Developing Accountability Metrics for Students with Disabilities in Higher Education: Determining Critical Questions

Marya Burke,
Bradley Hedrick
University of Illinois at Urbana Champaign

Sue Ouelette
Northern Illinois University

Thomas Thompson
Harper College

Abstract

In order to address the significant gap in the availability of information on postsecondary students with disabilities in Illinois, the Illinois Board of Higher Education funded a three-year project to develop a disability metrics model to improve accountability efforts and strategic policy development. The Metrics on Disability and Postsecondary Education (MDPE) team designed the model to determine the extent to which the needs of students with disabilities were being met throughout their educational careers. The project consists of three phases. Phase I sought to identify the critical questions/issues related to disability access that the model needed to address. Phase II focused on instrument development, data collection methods, and implementation of a pilot study. Phase III was dedicated to dissemination across institutions of higher education in Illinois and finalizing the model. This paper reports the activities and findings of Phase I.

The Illinois Board of Higher Education (IBHE) report *Gateway to Success: Rethinking Access and Success for a New Century* (2002) revealed significant gaps in existing information on students with disabilities in postsecondary education. While national surveys indicated that over 9% of postsecondary students report disabilities (Henderson, 2001), the IBHE report showed a range from less than 1% to 4%. Furthermore, existing data resources and practices were found frequently to be incomplete and difficult to analyze on a system-wide basis, because institutions varied widely in their methods of counting students with disabilities and assessing service provision and quality. Institutions lacked reliable comparative data on the experiences in and benefits of postsecondary education for students with and without disabilities. IBHE determined that to effectively respond to public need, a comprehensive and continuous approach to this issue was needed.

The discrepancies in expected versus reported representation of people with disabilities revealed in comparisons between national surveys and the IBHE report, sent up red flags. Several explanations for the discrepancies might apply; however, identifying a cause was not possible given existing data resources. This dearth of information is not limited to Illinois. As Lex Frieden (2004) of the National Council on Disability points out, "the amount of rigorous, evidence-based research on programs that promote positive outcomes for students with disabilities is severely limited" (p. 6). Furthermore, most existing research has focused on the elementary and secondary levels and on the initial transition period/process from high school to work or postsecondary education.

Demographics on Disability in the United States

Examining the data on people with disabilities provided by the U.S. Census Bureau helps establish a general context. Thus, 2005 American Community Survey found that 12.1% of the population between the ages of 16 and 65 had some type of disability (the relative impact of the disability is not known). When we move beyond "how many" to examine issues such as life experiences, findings of considerable importance emerge. For example, according to the Census Bureau Survey of Income and Program Participation (SIPP), poverty rates are heavily skewed in relation to disability. In a sample of 149,031 individuals aged 25 to 64 years old, 16.33% had some form of disability and of those, 20.9% were living in poverty. Of those with a "severe" disability (66.25% of all with a disability) 25.9% were in poverty. By comparison, among those with no disability (83.66%), only 7.7% were in poverty (National Center for Education Statistics; 2002). Individuals with disabilities are also less likely to be employed (Frieden, 2004), When they are, they earn less than nondisabled peers. (Stodden, Conway & Chang, 2003).

In addition, persons with disabilities are for example, likely to endure a "layering" of disadvantages due to other demographic characteristics. For example, research suggests that minorities (other than Asians) and people with low incomes are more likely to have a disability. A "catch 22" scenario emerges whereby persons with disabilities are perpetually confronted with challenge and adversity (Horn & Berktold, 1999; Wolanin & Steele, 2004). It is likely that people with disabilities experience similar layering of challenges within the educational system.

Characteristics of Students With Disabilities in Postsecondary Education

Students with disabilities are less likely to pursue postsecondary education (Frieden, 2004). When they do, they are often less well prepared. They are also more likely to enroll in community colleges rather than baccalaureate institutions. This varies somewhat by disability type; however, we know little about what contributes to this trend (Stodden et al., 2003). Many enroll in community colleges with intentions of transferring to baccalaureate institutions[1], but the majority (with and without disabilities) do not get there (Horn & Berktold, 1999).

According to the National Postsecondary Student Aid Study (NPSAS, 2000), approximately 9% of all undergraduates reported having a disability (Frieden, 2004). These students tend to be older than their counterparts without disabilities, delay enrollment, and are likely to have more dependents (Wolanin & Steele, 2004). Further, they are more likely to enroll on a half-time basis (George Washington University HEATH Center, 2000 and have lower overall retention rates and take longer to obtain their degrees. (Freiden, 2004; Stodden et al., 2003).[2] Finally, though many of the post-graduation experiences of students with and without disabilities are similar, there are troubling differences, including the following:

> Those who earn a bachelor's degree appear to have relatively similar early labor market outcomes and graduate school enrollment rates as their counterparts without disabilities ...Students with disabilities however, were more likely to be unemployed. (Horn & Berktold, 1999, p. vii)

Many policies attempt to assist students with disabilities in confronting these challenges. However, the effects of such policies differ by disability type, both within and across education levels (Stodden, Jones, & Chang, 2002).Though we are becoming aware of these differences, we know very little about the consequences they may have for students. As is the case with many underrepresented and underserved groups, complex and overlapping factors that affect student success.

