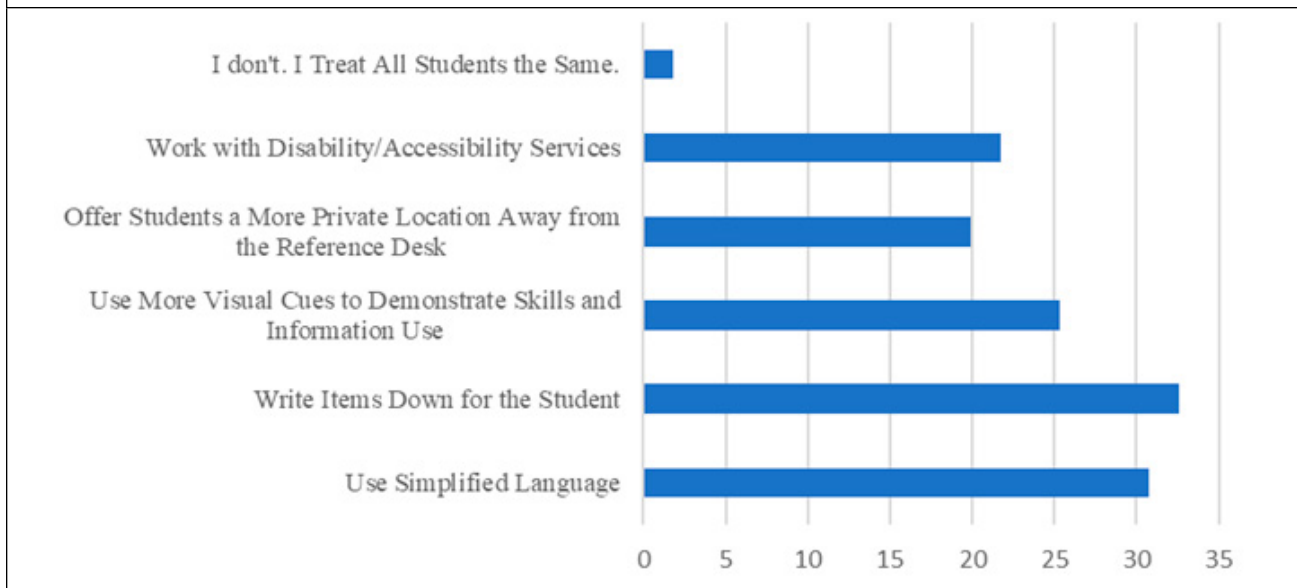
Results

Descriptive Statistics

Thirty-eight (38) complete responses were received from an initial population of 102 librarians at universities that offer PSE programs for learners with ID (37% response rate). These respondents (see table 1) were distributed roughly equally on the eastern and western halves of the United States from librarians with an affiliation with a four-year public university. Twenty-eight (28) of 38 respondents (74%) were from a college or university with a student population of fewer than 10,000. All respondents hold a master of library science and/or master of library and information science degree. Most of the respondents (53%) had extensive professional librarian experience (21 years or more); 32 percent of respondents had between 10 and 20 years of professional experience, while 15 percent had 9 years of experience or less. Most respondents lacked any library and information science coursework on serving individuals with disabilities, while about one-half had an educational background in technology, teaching, or social services.

