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ABSTRACT
        This annotated bibliography focuses on career
development and employment of college students and graduates with
disabilities, with an additional section on technology as it relates
to employment. The bibliography includes journal articles, books,
booklets, a dissertation, handbooks, conference papers, and reports,
issued from 1988 to 1994. It is divided into the following four
sections: (1) career preparation and employment status of individuals
with disabilities, including subsections dealing with the
self-perceptions of students with disabilities, counseling
approaches, and outcome studies; (2) career services for students
with disabilities, including descriptions of projects and a
conference; (3) reviews of training and educational materials for
students, staff, and employers; and (4) adaptive technology in the
workplace, including descriptions of online services related to
employment. A brief summary and commentary introduce each section.
(JDD)

UNIVERSITY OF MINNESOTA

CAREER DEVELOPMENT, EMPLOYMENT, AND TECHNOLOGY FOR COLLEGE STUDENTS AND GRADUATES WITH DISABILITIES:
AN ANNOTATED BIBLIOGRAPHY

1994 EDITION

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STUDENT
AFFAIRS

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INTRODUCTION

This annotated bibliography is the third in a series prepared by Career Connections, a project funded by the U.S. Department of Education, Office of Special Education and Rehabilitative Services (OSERS) and housed in Disability Services at the University of Minnesota. Project ICAN, an OSERS-funded project at the University of Massachusetts-Amherst, collaborated on the first two bibliographies in the series and Careers On-Line, another University of Minnesota OSERS-funded project, assisted in preparation of this year's bibliography.

The focus of this bibliography is again on the career development and employment of college students and graduates with disabilities with an additional section on technology as it relates to employment. The authors completed a search of ERIC and Psychological Abstracts covering the years 1990-1994. After eliminating articles abstracted in the two previous bibliographies, the remaining articles represent such widely scattered topics that it is difficult in this introduction to comment on common themes or to discuss conflicting findings. More research is needed in the area of career development and disability before conclusions can be drawn about the needs of this population, effective approaches, and appropriate institutional response.

This edition is divided into four sections. The first section covers career preparation and employment status of individuals with disabilities, and includes sub-sections dealing with the self-perceptions of students with disabilities, counseling approaches, and outcome studies. The second section deals with issues related to providing career services for students with disabilities and includes descriptions of projects and a conference dealing with these issues. The third section contains reviews of training and educational materials for students, staff, and employers. The final section focuses on adaptive technology in the workplace and also includes descriptions of on-line services related to employment.

Before presenting the abstracts, we offer a brief summary and commentary on each section.

Career Preparation and Employment Status

<u>Self-Perceptions</u>

The articles in this section address how students view their own preparation for employment. Thompson and Dooley-Dickey (in press) found that students with disabilities feel fairly well prepared in job seeking skills except for their knowledge of employment rights under the ADA and ability to disclose their disability to a prospective employer. Babbitt and Burbach (1990) studied the career aspirations and expectations of physically disabled students. They found that although students had high career aspirations, many of them did not think their goals were reachable. A factor analysis of how they set their goals revealed that the influence of parents was the least motivating factor in choosing a career. In contrast, Polloway, Schewel, and Patton (1992) found that family members were often cited by adults with learning disabilities as an important positive influence on their development. This same article, however, reports that school experiences were generally characterized by these adults as negative. Tseng (1992) conducted a study of the career indecision of college students with disabilities and found that older students with disabilities (age greater than 20 years) had higher levels of career indecision than older students without disabilities. The author suggests that adjusting to the disability and the perceived need to change career goals due to the disability may be contributing factors.

<u>Counseling Approaches</u>

The general consensus of this section's articles is that programs are necessary to prepare students with disabilities for employment. Hutto and Thompson (in press) propose a model in which an individualized plan is developed and self-confidence and self-presentation techniques are emphasized. Programs for those who are deaf or hard of hearing should include one-on-one counseling, career development　ses, mentor programs, and peer groups, according to career service providers interviewed by McCann (1993). For students with learning disabilities, Patton and Polloway (1992) advocate a model that includes transition planning and adult service delivery based on an adult development model. Adelman and Wren

(1990) contend that developing self-understanding is the key to success in graduate school and employment for adults with learning disabilities.

Outcome Studies

Very few outcome studies on postsecondary students with disabilities have been reported since our last bibliography. Three of the studies abstracted here deal with adults with learning disabilities and the fourth discusses specifically women with disabilities. The Adelman and Vogel article (1993) includes a review of the major studies on outcomes for adults with learning disabilities. One of the studies mentioned in their review is abstracted here (Herzog & Falk, 1991). This study reports on adults with learning disabilities who graduated from a two year paraprofessional training program. Although 76% of the graduates were working, salaries were low and many were still financially dependent on their parents. This group may not be representative of the college/university students who are the focus of this bibliography as they graduated from a special program, not a mainstream 4-year program. Greenspan, Apthorp, and Williams (1991), however, did a study of students with learning disabilities at a 4-year university. They examined the relationship between social competence and work experience in college students with disabilities. Those with low social competence had more difficulty in finding jobs and had lower paying jobs than those with high social competence. In addition, those with low social competence were more likely to also have attentional disorders which were associated with a marginal work history.

Russo and Jansen (1988) report on the status of women with disabilities in the workplace. Although the number of women in the workforce has dramatically increased, the number of women with disabilities in the workplace has not kept pace. In addition, women with disabilities are employed at a substantially lower rate and receive significantly less in fringe benefits than do men with disabilities.

Program Development

Articles in this section describe model programs or discuss issues related to program development. Johnson (1992) describes a job seeking training program for deaf and hard of hearing students, which includes job

seeking skills assessment, job application training, and interview skills development. "IN-D'MAND" (1991) is a model internship program for disabled, minority, and disadvantaged community college students in California. Like Johnson's program, students work on job seeking skills, but the program also includes an actual internship experience. Access to Employment (Altschul & Michaels, in press) is a federally funded project that takes a different approach to developing career opportunities for students with disabilities. In collaboration with seven universities, students with disabilities, career service providers, and employers participate in workshops together to identify the major barriers to successful integration into the workplace and to develop action plans for addressing these barriers. Another project that resulted in the development of action plans was a conference on employment of people with learning disabilities (Gerber & Brown, 1991). Conference attendees agreed that the field of learning disabilities must focus more attention on employment issues.

