

# Career Assessment and Planning Strategies for Postsecondary Students with Disabilities

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## Abstract

*Career assessment and planning services that enable students with disabilities to make successful transitions from higher education to careers are an important component often missing in the postsecondary educational experience. Comprehensive services in this regard involve students in considering how to incorporate their preferences, assets, and disability-related limitations in career and accommodation planning. In this article, one such technique for doing so is demonstrated in four case studies with both undergraduate and graduate students. The career assessment and planning approach includes reliable and valid measures of vocational interests, barriers to productivity, strengths, and disability-related limitations, culminating in an accommodation plan that specifies the technology and/or modifications students need to perform essential functions of desired jobs. Important outcomes of the career planning experience are also discussed.*

A critical need exists in postsecondary educational programming to assist students with disabilities in their efforts to link their accomplishments in postsecondary education with their future career goals. Too often the transition experience is viewed more in terms of moving from secondary school to work or higher education rather than in terms of moving from postsecondary education to careers and the supports needed to maintain those careers (Carroll & Johnson-Bown, 1996; Kundu, Dutta, Schiro-Geist, & Crandall, 2003). Certainly both perspectives on transition are integral to improved quality of life for young people with disabilities, but the emphasis of this paper is on proper preparation for career development, i.e., on the transition from postsecondary education to the world of work.

Preparation for the transition from higher education to career is not simply about identifying and securing supports for vocational success; it is also about identifying interests and assets and matching those characteris-

tics to activities in and demands of the world of work. Therefore career assessment and planning strategies are needed at the postsecondary level that address multiple goals which include (a) identifying the student's interests, assets, and disability-related limitations; (b) helping the student develop vocational goals consistent with those interests, assets, and limitations; and (c) creating problem-solving or accommodation strategies consistent with personal career goals and perceived barriers. The purpose of this paper is to describe such a career assessment and planning methodology in terms of four case studies, two undergraduate students with disabilities and two graduate students with disabilities.

## *Postsecondary Education and Employment Outcomes*

Explication of a career assessment and planning approach is particularly timely. Enrollment of students with disabilities is at an all-time high in postsecondary education. The National Center for Educational Statistics

(NCES; 2003) reports that approximately 9.3 percent of students in postsecondary education in 2000 had disabilities, which is approximately three times the number of such students in 1978 (Torkelson, Lynch & Gussel, 1996). Disability types of students enrolled in postsecondary education include learning disabilities (30%), orthopedic disabilities (25%), hearing loss (16%), vision loss (16%), and mental illness and depression (14%) (NCES, 2003).

Increased enrollment of students with disabilities is, in and of itself, a sufficient reason for advocating for improved career assessment and planning services. However, one can also argue for improvement and expansion of such services based on outcome information regarding employment. Among postsecondary graduates with disabilities who are able to work, nearly one in three (33%) is unemployed. The gravity of such a statistic becomes evident in comparisons with unemployment rates of students without disabilities. Only 2.5% of this group is employed following completion of postsecondary education (Gingerich, 1995 quoted in Rumrill, Koch, Murphy, & Jannerone, 1999).

Unemployment is only one facet of the problem. For those students with disabilities who do become employed, evidence of underemployment also exists. Students with disabilities are also less likely to participate in training and advancement opportunities and consequently have a much lower probability of holding professional positions. In fact, many college graduates with disabilities acquire jobs that do not even require a postsecondary degree, jobs that typically do not provide good salaries or fringe benefits (National Council on Disability, 2003).

### *Barriers to Employment*

Students with disabilities face many barriers in their efforts to secure satisfying employment which have very little to do with their training since they are in fact college graduates. Some of these barriers are difficult to document as they are the product of social attitudes manifested in subtle employer discrimination during the hiring process (Perry, Hendricks, & Broadbent, 2000). Evidence of discrimination beyond the hiring phase of employment exists as well because students indicate that they encounter resistance when they request reasonable accommodations and/or training related to career advancement (National Council on Disability, 2003; Roessler & Rumrill, 1995). It is not enough that these barriers pose significant external impediments to career success. Over time they become internalized as negative beliefs held by the students regarding their personal potential as applicants and employees (Hennessey, Roessler, Cook, Unger, & Rumrill, 2006). In this

regard, Corrigan, Jones, and McWhirter (2001) argued for career interventions to help postsecondary students with disabilities form more positive self-perceptions and career plans. The case can be made that career assessment and planning services represent the first step in helping students create a positive vision of their own employment potential.