> The postsecondary outcomes of students with disabilities, however, may not be directly comparable to those students without disabilities… in addition to the obstacles they may have experienced related to their disabilities, [they] were also more likely to have other experiences and circumstances that potentially conflicted with their schooling. (Horn & Berktold, 1999, p. 41)

As Horn and Berktold suggest, these differences can add to the barriers to success students with disabilities face.

Accommodations and Assessment

The NCSPES provided a broad-stroke picture of the services provided to undergraduates, illuminating some of the differences between baccalaureate and community college institutions.

---

[1] We have chosen to use the term "baccalaureate" to refer to what have traditionally been termed four-year institutions. This term reflects a more accurate emphasis on the nature of the institution rather than on the (increasingly inaccurate) time to degree reference.

[2] Community colleges tend to serve more minority students and more low-income students. The differences in student populations have significant impact on the culture of these institutions and on the capacity of institution to provide for the needs of the students (Perna, L., 2000; National Center for Educatio n Statistics, 2005).

One of the findings that stand out is that undergraduates "reported much higher use of all types of accommodations at the postsecondary level" (Stodden et al., 2003, p.33).[3] This and other findings suggest that institutional culture has a powerful impact on services provision:

> … four-year institutions surveyed are more likely to provide … [services that are] adaptations… such as making on-campus transportation accessible; or, they are services offered to all students, such as career counseling and work study. [two-year institutions] are more likely to [provide services that are] specialized, varied, and focused on serving students with disabilities specifically. (Stodden, p. 34).

Community colleges provided more interpreter services and baccalaureates provided more metacognitive, study-skills, and memory-skills training. Impetuses for differences in some service provision are less clear; for example, two-year institutions provided linkages to outside organizations and personnel more often than baccalaureates (Chang & Logan, 2002).

We also know little about postsecondary students' qualitative experiences with services and the effects of services on outcomes. The counts and comparisons of services offered are often generalized and simply address what might be available, not what students actively use and benefit from (Frieden, 2004). As Stodden and his colleagues point out, "there is very little empirical evidence that actually matches the provision of specific types of assistance with any type of outcome at the postsecondary level" (2003, p. 39).

Problems With Existing Data Collection Methods

Some data collection challenges are inherent in conditions regarding students with disabilities. As Wolanin and Steele (2004) pointed out:

> One cannot simply look at the figures of students with disability who have graduated and examine who enrolls in college … every student with a disability who completes high school is not college qualified; many … with a disability delay entry to college, and data … do not adequately capture this delay … students with disabilities may not [self-identify or] seek disability services; … some students are diagnosed … for the first time when they begin college, while others are diagnosed while enrolled … (p. 7)

Such demographic characteristics increase the likelihood of students with disabilities being left out in standard data collection practices of institutions. Many students with disabilities require specific accommodations relating to the format in which information is being presented in order to be able to access it. Researchers often construct surveys and other data collection mechanisms without attention to accessibility and response rates thereby artificially reducing the sample of an already small population.

Other research design elements negatively affect data collection on students with disabilities. Wolanin and Steele (2004) examined the National Longitudinal Transition Study of Special Education (NLTS), the National Educational Longitudinal Survey (NELS), the NPSAS (already mentioned), the Harris Survey of Americans with Disabilities, and the Cooperative Institutional Research Program (CIRP). The construction of these otherwise valuable sources of information is problematic. Specifically, the authors found that, "none of these data sources use the categories of disability outlined in the Americans with Disabilities Act … They also fail to account for those who have a 'record of such an impairment' and those who are 'regarded as having an impairment" (p. 2).[4] These surveys also lack information on how long the students have lived with their disability and whether the disability has been officially documented. Students may have the option of selecting among a list of disability types; however, the options are often limited and constrain critical information. Thus, respondents with multiple disabilities can select only one category or must prioritize (perhaps arbitrarily) using primary, secondary, and tertiary categorizations.

Statement of Purpose

The MDPE project seeks to address the paucity of information available about students with disabilities in higher education revealed in reviews of the existing literature. A first step in addressing the gap involved reaching a consensus on the focal areas to address. We needed to identify the critical areas where information

---

[3] The NCSPES sample consisted of 650 institutions (246 two-year/less than two-year, and 369 four-year).

[4] This study refers to specific editions of these surveys and may not reflect the most current forms: IDEA Section 602 (3)(A)(i), Census 2000, Education Dept./Office of Special, Education Programs 2001, NLTS-2, 2000, NELS 1988, NPSAS 1999-2000, Baccalaureate &, Beyond and the Beginning Postsecondary Student Longitudinal Studies 2000, Harris Poll/National Organization on Disability 2000, and the CIRP 2000. However, the lack of ADA compatibility in these editions highlights a is indicative of an existing challenge for researchers to address the diversity of definitions in use.

about students with disabilities and higher education was needed. Recognizing that such information can be difficult to obtain, we also needed to identify the barriers to obtaining information.

The project consisted of three phases. Phase I was to identify the critical questions/issues related to disability access, to assess the extent to which postsecondary institutions in Illinois were collecting such data, and to determine their existing capacity to do so. Phase II involved designing instruments and methods to gather data and pilot test them. Finally, during Phase III, the findings of the pilot as well as additional feedback were used to design a disability metrics model that could be implemented statewide. The remainder of this article will focus on the activities and findings of Phase I.

Methods

Preliminary Questions

The literature review highlighted five areas that are critical to effectively address the goals of the project. The MDPE team used these as a template for instrument development.

In addition to these core areas, the team included specific questions drawn directly from the existing literature. Further, project investigators drafted additional questions out of their own knowledge of postsecondary disability services and underrepresented student data metrics.

Focus Groups

Participants. In spring 2005, the MDPE team invited postsecondary disability service providers, ADA coordinators and other institutional liaisons to the IBHE, students with disabilities, parents of students with disabilities, and high school transition specialists to participate in focus groups. The choice of such a wide range of stakeholders attempted to maximize diversity of perspectives. The focus groups were hosted at institutions across Illinois in an effort to reach a geographically representative mix. The MDPE team paid particular attention to institutional type, size, and location. Members of the Association on Higher Education and Disability and the Illinois Advisory Council on the Education of Children with Disabilities recommended specific participants. Disability service directors recommended students for participation. All participants were contacted by phone and via email.

A total of 28 individuals participated in the three focus groups (see Table 1). This sample included representatives from 8 of the 11 public universities and 6 of the 48 public community colleges in Illinois. Each session was to include the following: 2 disability service providers from community colleges and 2 from baccalaureates, 1 parent, 1 student, 1 director of special education. In addition, the three co-principal investigators as well, and group facilitators attend. In actual practice, slightly different combinations were present.

Logistics. Southern Illinois University at Carbondale, Northern Illinois University in DeKalb, and the University of Illinois at Springfield hosted meetings scheduled for two-hour timeframes. Sign language interpreters and computer-assisted real-time transcription services were provided when requested.

Process. The facilitator informed participants that the intent of the focus group was threefold: (a) to review the preliminary set of questions, (b) to solicit comments on the importance of the questions/issues identified and identify questions and/or issues deemed to be of equal or greater importance, and (c) to generate consensus recommendation regarding the final set of questions that the model instruments and methods should be designed to address.

Table 1

Question Development Focus Groups

Position of Participants	Number of Participants
Disability Services Staff	10
Directors of Disability Services	9
Student Services Personnel	1
Directors of Special Education	2
Institutional Research Personnel	2
Students	3
Parents	1
Total	28

The focus groups encourage three types of interaction. The first two stages were highly structured and directive. First, principal investigators presented a summary of the project goals and design. Participants identified (privately and independently) information/questions they considered most important with respect to students with disabilities in high schools, community colleges, and universities. Next, they shared these ideas and voted for the three questions they found most important in each category.

In the second stage, the facilitator read aloud the set of questions generated by the project investigators. Participants rated questions from highest to lowest priority. They identified questions for elimination or modification, and suggested questions to address issues they felt had been left out. They completed this process independently, and the facilitator limited discussion to obtain a maximum of individual responses.

In the final stage, participants had a more open-ended opportunity to engage in shared discourse about the questions and issues, including potential barriers/challenges related to the development and implementation of a postsecondary disability metrics model.

Results

Topic Areas

As indicated, the project investigators began with five topic areas and created an extensive question set to address them: (a) Transition from high school to post-secondary; (b) Postsecondary student demographics and service use; (c) Satisfaction regarding accessibility in postsecondary institutions (d) learning and employment outcomes following participation in postsecondary institutions and (5) institutional disability services structures in postsecondary institutions.

