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ABSTRACT
                Over the past 15 years, post-secondary institutions
have experienced a significant increase in the enrollment of students
with disabilities. This study examined the career decision-making
attitudes of 21 college students with disabilities and the impact of
their disability on academic and career choices. Nineteen
undergraduates and two graduate students attending a small liberal
arts university in the Midwest completed the Career Maturity
Inventory and participated in a semi-structured interview. When
compared to national norms, the participants' had career maturity
scores comparable to junior high school students. Despite the
attention given to transitions for individuals with disabilities from
high school to the world of work, a majority of the participants in
this study reported receiving no transition services in high school.
Furthermore, participants with auditory, visual, or physical
disabilities were better able to describe the impact of their
disability on academic and career development than were students with
other types of disabilities (e.g., learning disabilities). It is
recommended that students with disabilities participate in
self-advocacy training and that they develop individualized career
plans. The long-term implications of proposed interventions and the
increase of independence should also be considered. Appended is the
Career Development Interview Protocol Semi-Structural Interview.
Contains 24 references. (RJM)

Running head: CAREER DEVELOPMENT OF STUDENTS WITH DISABILITIES

Identifying the Career Development Needs

of College Students with Disabilities

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Abstract

This study examined the career decision-making attitudes of 21 college students with disabilities and the impact of their disability on academic and career choices. Students completed the Career Maturity Inventory (Crites, 1978a) and participated in a semi-structured interview. When compared to national norms, the participants had career maturity scores comparable to junior high school students. Furthermore, participants with auditory, visual, or physical disabilities were better able to describe the impact of their disability on academic and career development than students with other types of disabilities (e.g., learning disabilities) were able to articulate. It is suggested that students with disabilities participate in self-advocacy training and develop individualized career plans.

Identifying the Career Development Needs

of College Students with Disabilities

Over the past 15 years, post-secondary institutions have experienced a significant increase in the enrollment of students with disabilities (Satcher, 1993). Nationally, the average enrollment has grown from 2.6% in 1978 to more than 8% in 1986 (Aksamit, Morris, & Levenberger, 1987). This trend is expected to continue in the near future (Brinckerhoff, 1994).

This increase in enrollment has been attributed to at least three factors. First, there are now services and supports at the post-secondary level for students who are "otherwise qualified" based on PL93-112, Section 504 of the Rehabilitation Act of 1973 (Office of Civil Rights, 1992). Second, many students with disabilities are receiving better academic preparation in high school (Minskoff, 1994). Third, students with disabilities, like many high school students, have aspirations of entering professions and occupations that require post-secondary education (Brown, Gerber, & Dowdy, 1992).

Due in part to their desire to become professionals, an increasing number of recent high school graduates are electing to seek undergraduate degrees (Brown et al., 1992). Others are faced with changes in the workplace as a result of increased skill requirements and return to school in order to update or seek additional skills (Satcher, 1993). Although some individuals will not need services or support during their post-secondary experience, others will. Unlike elementary or secondary schools

where others (parents, teachers, etc.) initiate services,
students under Section 504 must self-identify before a post-
secondary institution will provide accommodations. Individuals
must have an understanding of their disabilities and advocate for
themselves (Mellard & Hazel, 1992; Minskoff, 1994). Understanding
of one's disability and self-advocacy continue beyond post-
secondary settings to the workplace where individuals must once
again self-identify in order to receive accommodations as
regulated by the American for Disabilities Act (Allen, 1993).
Individuals who are unable to explain their disability, fail to
anticipate problems, or do not develop compensatory strategies
may have trouble with their jobs (Adelman & Vogel, 1990; Ryan &
Price, 1992).

As students prepare for employment, their disabilities
(including the type and age of onset) will influence the career
selection process (Baggett, 1993; Rojewski, 1992). Those who have
identified and can explain their personal strengths and
weaknesses can make more informed career choices and give
accurate information to employers, coworkers, and employment
agencies (Ryan & Price, 1992). As individuals move through the
career decision-making (CDM) process, those who fail to find the
right match between career demands and their strengths are likely
to experience frustration and disappointment (Adelman & Vogel,
1990; Hoy & Gregg, 1986). College students with disabilities may
not be fully aware of the various ways in which their
disabilities can potentially influence their career decisions.

