EMPLOYMENT OUTCOMES OF UNIVERSITY GRADUATES WITH LEARNING DISABILITIES

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Abstract. **Limited research exists related to the employment outcomes of adults with learning disabilities (LD) who graduate from postsecondary institutions. The current study presents the results of a followup investigation of 500 graduates with LD from three universities in the United States. Results indicated that levels of full-time employment, employment benefits, and salary earned were competitive with statistics related to the American workforce, in general, and exceeded statistics on adults with LD who are not college graduates, in particular. Data are also presented on post-graduation education levels achieved, type of employment, number of jobs held, and LD disclosure in the workplace.**

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Students with learning disabilities (LD) constitute just under half (49.2%) of all students with disabilities served under the Individuals with Disabilities Education Act (IDEA) in America's public schools (U.S. Department of Education, 2003). These numbers may be a conservative estimate of the total number of students with LD nationally, as increasing numbers of students with LD receive services under Section 504 of the Rehabilitation Act of 1973 (Blazer, 1999; Brady, 2004; deBettencourt, 2002; Seese, 2003).

Although the majority of these students transition directly from school into employment (Gerber & Price, 2003), a significant number are transitioning to postsecondary education. That is, the least restrictive environment mandate of IDEA has resulted in larger numbers of students with LD being enrolled in competitive high school coursework, and thus being more qualified for postsecondary education (Brinckerhoff, McGuire, & Shaw, 2002). Additionally, the emphasis on transition in IDEA '97 has focused more attention on college preparation when planning the academic program of secondary students (American Youth Policy Forum and Council on Educational Policy, 2002).

Consequently, the number of students with LD accessing postsecondary education steadily increased over the past decade, and more than tripled since 1978 (American Youth Policy Forum and Council on Educational Policy, 2002). A nationwide study of first-time, full-time college freshmen at four-year institutions in 2000 indicated that 6% reported a disability. Students with LD constituted the largest cohort (40%) of this group, and 2.4% of all college freshmen. This represented an increase from 1% of all college freshmen in 1988 (Henderson, 2001). These figures may be underestimates of the total number of students with LD in college, as many students with disabilities begin college at two-year institutions (American Youth Policy Forum and Center on Educational Policy, 2002; National Center for Education Statistics, 2000) or at part-time status, and are thus not included in these statistics.

Postsecondary education is a vital conduit to meaningful employment in the United States (American Youth Policy Forum and Center on Educational Policy, 2002; Conyers & Szymanski, 1998; Wagner, Cameto, & Newman, 2003). In an analysis of 2001 statistics compiled by the Bureau of Labor Statistics, the National

Center for Education Statistics (NCES) noted that adults with higher levels of education were more likely to be employed than those with less education. In fact, of adults with a bachelor's degree or higher, 79% were employed, compared to 64% of those who completed high school, and 44% of those who did not complete high school (NCES, 2002). These trends are also evident among adults with disabilities, who are less likely to be as highly educated, and more likely to be unemployed or underemployed than adults without disabilities (National Organization on Disability, 2001a, 2001b).

The link between the "education gap" (National Organization on Disability, 2001a) and employment was directly addressed by the National Council on Disability in its 2002–2003 *Progress Report,* which stated:

> With unemployment among persons with disabilities remaining stubbornly high despite a variety of federal initiatives and public-private partnerships designed to improve the situation, and with long-term job prospects and income potential for people without college education looking increasingly grim, it should be more apparent than ever before that, wherever possible, higher education is key to the economic prospects and aspirations for independence of youth with disabilities. (2004, p. 68)

Thus, emphasis continues to be placed upon the successful transition to postsecondary education for students with disabilities. However, there is a paucity of research related to the eventual outcomes of students with disabilities who successfully transition to and graduate from college. While multiple studies have examined the employment experiences of adults with LD, these investigations have largely focused on secondary school graduates and dropouts (e.g., Blackorby & Wagner, 1996, 1997; Goldstein, Murray, & Edgar, 1998; Levine & Nourse, 1998; Raskind, Goldberg, Higgins, & Herman, 1999).