Focus group participants identified a sixth topic area: campus climate related to participation and attitudes of students, instructors, and staff. Participants considered these six areas essential to developing a rich understanding of issues related to disabilities in higher education.

Specific Questions

Focus group participants deemed the majority of questions to be of critical importance and validity. This finding represents a triangulation of perspectives between the principal investigators, concepts within the literature base, and stakeholders in the field. Such triangulation is critical to validating the direction of research. Differences in the priorities assigned to specific questions emerged, and several participants suggested that ranking the questions was difficult. One of the respondents commented, “I feel at this stage ranking these questions is arbitrary. Each is pertinent to address and should definitely be included.” Some suggested specific modifications to certain questions and identified additional questions as well. The final list of questions included addressed the six areas identified in the research process (see Tables 2-7).

Discussion

Critical Information

The study began with an analysis of the existing literature on students with disabilities in higher education. This revealed a paucity of information that seriously hinders any efforts to effectively serve students and design policy. The team took a first step in addressing this gap by seeking to identify consensus on key areas on which it would be critical to gather information. Six areas emerged: student demographics and service use, satisfaction and access, climate, learning and employment outcomes, and institutional disability services structures and characteristics.

Challenges and Barriers

Recognizing that information on students can be difficult to obtain, the MDPE team sought to identify challenges and barriers that would have to be addressed to achieve a viable and useful systemic model. The process of implementing any new policy raises suspicions and concerns among all the various stakeholders in a system, so careful planning and attention to detail in the design is critical.

The challenges and barriers raised by participants can be categorized primarily as falling within two camps, institutional idiosyncrasies and data collection complexities. What follows are the specific issues raised by participants.

Context

One theme that emerged from the focus groups was the importance of context, specifically regarding the differences among each unique institution and between types of institutions. With respect to transition from high school to postsecondary institutions, participants pointed out the significance of the different philosophies embedded within IDEA vs. ADA/504 policies. Specifically, they insisted that this translates into very different expectations for students and attitudes towards them. Stodden and his colleagues (2002) pointed to this as well:

> [Secondary schools] are responsible for identifying and assessing students with disabilities, and with developing an Individual Education Program (IEP), that outlines each student’s assistance needs.

Table 2

Topics 1 and 2 Combined: Transition From High School and Demographics & Services

- How many students who had Individual Educational Plans (IEPs) matriculate to your institution?
- How many students who had 504 Plans matriculate to your institution?
- How many students with disabilities enter your institution through conventional admissions processes?
- How many students with disabilities enter your institution through an alternative admissions process?
- How many students with disabilities enter your institution annually?
- What is the total enrollment of students with disabilities in your institution?
- How many students with disabilities enter your institution from home-schooling programs?
- How many students with disabilities enrolled full-time? Part-time?
- How many students with disabilities are participating in dual/concurrent programs?
- How many students with disabilities participate in distance learning programs?
- What are the reasons identified by students with disabilities for choosing an institution (e.g. financial support
- offered, specific program, perceived supportive environment, other)?
- How many students receive support from the Illinois Division of Rehabilitation Services?
- How do students with disabilities finance their education (e.g. grants, athletic scholarships, other)?
- How many students received disability support services over a given year?
- What support services are provided (in total and specific to each students with disabilities)?
- How often do students with disabilities participate in transition preparation (career fairs, internships, interview training, etc.)?
- How many students with disabilities attend the various non-disability specific skills trainings offered by the institution (e.g. information technology use, computer technology use (software/hardware), study skills)?
- How do withdrawal rates compare for students with disabilities and cohorts without disabilities?
- How many switch enrollment from one community/junior college to another (horizontal transfer)?
- How many enroll in a community college after having been at a baccalaureate institution (reverse transfer)?
- How many engage in conventional transfer (from a community college to a baccalaureate institution)?
- To what extent is architectural inaccessibility a barrier for students with disabilities?
- To what extent are design factors in IT barriers to students with disabilities?
- What did students with disabilities report as unmet disability service needs?
- What did students with disabilities recommend to enhance disability access and support?

> … secondary schools [tend] to place students with disabilities in special classrooms for all or part of their curricula, [this is] deemed a 'direct service.' … At the postsecondary level, students are no longer covered under IDEA and must identify themselves… Postsecondary schools … [provide] "accommodations" based on their type of disability … [and] a minimalist interpretation of the concept of 'reasonableness'. (p. 3)

Participants also mentioned several issues related to the unique characteristics of postsecondary institutions that can compound this shift in culture, including institutional resources, including personnel, time, and money; institutional mission, especially regarding differences between community colleges and baccalaureate institutions; and structural factors, such as academic scheduling with respect to the length of courses and academic programs, and so on. For example, several participants asserted that transition from high school is a particularly complex issue for community colleges. That is open-enrollment policies of community colleges translate into a student population that is considerably more heterogeneous than that of the majority of baccalaureate institutions with respect to student academic backgrounds and educational goals.

Further, some cultural differences relate to the different missions of the general types of institutions. In addition, individual school factors make for unique environments. For example, one respondent indicated that her school has an unusually large number of students who use wheelchairs. This demographic characteristic is both a result of cultural factors and an influence on

Table 3

Topic 3: Satisfaction

- How satisfied were students with disabilities with non-academic campus programs related to climate
- (fraternities/sororities, campus rec., athletics, student govt., music/art/cultural events, etc)?
- How satisfied were students with disabilities with the disability support services received?
- How satisfied were students with disabilities with the accessibility of admissions processes?
- How satisfied were students with disabilities with the accessibility of the new student orientation?
- How satisfied were students with disabilities with access in their chosen field of study/major?
- How satisfied were students with disabilities with access outside their chosen field of study/major?
- How satisfied were students with disabilities with the knowledge of instructors regarding disability support services, and willingness to implement supports?
- How satisfied were students with disabilities with ancillary student service programs (e.g., housing, counseling services, career services, health services, financial aid, community/campus transportation, etc)?

Table 4

Topic 4: Learning Outcomes

- What were the self-reported learning outcomes of students with disabilities? (regarding disability-specific, academic, and non-academic skills/knowledge)
- Did graduating/completing students with disabilities assess their skills as adequate in the following areas: self-management, self-advocacy, use of information technology use of computer technology, other?
- How many times did students with disabilities change majors/programs of study?
- What were the exiting academic demographics of students with disabilities (program of study, GPA, etc.)?
- How many students with disabilities (specifically those with developmental delay) failed to meet the minimum performance requirements of academic courses?
- What is the graduation/completion rate of students with disabilities who enroll at your institution?
- How many years did students with disabilities require to complete their programs/degrees?

Table 5

Topic 5: Employment Outcomes

- How many students with disabilities received a job offer prior to graduation?
- How many students with disabilities accepted a job offer prior to graduation?
- On average, how soon after graduation do your alumni with disabilities obtain their first job?
- How many graduates/completers with disabilities pursue additional education within a year of graduation?
- How many graduates/completers with disabilities obtain employment within a year of graduation?
- Of students with disabilities graduates/completers who obtain employment within a year of graduation, how many are employed full-time for pay; part-time for pay; not employed for pay? Of those, how many are employed in fields related to their programs/majors?
- What were the average salaries of alumni with disabilities (of those employed after one year)?
- How satisfied are alumni with disabilities with their current employment?

Table 6

Topic 6: Climate & Accessibility

- What number of faculty attend trainings/workshops on disability issues and accommodations yearly?
- How often are faculty trainings/workshops on disability issues/accommodations held?
- How often do faculty/staff request information/consultation on student accommodation issues?
- How many faculty made accessibility related curricular/instructional changes over the past year?
- What percent of faculty are informed of responsibilities regarding disability issues in the classroom?
- How many internal/external grievances on disability issues have been filed over the past year?
- How many of these filings were upheld? Dismissed? under review?

Table 7

Additional Data Interests: Institutional Commitment to Disability Access and Supports

- What is the annual expenditure for each institution for disability support services?
- What are the income sources for disability services at each institution?
- How many personnel are employed in disability support services and what is their expertise or function?
- What is the full time equivalent of professional staff and nonacademic staff by area of expertise/function?
- How many volunteers are utilized in the coordination and provision of services?
- How many students are employed in disability services? How many of these are students with disabilities?

culture. The primary implication of these institutional differences is that context is a critical component of any attempt to design a model for understanding the experiences and outcomes of students with disabilities in higher education.

Meaning-Interpretation of Questions

The diversity of Illinois institutions presents significant benefits for students with disabilities; however, that same diversity can serve as an impediment to gathering meaningful data about students. For example, participants pointed out that their institutions differ in the terms used to categorize disabilities. Institutions often arrive at these different terms *re*actively or in an ad hoc fashion as the need arises. While this practice serves the immediate needs of the institution, the cumulative result is that the educational system at large is crowded with idiosyncrasies that make systematic research and policy-making difficult and limit researchers' abilities to make accurate observations about the populations are limited.[5] The significance of this diversity in terminology for this project is that the model must include processes to account for diversity without losing the ability to make meaningful analyses of large-scale trends/issues.

