Making Student Services Welcoming and Accessible Through Accommodations and Universal Design

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Abstract

Thirteen focus groups with a total of 53 postsecondary students with disabilities and 14 focus groups with a total of 72 personnel from student service offices on campuses nationwide identified access problems encountered by students with disabilities in these offices and potential solutions to these problems. Students shared experiences in which student service personnel did not know how to deal with them and where they felt disrespected. Participants in focus groups identified a need to increase staff comfort level in working with students who have disabilities as well as to increase staff knowledge and skills regarding disabilities, especially "invisible" disabilities that are not disclosed by service users; communication and accommodation strategies; rights and responsibilities; campus resources; and issues unique to specific offices. Students and practitioners recommended a variety of publications and training options. The authors share general approaches, categorized as the delivery of accommodations and the application of universal design, and specific on-site and online training materials that address issues identified in this exploratory study.

Civil rights legislation, social equity awareness, advancements in assistive technology, and medical breakthroughs are among the factors that have resulted in higher expectations, better pre-college academic preparation, and greater numbers of people with disabilities pursuing higher education (Henderson, 2001; National Council on Disability, 2000). It has been estimated that 6-9% of college students have disabilities, and the members of the largest and fastest growing group of college students with disabilities have learning disabilities (Henderson, 2001; Horn & Nevill, 2006; National Center for Educational Statistics, 2000). Of those who report a disability, 40% report a learning disability, 16% a visual impairment, 16% a health-related disability, 9% a hearing impairment, 7% a mobility/ orthopedic disability, and 3% a speech impairment (Henderson, 2001).

Students with disabilities are less likely than students without disabilities to pursue a postsecondary education, stay enrolled, successfully transition from two-year to four-year schools, earn postsecondary degrees, and secure employment (Horn & Berktold, 1999; National Council on Disability, 2000; Wagner & Blackorby, 1996; Yelin & Katz, 1994). These facts are of particular concern because, for individuals with disabilities, the positive correlation between level of education and rate of employment is stronger than for the general population (Blackorby & Wagner, 1996; Stodden, 1998; Stodden & Dowrick, 2000; Yelin & Katz, 1994). This positive correlation suggests that further education may lead people with disabilities to a level playing field with peers who do not have disabilities. Creating a postsecondary environment that increases the number of students with disabilities completing degrees has the potential to help the United States fully employ all potential workers and thereby maximize productivity and international competitiveness (National Council on Disability and Social Security Administration, 2000; Office of Disability Employment Policy, 2001).

Federal legislation, specifically Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, requires that postsecondary institutions provide reasonable accommodations to ensure equal access to program offerings for qualified students who disclose their disabilities and present appropriate documentation (Frank & Wade, 1993; West, Kregel, Getzel, Zhu, Ipsen, & Martin, 1993; Waddell, 1999). This legislation is interpreted to mean that, besides academic courses, institutions must provide students with disabilities access to services offered by admissions, registration, financial aid, housing

and residential life, and advising offices; computer labs; libraries; career centers; tutoring centers; and other student services (Milani, 1996; Simon, 2000).To comply with this legislation, campuses have developed policies, procedures, and specialized staff to help students who disclose their disabilities arrange reasonable accommodations to ensure access to classes and other campus facilities, products, and services. Students who do not require or choose not to request accommodations do not need to disclose their disabilities to anyone on campus. It is estimated that only one in four (26%) postsecondary students with disabilities self-disclose their disabilities to the campus disability services office (U.S. Department of Education, 2000).

Review of Research and Practice

Research on the experiences of postsecondary students who disclose their disabilities has revealed that although most students report being generally satisfied with the accommodations they receive (Lancaster et al., 2001; Lehman, Davies, & Laurin, 2000), the level and types of support services provided to students with disabilities vary greatly among postsecondary campuses (Stodden, Welley, Chang, & Harding, 2001). Students with disabilities report difficulties in accessing courses, financial aid, housing, and other services (National Council on Disability, 2003). Some students, especially those with learning disabilities, report having difficulty acquiring accommodations and maintaining confidentiality of disability-related information with their instructors (Hill, 1996; National Center for the Study of Postsecondary Educational Supports, 2000b). Some are reluctant to disclose their disabilities to faculty they suspect may have negative attitudes about them or may share this information with others. They note that some instructors are unaware of the rights and accommodation needs of students with disabilities (Frank & Wade, 1993; Hill, 1996; Lehman, Davies, & Laurin, 2000; National Center for the Study of Postsecondary Educational Supports, 2000b).

A large and growing body of published research addresses the training needs of faculty and academic administrators with respect to effectively teaching students with disabilities (Bourke, Strehorn, & Silver, 2000; Burgstahler, 2008b, c; Burgstahler, Corrigan, & McCarter, 2004; Burgstahler & Doe, 2006; Doña & Edmister, 2001; Hill, 1996; Leyser, Vogel, Wyland, & Brulle, 1998; National Center for the Study of Postsecondary Educational Supports, 2000a; Scott & Gregg, 2000; Sheppard-Jones, Krampe, Danner, & Berdine, 2002; Vogel et al., 1999; Yuker, 1994). Researchers

have reported that many individuals in these positions have little experience with students who have disabilities and are not sufficiently familiar with the legal issues of access, do not know what policies and procedures they should employ, what specific accommodations are appropriate and ensure that academic standards are maintained, what their role is in making accommodations, how to communicate with students who have disabilities, and what campus and community resources are available. Additionally, it has been found that some faculty members and administrators are more willing to accommodate mobility and sensory impairments than "invisible" disabilities such as learning disabilities and psychiatric impairments (Lehmann, Davies & Laurin, 2000; Vogel, Leyser, Wyland, & Brulle, 1999; Sheppard-Jones, Krampe, Danner, & Berdine, 2002).

A very small body of published research and practice has begun to identify barriers students with disabilities face in using campus services (Burgstahler, 2008d) such as tutoring centers (Higbee & Eaton, 2003), libraries (Schmetzke, 2001), counseling centers (Uzes & Connely, 2003), residential living (Wisbey & Kalivoda, 2003), and computer labs (Thompson, 2008). Sheppard-Jones et al. (2002) identified specific needs for information in the areas of providing accessible transportation and parking, hiring students with disabilities, using accessible technologies in libraries, ensuring physical campus accessibility, and making campus and community resources available to students with disabilities.

Background and Purpose of the Present Study

DO-IT (Disabilities, Opportunities, Internetworking and Technology), located at the University of Washington, was funded by the U.S. Department of Education (grant #P33A990042) to design and deliver professional development for faculty and academic administrators to increase their knowledge and skills in educating students with disabilities. As a needs assessment, focus groups of students with disabilities and of faculty and academic administrators were conducted (Burgstahler & Doe, 2006). Based on the results, project staff created professional development options that include printed checklists and other materials, on-site instruction, video presentations, and a comprehensive Web site called The Faculty Room (DO-IT, n.b.d.). Evaluative data suggest that training positively impacted: (a) the knowledge and skills of faculty and academic administrators, (b) the application of accessible practices in classes of trained faculty, and (c) the average course grades of students with documented disabilities, bringing them closer to those of students

without disabilities (DO-IT, 2008). During this project, universal design emerged as an approach for helping faculty effectively teach students with a wide range of abilities and disabilities as well as other characteristics, such as those related to age, gender, and race/ethnicity. In universal design of instruction, rather than focusing on the average student, instructors proactively design their teaching materials, delivery methods, and environments to address the wide range of characteristics of potential students. Instruction developed in this way maximizes inclusion, minimizes the need for accommodations for specific students with disabilities, and benefits students with disabilities who do not disclose their disabilities as well as students with a variety of learning styles and other characteristics (Burgstahler, 2008c).

DO-IT received funding from the U.S. Department of Education (#P116D990138-01) to conduct focus groups of postsecondary students with disabilities and student service office (SSO) personnel to understand SSO problems and solutions as perceived by members of each group and to use these perceptions to inform policy and practice with respect to SSOs. The study presented in this article gathered relevant information from SSO personnel and students with disabilities to develop content and strategies for the professional development of SSO personnel to guide them in being both (a) proactive in designing welcoming, accessible, and usable services (i.e., employ universal design principles) and then (b) reactive in providing accommodations to specific students with disabilities for whom the design is not fully accessible. Since campus services play important roles in the academic, social, and career success of postsecondary students (Seidman, 2005), the results of this study have the potential to ensure equal access to postsecondary education and career outcomes for individuals with disabilities.

Research Questions

The following research questions were established for this study.

1. What challenges do students with disabilities face in effectively using student services at postsecondary institutions?
2. What challenges do SSO personnel at postsecondary institutions face in providing services to students with disabilities?
3. What are potential solutions for making SSOs more accessible to students with disabilities?
4. What are the best options for professional development of SSO personnel to help them more effectively deliver services to students with disabilities?

Method

Focus groups were selected as the best method to gather this data because it was desirable that "participants can qualify their responses or identify certain contingencies associated with their answers. Thus, responses have a certain ecological validity not found in traditional survey research" (Stewart & Shamdasani, 1990, p.12). Focus groups can provide insights into what people think, as well as why they think the way they do (Jacobi, 1991; Krueger & Casey, 2000; Mertens, 1998; Morgan, 1998). Participants can challenge one another, possibly leading to better-developed ideas and more creative solutions, and stimulate one another to remember a situation that might otherwise not have occurred to the participant.

Procedures and Participants

DO-IT's project team members who are disability services administrators recruited participants through departmental notices, postings on electronic discussion lists, and professional contacts and also moderated the focus groups. They verified the disabilities of participants based on documentation within disability service offices. Moderator guidelines and a script were created by research staff and distributed to focus group moderators to ensure consistency in the conduct of the focus groups. Table 1 contains the list of question areas covered in the focus groups; however, since the moderators followed principles of non-directedness as they solicited views from group members, the order and wording of the questions differed from group to group. Focus group meetings were approximately 90 minutes long and were audiotaped. Research staff transcribed all spoken utterances that were on the tapes, using arbitrary codes to identify each speaker. None of the moderators were involved in data analysis or research reporting.

Fourteen SSO personnel focus groups with 72 participants were conducted at 14 postsecondary institutions in 11 states (CA, GA, MN, NE, NY, PA, RI, SC, TN, TX, and WA,). Forty-three of the SSO personnel were women and 14 were men; the gender of 15 participants was not recorded. A diverse mix of institution types was represented. Four of the institutions were 2-year and 10 were 4-year. Six of the participating institutions were in an urban setting, three were in a rural community, and five were in a suburban location. Focus group participants worked in many different types of student service units, including those related to counseling, careers, admissions, academics, health, housing, registration, access and accommodations, transportation, advising, testing, writing, financial aid,

Table 1

Questions asked of students and SSO personnel

SSO personnel questions

1. Describe your familiarity with services on this campus that provide accommodations to students with disabilities and your experience interacting with these services.

2. What's your understanding of the legal responsibilities to provide access to your services to students with disabilities? How has your unit responded to these legal responsibilities?

3. How accessible is your unit to individual disabilities? That is, is it wheelchair accessible? Do you provide documents in alternative formats: Braille, large print? How accessible is the web site? And do you have a statement about requesting accommodations in your publications?

4. Describe your positive and negative experiences working with students with disabilities.

5. Have you ever heard of, or been offered, professional development opportunities to learn how to work with students with disabilities? Did you participate? What did it involve? How was it scheduled? Was it satisfactory?

6. Tell me what you think staff and administrators of student services need to know about working with students with disabilities.

7. If you were offered professional development on accommodating students with disabilities, which method of delivery would you prefer and why?

Student questions

1. Tell me what you know about the services on your campus that provide accommodations to students who have disabilities and describe your level of satisfaction with these services?

2. What is your understanding of the legal responsibilities of the college to accommodate students with disabilities?

3. Tell me about your experiences, positive and negative, that you've had regarding disability-related access issues with staff and administrators of student service offices such as financial aid, admissions, registrar's office, counseling center, and others.

4. How could administrators and support staff become better prepared to provide services for students with disabilities in their activities and offices? What information would be most useful for them to have?

and libraries; two participants identified themselves as instructors; one was simply identified as an older female student. Focus groups ranged from two participants to seven participants, with an average of 4.8 participants. Focus groups of SSO personnel examined participant challenges in working with students who have disabilities and made suggestions for addressing these issues, including recommendations for effective professional development for SSO personnel to make student services more effective for students with disabilities.

Thirteen student focus groups were conducted at 12 institutions in 9 states (GA, IA, MO, NE, NY, PA, RI, TN, WI); eight of these institutions also conducted focus groups with SSO personnel as noted above. Focus groups ranged from one to seven participants with an average of 4.1 participants. Institutions with a diverse set of characteristics were represented. Four of the institutions were rural, two were suburban, and six were urban. Two of the participating institutions were two-year and 10 were four-year schools. A total of 53 students with disabilities participated; 17 were males, 23 were females, and 13 did not specify gender. Disabilities represented among focus group participants, who in some cases reported multiple disabilities, included eight visual impairments, four hearing impairments, 10 mobility impairments; six health impairments (including seizure and immune system disorders), seven Attention Deficit/Hyperactivity Disorder (ADHD), one psychiatric disability, and nine learning disabilities. Thirteen of the participants did not disclose their specific disability type. The focus groups of students with disabilities examined challenges participants encountered when using student services, proposed solutions to address the identified problems, and offered suggestions for how SSO staff could become better prepared to work with students who have disabilities.

Data Analysis

Both traditional and computer-assisted methods were employed to analyze focus group data. The first step in data analysis was to manipulate the large amounts of raw data into manageable sets. Preliminary review of the data helped researchers organize it around specific topics. As unexpected yet relevant issues emerged from reviewing raw data, new categories were coded. Several levels of analysis were implemented before the analysis was complete (Krueger, 1998). Computer-aided analysis provided an efficient and systematic way to code and sort the large amount of data collected (Ford, Oberski, & Higgins, 2000; Krueger, 1998). Atlas.ti software was used to code the transcripts, making it relatively easy to develop hier-

archical categories of coding, create new categories, delete old categories, re-organize existing categories, and re-index sections. Quotations of participants that substantiated summary statements were also collected.

A codebook was developed to identify and quantify problems and solutions. "Problems" were classified as to whether they were related to the student, the SSO, or the system. "Proposed solutions" were suggested actions to be implemented by the student, SSO personnel, or by the institution as a whole. The content of this article focuses on problems related to the SSOs and proposed solutions SSOs could undertake. Separate subsequent papers will report on problems and solutions related to students and to institutions. The types of problems and proposed solutions for the SSOs were categorized as "knowledge" (e.g., lack of awareness, inadequate information), "attitude" (e.g., closed-mindedness, negative perspectives), "skills" (e.g., lack of ability to communicate or offer accommodations) and "other" (i.e., problems not falling into the other three categories). Figure 1 illustrates the coding scheme; there were a total of 90 codes related to SSOs, students, and the institution or system overall. Thirty of these codes were related to the SSOs and used for the results reported in this article.

Results

As indicated in Figure 2, nearly all (93%) of the focus groups of SSO personnel identified at least one problem with their SSO, as did nearly three fourths (71%) of the student focus groups. The type of problem most frequently identified by both groups is in the category of knowledge of SSO staff; a problem in this area was mentioned in 12 of the 14 groups of SSO personnel and in eight of the student groups.

Figure 3 shows the percentage of groups proposing solutions to problems with the SSOs. All of the focus groups of SSO personnel proposed at least one solution for such problems, as did nearly all (86%) of the student focus groups. Figure 4 shows that, overall, SSO personnel participating in the focus groups made an average of 20.4 comments relating to proposed solutions to problems in the student services offices, while the students made an average of 7.1 comments. SSO personnel proposed solutions for a lack of knowledge most frequently (11 groups); students offered more suggestions for skill development and attitude improvement in these offices (10 groups).

SSO Personnel Perspectives Regarding SSO Problems

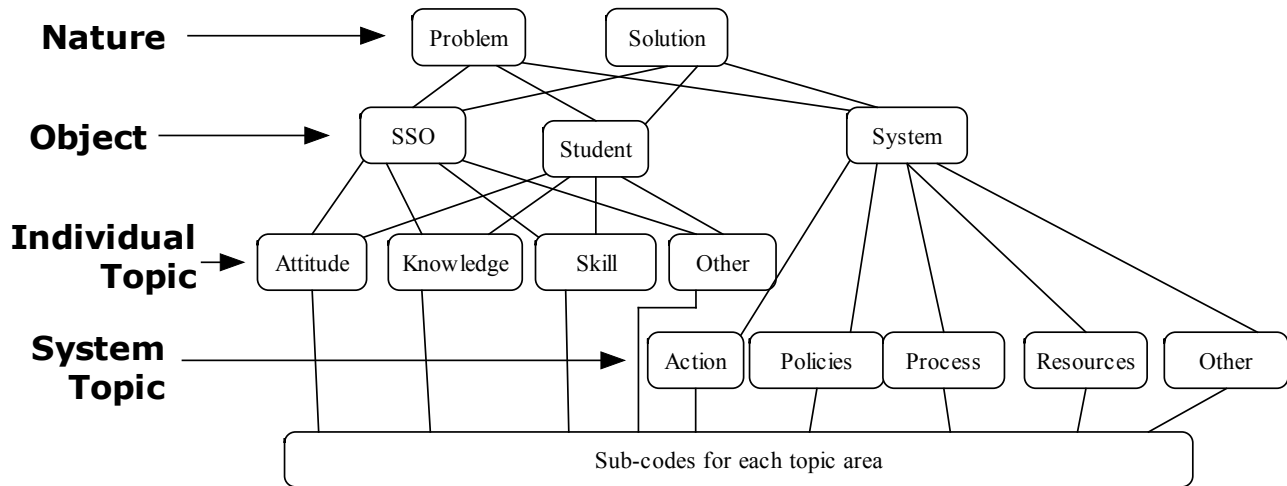SSO personnel were asked to discuss three general

Figure 1. Coding scheme

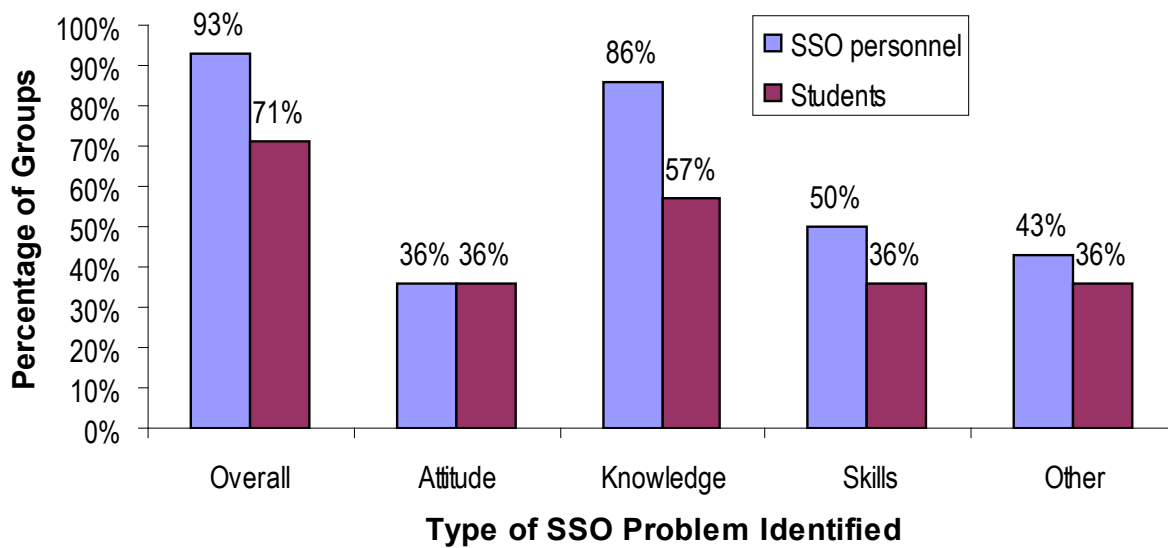*Figure 2.* Percentage of groups identifying SSO problems.

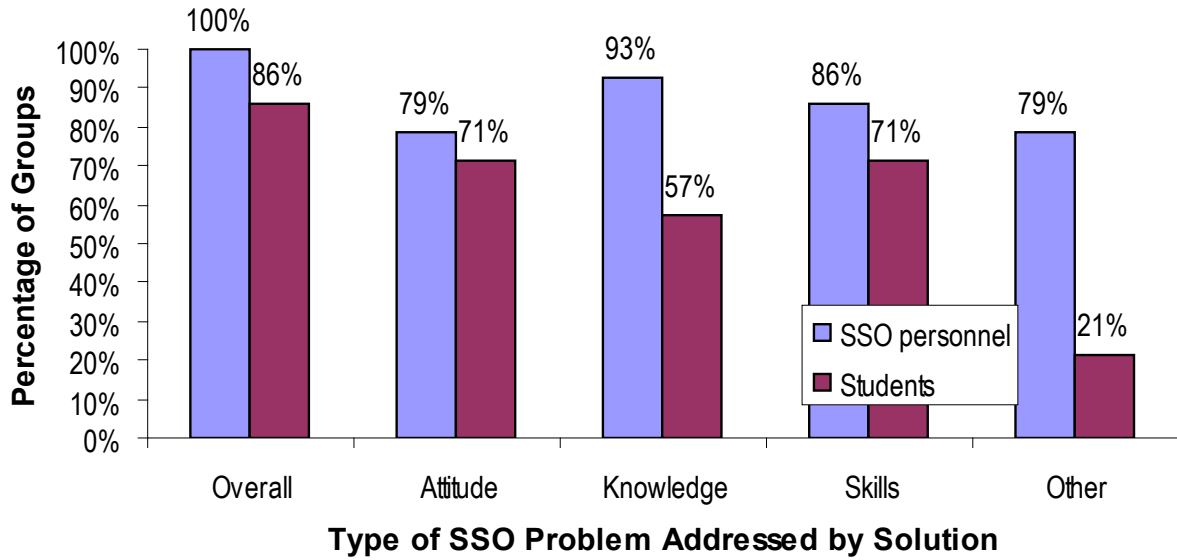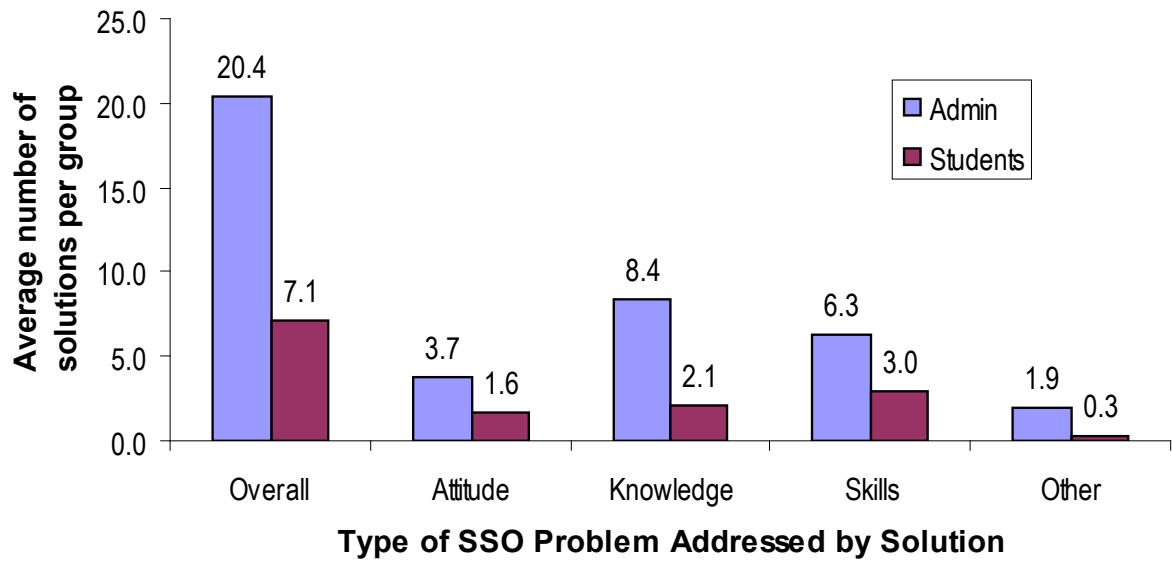*Figure 3.* Percentage of groups identifying SSO solutions.

Figure 4. Average number of SSO solutions per group.

areas of challenges faced when serving students with disabilities—knowledge, attitudes, and skills—that were sub-coded into more specific categories. Table 2 summarizes the number of comments receiving each sub-code in each of these general areas, as well as the number of groups in which each category of comments was made. The number of groups provides some indication of the prevalence of the category across the institutions, while the number of comments provides an indication of the prevalence of the category within the institutions.

Overall, comments of SSO personnel suggest that they are generally reactive rather than proactive in their approach to dealing with students who have disabilities. They (a) design services for the average or "typical" student, (b) deal with students who have disabilities on a case-by-case basis, and (c) rely on referrals to the campus office with expertise in addressing the needs of students with disabilities. As clarified by one participant:

> … the majority of our students are your average, your 'normal' students or whatever and we kind of tend to cater towards them and we don't—it's not that we don't think about [students with disabili-

ties], it's just that… awareness is not there until you're in the situation where you see the person in the wheelchair or the blind person with the cane.

SSO knowledge. Problems related to inadequate knowledge of SSO personnel with respect to serving students with disabilities fell into five categories: "Rights and responsibilities," "Disabilities;" "Accommodations – strategies," "Accommodations – adaptive technology," "Disability resources and processes," and "Other." See Table 2 for comment and group counts.

SSO personnel reported a lack of knowledge about their legal obligations, the needs of students with disabilities, strategies for meeting those needs (especially for students with invisible disabilities), general SSO accessibility issues (e.g., accessibility of Web sites), and campus and community resources for students with disabilities. As reported by one SSO staff member, "If we don't know what's correct and what's successful… then we tend to either stay back and not do anything or go overboard."

Another SSO staff member said:

> It's not so much "How do I work with this student?", but "Where can I get the necessary services for this student?" Now I don't know anything

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Table 2

SSO Personnel: Number of Comments/Groups Receiving Code for Problem in Knowledge, Skill, or Attitude Area and Subarea

Problem Area and Subarea	# Comments	# Groups with at least one such comment
Knowledge:		
Rights and responsibilities	7	6
Disabilities	9	6
Accommodations – strategies	9	4
Accommodations – adaptive technology	7	7
Disability resources and processes	9	5
Other	17	4
Attitude:		
Resistance	3	3
Other	5	3
Skill:		
Poor communication	6	4
Not knowing how to respond to students with disabilities	8	4
Other	5	2

about AD/HD [Attention Deficit / Hyperactivity Disorder] [and]…I don't know anything about special needs for the blind…and I don't necessarily want to become super-knowledgeable in those areas. But, what I do want to know is, when a student comes to my counter and says, which they do frequently, "I need testing for AD/HD. I think I have it and I need to be tested." I want to know… (a) do we do that? and (b) can I send them to you? Because I don't want to send them if we can't do it. So … what's real helpful to me is scope of services.

In a similar vein, another commented:

…[In] Admissions… we rely on disability services to…flesh out the reality of what a student can do or not do or what accommodations are available...We believe it's our responsibility to help them in any way possible, whether it's in aiding in filling out a form…or getting them to a particular person… we see ourselves more as a referral service to disabilities services…I don't think we in Admissions always know how far we are to probe, or what's appropriate to ask.

SSO personnel reported both being unaware of the availability of adaptive technology and knowing that it was not available on their campuses. Some were not sure whether materials from their SSO contained information about how to request disability-related accommodations.

SSO attitude. Problems with attitudes of SSO staff about serving students with disabilities were coded as "Resistance" or "Other." Table 2 displays comment and group counts. A comment received a code of "Resistance" if the comment itself exemplified resistance or if the comment reflected resistance on the part of other SSO personnel. Overall, resistance came through in comments on lack of time and motivation to address disability-related issues. One participant told of staff members who do not want to handle disability-related calls at all. Comments were also coded as "Resistance" if the participant questioned the fairness of accommodations. One participant expressed concern that accommodations hold the student with the disability to a different standard than that for their peers without disabilities, and that some students exploit accommodations to receive an unfair advantage.

SSO skill. Comments of SSO participants about inadequate SSO personnel skill levels for addressing the needs of students with disabilities were coded as "Poor communication," "Not knowing how to respond to the needs of students with disabilities," and "Other." A number of these comments overlapped with those labeled lack of knowledge as reported in an earlier section of results.

SSO staff reported having inadequate skills in serving students with disabilities: "…I didn't know what to do"; "… you don't want to … treat them differently… you don't want them to feel helpless, …just kind of tread lightly…maybe be a little bit reserved because I don't want to offend." Another participant said, "…because I don't deal with it a lot…I am not real comfortable and maybe afraid I'll use a wrong word if it's not part of my normal vocabulary." Other examples suggest problems in communicating effectively with students who have disabilities: "you certainly don't wanna imply something that may or may not be true, but at the same time, you need to get the student the right assistance and make the right referrals;" "I think we assume people want us to do stuff for them, and they don't." Another summarized problems in the area of communication:

So overall, there has been more positive than negative. But when those negatives come through it's like, wait a minute. I'm trying to help you and if you don't let me try to help you or find out, you know, let's start from the beginning. You may have said your story 10 times already but this is the first time I'm hearing it. This is the way we have to do it so I know where to point you, whether it means the Disability Resource Center, whether it means picking up the phone to Residence Life and saying I've got one of your people over here. Can we fax stuff back and forth so that we can get this process done so that you don't have to send them across campus for the tenth time if they've been sent from another place and just been sent all over.

Some said they avoided students with disabilities. Others reported feeling fearful of offending a student and discomfort in (a) trying to accommodate a student without knowing about the disability and if they should ask for more information, or (b) knowing about the disability but not being able to accommodate it, either because accommodations are not available or they were unaware of them. One individual cautioned that offers must be worded carefully because, in rare cases, a student may take advantage of the situation to gain unreasonable accommodations.

Student Perspectives Regarding SSO Problems

When possible, student comments were coded using the same scheme used for SSO personnel comments. Table 3 summarizes the number of student comments coded into each of the subareas of knowledge, attitudes, and skills, as well as the number of student groups

Table 3

Students: Number of Comments/Groups Receiving Code for Problem in Knowledge, Skill, or Attitude Area and Subarea

Problem Area and Subarea	# Comments	# Groups with at least one such comment
Knowledge:		
Rights and responsibilities	3	3
Disabilities	4	4
Accommodations – strategies	9	5
Accommodations – adaptive technology	1	1
Other	2	2
Attitude:		
Resistance	10	5
Other	12	2
Skill:		
Poor communication	11	5

in which at least one of these comments was made.

SSO knowledge. Students reported situations where SSO personnel did not understand the impact of their disabilities in specific situations and their accommodation needs when using student services. Some noted specifically a lack of knowledge regarding invisible disabilities. One student said, "I do think that a lot of people aren't aware of what they need to do." Another student reported, "…if you go to student life or academic affairs or whatever and have questions that involve your disability they'll immediately send you to the disability office…so they don't have to deal with it." Students shared struggles in gaining computer access, in obtaining accommodations from housing services and the library, and in getting a tutor. One summarized, "[I] had to fight to get certain things." Another student said:

> I can't stand the lack of help from Housing. They just give me the run around. That's my worst experience here on campus. They really need to be taught about accommodations. They don't realize that it's a law that they have to help people. The people in charge don't even know that. Maybe they do, but they just don't care.

SSO attitude. Although some comments reflected students' success in getting needed help in SSOs, others reflected the perception of disrespectful, suspicious, ignorant, or impatient behavior. Students specifically mentioned negative attitudes of personnel at the library, the bookstore, the registrar's office, and the financial aid office. One, who reported a hearing loss, mentioned

difficulty getting accommodations from housing services in a fire drill and other potential emergencies. Participants reported disparities in services for students with different types of disabilities. One student said, "I feel that if you have a hidden disability that is not very apparent and if you have more than one that kind of compounds the first disability, um, people are very skeptical with you and will not give you patience."

SSO skill. When discussing instances of "Poor communication," students remarked on a lack of sensitivity, understanding, and respect on the part of SSO personnel. Some reported that staff behavior made them feel like a burden, misunderstood, or dismissed, which suggested to them that staff members considered them to be stupid, irritating, or doing something wrong. One student reported an experience in a financial aid office:

> …they give you yes and no answers…They don't go, 'Yes, you're on a waiting list' or 'yes you'll get it in three weeks' or 'yes we received that...' They just go 'yes, no, get out of here.' If you have any kind of speech impediment or hearing or visual or reading problem…they talk so fast, that you don't, you have to like stand there and give them a funny look and ask them to repeat it and then they get upset about you.

Students reported situations where SSO staff clearly did not look ahead to anticipate access barriers for students with disabilities; as reported by one student in a dorm environment, " …when it comes to the fire alarm you know, me being deaf, …they never asked me if I needed extra help during the night or anything like that."

SSO personnel and students both proposed a number of solutions for each reported problem category. Although many of the proposed solutions related to better understanding of the accommodation needs of specific students with disabilities, some promoted a proactive approach to creating welcoming and accessible services and materials (i.e., universal design).

SSO Personnel Perspectives on Proposed Solutions for SSO Problems

Table 4 summarizes the number of suggestions from SSO personnel for improving each problem area, and the number of groups in which these comments were made. The content of the comments is summarized below.

SSO knowledge. Proposed solutions for knowledge problems, summarized in Table 4, were coded with the same categories as the problems themselves. Although some participants indicated they needed more information about legal responsibilities in serving students with disabilities, participants in 10 of the groups said they were familiar with the requirements of the Americans with Disabilities Act (ADA). One said, "I feel that legally we are obligated to provide…, once documentation is provided,…anything that was prescribed...."

Some participants articulated a commitment to ensuring access beyond specific legal requirements.

Participants recommended a variety of training formats including regular on-site workshops, with options for staff members who cannot leave their duties to attend training; reference materials ranging from a summary brochure to a comprehensive guide; and a hotline. One individual expressed the desire for "some informal discussion as well, because… learning from each other is also beneficial." Participants specifically suggested including interactive trainings, with some mentioning the positive impact of role playing disabilities or hearing testimonials from students with disabilities. One participant reported this training experience, "…when the hearing impaired student spoke at the in-service…that really opened up some eyes." Another shared the following story:

> One of the trainings I had, which I really liked… was very much a hands-on approach where you experienced it—you were blindfolded or had to get around in a wheelchair and try and get from one place to the other or had a sighted guide, or had your ears plugged up… it made such an incredible impression on experiencing what they

Table 4

SSO Personnel: Number of Comments/Groups Receiving Code for Suggested Solution to Problem in Knowledge, Skill, or Attitude Area and Subarea

Proposed Solution Area and Subarea	# Comments	# Groups with at least one such comment
Knowledge:		
Rights and responsibilities	32	10
Disabilities	8	4
Accommodations	23	8
Disability resources and processes	30	10
Other	25	8
Attitude:		
Develop positive attitudes toward student with disabilities	28	8
Encourage students with disabilities	3	3
Understand disability as a diversity issue	1	1
Other	19	5
Skills:		
Communicating with students who have disabilities	29	9
Creating accessible environments and services	30	7
Providing accommodations to specific students	21	8
Using disability services	6	6
Other	5	3

go through…to get around and…negotiate in… the world…"

Participants suggested information-oriented disability-specific topics, such as services, accommodations, and resources available, guidelines to determine if requested accommodations are "reasonable" in specific settings, as well as other topics related to improving SSO personnel's understanding and sensitivity to disabilities. In a related concern, one participant suggested the need to help staff look "past the disability" to the student, raising awareness that the student is more than a disability.

In addition to trainings, one participant mentioned the increase in understanding and sensitivity that can come from having a coworker with a disability, especially when that person shares experiences with other staff. As far as office operations, one participant mentioned the value of having an in-office specialist: "Our office actually has a staff person that works with the disabled students… so not only do we accommodate students in terms of what we all do in our different jobs, but we also have that one person that specializes in helping students with disabilities."

SSO attitude. Proposed solutions to problems related to SSO personnel attitudes about serving students with disabilities overlapped with proposed solutions to knowledge gaps. These were coded, as summarized in Table 4, as "Develop positive attitudes toward students with disabilities," "Encourage students with disabilities," "Understand disability as a diversity issue," and "Other."

On the positive side, one participant noted that at their institution they were working with the students "from the heart" and not working only to meet minimum government. Additionally, some participants cautioned that it is easy to overlook invisible disabilities in favor of visible disabilities, and some remarked that it is important for staff to assume that students with disabilities are no more or less likely to try to "milk" the system than students without disabilities. One said:

Even the ones with entitlement issues it's mostly they're scared, they don't understand and that's true also of a lot of other students. But then they have the other issues of the disabling condition to deal with… if they are met where they are, I usually see…a willingness to take steps.

In addition to these insights, participants noted that direct experience with students or co-workers with disabilities can have a positive impact on attitude. One participant testified to the value of hiring students with disabilities as one strategy for promoting accessible services and improving attitudes toward students with disabilities:

… I believe that it is very important to make them part of our residence life community, so this past summer we had about 100 conference assistants and we hired two students that were in wheelchairs and we put them to work just like any other student and so it's a very close relationship that the Residence Life Housing Department has with students with disabilities.

Another gave an example that illustrated the value of proactive thinking in ensuring that services are accessible to all students:

I was doing a presentation on the screen with all the lights off and [a student who was deaf] had somebody with her who signed, I just turned off all the lights and so that was my…first introduction into "this is not how we do it…" we had been unprepared so, it's kind of like, I don't want that to happen again. So that was kind of what spurred me to continue to try to make sure that our services are available to all of our students.

Participants suggested the need for assistance in offering help without conveying the message that the student is helpless. They recommended that better communication patterns should be developed in SSOs to avoid awkward situations.

…when somebody comes into the office in a wheelchair, I don't think everybody should get up and go over there and…[I] think it makes them mad. I've seen, on the edge of that reaction, you know, everybody 'Can we help you?' I mean there might be five other people but 'Can we help YOU and can we all crowd around you?' I don't think that's right either because I don't think they want to be singled out, I would not."

Participants commented on the importance of staff understanding the various roles they play—to encourage students with disabilities, to help students reach specific goals, and to refer students to special services. One emphasized the role in encouraging students with disabilities this way: "I see myself as kind of a cheerleader to them. Kind of 'Don't give up. Let's take another look at the resume,' you know, 'What are you going to say?' Just to keep them positive." One emphasized the importance of reducing "the anxiety for both parents and students who are coming to a large university." One participant said, "…[our] goal is to make the student employable, …even though the student may have a disability, that student has to know how to work in our society..." The value of considering disability as part of campus diversity efforts was mentioned as a possible approach to improving attitudes toward students with disabilities.

SSO skill. Proposed solutions to problems related to SSO personnel skills for addressing the needs of students with disabilities were coded into five categories, as summarized in Table 4: "Communicating with students who have disabilities," "Creating accessible environments and services," "Providing accommodations to specific students," "Using disability services," and "Other."

SSO personnel reported looking to the disability services office for support. One participant said "… Sometimes we are seeking out the Office [of Disabilities] to be sure that legally we are in compliance with supporting the student and it may be a service that the Office of Disabilities provides, but it also may be some other responsibility of the university in a broader sense to support that student. And I would not know that necessarily, I would need to rely on the expertise of the office for that." Another said, "I stay out of the business of defining what is 'reasonable,' I seek help on…defining what is reasonable. I think it would be good for us to get reminders on the ADA, the requirements, …maybe a little training once in awhile."

In addition, participants recommended that SSO personnel improve skills for addressing the needs of students with disabilities without prying or making inappropriate assumptions about the disabilities or the students' accommodation needs. Some asked for training on how to approach and communicate with students who have disabilities and to recognize, understand, and accommodate disabilities. SSO personnel remarked on their desire to improve interactions with this student group. As reported by one SSO staff member:

We need some insight into teaching methods that work better with the disabled students as opposed to the typical student, um, in terms of the ADHD or whatever. We…[are] not necessarily aware of how the student actually learns. So I think I need a little bit of assistance there in terms of if there are different styles that we should be using, different approaches…I mean, how much can they retain at a time, how fast should we be going with them…what's reasonable…for them and that kind of thing.

Strategies identified included both accommodations for specific students and strategies that had the potential to benefit all students (i.e., universal design), including those with undisclosed disabilities. Accommodations for specific students included walking around a high counter to sit near a person in a wheelchair, allowing early registration for a student with a disability, providing sign language interpretation, accessible transportation, and documents in Braille. Proactive strategies that have potential to benefit more students with or without disclosed disabilities included teaching tutors to write in large print on white paper with contrasting ink, making facilities wheelchair accessible and providing a lower counter area for wheelchair-users, and designing SSO Web sites in accessible formats. Principles of universal design can also be seen in efforts noted by participants to improve interactions with students who have disabilities. These include paying attention to language used regarding specific disabilities, patiently repeating information for students, letting students know what services are available, both one-on-one and through general outreach efforts (e.g., in publications), developing an extensive communication process with students to ensure that communication is effective for all students, and using negative interactions in the past as learning experiences.

Student Perspectives Regarding Proposed SSO Solutions

Student comments were coded using the same coding scheme as used for SSO personnel comments. Table 5 summarizes the number of comments receiving each code and sub-code, as well as the number of groups producing at least one comment receiving a given code.

SSO knowledge. Students recounted success stories regarding the responsiveness of an institution and the service provided by specific staff members. One student told about his/her current institution's high level of responsiveness when compared with another institution: "…at my other schools I used to have to, you know, fight to get certain things whereas here you say the word and it's like okay and they get it done." One student suggested making sure staff understand that "mental disabilities" are included under the ADA. Another suggested that SSO staff be provided with a list of accommodations students with disabilities may need that might not occur to someone without an understanding of the disabilities. As articulated by one student:

… it would never occur to [staff] that someone couldn't go through a metal detector or someone might have to leave the line three times to go to the bathroom. …it just doesn't occur to them. So if there was…a list…not saying these are my disabilities but that there are people who need these sorts of things...

SSO attitude. Students advised SSO staff to be respectful, sensitive, and patient with them. Participants said that it can be difficult to get services when their disability doesn't conform to the expectations of those providing the service, in particular for learning and other invisible disabilities. They suggested training and support to increase staff sensitivity and suggested that efforts to increase SSO personnel knowledge in this

Table 5

Students: Number of Comments/Groups Receiving Code for Suggested Solution to Problem in Knowledge, Skill, or Attitude Area and Subarea

Proposed Solution Area and Subarea	# Comments	# Groups with at least one such comment
Knowledge:		
Rights and responsibilities	2	2
Disabilities	8	3
Accommodations	11	6
Disability resources and processes	2	2
Other	6	3
Attitude:		
Develop positive attitudes toward student with disabilities	12	5
Encourage students with disabilities	1	1
Understand disability as a diversity issue	5	4
Other	4	3
Skills:		
Communicating with students who have disabilities	7	5
Providing accommodations to specific students	16	9
Creating accessible environments and services	14	6
Other	5	3

area may serve to improve their attitudes. One said,

> [SSO staff]… need to… be…respectful and sensitive to other people …they don't have to be perfectly understanding. They just need to answer the questions with respect and just show that they care somewhat about what's going on in your life and…what you need… I think that's the main thing. You have to be respectful and sensitive and just try to…answer the questions and no smart remarks or anything. Nothing disrespectful.

SSO skill. Students recounted primarily positive experiences with accommodations, including help in math, Spanish, and writing labs; being paired with a tutor who had extra training in helping students with disabilities (and suggested that more tutors should receive such training); special lighting; flexible attendance requirements and assignment deadlines; and accommodations on testing (e.g., extended time in a distraction-free environment). One student reported, "The library, financial aid, the registrar, the counseling center, they're great!"

Discussion

In the reported study, SSO personnel generated 75% more problem-related comments and more than three times as many solution-related comments for student service offices than did students. Students and SSO personnel identified similar problems encountered by students seeking services from the SSOs.

Most of the SSO "knowledge" problems identified by students and SSO personnel have also been reported in the literature regarding faculty experiences. Challenges SSOs share with faculty include: lack of experience with students who have disabilities; lack of awareness of general accessibility issues and available accommodations, including adaptive technology; inadequate knowledge about and sensitivity to "invisible" disabilities (e.g., learning disabilities, ADD/ADHD, mental illness, health impairments); lack of knowledge of legal obligations; and uncertainty about what, if anything, they should do about accommodating students who have disabilities not disclosed to them. Students also noted that some SSO personnel do not understand the impact of disabilities on their lives, their needed accommodations, or the role of the SSO in providing accommodations.

Issues of attitude and skill levels of some SSO personnel were also similar to those identified by faculty: (a) that accommodations might hold students with disabilities to lower standards than those for students without disabilities and thus give them an unfair

advantage, (b) that addressing the needs of students with disabilities is too time consuming, and (c) that some students may take advantage of their disabilities by trying to get permanent accommodations for temporary disabilities or otherwise "working the system." In addition, SSO personnel expressed the need for improved skills in communicating appropriately with students who have disabilities, taking care not to offend these students, as well as identifying reasonable accommodations. Students perceived that some SSO personnel were impatient, disrespectful, and rude and made them feel that they were irritating, burdensome, or doing something wrong; these problems were also identified by students in earlier work regarding their experiences with faculty members.

Solutions proposed by both stakeholder groups included trainings, perhaps with role-playing or testimonial components, and informational materials to increase SSO personnel knowledge and skills regarding disabilities, access issues, and accommodations. Most of the recommended training content for SSO personnel focused on reactively addressing the needs of a specific student with the disability. SSO personnel recommended increasing the ability of all staff to address the needs of this student group as well as designating an in-office specialist on disability issues. Participants considered it important that the SSO staff know when it is appropriate to turn to the campus disability services office for support of specific students and to be sure they are in compliance with legal and campus institutional requirements. However, some students cautioned against referring students to that office for all questions related to disability; rather, they noted that it is beneficial to also build the capacity of SSOs to respond confidently and appropriately to requests from all students.

While most proposed solutions may have been reactive, several could be offered proactively as part of a universal design strategy to benefit other students, both with and without disabilities, disclosed or not. Some of these included creating accessible products and environments, including publications and Web sites; making simple facility changes such as lowering the placement of postings on a wall so they can be read from a lower vantage point; training tutors to write in large print with contrasting ink; improving the communication skills of SSO personnel so that they are able to treat all students with respect, courtesy, and patience; and addressing disability issues as other diversity issues, working with each student "where they are" as they do with students from different cultures. As SSO personnel learn to increase their skills in working with

students who have disclosed or undisclosed disabilities, it may also benefit others who may simply need some extra patience that day or who simply may not be the "average" student in other ways.

Using a universal design approach whenever possible alleviates a number of problems identified by SSO personnel. When universal design is applied, fewer students with disabilities may need accommodations, thus increasing efficiency and reducing the range of accommodations and strategies the SSO personnel need to become familiar with and the need to know about a student's undisclosed disability, and thus the time required to provide reasonable accommodations.

Recommendations and Applications

Analysis of focus group data suggests that campuses should consider training options to increase the ability of SSO staff to address the needs of students with disabilities within their offices, while also providing guidelines for utilizing campus disability services for additional support. Specific goals of the training could include increasing SSO personnel's understanding of and sensitivity to disabilities, both invisible and visible; knowledge of legal issues; knowledge of campus policies, procedures, and resources regarding students with disabilities; and the ability to employ universal design strategies to increase the accessibility and usability of their services for all students and to minimize the need for special accommodations. In addition to providing guidance in accommodating students with disabilities, the disability services office may also be able to help SSOs apply universal design principles to their services.

Availability of Professional Development Materials

Based on the results of this exploratory study, the DO-IT Center led 20 partner postsecondary institutions in creating materials for training offerings that can be offered on any campus to SSO personnel. Titled *Students with Disabilities and Campus Services: Building the Team PRESENTATION AND RESOURCE MATERIALS* and freely available online, the training content includes suggestions on how to apply principles of universal design proactively to address disability-related needs without knowing the details about disabilities of specific students (Burgstahler, 2006). Potential strategies for designing more welcoming and accessible SSO services include accessible counter space, a statement in publications that tells how to request disability-related accommodations, and images of students with disabilities in materials. This training binder includes strategies to help disability resource centers, campus

service units, and students with disabilities effectively work together. The content also includes information on disability types and typical accommodations, especially regarding learning disabilities, psychiatric impairments, and other invisible disabilities; the role of "reasonable accommodations" to level the playing field, rather than give unfair advantage, to students with disabilities; rights and responsibilities of both the students with disabilities and postsecondary institutions; effective ways to communicate with students about their disabilities and accommodation needs; resources for students with disabilities, including the availability of adaptive technology and other accommodations; accessibility issues for specific SSO offices (e.g., emergency warning systems for dorms, software in computer labs); the development of procedures for accessing the support of the disability services.

These professional development materials, complementing those created for faculty (Burgstahler, 2003) and in response to the diverse interests and scheduling needs of the SSO target group, include multiple delivery options tailored to specific offices and different content needs. Multiple options include the following:

- A 20-30 minute presentation during regular staff meetings to introduce participants to legal issues, universal design, accommodation strategies, and resources.
- A 1-2 hour presentation with a special focus on the universal design of SSOs and typical accommodations for students with a variety of disabilities.
- Tailored workshops for in-depth training on the universal design of specific units such as admission offices, registration, libraries, advising offices, tutoring centers, computing services, and career service offices.
- Televised instruction using a series of videos presented on public television stations.
- Self-paced, Web-based instruction with expanded content of other models, interactive components, and downloadable video presentations; the Web site is titled *The Student Services Conference Room* (DO-IT, n.d.c).

To complement all of these options, checklists for implementation of universal design in SSOs were created and tested for face validity. While the document, *Equal Access: Universal Design of Student Services* (Burgstahler, 2008a), can be used by any office, feedback from participants in the current research as well as disability service staff on the project team suggested that service units need checklists specifically tailored to their units. Therefore, a series of checklists for libraries,

tutoring centers, registration offices, computer labs, career services, and other services were created from the generic checklist and made available online (DO-IT, n.d.a).

Questions for Future Research

Research is needed to test the effectiveness of the tools and strategies developed from this research. Specific questions to consider for future research are listed below:

- How effective are various training options in improving knowledge, attitude and skills of SSO personnel when addressing the needs of students with disabilities?
- What impact do training efforts have on the success of students with disabilities?
- What training could be provided to students with and without disabilities to support their success?
- How can professional development for faculty and staff be institutionalized on campuses?
- How are institutions that apply universal design in policies and practices otherwise different from those that do not?

Conclusions

Focus groups of students with disabilities and of personnel in student service offices were conducted to identify problems encountered as SSOs serve students with disabilities and determine possible solutions to make these services more effective and accessible. Although many problems and solutions for SSO personnel are similar to those identified for faculty in previous studies, additional issues were also identified, such as the height of a service counter. Results of the study support professional development approaches that provide guidance for proactively designing accessible services, providing accommodations for specific students, and addressing issues relevant to specific student service units (e.g., software access in computer labs). It is recommended that training be offered to increase SSO personnel sensitivity toward disabilities, especially invisible disabilities, as well as knowledge and skills regarding legal issues, reasonable accommodations, universal design strategies, communication between students and staff, available resources, and coordination between the disability services office and the SSO. As in training faculty, teaching the application of universal design offers an approach for addressing the needs of students with disabilities in a way that potentially reduces the need for individual accommodations and benefits all students. Since staff needs and preferences vary widely, campuses are encouraged to

offer a variety of training options tailored to specific units—short and long presentations and workshops, online training and Web resources, video presentations, and printed materials with varying levels of detail. As SSOs improve their ability to serve students with disabilities, all students may find an increasingly accepting environment in which they can fully benefit from services offered.

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