### *Career Success and Student Characteristics*

Another argument for improving career assessment and planning services is implicit in research that describes the characteristics of students with disabilities who do succeed in securing and maintaining desirable employment. For example, Satcher (1995) described the attributes of students with learning disabilities who embark on meaningful careers; these characteristics are the very qualities that effective career assessment and planning services can identify and enhance. Students with learning disabilities who are more likely to achieve their career goals understand not only how their disabilities affect their performance but also how they can accommodate relevant vocational limitations through proper job/person match, assistive technology, or job restructuring. Successful students describe their limitations in functional terms, investing no time in denying the impact of their disabilities. They are aware of their vocational interests and can relate them to vocational roles consistent with their preferences and strengths. Finally, they have confidence in their abilities to approach their supervisors and employers about accommodations needed on the job (Palmer & Roessler, 2000; Roessler, Rumrill, & Brown, 1998).

Without major improvements in career assessment and planning services, students with disabilities will also remain uninformed about available employment-related legislative protections (Hennessey, Roessler, Cook, Unger, & Rumrill, 2006). For example, Title I of the Americans with Disabilities Act (ADA; Coker, 2005) assures individuals with disabilities access to nondiscriminatory hiring processes. The ADA protects the rights of applicants and workers with disabilities in their efforts to request and receive reasonable accommodations needed to perform the essential functions of their positions (Blanck, 2004; Torkelson, Lynch & Gussel, 1996). Career assessment and planning services would help students with disabilities understand these employment protections and the types of hiring or employment actions that are in violation of these protections (Roessler, Neath, McMahon, & Rumrill, 2007). Furthermore, these services would provide students with information about the types of reasonable accommodations that would help them perform satisfactorily on the

job as well as about the procedures involved in requesting those accommodations post-offer or on the job (Friehe, Aune, & Leuenberger, 1996; Roessler et al, 1998).

The purpose of this paper is to present via case studies one methodology for career assessment and planning that is tailored to the needs of students with disabilities in postsecondary education. This methodology is an example of one of many types of interventions or programs that could be implemented to help students with disabilities secure and maintain employment post-graduation. The methodology is demonstrated in four case studies involving students with disabilities who are enrolled in either undergraduate or graduate studies. In part the approach includes traditional assessments such as Holland's Self-Directed Search (Gottfredson & Holland, 1996) that help individuals clarify their vocational interests. At the same time the approach recognizes that disability is one of several important social and personal factors affecting employment outcomes (Enright, Conyers, & Szymanski, 1996). Consequently, disability-specific assessments such as the Personal Capacities Questionnaire (PCQ; Crewe & Athelstan, 1984) and the Work Experience Survey (Roessler, 1995) are included in the battery. Assessments of this nature provide students with disabilities information about their own strengths and limitations and the types of assistive technology and accommodations needed in the workplace to reduce or remove the work-related effects of those functional limitations (Coomber, 1996). Information regarding the career assessment methodology and the four case studies is presented in ensuing sections.

### **A Career Assessment and Planning Methodology**

Four students with disabilities in postsecondary education (two undergraduate and two graduate students) participated in the model career assessment and planning strategy. In this section, the individual students are presented in terms of their background characteristics. Each of the measures used in the career assessment and planning approach is introduced along with the specific steps involved in administering the various phases of the assessment. Data from the career planning and assessment process provide information for case studies in terms of participant interests, strengths, limitations, accommodation needs, and career planning considerations.

#### *Participants*

Participant 1 was a 41-year-old Caucasian male who was attending a community college with the goal of receiving his associate degree. Participant 2 was a 21-year-old African American female attending a four

year university. Participant 3 was a 40-year-old African American female in the third year of her doctoral program in cultural foundations of education. Participant 4 was a 50-year-old Caucasian female in a master's program at a four year university.

#### *Instrumentation*

*The Self-Directed Search (SDS).* Participants completed Holland's Self-Directed Search (Holland, 1994) to clarify their vocational interests and possible vocational directions. Results from the SDS provide insights into an individual's preferences among vocational activities found in realistic, investigative, artistic, social, enterprising, and conventional occupations. Profiles based on the student's strongest preferences for two to three of the occupational interests represent the Holland summary or high point code which can be matched with numerous related vocational titles listed in the Dictionary of Holland Occupational Codes (Gottfredson & Holland, 1996). The SDS is a widely used measure of occupational interests with considerable support for its reliability and validity (Spokane & Cruza-Guet, 2005).