About 10 percent of respondents to the survey personally identified as having a disability, while more than two-thirds of respondents indicated that someone they know or care about has a disability. Although the majority of respondents indicated that they had experience serving individuals with disabilities (68%), 11 respondents (29%) were not sure whether they had ever served a student with a disability, and one (3%) indicated that they had never served a student with a disability.
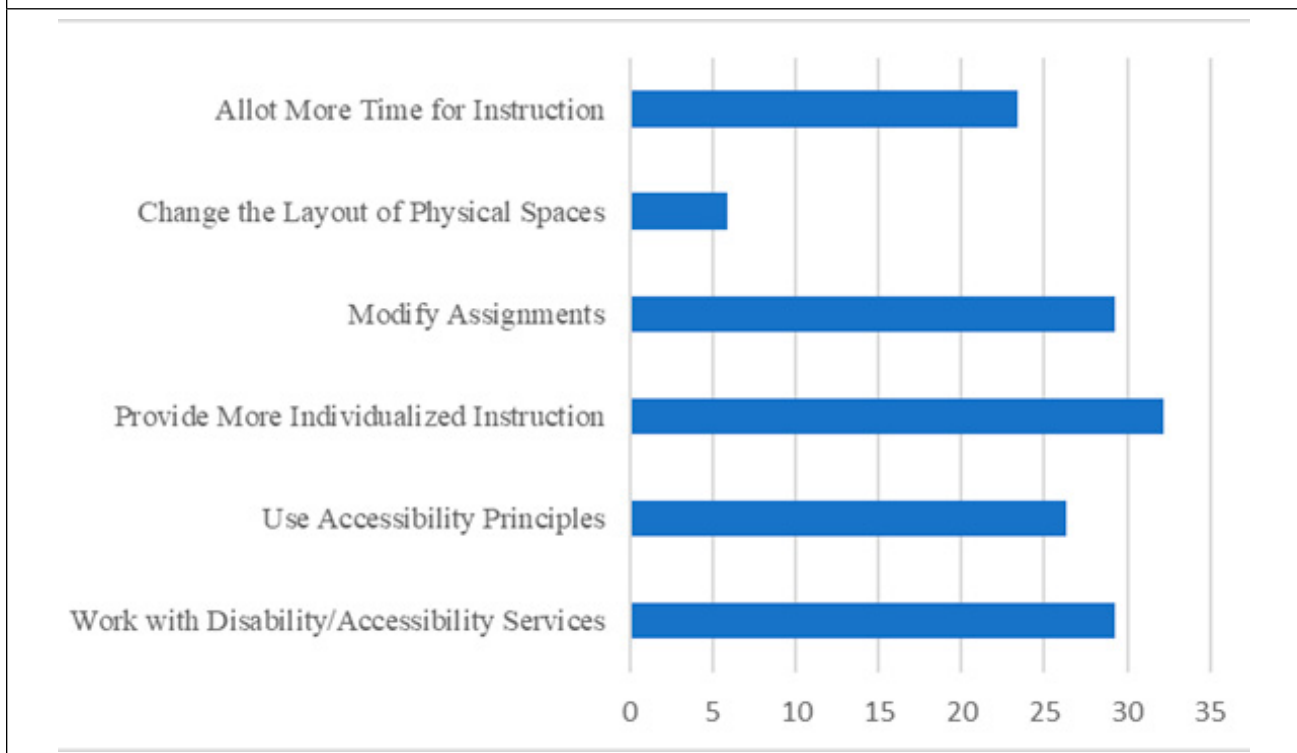
TABLE 1	
Participant Locations	
State	**Number of Participants**
Alabama	1
California	4
Colorado	1
Connecticut	2
Florida	2
Georgia	1
Illinois	2
Indiana	2
Iowa	1
Kansas	1
Kentucky	2
Louisiana	1
Massachusetts	2
New Jersey	2
New York	3
Ohio	1
Oklahoma	2
Pennsylvania	2
South Carolina	2
Texas	2
Wisconsin	2
Total	38

FIGURE 1
What Reference Services Accommodations Are Made for Students with ID

| Category	Value
I don't. I Treat All Students the Same.	~2
Work with Disability/Accessibility Services	~22
Offer Students a More Private Location Away from the Reference Desk	~20
Use More Visual Cues to Demonstrate Skills and Information Use	~25
Write Items Down for the Student	~33
Use Simplified Language	~31

Displayed in figure 1 are responses to the (multiple answer) questions, "How do you modify reference services for students with ID?" Only a couple of respondents noted that they do/would do nothing different, instead treating "everyone the same." The most cited adjustments were accommodations of language/communication: using simplified verbal language; writing items down; and using more nonverbal cues. On the other hand, modifications to instructional sessions, as shown in figure 2, focused equally on communication techniques

FIGURE 2
What Instructional Accommodations Are Made for Students with ID

Category	Value
Allot More Time for Instruction	~23
Change the Layout of Physical Spaces	~5
Modify Assignments	~29
Provide More Individualized Instruction	~32
Use Accessibility Principles	~26
Work with Disability/Accessibility Services	~29

like more individualized instruction and intermediary techniques like working along with disability/accessibility services. Respondents were more likely to select multiple answers with the reference services question than the instructional services question.