Research focusing specifically on the employment experiences of college graduates with LD is emerging in the professional literature (Adelman & Vogel, 1990; Greenbaum, Graham, & Scales, 1996; Horn, Berktold, & Bobbit, 1999; Madaus, Foley, McGuire, & Ruban, 2001, 2002; Silver, Strehorn, & Bourke, 1997; Vogel & Adelman, 2000; Witte, 2001; Witte, Phillips, & Kakela, 1998). In general, these studies report positive outcomes in terms of levels of employment and salary, and point to the fact that a successful postsecondary experience can make an important difference in employment outcomes (Madaus et al., 2001). However, the results are mixed with regard to job satisfaction, and most studies revealed concerns related to employment-based disability self-disclosure, accessing accommodations (Madaus et al., 2001; Kakela & Witte, 2000), and employee knowledge of their rights under the ADA (Witte, 2001).

Although these studies were critical in laying the foundation for investigations in this area, each was conducted at single institutions, and the results are thus restricted by small and homogeneous samples. Many were also conducted during the mid- to late 1990s, during a period of national economic prosperity that waned in subsequent years. For these reasons, updated and expanded data in this area are important to obtain an accurate portrait of the post-college experiences of graduates with LD.

Rationale for the Present Investigation

The transition from educational institutions to employment is one of the most important transitions that people make in their lifetimes (National Institute on Disability and Rehabilitation Research, 2002). The transition is made more difficult because the worlds of academe and employment are markedly different, and individuals with LD move from a culture that is increasingly understanding of LD to a culture largely unclear about the concept (Gerber, 2002).

The research gaps in this transition area result in "well-intentioned" transition efforts that are not guided by evidence-based best practices (Gerber & Price, 2003). There is a need to update and build upon existing findings and to more thoroughly investigate employment outcomes through the use of a large, heterogeneous sample of college graduates with learning disabilities. The intent of the present study was to extend the investigation conducted by Madaus et al. (2001) to a larger, nationally representative sample of graduates with learning disabilities.

METHODS

Sample

The data presented here represent a portion of a total investigation of 2,131 graduates with LD from six postsecondary institutions nationwide. Participating institutions varied in size (from under 1,000 students to over 20,000 students); location (four eastern schools, two western schools); competitiveness (an open-enrollment community college, public universities); and institutional type and mission (community technical college, public universities, Research I universities). The institutions also varied in the amount of support offered to students with LD (e.g., from basic services to comprehensive support programs).

An invitation to participate in the investigation was initially offered to eight institutions in one northeastern state that represented a range of institutional types. However, four institutions could not participate due to institutional restrictions or logistical problems (e.g., lack of support staff to assist in record reviews and mailings) that made participation prohibitive. The director of an

Table 1
Sample Sizes and Response Rates from Participating Schools

Institution	Responses Received	Size of Sample	Response Rate
1	15	53	28%
2	8	29	28%
3*	38	87	44%
4*	303	1048	29%
5*	160	303	53%
6	65	611	11%

*Denotes institutions used in the present analysis.

LD support program in a western state expressed interest in the project and was subsequently invited to participate. This led to a referral to a second western institution.

In order to be included in the sample, each respondent had to be a graduate of the institution at the time of the study (including associate's degrees, bachelor's degrees, or advanced degrees). A respondent could be a graduate from an institution and still be enrolled at the time of the study while in pursuit of an additional degree. Further, the respondent must have been registered with the appropriate office as a student with a learning disability during his or her academic career. Section 504 of the Rehabilitation Act requires that students who are requesting services on the basis of an LD submit documentation that verifies the existence and nature of the disability.