Another aspect of the CDM process that needs to be examined among college students with disabilities involves their attitudes toward making career decisions. The CDM attitudes that college students possess have been linked with a variety of adaptive career behaviors, including CDM skills, CDM self-efficacy, and engagement in career exploration activities (Crites, 1978b; Luzzo, 1995). Several investigations have revealed that students with disabilities may have less mature CDM attitudes than their peers without disabilities (Biller, 1988; Bingham, 1980; Fafard & Haubrich, 1981). Discovering differences between the CDM attitudes of college students with disabilities and their peers without disabilities can have important implications for designing appropriate intervention strategies.

This study had three purposes. The first was to replicate previous studies to determine how students with disabilities compare to their peers without disabilities in terms of their attitudes toward career decision making. The second purpose was to determine if students could specifically describe their disabilities and the impact of their disabilities on educational and career goals. The third purpose of the study was to determine what resources and activities students with disabilities use in their selection of college majors and in the pursuit of their careers.

Method

Participants

Participants included 19 undergraduate (11 women and 8 men)

and 2 graduate students (1 woman and 1 man) attending a small
liberal arts university in the Midwest. All participants had been
identified with a disability prior to the investigation.
Participants' disabilities included learning disabilities (n =
14), hearing impairments (n = 2), blindness (n = 2), chronic
asthma (n = 1), autism (n = 1), and cerebral palsy (n = 1).
Participants' ages ranged form 19-51 (M = 25.42, SD = 9.06) with
7 first-year students, 3 sophomores, 3 juniors, 6 seniors, and 2
graduate students. The sample included 18 Caucasians and 3
African Americans.

Procedure and Materials

Early in the spring of 1994, the Coordinator of the Services
for Students with Disabilities program sent a letter to all of
the students at the university who were receiving some type of
assistance from the university related to their identified
disabilities. The coordinator invited the students to participate
in a career development research project. He informed the
students that their participation in the project was voluntary
and that all data collected in conjunction with the study would
remain confidential. Of the 80 students who were sent letters, 21
agreed to participate in the investigation.

There were two phases involved in the data collection
procedure: (1) completion of a survey packet and participation in
a semi-structured interview. The survey packet included a
demographic form (asking students to indicate their sex,
ethnicity, age, year in college, type of disability, current

major, career aspiration, and current occupation) and the
Attitude Scale (Screening Form A-2) of the Career Maturity
Inventory (Crites, 1978a). The Attitude Scale was used to assess
each participant's attitudes toward the CDM process. The scale
consists of 50 statements to which respondents indicate agreement
or disagreement by answering true or false. Higher scores
represent more mature CDM attitudes and greater readiness to make
career choices (Savickas, 1990). Internal consistency reliability
coefficients for the Attitude Scale range from .72 to .90, with
test-retest reliability of .71 over a 1-year interval (Crites,
1978b). The Attitude Scale is generally considered an adequately
valid measure of CDM attitudes (Savickas, 1990) despite some
psychometric concerns raised in the literature (Westbrook, 1982).
It has been used in prior investigations to measure the career
maturity of students with disabilities (Biller, 1988).

The semi-structured interviews averaged approximately 30 min
in length. Each participant was asked the same series of
questions (as shown in the Appendix). The questions were designed
to evaluate each student's awareness of the CDM process and her
or his understanding of the impact of the disability on career
development. Students participated in the two phases of the
project in a counterbalanced order. Surveys were completed
individually with a research assistant on site to answer any
questions about the measures or the procedure. Likewise, all
interviews were conducted individually.

The research assistants who collected all data associated

with the project were enrolled in a graduate level Special

Education program at the university. They were not aware of the

research hypotheses during the data collection process.

Results

CDM Attitudes

Participants' mean score on the Attitude Scale of the Career

Maturity Inventory was 35.85 (SD = 4.78). Based on norms printed

in the Career Maturity Inventory's Theory and Research Handbook

(Crites, 1978b), participants in this investigation reported

attitudes more comparable to junior high school students than

traditional college students. In fact, the mean Attitude Scale

score for participants falls below the 20th percentile for

college students in general (Crites, 1978b).

Knowledge of Disability

When asked to describe their disabilities, the students with

sensory, physical, or health problems were most specific. For

example:

"I have cerebral palsy which affects my left side.   It's

hard to..."