Two articles focused on specific issues related to program development. Miller (1993) reports on a study of clients' perceptions of counselors with physical disabilities. Results indicate that neither physical disability nor amount of experience significantly affects the clients' perceptions of the counselor's expertise, attractiveness, or trustworthiness. Finally, Swanson (1993) discusses the need for integrating a multicultural perspective into career counseling. The author includes physical disabilities in the definition of multicultural diversity but makes no specific suggestions of how to incorporate disability issues into the overall diversity agenda.

Training Materials and Periodicals

This section includes two guides for students (Bolles, 1991 and Thompson, Bethea, & Satcher, 1993), which deal with job seeking, disclosure, and accommodation strategies. Two training manuals for campus career services staff (Johnson, Aune, Aase, and Anis, 1994; Satcher, McGhee, Friend, Brandt, Walters-Kemp, and Barker, 1993) discuss disability characteristics, responsibilities under the ADA, and career counseling strategies. Of these staff training manuals, the Satcher guide focuses on learning disabilities while the Johnson guide covers all disability areas. Training for students and community mentors is the topic of a manual by Johnson (1994), which

prepares students and mentors for a mentorship experience. All of the training manuals for professionals were developed by OSERS-funded projects.

Finally, this section includes a review of the magazine *Graduating Engineer, People with Disabilities,* a periodical geared to students with disabilities aspiring to enter engineering and scientific fields.

Adaptive Technology and On-Line Services

The articles in this section address the technology needs of people with disabilities (Wobschall, 1989), specific adaptive technology programs and approaches (Brown, 1993; Gagliano, 1992; Greenwood, 1990), and information on the Internet related to career development and disability. A description of the Internet Gopher User's Guide (Lindner, 1994) is included because the guide describes how to access the Internet Gopher, which in turn provides access to a number of job listings services and career/disability-related listservs in addition to countless other resources. Three of the job listing services are described in this bibliography ("Academe This Week," "Careers On-Line," and "West Georgia College Jobnet"). These abstracts follow a different format than the other abstracts in the bibliography. The purpose is to describe the job listing services so that the reader can access and effectively use the service.

Discussion

Although the literature presented in this bibliography does not include enough studies on any one issue to draw definite conclusions, there are certain issues that continue to emerge when the topics of disability, career development, and employment are addressed.

In terms of student development, practitioners in the field and students themselves are concerned that students are not adequately informed about their rights under the ADA. In addition, students are unsure about whether to disclose their disability to an employer and if so, how to go about it effectively. Some research suggests that disabled students make career decisions and establish themselves in careers later than nondisabled students. It is not clear whether this is because (a) disabled students have had more

limited career-related experience in their formative years; (b) a recent onset of disability has required a shift in career goals; (c) disabled students have been afforded fewer opportunities because of the negative attitudes of nondisabled individuals; or (d) a combination of the above. There is some concern that students with disabilities are not keeping up with the recent explosion of technology. Although major advances have been made in adaptive technology, students may not know about this equipment and software or they may not be able to afford it. In addition, while electronic communication is becoming a common means of communication and information sharing, students with disabilities may not have equal access to it.

Researchers and service providers are beginning to address the question of institutional response to these issues. A dialogue has begun about whether students with disabilities need specialized career services or whether mainstream offices should adapt their services to this population. Based on the literature available so far, career services personnel may get a mixed message — that they are responsible for providing services to students with disabilities, but also that students with disabilities have so many unique issues that specialized approaches are needed. It is important that disability service providers and career service providers collaborate to determine how best to address this issue. Finally, very little has been written about employer response to disability disclosure and to requests for accommodations. Employers need to be included in the conversation about effective approaches to disability in the workplace.

Acknowledgments

ABSTRACTS

Career Preparation and Employment Status

<u>Self-Perceptions</u>

Babbitt, C.E., & Burbach, H.M. (1990). Note on the perceived occupational
        future of physically disabled college students. <u>Journal of Employment</u>
        <u>Counseling,</u> <u>27</u> (3), 98-102.

        This article reports on a study of the employment aspirations and
expectations of college students who are physically disabled. Students from a
university in Pennsylvania (N=93) completed questionnaires, which
identified aspirations by asking students, "If you could write your own ticket,
what kind of job would you select as your life's work?" To gauge
expectations, students were asked, "Being realistic, what kind of job do you
expect to have?" Using Hollingshead and Redlich's (1958) index of social
position, responses were grouped into three categories of aspiration and
expectation. A basic finding of the study indicates that student aspirations
exceeded expectations. Despite high career aspirations, many of the
respondents believed their goals were unreachable.
        Also, nearly 75% of these students preferred a career that emphasized
working with people as opposed to working with their hands or working
with ideas. Opportunities in the private sector were overwhelmingly
preferred over those in education or government. Some of the key factors
most influential in selecting a career were: the desire to help people, the need
for exciting and meaningful work, financial compensation, and security. The
least important motivator in choosing a career was the influence of parents.
This result is surprising because it counters prior research findings with high
school age students.
        It should be noted that the authors of this bibliography found the
terminology used in this article offensive. Babbitt and Burbach use the terms
"handicapped," "wheelchair bound" and "the physically disabled" to refer to
students with physical disabilities. They also make the assumption, for which
they provide no support, that students with physical disabilities are perhaps

attracted to working with people "from a desire to repay society for the care that they have received throughout their lives" (p. 103).

Polloway, E. A., Schewel, R., & Patton, J. R. (1992). Learning disabilities in adulthood: Personal perspectives. Journal of Learning Disabilities, 25 (8), 520-522.

This article provides an epilogue to the six-part series on adults with learning disabilities by providing firsthand accounts of how a learning disability can have a major impact on one's life. Selected observations from a sample of adults who participated in a study exploring the challenges of learning disabilities in adulthood are profiled. Three themes are identified as typifying how individuals dealt with these challenges: coping strategies (i.e., skills and strategies to succeed in the workplace), positive influences (i.e., sports programs, family members), and school experiences (usually characterized as negative). Through the individual observations, examples of successful models and strategies are depicted.