*The Work Experience Survey (WES).* The Work Experience Survey (Roessler, 1995; Roessler, Reed, & Rumrill, 1995) was developed to identify barriers to productivity in the workplace as perceived by individuals with disabilities who are currently employed or are expecting to be employed in the near future. It consists of six sections: background information, barriers to physical access in the workplace, problems with essential job functions, job mastery concerns, job satisfaction, and accommodation planning priorities. In checklists addressing barriers to access and performance of essential functions, respondents also list job accommodations that would enhance their performance. Measures of job mastery concerns (coefficient alpha, .78) and job satisfaction (coefficient alpha, .74) provide additional information regarding needed job modifications (Roessler & Rumrill, 1995). In research with individuals with severe chronic illnesses such as multiple sclerosis and rheumatoid arthritis, findings consistently demonstrate inverse relationships between number of access and performance barriers and job satisfaction (Allaire, Wei, & LaValley, 2003; Roessler & Rumrill, 1995).

*The Personal Capacities Questionnaire.* Developed by Crewe and Athelstan (1984) from research on the Functional Assessment Inventory (FAI), the Personal Capacities Questionnaire (PCQ) is a self-report measure of an individual's employment-related strengths and limitations. Results from the PCQ indicate the extent to which the person believes they have capabilities or

disability-related limitations in areas such as vision, mobility, judgment, finances, acceptability to employers, and skills. Researched widely in the field of rehabilitation, the PCQ is frequently used to estimate severity of disability for vocational rehabilitation agencies in the State-Federal system to determine order of selection of applicants for services. In research with the FAI on which the PCQ is based, alpha coefficients were .79 to .80. Perceived employment-related assets and limitations provide valuable information regarding the extent of job/person match possible with or without accommodations. Information from the PCQ is analyzed in relation to results of job analyses to determine the suitability of the match between person and job.

#### *Administration*

The career assessment and planning strategy involves the student and career assessor in a process of completing and discussing the SDS, WES, and the PCQ. Results from the SDS are used to direct students toward a variety of occupational titles consistent with their Holland summary or high point code. Students may even consider the implications of these results for selection of a major or for other more immediate educational planning purposes. The WES helps students clarify prospective barriers that exist in the workplace in terms of physical access, performance of essential functions, and/or job mastery. These barriers merit consideration not only for their impact on job performance but also for their impact on job satisfaction (Dawis, 2005). In every case, the student with a disability and the career assessor review the need for job accommodations to reduce or remove perceived impediments to productivity. In relation to tasks identified in jobs of interest to the student, information from the PCQ indicates areas in which student strengths match job responsibilities and areas in which student disability-related limitations may affect task performance. The purpose of the accommodation plan developed at the end of the career assessment session is to both enumerate jobs of interest following graduation from postsecondary education and accommodations needed to address barriers to access or performance of essential functions in those jobs.

Student personnel professionals or disability specialists are qualified to administer and score the measures in the career assessment and planning battery. Students with disabilities may complete the measures, with the assistance of the administrator, in one or several sessions. Forms are available for listing information such as Holland summary codes, related educational majors and job titles, personal capacities and limitations, job analysis and personal capacities consistency, aspects of an ac-

commodation plan including accommodations needed, who can assist in procuring such accommodations, and how they can help in that process. Information on these summary forms provides students with disabilities an in-depth and practical plan for their transition from postsecondary education to careers.

#### *Analysis of Case Studies*

The sections to follow provide detailed case studies of four students who completed the career assessment and planning strategy recommended in this article. Each case study includes information regarding the person's background, vocational interests, perceived barriers to workplace productivity, personal capacities and limitations as they relate to job tasks, and aspects of an accommodation plan.

### **Case Studies**

*Participant 1: 40-year-old Caucasian male with Attention-Deficit Disorder, rheumatoid arthritis, chronic back pain, and schizotypal personality disorder.*

*Interests of Participant 1.* Interest results from the Self-Directed Search indicated a summary code of I (Investigative), S (Social), and R (Realistic), with related job titles in areas pertaining to physiology, security, and ecology. Although Participant 1 stated that he would like to work in a position related to the government, he was unable to identify any jobs of interest in Holland's (1996) booklet, "The Occupations Finder." He stated that he "was on the right path, proceeding with education, but still searching for a satisfying career path." Additional assistance from career services staff is needed to help Participant 1 clarify his educational and career interests and goals.