Diversity of Student Populations

While any model must account for diversity of terminology to ensure validity in data collection and interpretation, this diversity is something of a byproduct of the autonomy of educational systems. There is another area in which diversity is perhaps a more fundamental characteristic inherent in the subject itself: the population of students with disabilities. In this case, diversity is not an element to *manage* through development of a common language or some other method of conceptual alignment. Instead, we must *explore* diversity in the population to develop a rich and comprehensive understanding. Meaningful research of disability issues requires comparisons *across* and *within* disability types (including analysis of those who register for services and those who do not), and *between* the population of students with disabilities and those without. Past data collection efforts have tended to report on all students with disabilities; however, the issues relevant to students with muscular dystrophy, for example, are likely to be quite different from those of students with dyslexia. Therefore, without disaggrega-

---

[5] This is an issue across the educational system. The Illinois Board of Higher Education, the Illinois State Board of Education, and the Illinois Community College Board themselves employ varied terminologies. Furthermore, new terms emerge with advances/changes in the medical and mental health fields.

tion of disability types, it would be difficult, perhaps impossible, to make informed policy decisions and assist in accountability efforts regarding outcomes of students with disabilities.

Methods

Data to address the six areas of interest fall primarily within two categories: student information and institutional information. For effective and comprehensive information, we must design the MDPE model to gather data from multiple sources. Some information will come directly from students with and without disabilities to support comparative analyses. Other information will result from mining existing institutional sources.

Though participants agreed that the questions target relevant and high-priority information, the majority raised concerns about the feasibility of obtaining answers. Challenges revolved around issues of logistics, resources and capacity, confidentiality, accountability, and institutional willingness to collect such data. Informants frequently strayed from the task of determining the priority of a given question due to concerns regarding pragmatics and politics of data collection. They had considerable difficulty imagining an ideal situation in which they could have access to whatever information they deemed most important to the needs of students with disabilities.

Unpacking the issue of feasibility by linking it to issues raised by participants helped identify areas the metrics model must address. Though there is considerable overlap and inter-contextuality among issues, examining each individually allows for a design that is more effective.

Logistics

Many focus group participants raised the issue of logistics. Typical questions included the following:

- Where would information come from?
- Who would do the collecting; who would know the "answers" to different types of questions?
- How would answers be obtained?
- How often would data be collected?
- Where would data be stored?
- Who would have access to the data?
- How would the data be used?

Several pointed out that some information would only be available directly from the students whereas other data would have to come from high school counselors, college admissions departments, and direct service providers. The multiple sources of data would require multiple methods for data collection. For example, admissions and records offices in postsecondary institutions could answer some questions regarding secondary student demographics; however, there is no uniform model for what information is currently available. Institutions design their own admissions applications and set their own requirements. Furthermore, the general categories of data collected also vary across institutional types. To gather information on service use at the secondary level some agreement would need to be established between secondary and postsecondary institutions. This would be challenging enough without taking into consideration confidentiality requirements and data system compatibility. Tracking students from secondary to postsecondary settings is also problematic.

The task of collecting data on postsecondary student demographics and service use is perhaps less daunting in many respects because there are some common models/variables in place; however, the process is still quite involved. Information is readily available on what services are offered at an institution, but accurate data on actual use is less easily obtained. Many disability service units have summative information on service use and anecdotal insights into differences in use across and between disability types and the significance of differences. In-depth understandings are rare.

The reports of disability service providers and their staff can inform questions of satisfaction; however, detailed information and understandings can only come directly from students. The same is true of issues related to institutional climate and attitudes. On the other hand, information regarding institutional disability services structures and characteristics in postsecondary institutions would come from disability services staff and other institutional offices with very little input from students.

Some learning and employment outcomes are available via existing structures to fulfill reporting requirements for IBHE. Other outcomes are more subjective, though no less important, and only students can assess them. This is especially true of outcomes relating to advocacy skills and personal development. In addition, assessments of achievement may vary depending on the perspective of the respondents; that is, students may give quite different answers than staff.

The challenges related to who can provide data are joined with those encountered in simply trying to reach the various informants. Gaining access to those who have left a given institution can be difficult, simply with respect to tracking them down to a valid address or email. Furthermore, such efforts become even more complicated when the informants have disabilities related to communication. The nature of the population exacerbates the difficulties of obtaining meaningful response rates.