Thompson, A.R., & Dooley-Dickey, K. (in press). Self-perceived job search skills of college students with disabilities. Rehabilitation Counseling Bulletin.

College students with disabilities from 16 universities volunteered to participate in a study that would measure their self-perceptions about 20 different job seeking skills. These skills included preparing effective resumes and cover letters; when/how to disclose their disability; and communicating their skills and abilities to employers. Of 375 questionnaires distributed through the directors of campus support services, 245 were returned. Independent variables included age, sex, type of disability, acquired or congenital disability, receiving vocational rehabilitation services, and paid work experience. Students used a 5 point scale to rate their self-perceived ability to perform a particular job acquisition skill (1= definitely need skill training, 5= can definitely do this skill).

Students rated themselves fairly well for most job seeking skills. However, they were not confident of their ability to effectively disclose and discuss their disability with an employer. Also, the students were unclear

about how the ADA protected   civil rights during the employment search. Interestingly, factor analysis revealed that whether the student had received vocational rehabilitation services or career counseling had no impact on self-perceived job skill ratings. Factors that positively impacted the self-perceptions of students were as follows: satisfied with college major, knew what kind of job to look for upon graduation, had paid work experience, and had an acquired disability. The authors emphasize the need for the development of good job seeking skills training within the rehabilitation and career counseling communities.

Tseng, C.C. (1992). A study of the relationship of disability status and life experience to career indecision among college students. Unpublished doctoral dissertation, University of Wisconsin, Madison, WI.

This dissertation describes the relationship between disability status, life experience and career indecision among college students. The author discusses career decision-making models and the factors which may inhibit career decision making.

One hundred and twenty-five students (64 with disabilities and 61 without disabilities) completed the Career Decision Scale (CDS), the Vocational Identity Scale (VI) and a Biographical Questionnaire (BQ). Factor analysis and stepwise multiple regression were used to analyze the data.

The results indicated a significant interaction between disability status and age on the CDS and VI scores indicating that older students with disabilities had higher levels of career indecision than older students without disabilities. The author cites two possible reasons older students with disabilities may have difficulty with career decision making: (a) perceived need to change career goals due to disability; and (b) adjustment to disability. The author also cited limited work experience as a contributing factor to career indecision for older students with congenital disabilities.

Counseling Approaches

Adelman, P.B., & Wren, C. T. (1990). Learning disabilities, graduate school, and careers: The student's perspective. (Available from Director, Learning Opportunities Program, Barat College, 700 Westleigh Rd., Lake Forest, IL 60045)

This booklet contains information that college students with learning disabilities will find helpful as they consider graduate school or the workplace. The authors address the following topics: (a) adjustment to one's learning disability; (b) common problems that learning disabled adults encounter in college and beyond; (c) finding and understanding diagnostic evaluations; (d) strategies for success in college; (e) taking advantage of LD services; (f) obstacles that interfere with success in college; (g) career planning and pre-work experience; (h) selecting the right graduate school; (i) selecting the right career; (j) job hunting strategies; (k) how to avoid and handle problems on the job; (l) pros and cons of disclosure; and (m) understanding one's rights. The booklet also includes resources on graduate and professional schools. The authors emphasize self-understanding as the key to navigating successfully through college, graduate school, or the workplace. On the left hand side of the booklet, two adults with learning disabilities relate their personal stories to the topics addressed on the right hand side.

Hutto, M.D., & Thompson, A.R. (in press). Counseling college students with visual impairments in preparation for employment. RE:view.

The authors offer employment counseling guidelines to assist college students with visual impairments to prepare for their job search. The proposed model appears to be synthesized from other studies cited in the brief, and it is unclear whether this model has been tested. The article provides a discussion of the issues surrounding visual impairments and the approaches necessary to achieve competitive employment. Students with visual impairments were selected as the subject because they represent a growing percentage of the overall undergraduate disability population.

In the first step of the proposed model, a composite skills development plan is developed from the results of student self-assessment tools and

observations by counselors of the student's job seeking behaviors. The second part of the model focuses on developing knowledge and skills that foster self-confidence and optimal self-presentation techniques. Mock interviews are recommended to provide a realistic training environment.

The authors contend that counselors will probably find that college students with disabilities often fall into one of three categories: (a) students who exhibit knowledge of behaviors required for success, believe they have what it takes for academic success, and possess the confidence that they will find employment; (b) students who believe they have what it takes for academic success but lack the confidence that they will find employment; and (c) students who believe they have what it takes for academic success and possess confidence that they will find employment but lack the awareness of the behaviors required to reach the desired outcomes. The category in which the student falls determines the intervention strategy used by the counselor.

McCann, Jessica (Summer 1993). Listening to the community of the hearing-impaired. Journal of Career Planning and Employment, 43-49.

The author believes three steps need to be taken before career service providers and employers can work effectively with the deaf and hard of hearing community: (a) understand the difference between deafness and hearing impairments; (b) explore the unique history and culture of deaf Americans; and (c) pursue creative options for open communication. McCann provides a chronological review of how deaf people have developed their own culture through the establishment of schools, associations, publications, and role models. She explains that the preferred term to use for people who are deaf is "deaf" and not "hearing impaired." The author discusses the use of ASL (American Sign Language), the preferred mode of communication for the deaf culture. Also, McCann offers alternative methods most commonly used by deaf individuals to communicate with the hearing world, including paper and pen, gestures, lip-reading, speech, and combinations of these communication forms.

The article quotes various career service providers who express their views about career development approaches with those who are deaf or hard of hearing. Some of the areas discussed are one-on-one counseling programs, career development orientation courses, mentor programs, and peer groups.

The article emphasizes the importance of keeping communication open during the employment process. McCann suggests that deaf people take the initiative in conveying any need for accommodation. The article outlines specific things to do or to avoid in working with sign language interpreters in the workplace.