*Perceived barriers to productivity.* In the WES, Participant 1 enumerated both physical and cognitive limitations such as inability to lift more than 25 pounds; difficulty standing, sitting, and walking for more than eight hours; intolerance for high temperatures or poor ventilation; fatigue; muscle deterioration in left upper extremity; and short and long-term memory problems. He also indicated that he has dyslexia and panic attacks and difficulty with computer navigation. The career assessor suggested accommodations such as an individual cubicle at work, Java coding for computer navigation problems, and equipment to overcome productivity problems due to upper extremity weakness.

*Assets of Participant 1.* The self-described strengths of Participant 1 included good work habits, the desire and ability to work, willingness to participate in the state-

Federal vocational rehabilitation system, effectiveness as a communicator, and a moderately optimistic belief that he would obtain employment. These strengths represent a readiness to work, presuming that proper workplace accommodations are in place.

*Limitations of Participant 1.* Participant 1 indicated three areas that would present potential limitations concerning future employment. The first area on the PCQ was learning ability. Participant 1 indicated that, although he could learn difficult material, he would need extended time and “extra” help to accomplish learning tasks. He indicated that his memory was poor and noted frequently being confused. He appeared to have short-term memory problems. The third area of limitation was in perceptual abilities. He stated difficulty in performing tasks that required “looking closely at details.”

*Accommodation and Career Planning.* The following physical accommodations were suggested upon completion of the assessments: individual cubicle at work, software for computer navigation, and proper equipment for upper extremity weakness. With assistance from a rehabilitation engineer with the Bureau of Vocational Rehabilitation (BVR), Participant 1 could obtain further information about the feasibility and availability of these accommodations. BVR could also assist in the purchase of the accommodations.

Regarding the issues that Participant 1 may have with his dyslexia the following accommodations could be made: convert text to audio or use a reading pen, provide documents in large print or double space text, use screen reading software, or a manual or electrical line guide to help him “keep his place” on the computer monitor. When composing or writing documents he could use software programs that assist with spelling, reading, and grammar; use electronic or talking dictionaries and/or spell checkers or allow him to create verbal responses instead of written responses to reports and correspondence.

To accommodate panic attacks, Participant 1 could utilize counseling through an employee assistance program, be permitted to make phone calls during work hours to physicians and others for support, and receive permission to take breaks to practice stress management techniques. If attendance at work is an issue, the employer could create an opportunity for a self-paced workload and flexible hours. To cope with change in the work environment management could maintain open communication channels between the employee and old and new supervisors, and provide weekly or monthly meetings with the employee to discuss workplace issues and production levels. Other accommodations that keep anxiety at a minimum include providing written job in-

structions, establish long and short term goals, develop strategies to deal with problems before they occur, and develop procedures to evaluate the effectiveness of implemented accommodations.

Although he did not indicate a strong preference for any positions related to his Holland Code, Participant 1 stressed both the compatibility of his educational plans with his measured interests and the need to complete his educational program to increase his access to properly accommodated jobs. Because he did not have concrete job goals at the time of the assessment, Participant 1 should engage in further career counseling and academic advisement to ensure that completion of his education will translate into feasible employment opportunities

*Participant 2: 21-year-old African American female with dyslexia and partial vision loss.*

*Interests of Participant 2.* In terms of occupational daydreams, Participant 2 listed her interests as art, music, and teaching, with her main stated interest being “art teacher.” In part, her Holland summary code, ASI, was consistent with her self-reported vocational interests; however, the only ASI job title of interest to Participant 2 was art exhibitor which requires more of a focus on art display than on art instruction. Fortunately, her expressed interests and her measured interests differed only slightly in that the code for art teacher is ASE, indicating that the job tasks of an art teacher requires a more outgoing or enterprising orientation than the job tasks of an art exhibitor which require a more investigative orientation. Of course, working with art in any capacity represents something of a challenge given the visual limitations of Participant 2.

*Perceived barriers to productivity.* Results from the WES underscored the significance of barriers to productivity related to her vision loss rather than to her learning disability. In terms of physical access barriers, Participant 2 identified lighting and identification of signs and labels as concerns. She suggested several accommodations for those barriers that would eventually become part of her overall accommodation plan. To accommodate her vision loss, she first needed to have prescription eye glasses. She also needed to work in rooms where she could control the lighting by making it dimmer or brighter depending on the type of activity. She felt confident to perform nearly all of the essential functions of the role of teacher with the exception of some of the visual requirements. Having written materials such as papers, notes, and signs in large print would help greatly. She also expressed a need for reliable transportation to and from work since she was not a licensed driver.