Figure 3 displays the results to the question, "What would help you better serve students with ID?" Surprisingly, "more money" was not a top choice. Rather, respondents were much more interested in acquiring a greater knowledge about ID and with improving collaboration relationships with subject matter faculty. Better representation of individuals with disabilities on the college/university campus was also cited as desirable. Only about 25 percent of respondents indicated that increased funding was necessary to better serve students with ID.

FIGURE 3
What Would Help Better Serve Students with ID?
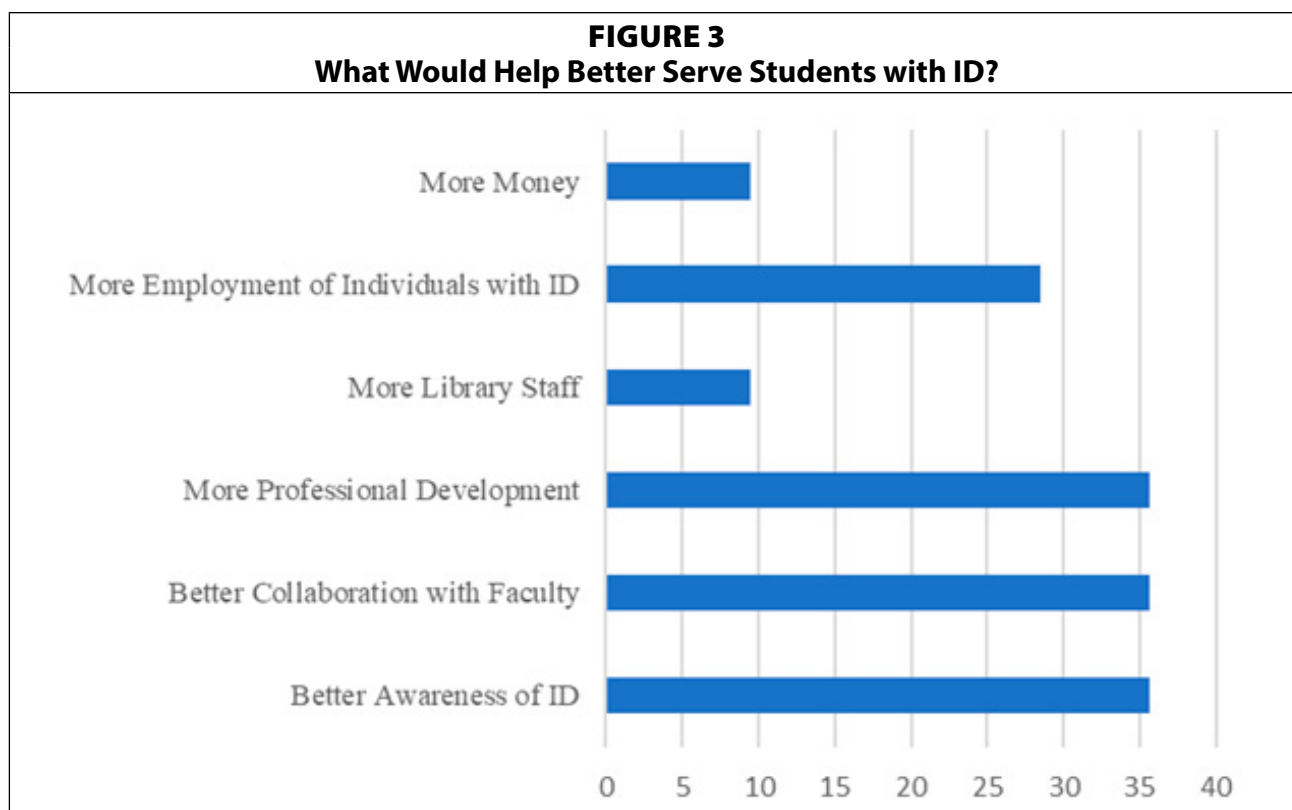
In response to the question regarding respondents' opinions toward serving students with ID, a near 50–50 split exists between those who believe either that their campus lacks adequate resources to serve this population or that the population deserves only equal but not more resources and those who believe that "university libraries should work with these students (with ID) and their programs to develop policies and services that are beneficial." This may suggest that librarians are generally uncertain about their capacity to serve members of the ID population but are interested in providing help when they are able.

As shown in figure 4, lesson plans and cultural sensitivity practices are the most common principles/approaches employed by respondents to prepare for instruction, with disability awareness and accessibility principles close behind. Comparatively, instructional design, and technology-based engagement practices are limited. Additionally, all survey respondents indicated, in response to what factors they consider when developing instruction, academic level of students, academic area/subject, and course format are necessary information/considerations. However, only 42 percent said that they consider or inquire about whether any of the students have special learning needs.

Finally, more than one-half of survey respondents (55%) indicated that neither their university nor library offers professional development opportunities related to working with individuals with disabilities. Among those respondents who indicated that these opportunities do exist, 35 percent indicated that both their university and library offered this type of training, 47 percent indicated that only their university did, and 18 percent indicated that only their library did.

FIGURE 4
Principles/Approaches Incorporated into Instructional Preparation
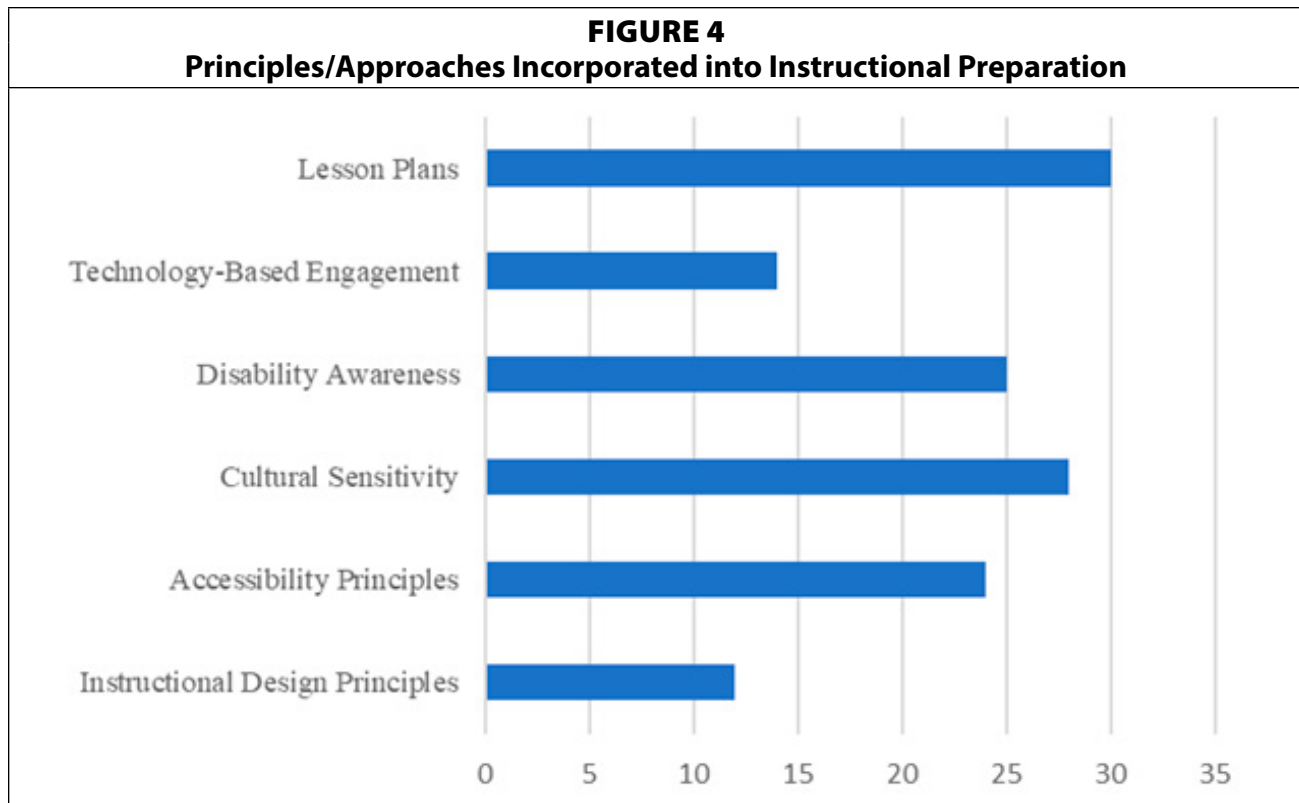
Differences in Responses

In the following section, statistically significant findings among demographic (independent) variables and service (dependent) variables are analyzed using chi-square tests. Personal experience with individuals with disability and educational background are found to be two variables that appear to particularly shape a respondent's views about library services for students with intellectual disability.

Regarding modifications made to reference and instructional services in academic libraries:
- University Size (greater than 5,000, less than 5,000): $X^2 = 19.71$, $p < 0.05$. Respondents at smaller schools were particularly more likely to use simplified language in reference and teaching, while respondents at larger schools were more likely to use additional support from disability services.
- Degree in Education, Information/Learning Technologies, or Psychology/Sociology/Social Work (Yes, No): $X^2 = 36.47$, $p < 0.01$. Respondents with one of these degrees were more likely to modify assignments for students with ID, while respondents without these degrees were more likely to use additional support from disability services.
- Personal Experience with an Individual with a Disability (Yes, No): $X^2 = 69.72$, $p < 0.01$. Respondents without personal experience were more likely to seek additional support

from disability services, while respondents with personal experience were more likely to use accessibility principles and change layouts of physical spaces.

Regarding what would help you better serve students with ID:

- Personal Experience with an Individual with a Disability (Yes, No): $X^2 = 24.02$, $p < 0.01$. Individuals with personal experience were more likely to emphasize the need for better collaboration across campus and the need for better representation of individuals with disabilities among university employees. Individuals without personal experience were more likely to emphasize the need for more training and funding.

Regarding how you feel about serving students with ID:

- Personal Experience with an Individual with a Disability (Yes, No): $X^2 = 80.28$, $p < 0.01$. Individuals without experience with individuals with disabilities were much more likely to suggest that students with ID would be better served at another institution or that their university does not have the resources to support these students. Those individuals with this experience were much more likely to suggest that these students should receive the same services as anyone who uses the library and that universities should work with these students to develop relevant policies and services.

Regarding what principles/approaches you use for instruction:

- College/University Degree in an Education, Information/Learning Technology, or Sociology/Psychology Area (Yes, No): $X^2 = 23.55$, $p < 0.01$. Individuals with an educational background in one of these areas were more likely to engage in technology-based engagement, while those without this educational background were more likely to use a detailed lesson plan to guide their instruction.

Additional Findings about Teaching Information Literacy Skills

Respondents indicated that they teach information literacy skills including searching (21%); evaluation of sources (20%); attribution and proper citations (19%); intellectual freedom and copyright (14%); interpreting graphs, charts, and figures in publications (5%); interpreting methods, hypothesis, theory, and findings in a scholarly publication (8%); discipline-specific literacy skills (such as health literacy and its relationship to information literacy) (8%); and other information literacy skills (90%). When partnering with subject faculty to develop instructional sessions, respondents consider and inquire about the academic level of students (23%); academic area (22%); course format (online, in-person, hybrid) (22%); special learning needs of students (10%); program outcomes (9%); teaching style of instructor (8%); and other (6%) with comments knowing course objectives and key texts, course assignments, disciplinary/professional expectations, and workplace recruitments; and upcoming assignments. These factors suggest that the respondents are well situated and well suited for addressing reference and instruction services and PSE opportunities for individuals with ID.