Patton, P.R., & Polloway, E.A. (1992). An introduction to the special series. Learning disabilities: The challenges of adulthood. Journal of Learning Disabilities, 25 (7), 410-415.

This article provides an introduction to a six-part series on learning disabilities in adulthood. The authors cite not only the increase in the number of articles focusing on adults with learning disabilities in the literature, but also some of the qualitative differences that characterize more recent articles. These differences involve departing from childhood disability models and applying an adult developmental model to better understand the adjustment issues of adults with learning disabilities. The authors discuss life-span development and cite major mediating variables: biological and intellectual, personal and social, past experience and anticipatory socialization, and locus of control. Citing some of their previous research, Patton and Polloway categorize major life demands into six domains: employment-education, home and family, leisure pursuits, community involvement, emotional and physical health, and personal responsibility and relationships. The authors specify that appropriate supports are necessary to successfully deal with the demands of adult life, and they discuss two topics in this regard: transition planning and adult service delivery. The importance of natural supports is stressed. This introduction to the series concludes with an overview of each of the six articles in the series.

Outcome Studies

Adelman, P. B. & Vogel, S. A. (1993). Issues in the employment of adults with
    learning disabilities. Learning Disability Quarterly, 16, 219-232.

This literature review on the employment of adults with learning
disabilities covers the following areas: (a) transition to work and availability
of vocational training; (b) success in obtaining employment; (c) types of
employment obtained; (d) rate of employment; (e) wages received; (f) levels of
job satisfaction and attitudes toward work; (g) success in the workplace; (h)
manifestation of and effects of the learning disability in the workplace; (i)
compensatory strategies used in the workplace; and (j) employer perception,
awareness, encouragement and support of individuals with learning
disabilities.

The authors list several methodological flaws in previous research
related to the following areas. choice of dependent variables to measure,
selection criteria, severity of learning disabilities, sample sizes, subject
attrition, IQ level, demographics, socio-economic status, age, and gender. The
authors provide several recommendations to control for the confounding
effects of these variables.

Implications and recommendations for future studies as well as for the
future success of individuals with learning disabilities are given, including:
(a) screening for early identification of a learning disability; (b) educational
planning that addresses the areas of functioning affected by the learning
disability; (c) education of employers about the nature of learning disabilities
and possible accommodations to use in the workplace; (d) improving the
quality of vocational education programs; and (e) career counseling during
high school and post-secondary education which focuses on internships, job
shadowing, and mentoring.

Finally, the authors conclude that the results of studies related to the
employment of adults with disabilities are inconsistent.

Greenspan, S., Apthorp, H., & Williams, P. (1991). Social competence and work success of college students with learning disabilities. Journal of Postsecondary Education and Disability, 9 (1 & 2), 227-234.

The authors report on a study designed to examine the relationship between social competence and work experience in college students with learning disabilities. Students who were enrolled in an LD support program at a four-year private university (N = 45) were rated by program staff on the social competence scale of the General Competence Index (Greenspan, Gregory, Granfield, & Musheno, 1989) and divided in a High Social Competence (Hi SC) or a Low Social Competence (Lo SC) group. Subsequently, telephone interviews were conducted with the 18 students (9 Hi SC and 9 LO SC) who agreed to be interviewed about their work experience. Differences between the two groups were identified on the following dimensions: level of employment, difficulty in finding jobs, and the role of attentional disorders. No differences were identified between the group regarding their ideas about job maintenance and success.

In discussing implications of the study, the authors propose that social competence level, at least as measured by their instrument, may be a useful indicator of risk status for later employment difficulties in college students who have learning disabilities. A variety of suggestions are provided in terms of developing services for these students: collaboration between learning disabilities specialists and other service providers, peer support groups, job skill workshops, and supervised practicum experiences.

Herzog, J.E., & Falk, B. (1991). A follow-up study of vocational outcomes of young adults with learning disabilities. Journal of Postsecondary Education and Disability, 9 (1&2), 219-226.

The authors provide results of a vocational follow-up study of 113 young adults with learning disabilities who graduated between 1969-1987 from a two-year paraprofessional certificate program in human service careers (the Para-Educator Center for Young Adults (PEC) of New York University). Most of these young adults were functioning in low average to borderline range of intelligence. The authors piloted and subsequently revised a questionnaire that was sent to 220 PEC graduates. Items from the

questionnaire related to past and present employment, salary, financial independence, and job satisfaction were used to measure vocational outcomes.

Of the 113 subjects, 76% were currently employed; the vast majority of employed subjects were working as educational paraprofessionals. Salaries reported by those working were low, with more than half of the graduates earning annual salaries of $10,000 and below. However, 79% reported having very positive feelings about their work. Many of the subjects continued to be financially dependent upon others, primarily their parents; however over 60% of the subjects reported making contributions for their own support.

The authors discuss implications of the outcomes and relate them to findings reported in other research studies.

Russo, N.F. & Jansen, M.A. (1988). Women, work and disability: Opportunities and challenges. In M. Fine & A. Asch (Eds.), Women with disabilities: Essays in psychology, culture and politics (pp. 229-244). Philadelphia: Temple University Press.

The authors examine barriers that impact employment opportunities for women with disabilities, supporting their arguments by citing literature and previous research. The authors state that although the number of women in the workforce has dramatically increased, the number of women with disabilities in the workplace has not kept pace. The employment rates of women with disabilities are also substantially lower than those of men with disabilities.

The authors cite age and education as possible barriers to employment for women with disabilities. Research indicates that women with disabilities are significantly older than women without disabilities. Research also identifies that women with disabilities have fewer educational opportunities than their non-disabled counterparts. Sixteen percent of women with disabilities have no more than an eighth grade education.

In addition to age and education, the authors cite wage discrimination as a factor in limiting opportunities for women with disabilities. Women with disabilities also have less access to health coverage, pension plans, disability insurance, workers compensation, vocational rehabilitation, and special education programs than do men with disabilities.

In order to remedy this situation, the authors recommend that women with disabilities: (a) receive access to non-biased counseling by vocational rehabilitation counselors; (b) be informed about the labor market and which fields provide the best economic opportunity for women; and (c) receive access to educational opportunities which will prepare them to compete in the workforce.