*Assets of Participant 2.* Although reporting very little work experience, Participant 2 had assisted in a local hospital as a volunteer working with children. Her self-reported assets on the PCQ included many characteristics of a good teacher such as pleasant personality, intelligent, interest and achievement in academics, and sound practical judgment. When combined with her love of children and her volunteer work at the hospital, these personal attributes provided further evidence of the appropriateness of art teacher as a vocational goal.

*Limitations of Participant 2.* In completing the PCQ, Participant 2 manifested an awareness of how her moderate vision loss and dyslexia would affect her employment potential. First she expected to encounter discrimination on the part of some employers, i.e., school personnel, who would not believe that job accommodations would enable her to work as a teacher. Believing that she would be less acceptable to some employers, Participant 2 predicted that she would encounter limited job opportunities. Even though she considered herself to be a person of good judgment, she did note a limitation on the PCQ in terms of her tendency to “rush into things” before considering all of the options. Her responses to the PCQ indicated that she lacked self-confidence regarding her transition into a teaching career. She reported that some types of work were impossible given her disabilities and that special working arrangements may be difficult to find. As with many people with significant disabilities, Participant 2 commented on certain disincentives to employment in that remuneration and benefits of a teaching position must be equivalent to the financial support and health insurance benefits that she was receiving from Social Security.

*Accommodation and Career Planning.* With effective accommodation and career planning, Participant 2 can not only reduce or remove the practical barriers to assuming a career as an art teacher but also the self-imposed barriers due to her low self-confidence. With Participant 2, the career specialist must consider financial disincentives to employment, along with the relationship of personal assets and limitations to performance of essential functions in desired vocations. Of course, the most important step in planning for the transition from postsecondary education to career is the development of the accommodation plan. For Participant 2, this plan must include procurement and use of eyeglasses, adjustable lighting in classroom and work areas, large print for all reading materials and signage, and access to public transportation. Regarding the issue of dyslexia, Participant 2 could implement the same accommodations addressed under Participant 1. With these accommodations, Participant 2 can demonstrate to

prospective employers how she can perform the essential functions of an art teacher, a vocation consistent with her expressed interests and self-perceived personal assets.

*Participant 3: 40-year-old African American female with depression and degenerative bone disease.*

*Interests of Participant 3.* A third year doctoral student in cultural foundations of education, Participant 3 expressed interests in the areas of writing and educational research. Her Holland summary code, ASC, was an excellent match with these self-reported vocational interests. In fact, the summary code of ASC is the code for teacher, and Participant 3 had long-time interests in becoming a college professor and researcher. In a search of job titles with the ASC code in the Dictionary of Holland Occupational Codes (Gottfredson & Holland, 1996), Participant 3 singled out other related occupations of interest such as public relations, ministry, career counselor, teacher, script supervisor, and receptionist. The consistency of the expressed and measured interests of Participant 3 bode well for her personal satisfaction in teaching and research roles in higher education. Therefore, it becomes extremely important to identify any barriers to her productivity or “satisfactoriness” (Dawis, 2005) in those roles.

*Perceived barriers to productivity.* In completing the two sections of the WES, Participant 3 primarily expressed concern about a significant problem she had encountered in the past, namely, access to the work site. Consequently she indicated on the WES the need for elevator service if working above the first floor or the need for ramp access to office assignments on the first floor. Participant 3 was not overly concerned about performance of essential functions in teaching or writing/research roles, but she did worry about excessive standing (physical ability), rigid work schedules, and inflexible sick leave policies (company policies). Accommodations of interest included proper seating for both instructional and research activities and flexibility in scheduling her work and in the use of sick leave.

*Assets of Participant 3.* Participant 3 was hesitant to single out any particular areas as personal strengths during the PCQ assessment. In several instances, she indicated that mentioning her strengths seemed quite vain on her part. Later, in relating PCQ results to the job analysis of a teacher/researcher, Participant 3 did mention her strong written communication skills and her abilities in the areas of instruction and research.