"I have a severe bilateral-lateral hearing loss. I use

hearing aids to amplify the sound. I read lips, but   rely on

interpreters. When someone turns away from me,   I can't see

their lips."

"I stutter. People cannot understand me when I am

talking to them."

Ten of the 14 students with learning disabilities, however, could

only provide vague or inaccurate descriptions:

"I have a reading comprehension problem. When I am reading a text for my classes, I can't remember what I read."

"I have problems with math..."

"When I get tired, I lose my memory..."

"I have a hard time studying and remembering..."

Students were asked to describe specific ways their disability affected their educational development. Eighty-five percent of the participants agreed their disability was a barrier to learning at the present time.

"...without interpreters, I can't follow the lectures or discussions.".

"...I will get assignments mixed up. If the assignment is to do problems 1 to 31, sometimes I might only do up to number 13."

"I can't use my left side, so I have difficulty with..."

As shown in Table 1, 52% of the participants did not believe their disability would be a barrier to future employment. An additional 20% were unsure of the impact of their disability. Four participants, two undergraduates and two graduates, were able to explain precisely how their disability was a barrier to job performance. When required to use skills that were associated with specific deficits (e.g., reading, mathematics computation, listening), these participants cited problems with that aspect of the job (e.g., transposing numbers while using a cash register,

not being able to hear oral directions in a meeting, not being able to decode words when reading a technical manual). Each of these students had part-time employment experiences related to their career interests. The two graduate students had an employment history of more than 15 years in at least three different occupations.

Insert Table 1 about here

Participation in Career Development Activities

A summary of the participants' responses to the question about their involvement in career development activities is shown in Table 2. Participants reported utilization of a limited number of activities in their career exploration up to this point. The most frequently cited activity was completion of a career interest inventory in high school or at the university's career center.

Insert Table 2 about here

Of the 19 undergraduates in this study, only two students cited participation in multiple career exploration activities. Both of these students were among five participants who indicated they had used the university's career center. Only two participants were working in occupations directly related to their expressed career goals.

Discussion

Results of this investigation indicate that many college students with disabilities are not fully aware of the impact that their disabilities may have in terms of their career development. Participants exhibited CDM attitudes comparable to junior high school students, and they reported little experience with career development activities.

Despite the considerable attention given to the transition of individuals with disabilities from high school to the world of work, a majority of the individuals in this study reported receiving no transition services in high school. Seven of the participants attended private schools, which may partially account for the apparent lack of services and support. For those in public schools, a second possible explanation for this lack of services could be that students were not involved in meetings where parents, teachers, and counselors discussed career activities. Several participants reported that parents were their advocates and summarized meetings with school staff. Another possibility may be that career development activities continue to be secondary to academics and are perceived to be less important for individuals going to college. This view was supported by a study of individual education plans (IEPs) for high school students with learning disabilities (Transitional Planning Council of Rock Island County, 1993). The analysis found most IEPs focused on graduation requirements and emphasized academic goals. Systematic career planning was not evident in the plans.

Each of these factors may contribute to the relatively low career maturity of participants in this study. The factors may also offer an explanation as to why so few individuals have utilized the university's career center, limiting their contacts to near graduation and the need for employment. As one student noted, "I will find the center when I need to update my resume and interviewing skills."

Information gathered from participants also indicates that they may have difficulty recognizing the influence of their disability in the CDM process. A few years ago Mellard and Hazel (1992) found that adults with learning disabilities who were employed at the time had been influenced by summer or part-time jobs related to their career goals. These experiences helped them recognize the potential effects of their disabilities on future employment. The inability of the majority of the participants in the present investigation to recognize the potential barrier of their disability to employment may be due in part to the type of jobs they have held. As a group, they have worked in fast food restaurants, as manual laborers, and as aides--jobs which often do not utilize skills similar to those needed in other occupations. Participants have apparently not used employment as a means of career exploration but merely as an available source of income. Eighteen participants cited little or no knowledge of the skills required for the careers in which they have expressed an interest. Participants also reported a lack of awareness regarding how their disability would interfere in performing some

or all of the critical skills related to a job or career.