Program Development

Altschul, P., & Michaels, C. A. (in press). Access to employment: Building career opportunities for college and graduate students with disabilities. Journal of Career Planning and Employment.

This article describes a three-year research demonstration project entitled "Access to Employment," through the Career and Employment Institute of the National Center for Disability Services. The goal of the project is to improve the career options and advancement potential of college students with disabilities in professional and managerial positions. To achieve this goal, the project emphasizes enhancing the quality of communication and the working relationships among students with disabilities, career services providers, and industry. Organizations participating in the project are companies from the Industry Labor Council, a consortium of corporations and labor unions; seven universities; the Association on Higher Education and Disability (AHEAD); and the College Placement Council (CPC).

Project staff worked with the seven universities to identify the following major issues related to successful integration of students with disabilities into the workplace: (a) effective marketing of services by college personnel; (b) student participation in college services; (c) disability-related job-seeking skills preparation; (d) corporate practices in stating essential job functions in job descriptions; (e) effective disability-related training for faculty, career services offices, and employers; (f) confidence and self-esteem of students; (g) resources; (h) architectural and informational barriers; and (i) general perceptions of students with disabilities about employers and college service providers.

Project staff have conducted workshops across constituencies to develop acti n plans to address the above issues. Some of the solutions being implemented and considered are: (a) closer working relationships between career services offices and disability services offices; (b) ADA training for students and employers; and (c) providing accessible service offices and materials.

Gerber, P. J. & Brown, D. (1991). Report of the pathways to employment consensus conference on employability of persons with learning disabilities. Learning Disabilities Research & Practice, 6, 99-103.

The authors report on the outcome of the consensus conference, "Pathways to Employment for People with Learning Disabilities" held in May 1990 by the President's Committee on Employment for People with Disabilities. Participants represented constituencies that impact employment of people with learning disabilities from 21 states and the District of Columbia. Topics discussed were work preparation, vocational entry, reasonable accommodation, job advancement, socio-adaptability policy and legislation, attitudes, and definition/diagnosis. The report outlines the major issues that people with learning disabilities face in the workplace. Participants developed action plans, and results will be disseminated to agencies involved with employment, rehabilitation, and education. One general finding is that the field of learning disabilities needs to focus more attention on issues of employment and vocational functioning.

IN-D'MAND: Internships for disabled, minority, and disadvantaged students. Vocational education resource package. (1991). Los Angeles, CA: Evaluation and Training Inst. (ED337513).

IN-D'MAND is a model career internship program that started in 1988 at De Anza College for disabled, minority, and disadvantaged community college students. Included in the document is the IN-D'MAND handbook, which contains information on program guidelines, program implementation, and forms used to run the program effectively. The program provides students with opportunities to gain work experience related to their educational and career goals in order to help increase their

feelings of confidence and competence, to assist in their career decisions and understanding of business cultures, and to prepare them for advanced education and the world of work. Students who are accepted into the program receive training and counseling to develop their marketability. Employers who have been recruited by the program coordinator interview candidates for internship positions. Internships last a minimum of six months and an average of one year. Interns work 20 hours a week for pay and academic credit. They work with mentors and receive work performance evaluations at the end of their internships. Those interested in starting up a program like IN-D'MAND should contact Dr. Lois Bandiera-Locci, Coordinator, IN-D'MAND Program, De Anza College, 21250 Stevens Creek Boulevard, Cupertino, CA 95014.

Johnson, V.A. (1992). <u>A job seeking skills training program for students with hearing impairment</u>. Paper presented at the conference of the Association for Handicapped Student Service Programs in Postsecondary Education, Long Beach, CA.

This paper describes a job seeking skills training program for deaf and hard of hearing students. Because the employment process requires strong verbal and written communication skills, the author contends that additional training is needed to help hard of hearing students succeed in the employment process.

The training consists of three sections: (a) Job Seeking Skills Assessment; (b) Job Application Training; and (c) Getting Employment through Interview Training. The Job Seeking Skills Assessment evaluates the students' skills in filling out job applications and in interviewing. The Job Application Training instructs students in filling out job applications appropriately. Getting Employment through Interview Training teaches students what to expect in an interview and offers them an opportunity to practice their interviewing skills and gain feedback. Content, field-test results, implementation techniques, and evaluation procedures for the three sections are discussed.

Miller, M. J. (1993). Effects of counselor disability and reputation on client
perceptions during a career counseling session. <u>Journal of
Employment Counseling, 30,</u> 119-126.

The purpose of this study was to explore clients' perceptions of
counselors with physical disabilities. According to the author, previous
research suggests that client perceptions of counselors, such as their credibility
and level of expertise, may affect counseling outcomes such as behavioral and
attitudinal changes. In addition, research suggests that counselors with
disabilities are perceived to be more genuine, congruent, empathic and
understanding than counselors without disabilities. Other research reports
an underlying prejudice and negative evaluation towards people with
disabilities. Miller's study attempts to resolve contradictions of previous
findings and extend the investigation to include counselor reputation as well
as disability.

A 2x2 analogue factorial was used (counselor disability: disabled using a
wheelchair or not visibly disabled X level of training: post-master's-level with
one year experience or post-doctoral-level with three years of experience).
Subjects (N=166) viewed one of four possible career counseling analogue
sessions. The vignettes were exactly the same except for the manipulation of
disability and experience. After subjects viewed the video tapes, a rating form
was used to measure their perceptions of counselor expertness, attractiveness
and trustworthiness.

Results of the 2x2 ANOVA found neither physical disability nor
amount of experience to significantly affect subjects' perceptions of the
counselor's expertness, attractiveness or trustworthiness. In fact, mean
ratings for the counselor with a physical disability were slightly higher than
for the counselor without a visible disability. The author concludes that his
results do not support the contention that prejudices exist against counselors
with disabilities.

Swanson, J. L. (1993). Integrating a multicultural perspective into training for career counseling: Programmatic and individual training interventions. Career Development Quarterly, 42, 41-49.

This article reports on the need for integrating a multicultural perspective into career counseling that includes not only race and ethnicity but also gender, sexual orientation, age, socioeconomic status, and physical disability. According to the author, this need exists because of changing demographics as well as the role that culture plays in career choice. The author discusses training issues at both the programmatic and individual levels of intervention.

At the programmatic level, the author discusses the following six areas in which to address diversity issues: (a) diversity of students and faculty; (b) overall curriculum; (c) individual courses; (d) practicum experiences; (e) internships; and (f) evaluation of student progress.

At the individual level the author discusses the following six ways to address diversity-related issues: (a) articulate the training philosophy; (b) teach by example; (c) use formal and informal opportunities; (d) assess an individual's level of sensitivity and competence; (e) design a deliberate and individually tailored approach; and (f) anticipate student resistance.

Although no specific strategies are mentioned for working with students with disabilities, the strategies suggested by the author may provide a useful framework for training programs for the disability population. It should also be noted that the author includes physical disability in his definition of multicultural diversity but no mention of invisible disabilities is made.

Training Materials and Periodicals

Bolles, R. N. (1991). Job hunting tips for the so-called handicapped or people who have disabilities. Berkeley, CA: Ten Speed Press.

This booklet is a supplement to Bolles' What Color Is Your Parachute? Bolles encourages job hunters with disabilities to examine "the true nature of the job-hunt." Bolles identifies four reasons for hope:
1. Everyone is disabled, and everyone is employable.

2. Everyone is a member of many "tribes," and as a general rule
   employers like to hire those whom they perceive to be members of
   their own "tribe."
3. Employers never hire a stranger.
4. Everyone redesigns or modifies their jobs so as to highlight their
   abilities and get around their limitations.

The authors of this bibliography take issue with Bolles' first point.
However, we include this source in the bibliography because it provides other
good information for job hunters. Bolles discusses some of the commonly
held fears that employers have regarding hiring an individual with a
disability (e.g. insurance rates, job accommodations, safety issues) and then
provides information and strategies that can be used in an interview
situation to neutralize the fears held by employers. Bolles also identifies
some of the fears that cause one to "self-sabotage" their own job-hunt. The
booklet concludes with a bibliography of career development publications,
including many with a disability perspective, and a listing of local, state, and
national resources.

Graduating Engineer, People with Disabilities, Peterson's/COG Publishing
        Group, 16030 Ventura Blvd. Suite 560, Encino, CA 91499-3553.

Published five times a year, this magazine covers career development
and employment issues specifically related to engineers and scientists with
disabilities. The periodical is divided into six sections: careers, features,
lifestyle, columns, opinion, and departments. The career area includes
articles on topics such as job opportunities, disclosure strategies, job search
approaches, self-assessment tools, and promotion issues. For a more personal
perspective, the feature section covers subjects like individual success stories
and the ADA's effect on readers. The lifestyle portion of the periodical
discusses the latest information on business, careers, engineering, and
changing lifestyles. Columns include book reviews and stories about
innovations occurring at academic institutions. Letters to the editor and
reader opinion polls are regularly featured. Readers also have the
opportunity to take advantage of a resume forwarding service.

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Johnson, D. (1994). The mentoring experience. (Available from Disability Services, University of Minnesota, 12 Johnston Hall, 101 Pleasant St. S.E., Minneapolis, MN 55455)

This training manual is designed to assist disability service providers to create mentoring programs for college students with disabilities. The manual provides a description of program development, mentor/student recruitment, program closure, and evaluation. It also includes scripts for a student orientation and for a mentor/student workshop. The student orientation, which is one hour in length, includes information to assist students in deciding whether to participate in the mentoring experience and clarification exercises to assist service providers in identifying appropriate mentors. The workshop for students and mentors, about 2 1/2 hours in length, describes program guidelines and expectations and includes problem-solving, communication and listening exercises.

Johnson, D., Aune, B., Aase, S., & Anis, J. (1994). Putting ability to work: Disability, career development and employment. (Available from Disability Services, University of Minnesota, 12 Johnston Hall, 101 Pleasant St. S.E., Minneapolis, MN 55455)

This training manual addresses career development and employment needs of people with disabilities. The manual is written in script form and includes simulations, role-plays and problem-solving scenarios. The manual is divided into 10 modules: (a) interactional model of disability; (b) legislation; (c) disability types; (d) communication; (e) workplace accommodations/modifications; (f) adaptive technology demonstration; (g) counseling and advising; (h) hiring/supervision; (i) video resources; and (j) student trainers.

Each module can be combined with other modules to meet audience needs. Examples of ways to combine modules and sections within modules are given in the instructions for use. Copies of handouts and overhead transparencies are included and icons are included in the script to prompt the facilitator for use of overhead transparencies. The intended audiences are university/college career services staff, community employers, and human resource professionals. If all modules are used, the workshop will be four to

five hours in length. In addition, the last module trains students to co-facilitate workshops and requires five hours for two sessions.

Satcher, J., McGhee, M., Friend, P., Brandt, R., Walters-Kemp, P., & Barker, M. (1993). Bridges to career success: A model for training career counselors serving college students with learning disabilities. (Available from National Clearinghouse of Rehabilitation Training Materials, 816 West Sixth St., Oklahoma State University, Stillwater, OK 74078-0435)

This training manual addresses the career needs of college students with learning disabilities. The manual is lecture style in format and includes a problem-solving exercise and sample program forms. The intended audience is college career counselors and the length of the workshop is eight hours.

The first section describes: (a) the definition of learning disability; (b) appropriate testing used to diagnose learning disabilities; (c) characteristics of college students with learning disabilities; and (d) support services for college students with learning disabilities. The second section includes employment rights under the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.

In addition, the authors describe a model career project designed to meet the needs of college students with learning disabilities. Project components include: (a) self-assessment; (b) career exploration; (c) job shadowing; (d) reasonable accommodation; (e) interviewing ard job search techniques; and (f) follow up. The authors also address disclosure options and strategies for self-advocacy.