*Limitations of Participant 3.* Results from the PCQ were quite revealing in the case of Participant 3 for they clearly identified her self-perceived areas of

work limitations. Participant 3 singled out nine areas of functioning that might cause her significant problems in the workplace. Her questionable areas included: vision (seeing small print), speed (moved slower than others), ability to get around, ability to do heavy work, endurance and availability for work (rest periods needed if working full-time), absence from work (need for a flexible work schedule), stability of condition (concerned about maintaining proper diet, treatment regimen, and exercise routine), skill utilization, (need for a job well matched to her perceived limitations), and special job requirements (importance of access to on-the-job accommodations). She also mentioned her previous work history as a matter of some concern given her record of disability-related absences.

Based on job analysis results for teaching and research positions, the career assessment specialist collaborated with Participant 3 in developing accommodations for mismatches between capacities and job duties. Concerned about her verbal communication skills, Participant 3 felt that e-mail communications would be helpful as would a graduate assistant to handle some face-to-face communications. She remained concerned about her ability to stand and expressed the need for proper seating. To accommodate her need for a flexible schedule, she suggested that appointments with students were preferable to set office hours. Because she needed to work indoors and to have control of classroom temperature, Participant 3 wanted to have a classroom with windows and an individual thermostat.

*Accommodation and Career Planning.* The primary functions of teaching and research caused few concerns for Participant 3. However, she did have a number of other accommodation needs pertaining to both the acquisition and maintenance phases of her career. In her accommodation plan, she expressed the need for adequate seating, access to a graduate assistant, and the freedom to schedule appointments with students. Physical access remained a high priority as well, and Participant 3 needed a job in which parking, classroom, and general use areas were accessible. For Participant 3, ramp and elevator availability were high priority items in accommodation and career planning.

Regarding accommodations for depression, Participant 3 could request a flexible schedule and additional time to learn new responsibilities to maintain stamina. Her employer could provide a distraction-free work area, allow for the use of white noise or soothing music, increased natural lighting, and uninterrupted work time to help her maintain concentration. If she has difficulty with organization, Participant 3 could make daily lists to accomplish tasks, use an electronic organizer, and

divide large assignments into smaller tasks. For memory-related deficits she could tape record meetings and request all information provided by the employer in written form such as instructions and checklists. Regarding her diagnosis of anxiety, Participant 3 could implement the same accommodations listed for Participant 1 under panic attacks.

She felt that she could initiate action to identify and acquire accommodations needed but that assistance from other campus personnel such as ADA supervisors, physical plant representatives, or architects would be helpful. Participant 3 has much to offer as a college professor, and a few inexpensive accommodations are her only requirements to fulfill that potential.

*Participant 4: 50-year-old Caucasian female with multiple sclerosis.*

*Interests of Participant 4.* A part-time master's degree student in rehabilitation counseling, Participant 4 articulated interests in the areas of education, advocacy, public relations, gardening, childcare, and interior design. Her Holland summary code, SAE, was a good match with her reported vocational interests. This summary code is consistent not only with the current job of Participant 4 but also with her current educational program and career goal. The compatibility of her expressed and assessed interests suggests that Participant 4 will be personally and vocationally satisfied with her career goal of becoming a certified rehabilitation counselor.

*Perceived barriers to productivity.* In completing the two sections of the WES, Participant 4 expressed the need for moderate temperatures at work, well-ventilated spaces, and accessible parking spaces. Participant 4 indicated that she had difficulty with vision and could not work for more than eight hours a day. Accommodations listed in the WES included assistive technology to enlarge print in books and on computer screens such as closed circuit TV and screen enhancers, time management techniques such as proper delegation of work tasks to others, and flexibility in scheduling work with the option to work from home if necessary.

*Assets of Participant 4.* In completing the PCQ, Participant 4 was confident regarding her areas of personal strength. She described herself as someone able to function and work independently, maintain full-time employment, and expand her knowledge base. She indicated she is a diligent worker, highly social, and is willing to use any and all accommodations necessary to maintain her job or obtain a new position. Participant 4 reported high levels of vocational satisfaction.

*Limitations of Participant 4.* Participant 4 identified

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four areas of functioning in the PCQ that might cause problems in the workplace: vision (seeing small print), speed (move slower than others), lifting (difficulty lifting heavy objects), and numbness in the legs and feet. Based on job analysis results for a rehabilitation counselor, Participant 4 and the career specialist decided that these limitations could be easily accommodated.

*Accommodation and Career Planning.* Although the job functions of a rehabilitation counselor pose few problems for Participant 4, she does require some accommodations in her current and future employment. In her accommodation plan, she expressed the need for large print materials, both in paper and electronic formats. She also stated the need for a rubber mat in her office to allow her to move her desk chair easily. She could control the temperature of her office using a small fan or space heater when necessary. She would negotiate her work schedule with her supervisor to include working from home when necessary. Participant 4 felt confident in her ability to request and obtain these accommodations. She is convinced that she is on the appropriate career path.