The information gathered during the interviews confirms the work of Kavale (1987), indicating that specific characteristics of the learning disabled are not fully understood. Participants in this investigation with specific identifiable problems were often able to verbalize their strengths and weaknesses and understand some of the long-term ramifications of their disability. Almost all of the participants with learning disabilities, on the other hand, were unable to recognize ways that their disability might impact their career development. The confusion over identifying learning disabilities is a problem frequently discussed in the literature (Kavale & Forness, 1985). One might conclude that the definition of learning disabilities is so confusing to specialists that individuals with learning disabilities remain unsure of the long-term prognosis.

<div align="center">Recommendations and Conclusions</div>

Previous authors have raised concerns about the relationship of disabilities and successful adult adjustment (Baggett, 1993; Brinckerhoff, 1994; Minskoff, 1994; Satcher, 1993). Much attention has been given to the need for self-advocacy and career development among college students with disabilities. It is suggested, therefore, that programs and individuals focus on the long-term implications of proposed interventions and the increase of independence. After carefully reviewing the results of this study and findings from previous research in this domain, we developed three specific recommendations for achieving these

goals:

1.   All post-secondary education programs should include a
self-advocacy component in their summer session and new student
orientation programs. Boston University offers such a program
with an emphasis on helping students understand and explain to
others their disability, its impact, and the types of
accommodations they (the students) may need in academic and
employment settings (Brinckerhoff, 1994). Training needs to
address difficulties one may encounter in employment and social
situations.

2.   Individual career plans (ICPs) should be developed for
each student with a disability. Disability services provided at
the University of Massachusetts help students develop such a
plan. Students' ICPs are designed to help them identify career
goals by encouraging self-determination and the utilization of
campus career centers, which are frequently under-utilized by
students with disabilities (Baggett, 1993). Such a plan can be
prepared with the students, disability services staff, and
personnel from the career center. The purpose of this program is
to enable students to make use of multiple sources of career
information in a systematic fashion much earlier in their college
or university experience.

3.   Individuals with disabilities must have opportunities
to explore careers and occupations of interest, particularly if
they have little or no related career experience. Students should
be encouraged to use volunteer opportunities, internships, and

part-time employment (especially during the summer months) to increase their knowledge about careers and the potential impact of their disability.

For college student personnel who work with students with disabilities, career development for these students may seem like high school transition services at the post-secondary level. Yet results of this investigation indicate that a significant number of college students with disabilities have basic career education needs. At this level, students must have the option to participate in appropriate programs as a way to gain the necessary skills for future employment and related educational opportunities.

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Table 1

Percentage of Participants Who Perceive Their Disability as a

Barrier to Education and Employment

Perceived as a Barrier?	Education	Employment
YES	85.7%	28.6%
NO	14.3%[a]	52.4%[b]
UNKNOWN		19.0%

Note. Respondents by disability category:

[a]2 LD, 1 chronic asthma

[b]8 LD, 1 deaf, 1 blind, 1 chronic asthma

Table 2

Number of Participants Who Have Engaged in Various Career

Development Activities

	Educational Level of Experience		
Activity	High School	Community College	University
Career Fair	1		
Coursework	1		
Family, Friends	1		
Internship	1		
Interest Inventory	6	1	5
Part-Time Employment			2
Volunteer Experience	1	2	1

Appendix

Career Development Interview Protocol

Semi-Structured Interview

1.   What is your class standing?

2.   What kinds of careers are you interested in pursuing?

3.   Can you share with me how you decided on your major?

4.   What assistance have you received to help you in the
     selection of your major and/or career goal?

5.   What jobs have you held? As you describe each, please
     mention your job title and what it is that you did (or are
     currently doing) at that particular job.

6.   What is your disability? (Prompt for specifics)

7.   Describe the specific problems associated with your
     disability that may interfere with your ability to learn.

8.   What types of services did you receive in elementary school
     and/or secondary school related to your disability?

9.   In what ways does your disability affect your work?

Additional Questions to be Asked (if information needed)

1.   If the student has a learning disability, ask questions to
     determine if academic abilities affected include skills
     associated with reading, writing, math, memory,
     organization, and/or study skills.

2.   If you received help in high school associated with your
     disability, were you involved in the plans that were written
     for you?

3. From the problems you have described related to your
    disability, how have they affected your academic work in
    college?

4. From the problems you have described related to your
    disability, how have they affected you when you were at
    work?

5. From the problems you have described related to your
    disability, how do you think they will impact on your career
    choice(s)?

6. In what ways has your disability or the problems you have
    identified affected your social and/or leisure activities or
    relationships?