Each institution is able to set its own guidelines related to what constitutes minimally acceptable documentation. Typically, this involves the components of the Association on Higher Education and Disabilities (AHEAD) *Guidelines for Documentation of a Learning Disability in Adolescents and Adults* (1997), including measures of aptitude, achievement and information processing, and a clear statement of diagnosis. It must be noted that institutions are not required to follow the AHEAD *Guidelines,* and that prior to their promulgation, there was the possibility for greater variation in the quality and type of the documentation that was accepted.

Mailing

Because of confidentiality issues, the primary researcher was unable to access the rosters of the participating LD programs. Therefore, a contact person designated by the program director at each school worked to verify the names on the roster, to gather updated addresses of the graduates, and to conduct the actual mailings. The surveys contained a unique code for each respondent at each school, and were returned directly to the researcher. The researcher compiled a list of returned surveys for each school, and this was sent back to the contact person at each to track non-respondents for subsequent mailings.

The survey was mailed in three waves at each of the participating schools, including a wave that directed respondents to a web-based, electronic survey. This wave was set up as an attempt to increase the overall response rate, but resulted in only an additional 5.8% of the sample (n=29).

Response rates varied for each of the participating schools, ranging from 11% to 53%. Response rates and sample sizes for all six institutions are presented in Table 1. Examination of these numbers resulted in data from three schools being deleted from the present analysis. The response rate of 11% was considered susceptible to error, for example. One school had a total of 15 respondents. The community college in the sample featured only 8 respondents. To compare the results of eight community college students to over 500 students

at four-year institutions would be invalid. A total of 1,438 graduates remained in the final sample. The data for the current analysis are based upon a response rate of 35% (*N*=500).

Instrumentation

The instrument employed was based on the one used by Madaus et al. (2001, 2002). The survey was revised and updated based upon the results of that work and upon subsequent reviews from a panel of content experts, as well as by four university graduates with LD. These graduates completed the survey in the presence of the investigator, and talked through their interpretations and questions related to survey directions and items.

The final instrument consisted of four main sections. The first section contained demographic items across four broad areas, including Respondent Information, Educational Experiences, Employment Information and Career Experiences, and Your Learning Disability and Work Experiences. Several of the demographic questions were adjusted to be specific to the respondent's alma mater (e.g., colleges or programs specific to an institution). The second section contained five items related to the ADA and Transition to Career as a Person with a Disability. The third section consisted of items related to Job Satisfaction; the fourth section was related to Employment Self-Efficacy.

Table 2
Respondent Information

Variable	*N*	%
Gender		
Male	255	51.1
Female	244	48.9
No Response	1	
Total	500	100.0
Ethnicity		
Asian or Pacific Islander/American	1	.2
American Indian or Alaskan Native/American	0	0.0
Black Non-Hispanic American	10	2.0
Hispanic or Spanish-Surnamed American	14	2.8
White Non-Hispanic American	457	92.0
Non-Resident Alien	1	.2
Other	13	2.6
Puerto Rican	1	.2
No Response	3	
Total	500	100.0
Other Disability Reported		
Yes	53	10.7
No	443	89.3
No Response	4	
Total	500	100.0
English as a Second Language		
Yes	6	1.2
No	490	98.8
No Response	4	
Total	500	100.0

Table 3
Educational Experiences

Variable	*N*	%
Time of Initial LD Diagnosis		
Elementary School	253	50.9
Middle School	39	7.8
High School	86	17.3
Post High School	119	23.9
No Response	3	
Total	500	100.0
Additional Education Since Graduation		
Undergraduate Program	23	7.7
Graduate Program	167	40.0
Specialized Program	83	25.5
Highest Degree Obtained		
Associates	3	.6
BA/BS	349	70.9
Certificate	6	1.2
Doctorate	6	1.2
DMD	2	.4
JD	10	2.0
MA/MS	112	22.8
MSW	0	0.0
No Response	8	
Total	500	100.0

Sections 2 through 4 asked the respondents to rate their perceptions on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Construct validity for the Job Satisfaction, Employment Self-Efficacy, and ADA scales was investigated via principal-component analysis procedures. Analyses supported all scales standing as unique factors. The internal consistency of the three scales was examined using Cronbach's alpha reliability estimate for each factor. The alpha reliability estimate was .90 for the Job Satisfaction scale, .94 for the Employment Self-Efficacy scale, and .73 for the ADA scale all above minimum criteria of .70, as suggested by Gable and Wolfe (1993). More specific information related to the results of the scales may be found in Madaus, Ruban, and Zhao (2005).