Discussion

The descriptive statistics and statistically significant findings among variables using the chi-square test are used to inform answers to the research questions and to propose recommendations for improving reference and instruction services to PSE students with ID.

RQ1: What instruction and/or reference service accommodations are made by academic librarians for students with ID?

The majority (96%) of respondents indicated that they teach one to six one-shot sessions each week in partnership with subject area faculty, and just slightly more than one-third (36%) of respondents indicated that they teach one to three credit-hour courses at their institution. Fewer than half the respondents ask faculty members about students' special learning needs when preparing to teach. When asked about accommodations for students with ID, respondents indicated their involvement in a variety of approaches including allotting more time for instructional tasks and/or session time; collaborating with university accessibility services to individualize instruction, which was done more often by larger universities; offering various formats to consume information; providing individual or small group instruction; modifying assignments; and changing the layout of physical space. Nearly half (46%) the respondents indicated that the library offers an identified area for students with ID to take tests and to study. These are all forms of accessibility and support services that can positively contribute to ensuring that students with ID have full and equal access to college and university programming. Also, these accommodations and services by academic librarians are likely to contribute to the achievement of the *Think College Standards, Quality Indicators, and Benchmarks for Inclusive Higher Education* (Standard 1) by facilitating qualified academic access for students with ID that provides an array of existing course types attended by students without disabilities rather than separate courses attended only by students with disabilities. Further, these responses are likely to be indicative of PSE programming that facilitates collaboration and coordination (Standard 6) with key departments such as the library making it possible for students with ID to effectively use campus resources.

RQ2: What professional preparation have instruction and reference service librarians had for serving students with ID?

Respondents with prior education in the areas of education, information/learning technologies, or psychology, sociology, or social work were more likely to take steps to modify assignments for students with ID. Respondents without these degrees and without personal experience with disability were more likely to ask for assistance from university support services. While more than half the respondents (56%) indicated that they have experience in serving individuals with disabilities, 76 percent of respondents indicated that their master's program did not discuss serving individuals with ID. Responses indicate that only about half of universities that offer programs for students with ID also offer professional development opportunities related to working with these students. This leaves librarians to seek professional development themselves. The bottom line for these respondents seemed to be that opportunities to prepare for reference and instruction services to students with ID have been missing from master's programming for professional librarians. Opportunities to learn about adult learning in PSE that addresses students with ID is the desired topic for professional development growth and more important to the respondents in this study than additional funding for library resources.

RQ3: What would help academic librarians to better serve students with ID?

Study respondents identified what would help to better serve students with ID, including better awareness of ID in general (22%); better collaboration with faculty and staff (22%); more professional development (22%); more library staff (6%); more employment of individuals

with ID across the institution (18%); more money (9%); and other (1%), with the comment that it would help to have better options for purchasing books and other materials relevant and readable for adults with ID. Survey responses indicate that academic librarians want to invest more time and resources to better serving students with ID.

Limitations
While the sample for this study includes individuals who are relevant to the study's topic, there was a small response rate, which decreased representation of the entire study population. The small sample size also affects the reliability of the survey results, which led to higher variability and potential bias. The researchers are concerned that perhaps only a small number of people had knowledge about the survey sent to them in their email due to the impact of the COVID-19 crisis. The results of the study may be skewed to reflect only the opinions of those who read the email and participated because they may have had strong feelings about the study's topic. While the results of this study are impacted by timing of the survey, given the unknowns surrounding the global pandemic, it seemed important to nevertheless gather as much input as possible from this study population about serving college students with ID.

Recommendations
The following reference and instructional service recommendations are for improving accommodations for students with ID through strengthening three key elements: awareness, policy, and capacity building. Based on our research, these are suggestions for priorities for academic librarians as they interact with each other and campuswide.

Awareness
- Provide authoritative, current sources about ID during campus learning services events and training sessions.
- Talk generally about the information literacy learning needs of students with ID when serving as the library's representative on campus committees and/or task forces.
- Inform campus content partners about librarians' roles in designing reference and instruction services for students with ID.
- Collaborate with context area faculty about Open Educational Resource publications relevant and readable for PSE students with ID.
- Discuss the information literacy learning needs of students with ID during library curriculum and/or service planning.

Policy
- Ensure that information literacy learning for students with ID served under existing legislation (examples: IDEA; Title II of ADAAA; Section 504 of the Rehabilitation Act of 1973) is addressed as modifications or accommodations in institutional and library policy.
- Use institutional policy for providing accessibility training and services to faculty and academic librarians to inform library policies.
- Develop or modify existing library policy to support students with ID to gain access to the library environment, sources, and services.

Capacity Building

- Identify librarians with disabilities or with experiences with individuals with ID to hire and to serve as mentors and/or allies.
- Offer professional developing opportunities focused on the learning needs of adult students with ID.
- Fund demonstration and research on PSE models for teaching information literacy skills to increase the number of available options for students with ID and develop/disseminate replication materials.

Conclusion

As the only study focused on reference and instructional services at colleges and universities with programming for students with ID identified on the ThinkCollege.net website, the results from this study fill a gap in the research about academic librarians' perceptions about their involvement in inclusive education and students with deficits in intellectual functioning and adaptive behavior. By surveying librarians, we provided them the opportunity to communicate their backgrounds and indicate how they teach information literacy skills and provide library services and sources. They also communicated about how they accommodate and/or modify instruction for students with ID. Invaluable details were discovered that informed specific recommendations.

To better serve students with ID, college and university librarians need professional development opportunities that extend their knowledge and skills in teaching information literacy skills with a special focus on needs of students with ID and best practices in providing accommodations and modifications. Academic librarians who have education about ID and personal experiences working with individuals with disabilities tend to 1) recognize the need for better collaboration across campus; 2) value representation of individuals with disability among university employees; and 3) emphasize instructional services that support diversity, equity, and inclusion. Our findings further reveal the need to investigate benefits of hiring academic librarians with disabilities, which corresponds to Oud's[28] recent call for more academic library research focused on library employees with disabilities.

Increasing awareness of the enrollment of students with ID on college and university campuses is necessary to usher in neurodiversity in higher education. Addressing information literacy learning for students with ID in university and library policies and increasing capacity through continuous professional development and hiring are necessary steps for colleges and universities if they are to achieve diversity when traditionally underrepresented groups are included in the learning environment. There is still much more to learn about improving accessibility and inclusive PSE programming from the institutions identified on the ThinkCollege.net website.

APPENDIX. Librarians Serving Students with ID Survey
What is intellectual disability?
According to the American Association of Intellectual and Developmental Disabilities (AAIDD) frequently asked questions website, "[i]ntellectual disability is a disability characterized by significant limitations both in intellectual functioning (reasoning, learning, problem-solving) and in adaptive behavior, which covers a range of everyday social and practical skills. The disability originates before the age of 18" (AAIDD, 2019, para. 1). Further, according to the AAIDD website, the term *intellectual disability* (ID) denotes the same population once labeled *mentally retarded* (MR).