Tracking students. Questions and insights regarding where data would come from raised additional considerations. One of the significant challenges highlighted by participants was the complicated and interrelated issues inherent in trying to track down and contact students. Participants noted that there is currently no systematic method in place for tracking students across the K-20 system. The student identifiers used before postsecondary enrollment differ from those used post enrollment. Colleges and universities are moving away from relying on social security numbers for a number of reasons and have begun to use unique identifiers created upon a student's entry to the institution. Legal and ethical constraints regarding confidentiality further complicate the process. Institutions cannot require students to identify themselves as having a disability. They can only offer the option of self-reporting. The mobility of the student population while in school (both in place of residence and transferring across institutions), the (likely) higher rates of temporary and permanent withdrawal among students with disabilities, and the general mobility of students upon exiting postsecondary institutions adds to the difficulties of any data collection efforts.[6]

Resources and capacity. Any effort to collect data, much less to analyze it, requires resources, namely time, money, and personnel (including specific needs regarding technical skills for such an undertaking). Focus group participants pointed out that in the current climate of limited resources and belt-tightening, such resources may be hard to come by. One participant addressed this head-on suggesting: "IBHE needs to designate funding and staff if this data is to be obtained." Of course, resources include much beyond dollars and cents. Personnel, technical expertise, research infrastructure, and time all represent critical necessities for successful empirical research. In light of the differing availability of resources, focus group participants suggested that instruments be developed outside individual institutions and that researchers take advantage of existing resources such as the shared enrollment database and the high school transition forms mandated yearly for students with disabilities from the age of 14.5.

Institutional will and accountability. On top of the challenges mentioned above, institutions may resist efforts to track the experiences and outcomes of their students with disabilities for many reasons. As the previous issues imply, this type of effort would be quite complex and involve considerable investment of university resources. Any effort requiring additional resources in the current fiscal climate raises concern. The small size of the population of students with disabilities might also raise questions regarding the relative efficiency of taking on such a complicated effort.

Participants viewed the complexities and difficulties of data collection efforts as only part of the rationale for resistance, noting that institutions may view data collection efforts as inherently threatening because they can be used to pressure institutions to make changes. Though not suggesting any overt bias against such changes, participants suggested that all institutions resist change, especially when it will require a redistribution of resources.

Conclusion

Critical Questions

The efforts of the project investigators and the focus group participants culminated in the identification of six fundamental areas of critical importance in addressing the needs and experiences of students with disabilities in postsecondary education. Concomitantly, a detailed and comprehensive (though not complete) set of questions within each of these areas was developed. It was agreed that, if postsecondary institutions were capable of answering these questions, policymakers and service providers could better meet the needs of all students in postsecondary institutions. The data such questions would provide could go a long way to establish a rich empirical foundation for institutional planning and programming.

Challenges and Barriers

The researchers and informants also began the important process of identifying challenges and barriers to effecting change in the educational system. Many of these had to do with the interplay inherent in institutions of higher education between the uniqueness of each institution, common characteristics across specific institution types, and characteristics shared by all postsecondary institutions.

Focus group participants raised the issue of interplay in a broad sense in their concerns regarding context, diversity of the population, resources and capacity, and institutional will and accountability. The differences and similarities embedded within these areas make up the context within which the needs of students with disabilities' are to be explored, understood,

---

[6] Although these challenges are not unique to the population of students with disabilities, they may be exacerbated.

and addressed. Participants also broached challenges and barriers at the applied level in their discussions of the methods and logistics of data collection. The analysis of these issues presented in the discussion section illustrates the considerable complexity facing researchers as they seek to address the needs of students with disabilities.

Implications

As mentioned, the MDPE project was designed to address the paucity of information available about students with disabilities in higher education as revealed in reviews of existing literature. Our findings moved us closer to answering key questions about students with disabilities. Identification of critical questions about the transition phase between high school and postsecondary settings begins the process of addressing gaps in recruitment and retention of students. This area highlights the importance of readiness factors and educational pathways. The other five areas focus our attentions on factors related to how we can most effectively and efficiently serve our students with disabilities as they go through higher education and how we will assess our successes in this area when they complete their formal involvement in this area.

Though we include students with disabilities under the umbrella of "underrepresented" students, institutions have not been pressed to account for their policies and for student outcomes with this unique population. The call for greater accountability in this area is coming, and the specific questions identified in this study are invaluable in our efforts to use our institutional resources strategically and to engage in continuous improvement. These six areas together provide a map for higher education to use in designing data-collection mechanisms.

Having identified and validated these critical areas of information, the next step toward closing the information gap was to conduct an institutional capacity study to determine what resources and mechanisms are already in place and what further mechanisms would be required. Further, the capacity study provides an even richer and more detailed understanding of the specific challenges implementation of a systemic model might entail. Upon completion and analysis of the institutional capacity study, a preliminary model for data collection was designed and pilot tested. These efforts will be reported in a later article.