RESULTS

Respondent Characteristics

As illustrated in Table 2, there was a nearly even split of male (51%) and female (49%) respondents. The respondents were overwhelmingly White Non-Hispanic American (92%), followed by Hispanic or Spanish-Surnamed American (2.8%) and Black, Non-Hispanic American (2%). The average age of the respondents was 31 (Mean=31.3; *SD*=6.1), and they lived in a total of 37 states. Eleven percent of the respondents reported having another disability in addition to LD. The most common additional disabilities were attention deficit/hyperactivity disorder (43% of those reporting an additional disability), physical disabilities (15%), and medical disabilities (11%). Only eight respondents (1.2%) indicated that English was a second language. Table 2 contains additional detailed information about the characteristics of the respondents.

Educational Experiences

Table 3 presents information about the educational characteristics of the respondents. The majority (51%) reported being initially diagnosed with LD in elementary school, followed by those who were diagnosed after

Table 4
Current Employment Status

Variable	*N*	%
Current Level of Employment		
Full-Time (35 or more hours/week)	375	75.3
Part-Time (21 to 34 hours/week)	23	4.6
Part-Time (less than 20 hours/week)	32	6.4
Not Employed	60	12.0
No Response	2	
Total	500	100.0
Why Employed Part Time		
In School	19	32.8
Caring for Children	18	31.0
Caring for Other Family	0	0.0
Looking for Full-Time Employment	10	17.2
Medical Reasons	3	5.2
Other	8	13.8
Total	58	100.0
Seeking Employment If Not Employed		
Yes	23	39.0
No	36	61.0
Total	59	100.0
Reasons for Not Seeking Employment		
In School	8	21.6
Caring for Children	15	40.5
Caring for Other Family	1	2.7
Medical Reasons	3	8.1
Other	10	27.0
Total	37	100.0
Salary		
Less than $10,000	11	2.6
$10,001-$20,000	34	8.1
$20,001-$30,000	39	9.3
$30,001-$40,000	81	19.4
$40,001-$50,000	68	16.3
$50,001-$60,000	54	12.9
$60,001-$70,000	28	6.7
$70,001-$80,000	22	5.3
$80,001-$90,000	11	2.6
More than $90,000	70	16.7
Total	418	100.0
Ever Laid Off		
Yes	120	24.2
No	376	75.8
No Response	4	
Total	517	100.0
Reason for Lay-Off		
Company Closed	10	8.4
Company Bought Out	5	4.2

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Table 4 *continued*
Current Employment Status

Variable	*N*	%
Reason for Lay-Off *continued*		
Company Downsize; Budget Reduction	61	51.3
Performance Based	16	13.4
Other	27	22.7
Total	119	100.0
Self-Employed		
Yes	60	14.1
No	367	73.4
Total	500	100.0
Job Provides Benefits		
Yes, Full Benefits	328	76.1
Yes, Partial Benefits	43	10.0
No	60	13.9
Total	431	100.0
Type of Current Employment		
Agriculture	9	2.0
Business	127	28.9
Education	81	18.4
Factory/Industry	8	1.8
Federal Government	6	1.4
Health Care	40	9.1
Homemaker	6	1.4
Military	2	.5
Media	19	4.3
Non-Profit	14	3.2
Recreation	7	1.6
Social Services	21	4.8
State/Local Government	17	3.9
Technology	32	7.3
Other	118	26.8

high school (24%). Fifty-five percent of the respondents indicated that the availability of LD support services influenced their decision to attend a particular institution. Year of graduation spanned 24 years, from 1979 (one respondent) to 2003 (nine respondents), the most common year of graduation being 1999 (10%), followed by 1993 and 2000 (9% each). Since graduating from their respective institutions, 8% of the sample had pursued an undergraduate program, 40% pursued a graduate level program, and 26% pursued a specialized professional training program. The overwhelming majority of the respondents reported that the highest degree earned was a bachelor's degree (71%), followed by a master's degree (23%), juris doctorate (2%), and doctorate (1%).