## Discussion

Results from the four participants underscore the value of the career assessment and planning strategy. By combining measures of vocational interests, barriers to productivity, personal strengths and disability-related limitations with information from job analyses, career specialists can involve postsecondary students with disabilities in a careful and comprehensive evaluation of their needs in the transition from higher education to career. The approach addresses the problem stressed earlier, specifically the need to view transition for students with disabilities more broadly than simply the move from high school to work. The transition from postsecondary education to career should receive equal scrutiny in a process that involves students in prospective assessments of how personal capabilities, disability-related limitations, and job accommodations will enable them to work in jobs consistent with their expressed and measured vocational interests.

The limitations of this study include the fact that the model used in this instance was only performed on four students. Another limitation is the lack of follow-up data regarding the implementation of the suggested accommodations and their effectiveness. A third limitation is the fact that the assessment process does not address all career transition issues of students with disabilities. It is noted that this is one model that could be implemented to serve students with disabilities.

The descriptions of Participants 1 – 4 provide evidence that this type of information is needed to help increase the probability of successful linkages with the world of work, thereby avoiding the unfortunate situation for postsecondary students with disabilities often referred to as “failure to launch.” Using the recommended career assessment strategy, students and career counselors can clarify important issues such as what students want to do, perception of barriers to their personal productivity, and what they understand to be personal strengths and disability-related limitations. Consequently, students come to understand the aspects of chosen jobs they can perform well with or without reasonable accommodations. Interview data from students with disabilities indicate that career assessment is an important component of their postsecondary experience, and the techniques described in this article represent a feasible way of incorporating the impact of disability in career planning (Hennessey et al., 2006). More research is needed to determine the success of this approach. Follow-up with participants would provide evidence of the usefulness of the career assessment and planning tools used in these case studies.

The Person-Environment-Congruence Theory (PEC) as described by Dawis (2005) provides a rationale for the career assessment strategy. PEC theory stresses the importance of person/environment congruence, without adhering to the traditional position that presumes that both person and job are static entities. The PEC theory makes provisions for adjustments in both person and environment to enhance the match over time. Occupational fit is important in two ways. First the match between personal abilities and job tasks relates directly to the probability that the employer will consider the person satisfactory in the position. The compatibility between the individual’s interests and the activities of the job relates directly to the probability that the person will be satisfied in the position. The career assessment strategy not only helps students understand the demands and activities of various jobs but also the way in which changes in jobs via assistive technology and/or accommodations could improve personal satisfaction and satisfactoriness.

Participation in the career assessment approach allows students to gain important insights regarding personal attributes (e.g., interests, capabilities, and limitations) that will influence their career outcomes. The value of this information extends beyond clarifying matches and mismatches between student and job characteristics to specifying solutions to those mismatches in an accommodation plan. In fact, the accommodation plan is the culmination of the assessment experience

because it indicates not only the job modifications or assistive technology that students need to address disability issues in their careers but also who can help (e.g., State-Federal VR counselor) and how they can help (financial assistance for purchase of accommodations). For example, a wide range of accommodations were identified in the four case studies such as control of lighting and temperature levels, an individual work cubicle, screen enhancers and closed circuit TV for magnifying text, ramp or elevator access to the workplace, proper seating, flexible scheduling of work, and work-at-home options.

The assessment process does not address all career transition issues for students with disabilities. Specifically, the approach does not focus on helping students learn how to request reasonable accommodations at work. Career advisors for students with disabilities should discuss with students the meaning of concepts such as reasonable accommodation, undue hardship, harm to self and others, and nature of the business. Advisors need to prepare students with disabilities to approach employers and supervisors regarding the need for accommodations as part of the job interview process and as a part of their day-to-day work lives after securing employment (Friehe, Aune, & Leuenberger, 1996). As stated on the Job Accommodation Network (2008) an employee does not need to disclose his or her disability unless they need an accommodation to perform the essential functions of the job for which they are applying. Applicants never have to disclose a disability on a job application or during the interview unless they need an accommodation to assist them with the process. Requesting accommodations in the workplace requires the student to understand company policies, appropriate ways to approach his or her supervisor, and effective verbal and nonverbal techniques during the accommodation request (Roessler, Rumrill, & Brown, 1998).

Other important outcomes of the career assessment strategy are less obvious initially. For example, the technique is compatible with the emphasis in social work on the strengths approach to interviewing (DeJong & Miller, 1995). Information pertaining to personal capacities gathered through administration of the PCQ helps students appreciate what they have to contribute in the work role. Approaching the assessment process with the strengths perspective is considered an important way to convey the assessor's respect for the student which provides a solid foundation for a positive working alliance. It also helps students develop a sense of self-efficacy, with respect to their abilities, to seek and hold jobs on completion of their postsecondary education. As Participant 3 demonstrated, some students may

resist discussing their strengths at first, but they will eventually feel comfortable doing so.

The career assessment experience led to another unexpected outcome which was the overt discussion of the impact of employment discrimination on the lives of students with disabilities. Stereotypical thinking about applicants with disabilities on the part of employers includes concerns about the high costs of accommodations, anticipated poor attendance, safety, and productivity records of people with disabilities (Perry, Hendricks, & Broadbent, 2000; Roessler & Rubin, 2006; Stodden, Whelley, Chang, & Harding, 2001). Participant 2 realized that many employers would first perceive her in terms of what she could not do because of her visual limitations rather than what she could do given her personal strengths. Consequently, she will need to plan her job seeking approach accordingly. She needs to understand the difference between legal (can you describe how you would perform the essential functions of the position?) and illegal (do you have a disability?) questions in the job interview and how to handle illegal questions should they occur. She will need to consider whether or how and when to disclose her disability, keeping in mind that she is only required to discuss her disability following a job offer and only if she wishes to request accommodations (Coker, 2005). She may wish to disclose her disability in the application letter, early on in the interview, or as part of her discussion of her job qualifications (Ryan, 2004). Regardless, she must be very clear about describing how personal strengths and experiences qualify her for the position to counter employer stereotypes about people with visual limitations.

Besides its obvious contribution of clarifying vocational interests, personal strengths, limitations, and accommodation needs, the assessment process enabled one of the students to begin the process of discussing how disincentives to employment will affect her career plans (Roessler, Williams, Featherston, & Featherston, 2006). In this case, the student was realistically concerned about the impact of earnings from employment on the financial and health insurance benefits that she receives from Social Security. To contribute to this discussion, the career specialist should have some basic understanding or know where to direct students to receive information regarding Social Security initiatives such as work incentives and the Ticket to Work. In the past, students with disabilities have indicated that they were unable to acquire information from student personnel staff about programs such as the Social Security Administration and about legislation such as the Americans with Disabilities Act and the Family Medical Leave Act (Hennessey et al., 2006).

As stated earlier, this is one potential model that

postsecondary institutions could use to promote post-graduation employment for students with disabilities. Future researchers could replicate these case studies and collect follow-up information to gauge the usefulness of this approach in gaining and maintaining employment. Another important consideration would be to convince postsecondary institutions of the importance of providing and encouraging career assessment and planning services specifically for students with disabilities.

### Conclusions

Unless specific programming steps are taken in career assessment and planning, students with disabilities will continue to fare poorly in the transition from higher education to personal careers. More comprehensive assessment approaches are needed that involve students in considering how to incorporate their preferences, strengths, and disability-related limitations in career and accommodation planning. In this study, the technique for doing so is demonstrated in four case studies with students in both undergraduate and graduate education. This career assessment includes reliable and valid measures of vocational interests, barriers to productivity, strengths, and limitations, culminating in an accommodation plan that specifies the technology and/or modifications students need to perform essential functions of desired jobs. The underlying theoretical premise for the approach is Person-Environment-Congruence theory which stresses that both person and work environment must respond to meet each other's needs.

The most significant value of the career assessment and planning process is its potential to begin the anticipatory coping process for students with disabilities, i.e., the experience of identifying career goals, potential barriers to achieving those goals, and accommodations needed to reduce or remove those barriers (i.e., accommodation planning). Students benefit in many other ways from the activity, for example, it enables them to identify and appreciate their strengths and thereby gain confidence in their abilities to work. It prompts students to investigate a) new technologies and ways to access and finance such technologies as job accommodations and b) important pieces of legislation and social policy that affect their career plans and outcomes. It raises important issues for students to consider such as how to develop the skills of disclosing disability and requesting accommodations. Finally, it helps students confront realities of employment seeking such as employer discrimination and disincentives to employment and the strategies required to deal with such issues.

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