References

Chang, K., & Logan, J. (2002). A comparison of accommodations and supports for students with disabilities in two-year versus four-year postsecondary institutions. National Center for the Study of Postsecondary Educational Supports, Honolulu, HI. Retrieved September 15, 2006, from www.rrtc.hawaii.edu/products/phases/phase3.asp

Frieden, L. (2004). *Improving educational outcomes for students with disabilities*. National Council on Disability. Retrieved September 21, 2006 from http://www.ncd.gov/newsroom/publications/2004/educationoutcomes.htm

GW HEATH Resource Center. (2001). *Postsecondary students with disabilities: Recent data from the 2000 national postsecondary student aid survey.* Retrieved September 15, 2006, from http://www.heath.gwu.edu/factsheet.htm

Harding, T. Two-year follow up survey of the national survey of support services for students with disabilities. National Center for the Study of Postsecondary Educational Supports, Honolulu, HI. Findings Brief #24. Retrieved September 15, 2006, from http://rrtc.hawaii.edu/products/phaseII

Harding, T., & Chang, C. (2001). Research findings brief: Comparison of 2-year institutions versus 4-year institutions in offering supports and accommodations for students with disabilities. National Center for the Study of Postsecondary Educational Supports, Honolulu, HI. Retrieved September 15, 2006, from http://rrtc.hawaii.edu/products/phaseII

Henderson, C . (2001). *College freshmen with disabilities: A biennial statistical profile.* American Council on Education. Retrieved September 21, 2006, from http://www.heath.gwu.edu/otherpub/resourcesDirectory.htm

Horn, L., & Berktold, J. (1999). *Students with disabilities in postsecondary education: A profile of preparation, participation, and outcomes.* (NCES 1999-187).

National Center for Education Statistics. (2005). *The condition of education: Minority student enrollment.* Indicator #31. U.S. Department of Education: Office of Education Research and Improvement. Retrieved September 21, 2006, from http://nces.ed.gov/programs/coe/2005/section5/indicator31.asp

National Center for Education Statistics. (2000, June). *Stats in Brief. Postsecondary students with disabilities: Enrollment, service, and persistence* (NCES 2000-092): U.S. Department of Education: Office of Education Research and Improvement,. National Center For The Study of Postsecondary Educational Supports.

National Center for the Study of Postsecondary Educational Supports. (2000). *National survey of educational support provision to students with disabilities in postsecondary education settings*: Technical Report. University of Hawaii. Retrieved September 15, 2006, from http://rrtc.hawaii.edu/products/phaseI.html

Perna, L. (2000, Fall). Racial and Ethnic Group Differences in College Enrollment Decisions. (2000, Fall). *New Directions for Institutional Research, 27* (3), 65-83.

Stodden, R., Conway, M., & Chang, K. (2003, Fall). Findings from the study of transition, technology and postsecondary supports for youth with disabilities: Implications for secondary school educators. *Journal of Special Education Technology, 18(4).*

Stodden, R., & Dowrick, P. (2001). Postsecondary Education And Employment Of Adults With Disabilities. *American Rehabilitation, 25*(3), 19-23.

Stodden, R., Jones, M., & Chang, K. (2002, March). Services, supports and accommodations for individuals with disabilities: An analysis across secondary education, postsecondary education, and employment. Paper presented at the Capacity Building Institute, Honolulu, HI. Retrieved September 15, 2006, from http://ncset.hawaii.edu/Publications/Pdfs/services_supports.pdf

U.S. Department of Education, National Center for Education Statistics. (1999). Students with disabilities in postsecondary education: A profile of preparation, participation, and outcomes (NCES 1999-187).

U.S. Department of Education, National Center for Education Statistics, (2000). 1999-2000 National Postsecondary Student Aid Study. (NPSAS: 2000).

Wolanin, T., & Steele, P. (2004). *Higher education opportunities for students with disabilities: A primer for policy makers*. The Institute for Higher Education Policy.

About the Author

Marya Burke is a Research Scientist with the Program for Research and Evaluation in Public Schools (PREPS) in the College of Education at Old Dominion University in Norfolk, VA. She joins the PREPS team in collaborating with Virginia schools to inform culture and improve practice through collaborative research. Burke's research experience began with her doctoral studies in Educational Policy at the University of Illinois in Champaign Urbana. In her dissertation research she explored on issues of equity in K-12 and postsecondary education. Much of Burke's work has designed for specific organizational clients such as the Disability Access Committee of the Illinois Board of Higher Education, the Teachers Academy for Mathematics and Science in Chicago, *The WaterCAMPWS* and NANO-CEMMS engineering research centers at University of Illinois in Urbana-Champaign, and the Department of Education of the Urban League in Champaign, Illinois. A sociologist at heart, Burke explores educational issues with a systems and pattern-oriented lens. She is passionate about equity and collaborative participation of all stakeholders in education. She can be reached by email at: MBurke@odu.edu.