Thompson, A. R., Bethea, L, & Satcher, J. F. (1993). Employment guide for college students with disabilities. (Available from Mississippi State University, Department of Counselor Education and Educational Psychology, Post Office Drawer GE, Mississippi State, MS 39762)

This reference is a manual to assist both college students with disabilities and college counselors during the employment preparation stage. The authors discuss the Americans with Disabilities Act as it relates to job

applicants with disabilities. They highlight the main framework behind the ADA, including disclosure strategies and suggestions for requesting accommodations. Job seeking skills discussed include resume writing, cover letters, interviewing skills, job search plans, and job leads. Finally, the guide includes a resource list of organizations that may provide information to job seekers about accommodations, legal expertise, and technical assistance.

The 55 page guide is easy to read with main points highlighted and key information summarized.

Adaptive Technology and On-Line Services

Needs and Services for Adaptive Technology

Brown, C. (1993). Assistive computer technology: Opening new doorways. In J. Schuck and S. Kroeger (Eds.), Responding to disability issues in student affairs (pp. 89-102). New Directions for Student Services series, No. 64. San Francisco: Jossey-Bass.

This book addresses a wide range of issues related to disability and higher education. In the chapter abstracted here, the author discusses how assistive computer technology can be used to "bring students with disabilities into the technological mainstream of campus activity" (p. 89). The article explains how High Tech Centers have developed and addresses the following questions: From where have we come? What are assistive computer technologies? What have we learned? What will the future be?

The first part of the chapter describes how the High Tech Centers in the California community college system were developed. The second part explains how individuals can take advantage of adaptive technology. The third part explains what the High Tech Centers have learned since they started the program in terms of staff training, equipment purchase and maintenance, and technology integration. Finally, the fourth part of this chapter considers how assistive technologies might continue to evolve in light of the fact that "students with disabilities are rapidly becoming knowledgeable and sophisticated users of assistive computer technologies" (p. 101).

Many other states and colleges have started programs using the High Tech Centers model.

Gagliano, G. (1992, May/June). Services and strategies: The adaptive technology center as campus and community resource. Educom Review, 60-61.

This article describes the Training and Resource Center for the Blind at the University of New Orleans. The goal of the center is "to make knowledge and information accessible to the visually impaired population through the use of technology that enhances communication, educational opportunities, and independent living" (p. 60).

The article highlights four aspects of the center: microcomputer training services, training programs, information and technical services, and funding. Microcomputer training services provide the labs with special equipment and software to meet the students' adaptive technology needs. Training programs offer several courses to improve computer skills. Information and technical services offer consultation on custom-made adaptive equipment and evaluation of clients' computer proficiency. Finally, funding is the key to continuing these services. Tuition fees and Rehabilitation Services are part of the self-generating funds used to operate the center.

Greenwood, R. (Ed.). (1990). Applying technology in the work environment. President's Committee on Employment of People with Disabilities and Arkansas Research and Training Center in Vocational Rehabilitation. (Available from Department of Rehabilitation Education and Research, Arkansas Research and Training Center in Vocational Rehabilitation, University of Arkansas, P.O. Box 1358, Hot Springs, Arkansas 71902)

This publication is a compendium of papers presented at two conferences sponsored by the President's Committee on Employment of People with Disabilities.

The first article explains how employers react to issues related to job accommodation and suggests that employers should meet individual needs by including the employee in the accommodation planning process.

Employers need to remind themselves that each person's needs are different. "Each disability, each set of limitations is very specific to one individual. More importantly, the person's remaining abilities are extremely individual" (p. 4).

The second article emphasizes that rehabilitation counseling will not be able to solve all disability issues in the workplace. Other helpful resources include: (a) JAN-Job Accommodation Network; (b) Able Data; (c) the International Directive; (d) Accent on Living; and (e) Veterans Administration.

In another article, "High-Tech Homework," Donna Walters Kozberg describes Lift, a nonprofit organization that trains and places people with disabilities in computer programming jobs. Kozberg describes five stages of the process: corporate planning, recruitment, training, contract employment, and direct placement. The article also discusses telecommuting as an important accommodation. Studies find that sending workers home to work is one way to increase productivity.

Lindner, P. (1994). Internet Gopher user's guide. Minneapolis, MN:
University of Minnesota. (Available from ftp:
Boombox.micro.umn.edu /pub/gopher/docs/"GopherGuide")

This user's guide describes the Internet Gopher, which was developed by the University of Minnesota for easier access to information on the Internet. The information can be searched using a specific word or by browsing. A variety of information is available, such as e-mail addresses, USENET (mailing lists), Library Catalogs (from around the world), and Quicktime (movies).

Anyone in the world is able to use Internet Gopher if they have the proper computer, configuration, and Gopher client software. Gopher can be accessed via the following systems: Macintosh, DOS, Microsoft Windows, UNIX, VMS full screen, NEXTstep, OS/2 VM/CMS and MVS. The user's guide helps the reader install the Gopher on three different clients — IBM, Macintosh and UNIX. It also guides you on how to retrieve the software that is needed to set up a Gopher client on your computer.

Once the Gopher is set up, Internet Gopher is very easy to use: you don't need to know where the file or information is coming from. The user's guide demonstrates that the Internet Gopher is user-friendly.

Wobschall, R. (1989). Are you listening? Developing a consumer-responsive system. Proceedings of the First South Central Technical Access Conference. Little Rock: University of Arkansas.

The author reports on the results of a needs assessment of Minnesotans with disabilities conducted by the Minnesota Governor's Advisory Council on Technology for People with Disabilities between November 1988 and February 1989. Two statewide surveys and five statewide hearings were used to determine needs around adaptive technology. After conducting a preliminary assessment of needs by survey, the Council held hearings to gather information about problem seriousness. Participants of the hearings indicated the following needs related to adaptive technology: funding; improved delivery systems; and increased use of technology for better communication, community integration, and increased learning power of students with disabilities.

A second survey was sent only to individuals with disabilities in order to design a statewide program to meet their needs. Results show that many respondents do not know where to obtain adaptive devices, have not received training or instruction on adaptive devices, and have little understanding of adaptive technology devices. Most respondents also indicated that cost deters them from using adaptive devices. Other problems include poor coordination between services offering technology assistance and problems in making transitions between services and daily living.

The S.T.A.R program was created to address these issues. The duties of S.T.A.R. include identifying and assessing the needs of Minnesotans with disabilities; coordinating policies, resources, and services related to adaptive technology; disseminating information about adaptive technology and funding sources; providing training and technical assistance; providing assistance to statewide and community organizations that provide adaptive technology services; and developing standards to ensure availability of adaptive technology.

On-Line Career-Related Services

The abstracts in this section describe on-line job postings that can be accessed via Gopher on the Internet. "URL" stands for Universal Resource Locator. The symbols and letters after URL make up the Internet address for the service. The abstracts below are more detailed than previous abstracts so that the reader will be able to access and effectively use the on-line services described.

Academe This Week
URL: //gopher://chronicle.merit.edu/

Academe This Week provides summaries of all of the articles in the current issue of The Chronicle of Higher Education, the preeminent weekly news magazine for higher education in the United States. In addition, Academe This Week publishes all job listings from the current issue of The Chronicle. It is provided for free on the Internet by The Chronicle itself, with information updated every Tuesday

The Chronicle attracts a large number of job announcements from around the country. Most of the positions are on college campuses, but The Chronicle does receive some announcements from private industry, which are listed as "Positions Outside of Academe".

One can search The Chronicle's job openings in one of two ways. First, one can search using The Chronicle's list of job titles. This is the preferred way to search, with over 80% of the service's users using this method. General categories are faculty and research positions, administrative positions, executive positions, and positions outside of academe.

Second, one may search for any word in a job announcement. The service then displays all announcements that contain that word. One may search all job listings, or restrict one's search to Northeast, South, Midwest, or West regions of the U.S., or to international jobs. This method of searching is used less often because it results in many false "hits." For example, typing in "disability" to search for disability-related jobs will reveal all jobs that have "disability" in their equal opportunity statement, which is almost all jobs. Searching by word can be useful if there is an unusual word that sets what the user is looking for apart from other postings.

Since Academe This Week simply mirrors the job announcements that are listed in the print version for The Chronicle, employers can submit job announcements directly to The Chronicle of Higher Education. All announcements appear in both the printed newsletter as well as this Internet service.

Careers On-Line
URL: //disserv.stu.umn.edu/

Careers On-Line is a federally funded project of Disability Services at the University of Minnesota that focuses on providing employment tools and resources for students and graduates with disabilities. The program is an on-line service that uses Internet Gopher to electronically link students/graduates with disabilities, employers, and career service providers.

Careers On-Line has four main databases: job postings, resumes of University of Minnesota students and graduates with disabilities, adaptive technology product listings, and job accommodation resources.

The job posting database includes career opportunities listed by category (e.g., social services, computers/information systems, education, business, medical/health care, etc.). These job postings include full-time, part-time, and internship openings. A vast majority of the positions are from the Twin Cities metropolitan area.

The resume database contains the resumes of University of Minnesota students and graduates with disabilities who participate in the Careers On-Line project. Resume data is entered in three sections: general information (name, address, etc.), education, and employment. Users utilize a search feature to identify candidates who have specific qualifications (e.g., major, grade point average, degree, etc.). The user then retrieves resumes of the desired candidates and contacts those individuals for further inquiries.

The adaptive technology database contains information on thousands of products. The information is arranged by access category (e.g., computers, reading aids, telephone, writing aids, etc.). The listings include a description of the product, manufacturer's name/address/phone, and pricing information. New products are added on an ongoing basis.

The job accommodation database will be developed in late 1994- early 1995. This database will include extensive resource information on types of reasonable accommodations, contact information, and legal issues.

West Georgia College JobNet
URL: gopher://sun.cc.WestGa.edu/coop

JobNet, from West Georgia College, lists job openings in Georgia, as well as national and international jobs. General information and tips about the job search process are also provided. It accomplishes this wide array of resources by linking to other career-related gophers in addition to providing some of its own information.

Following is a summary of the different directories currently available on JobNet. The words and symbols after each number below indicate how to find the directory once the user is in JobNet.

1. Employment Opportunities from USENET News/
USENET News is a world-wide bulletin board system that runs across Internet, as well as other computer networks.
2. Employment Opportunities Worldwide/
This is a repository of employment opportunities from universities, as well as other Internet feeds. It is set up in the following sub-directories:
- About WGC Career Center Archives/
  An explanatory file about the contents of the sub-directories.
- Employment opportunities within the U.S./
  This directory contains, primarily, employment listings from various campuses in the US, and includes both faculty postings and low-skill full/part time jobs for local students.
- International Employment Listings/
  This is a collection of employment opportunities available outside the US. It contains postings from both Universities and USENET feeds.
- Jobs by Subject/
  This is a collection of job opportunities sorted by subject. It is sponsored by such academic groups as the American Mathematical Society and C&RL (College and Research Libraries).

- Opportunities on Campus for Faculty, Staff, and Students /
  This section is devoted to job opportunities specifically available to
  West Georgia College faculty, staff and students.

3. Hiring Tips, Trends and Statistics/
This directory includes an assortment of hiring tips, employment trends and
statistics, and both on and off-line reference lists.

4. Link to Academe This Week (Chronicle of Higher Education)/
This is a gopher link to Academe This Week which hosts an assortment of
employment opportunities in educational fields.

5. Link to Academic Position Network/
Similarly, this link offers a host of academic opportunities.

6. Link to the Online Career Center/
The Online Career Center hosts one of the largest repositories on the Internet
for employment opportunities. It covers all fields of work and can be
searched by either geographic region or job title.

7. Links to Federal Opportunities/
These are various links to Federal employment opportunities.

8. VISTA (Volunteers in Service to America) On-line/
VISTA (Volunteers in Service to America) is a national service program
aimed at alleviating poverty in America's cities and towns. VISTA is one part
of AmeriCorps, President Clinton's new national service initiative.

While the "Opportunities on Campus" and the "Tips, Trends, and Statistics"
areas contain information directly from West Georgia College, the rest of this
service provides easy and well-organized access to the wealth of career
resources on the Internet.

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