State in which your library is located. (Please fill in blank.)
1. Type of university
    a. 2-year college
    b. 4-year private
    c. 4-year public
2. What is the size of your total student population?
    a. 5,000 or fewer
    b. 5,001–10,000
    c. 10,001–20,000
    d. 20,001 and greater
3. Number of years of professional librarianship experience. (Please fill in blank.)
4. What is your age?
    a. 25 or younger
    b. 26–35
    c. 36–45
    d. 46–55
    e. 56 or older
5. Do you have an MLS or MLIS?
    a. Yes
    b. No
6. Did any of your MLS/MLIS courses discuss serving individuals with intellectual disabilities?
    a. Yes
    b. No
7. Do you have an undergraduate, master's, or PhD in any of these areas? (Check all that apply.)
    a. Information or Learning Technology
    b. Education
    c. Psychology, Sociology, or Social Work
8. Do you identify as having a disability?
9. Does someone you know or personally care about have a disability?
10. Do you have professional experience serving people with disabilities?

The following questions are about your library's service to students with ID.
11. How do you modify reference services for students with ID?
    a. Use simplified language

    b.   Write items down for the student
    c.   Use more visual cues to demonstrate skills and information use
    d.   Offer students a more private location away from the reference desk
    e.   Work with disability/accessibility services to improve the reference interview (which might include consulting the student's individual learning plan)
    f.   I do not; I treat all students the same
    g.   Another modification (fill in the blank) _____

12. How do you modify instruction sessions for students with ID?
    a.   Allot more time for instructional tasks and/or session time
    b.   Work with disability/accessibility services to individualize instruction
    c.   Use accessibility principles to offer various formats to consume information
    d.   Provide more individual or small-group instructions
    e.   Modify assignments
    f.   Change the layout of physical spaces
    g.   Another modification (fill in the blank) _____

13. What would help you better serve students with ID?
    a.   Better awareness of ID in general
    b.   Better collaboration with faculty/staff
    c.   More professional development
    d.   More library staff
    e.   More employment of individuals with ID across the university
    f.   More money
    g.   Other (fill in the blank) _____

14. How do you feel about serving students with intellectual disabilities? (Check all that apply.)
    a.   This population does not belong at the university.
    b.   This population deserves equal access to education, but we do not have the resources to provide proper services.
    c.   This population should receive the same services as any other population that uses the library—no more, no less.
    d.   University libraries should work with these students and programs to develop policies and services that are relevant and beneficial.
    e.   I do not know enough about this population or the programs to have an opinion.
    f.   I do not know/do not wish to answer.

15. Does your library offer an identified space for students with ID to take tests or study?

The following questions are about your library's service to all students (the overall student population).

16. How often do you partner with subject area faculty to deliver one-shot instruction to support coursework?
    a.   Daily
    b.   Few times a week
    c.   Once a week
    d.   Few times a month
    e.   Once a month
    f.   Few times a semester

17. Do you teach 1–3 credit-hour courses at your university?
    a. Yes
    b. No

18. Which literacy skills do you teach? (Check all that apply)
    a. Searching skills (library catalog, Google searching, databases, and the like)
    b. Evaluating sources skills
    c. Attribution and/or proper citation
    d. Intellectual freedom and/or copyright
    e. Interpreting graphs, charts, figures in publications
    f. Interpreting methods, hypotheses, and findings in scholarly publications
    g. Discipline-specific literacy skills (such as health literacy and its relationship to information literacy)
    h. Other (fill in the blank)

19. What factors do you consider/inquire about when developing an instructional session with subject faculty? (Check all that apply.)
    a. Academic level of students (freshman, senior, graduate, doctorate, professional)
    b. Academic area (history, anthropology, dental hygiene)
    c. Course format (online, in-person, hybrid)
    d. Special learning needs for students (Are there students with hearing, vision, learning disabilities?)
    e. Program outcome (degree, certificate, nondegree)
    f. Teaching style of instructor

20. What principles/approaches do you incorporate into your preparation for instruction?
    a. Instructional design principles (ADDIE, Dick, and Carey)
    b. Accessibility principles (Universal Design for Learning)
    c. Cultural sensitivity
    d. Disability awareness
    e. Technology-based engagement (virtual reality/immersive technology, social media)
    f. Lesson plans with learning outcomes

21. Does your university or library offer any professional development opportunities related to serving individuals with intellectual disabilities?
    a. Yes
    b. No
    c. No, but I sought them out myself

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