Employment and Career Experiences

Table 4 presents information about the respondents' employment experiences. As illustrated, 75% reported full-time employment (35 or more hours per week). Five percent were employed 21 to 34 hours per week, while 6% were employed 20 hours per week or less. The most common reasons provided for holding part-time employment were being in school (33%) or caring for children (31%). Seventeen percent worked part

Table 5
Impact of LD on Employment and Disclosure

Variable	*N*	%
LD Impacts Work		
Yes	362	72.8
No	135	27.2
No Response	3	
Total	500	100.0
How Frequently LD Impacts Work		
Rarely	66	19.1
Occasionally	210	60.7
Frequently	54	15.6
Always	16	4.6
Total	346	100.0
Areas LD Impacts Work*		
Writing Skills	183	50.6
Oral Communication Skills	62	17.1
Organizational Skills	103	28.5
Reading Comprehension	129	35.6
Rate of Processing Information	154	42.5
Time Management	97	26.8
Mathematics Computation	98	27.1
Group/Team Projects	17	4.7
Social Interactions with Colleagues	31	8.6
Social Interactions with Supervisor(s)	18	5.0
Other	68	18.8
Self-Disclosed to Employer*		
Yes, when applying for current job	56	11.2
Yes, after being hired in current job	96	19.2
No, not in current job	124	24.8
Yes, when applying for previous job	23	4.6
Yes, after being hired in previous job	70	14.0
No, not in previous job	78	15.6
Have never self-disclosed	227	45.4
If Disclosed, to Whom*		
Supervisor	180	65.9
Coworkers	146	53.5
Others	42	15.4
Negative Effects If Disclosed		
Yes	46	19.7
No	187	80.3
Total	233	100.0
Requested Formal Accommodations		
Yes	33	12.4
No	233	87.6
Total	266	100.0
Denied Formal Accommodations		
Yes	9	28.1
No	23	71.9
Total	32	100.0

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Table 5 ***continued***
Impact of LD on Employment and Disclosure

Variable	*N*	%
Reason for Disclosure of LD*		
Need for additional time	31	11.4
Use of technology	20	7.3
More detailed directions	33	12.1
Make coworkers aware	101	37.0
Make supervisor aware	115	42.1
Other	84	30.8
Reason for Not Disclosing LD*		
Concern for job security	54	20.2
No reason to/no need	162	60.7
Negatively impact relationship with supervisor	81	30.3
Negatively impact relationship with coworkers	78	29.2
Negatively impact relationship with clients	45	16.9
Past disclosure created problems	9	3.4
Other	34	12.7
Strategies and Accommodations Used*		
Arrive to work early	242	48.4
Assistive technology	85	17.0
Delegation of difficult tasks	81	16.2
Graphic organizers	70	14.0
Problem solving/brainstorming	177	35.4
Quiet work environment	169	33.8
Use of proofreaders	162	32.4
Self-advocating	68	13.6
Setting goals and priorities	298	59.6
Staying late at work	236	47.2
Support from family/significant others	180	36.0
Time management	252	50.4
Time outside of work	171	34.2
Other	40	8.0

*Participants were asked to select all choices that apply.

time while conducting a search for full-time employment.

Respondents were asked to describe their current area of employment from a list of 15 broad areas. The most commonly selected areas were Business (29%), Other (27%), Education (18%), and Health Care (9%). Those who selected the category of Other (27%) were asked to specify their area of employment. The areas were wide ranging, and included employment such as Event Planning, Conference Interpretation, Construction/ Land Development, