PHASE II
PROPOSAL BRIEF #2
(MS#017a(1)-H01)

University of Hawai`i at Manoa Center on Disability Studies
National Center for the Study of Postsecondary Educational Supports
A Rehabilitation Research & Training Center

University of Minnesota
Institute on Community Integration
Michael Sharpe & David Johnson

Longitudinal Analysis of the Experiences of Students with Disabilities with Postsecondary Support Provision: Characteristics of Effective Support Systems

Problem to be addressed

Results of the National Survey of Postsecondary Supports for Students with Disabilities revealed a wide range of supports are currently being offered to postsecondary students with disabilities. According to survey results, availability and delivery of these services appear to vary with regard to institution “type” (e.g., 4 year vs. 2 year). Although it was observed that supports vary as a function of institution type, it is less clear the extent to which these differences impact outcomes of students. As intended, the survey was helpful in describing the current status of nature and range of supports available to students. However, no data was collected to examine consumer experiences within these service systems. Specifically, it is of interest to examine issues of consumer access, level of satisfaction, and perspectives regarding how such services are likely to effect employment objectives and other postschool outcomes. At present we do not know what the availability of supports (or lack thereof) impacts outcomes for students (e.g., “Does more necessarily mean better?”). Moreover, we do not have any information regarding what elements of support services are correlated with high levels of student access, satisfaction, and prospects for the future. Given the varying missions of institutions and the range of students with disabilities served, it is critical that we attempt to develop a better understanding of the components of supports services effectiveness.

The main purpose of this research effort will be to identify effective components of support services in relation to student outcomes. To accomplish this task, two basic research strategies will be employed: (1) an examination of student outcomes by conducting a “20/20” analysis of support service characteristics, and (2) an examination of input and process variables that lead to the identification of effective components of support services.

As described by Reynolds (1993), a 20/20 analysis is a method where we select a sample of the “top” 20% and the “bottom” 20% of institutions representing high and low levels of support services according to national survey results. One objective of this
research activity is to study how the range of support options available within various types of institutions impact student outcomes. That is, we are interested in knowing whether supports systematically vary as a function of institution type and the degree to which supports influence student outcomes. In addition, we are also interested in obtaining a broader understanding of effective components of service systems in general, relative to overall processes employed by postsecondary support service providers. Therefore, a second objective of this study will be to develop an empirically based model of services that can be used in the planning and implementation of support services programs that meet student needs from a variety of institutional missions.

**Research Questions**

Three basic research questions will be addressed in this study:

- How does the availability of support services in various types of postsecondary institutions impact consumer perceptions of access, satisfaction, and anticipated postschool outcomes?

- What are common characteristics of postsecondary support services that are most likely to result in high levels of consumer access, satisfaction, and positive perceptions of postschool outcomes?

- What supports are considered most effective in terms of carryover to subsequent employment? Related subquestions include: (1) How are supports used in subsequent employment? and (2) How did postsecondary support service systems influence the types of supports used in subsequent employment?

**Method Proposed to Address Research Questions**

**Design of the Study**

A longitudinal, cross-sectional design will be implemented over a three-year period to study consumer experiences with various types of postsecondary support services. As indicated by Menard (1991), in addition to describing changes over time, the proposed longitudinal research design can be used “to establish the direction (positive or negative, and from Y to X or from X to Y), and magnitude of causal relationships.” In this study, we will explore variation of services by institution type and the general relationship of how selected input and process variables influence consumer perspectives on access, satisfaction and postschool outcomes. Variable specifications include:

**Independent Variables**

*Input variables*—“fixed” variables which postsecondary support services have little or no "control" over and include: (1) institution “type” (2-year, 4-year,), (2) student population, (3) geographic location.

*Process variables*—variables where we assume postsecondary support services have some "control" or influence over what is being done to address the needs of students with disabilities. This includes many of the items included on the national survey that provide descriptive information about the nature and range of supports available at a given institution including: (1) number of trained staff, (2) whether there is an advocacy organization on campus, (3) extent of faculty training efforts, (4) number and types of assistive technology supports, and (5) skills development supports (study skills, organization and time management skills, etc.).
**Dependent Variables**

*Outcome variables*—outcomes presumably influenced by the interaction of inputs and service delivery processes. This study will focus on students’ perceptions of access, satisfaction, and postschool prospects (employment, independent living, etc.).

As indicated, inputs and processes represent independent variables while outcomes will serve as the dependent variables of this study. The 20/20 analysis will employ process and outcome variables, while research tasks related to model building will utilize all three variable types. These variables, including examples of outcome variables are shown in Figure 1.

**Description of Sample and Selection Process**

This study will involve an annual sample of 375-900 student volunteers recruited from institutions that participated in the *National Survey of Post-Secondary Supports for Students with Disabilities*. The first step in obtaining the sample of student volunteers is to use national survey data to identify the “Top 20%” and the “Bottom 20%” of institutional “performers.” In this case, we will scale items that were contained national survey data to select the top 20% of institutions that indicate substantial support services and conversely, the bottom 20% whose results reflected few services and supports. Items from the survey will be assigned standardized weights to facilitate the selection process and to identify optimal “cut-off” points.

Based on a strategy described by Reynolds and Zetlin (1993), “20/20 analysis” is an approach where one “looks at the margins” to assess programmatic outcomes. Once the top and bottom 20% of postsecondary institutions have been identified, a random sample of 25-30 institutions within each category will be drawn, stratified on institution type (e.g., less than 2-year, 2-year, and 4-year). Random samples will be drawn without replacement for each year of the study to help ensure that a wide variety of institutions will be eligible to participate in this study. For each institution selected, research staff will contact the lead administrator of the support services program to solicit their cooperation in the study. Upon Institutional Review Board (IRB) approval, each administrator will be asked to distribute surveys to 5-10 students with disabilities. Utilizing the most optimistic projections, samples size would range from approximately 125 to 300 students for each institution type, resulting in an annual sample of 625-1,800 students. At the conclusion of the Year 3, it is estimated that outcome data will be collected on approximately 1,875-5,400 students representing various types of disabilities and postsecondary settings. The sampling plan based on institution type is shown in Table 1 for Years 1-3.
**Protocol Used to Collect Data**

A survey protocol will be developed to collect data from postsecondary students with disabilities. The protocol will be designed to address three specific outcome domains: (1) access to services, (2) satisfaction with services, and (3) anticipated postsecondary outcomes. Survey items will be developed that directly correspond to items contained in the national survey. It is anticipated that each survey will require about 15-30 minutes of the respondent’s time. To help reduce any systematic bias in the distribution of surveys, institutional administrators will be informed that students will remain anonymous, nor will there be any attempt to identify specific institutions in any of the reports developed by research staff. Prior to dissemination, researchers at each consortium site will review the survey and will be field-tested with University of Minnesota students with disabilities.

**Intervention to be applied**

**Year 1**

The data collected in the first year of the project will be used to provide an initial analysis of general relationships between disability service processes and student perceptions of outcomes. At this level of analysis, it will be of interest to examine whether “more” purported services necessarily result in higher levels of access, satisfaction, or positive perceptions of postschool futures. This analysis will also provide useful information to help assess the overall external validity of the *National Survey of Post-Secondary Supports for Students with Disabilities*. Another aspect of the Year 1 study will be to conduct a “20-20” analysis (Reynolds, 1993; Reynolds & Zetlin, 1993) to examine dependent variables related to access, satisfaction, and anticipated futures between the top 20% of the institutions who obtained “high” scores on the national survey with those of the bottom 20%. This level of analysis will also focus on identifying programmatic discrepancies between institutional types and their relationship to student outcomes. In addition, a more general analysis will be conducted using student survey data obtained from all participating institutions to identify inputs and processes that are related to high levels of access, satisfaction, and positive perceptions of postschool outcomes. The purpose of this level of analysis will be to identify effective components of support services common to all types of postsecondary institutions and for subsequent research efforts aimed at model development.

**Year 2**

The research efforts described in Year 1 will be replicated in Year 2, but will be extended to begin the process of examining whether any trends can be detected based on 20/20 analysis results. Also, in the second year, researchers will aggregate the data of Years 1 and 2 to begin the process developing a model that provide information about inputs and process components of student
support services programs associated with high levels of access, satisfaction, and perceptions of positive outcomes. Essentially, Year 2 analysis activities will be concentrated on the description of hypothesized components of “effective” services based on empirically defined relationships (e.g., regression methods).

**Year 3**

The research activities described in Year 2 will be extended to include data collected from Years 1 and 2 to conduct 20/20 analysis. Research staff will work with RRTC consortium staff to refine the process of model development and to identify trends in students’ perceptions of access, satisfaction, and perceptions of postschool outcomes.

**Data Analysis and Write-Up**

Data analysis will include crosstabulation procedures to examine student survey results based on a variety of input and process variables and categories identified through 20/20 analysis. Descriptive statistics and multi-way crosstabulations will be used to examine outcome variables based on institution type, disability type, “year in school,” and various other variables to provide a comprehensive description of the nature and range of supports relating to the needs of postsecondary students with disabilities. Various types of analysis (analysis of variance, Chi squares, etc.) will be employed to examine student survey results each year data is collected and across samples to identify trends. Multivariate analysis techniques, specifically ordinary least squares regression and logit analysis will be used to construct a model of postsecondary support services that leads to high levels of access, satisfaction, and perceptions of positive postschool outcomes for students.

A report will be developed for each year of the project detailing methods, procedures, and significant findings. The final report will describe a model of effective support services and will provide information regarding trends observed over the three-year period, along with recommendations about future research efforts that will help to enhance and further validate the model.

**Products and Intended Audiences**

The purpose of this effort is to develop an overall product that will help service providers and researchers better understand characteristics of postsecondary support services that are most likely to result in high levels of consumer access, satisfaction, and positive perceptions of postschool outcomes. It is anticipated that development of a model will facilitate program planning by helping to identify effective components of support services overall, and specifically, for various institutional types (e.g., 2-year, 4-year). This research activity will also serve as the foundation for future efforts to establish empirical relationships of input, process, and outcomes of postsecondary support services.

**References**


Table 2: Work Planning Document For Phase II Study Proposal

<table>
<thead>
<tr>
<th>Task to be Completed</th>
<th>Person Responsible</th>
<th>Timeline</th>
<th>Product/Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development and Approval of Study Brief</td>
<td>Develop study proposal</td>
<td>Sharpe/Johnson</td>
<td>April, 2000</td>
</tr>
<tr>
<td>Set-up of Study Design &amp; Method</td>
<td>Obtain national survey data set</td>
<td>Sharpe</td>
<td>May-June, 2000</td>
</tr>
<tr>
<td>Conduct the Study (describe plan for pilot, implementation, replication)</td>
<td>Select random sample of institutions; contact program administrators; field – test surveys; disseminate surveys to students</td>
<td>Sharpe/Rosen</td>
<td>June-November, 2000</td>
</tr>
<tr>
<td>Analysis of Data or Information</td>
<td>Data entry; statistical analysis (crosstabulations; regression analysis)</td>
<td>Sharpe/Rosen</td>
<td>November-December, 2000</td>
</tr>
<tr>
<td>Development of Products and Reports</td>
<td>Report of Year 1 research efforts and summary of analysis</td>
<td>Sharpe/Rosen</td>
<td>January-March, 2001</td>
</tr>
<tr>
<td>Conduct Training, TA &amp; Dissemination</td>
<td>Disseminate results through written, oral presentations</td>
<td>Sharpe</td>
<td>March-April, 2001</td>
</tr>
<tr>
<td>Projected Costs (funded by the RRTC, leveraged from related projects and objective)</td>
<td>$50,000</td>
<td>Sharpe/Johnson</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Task to be Completed</td>
<td>Person Responsible</td>
<td>Timeline</td>
<td>Product/Outcome</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------</td>
<td>----------</td>
<td>-----------------</td>
</tr>
<tr>
<td>from partner or collaborating entity.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>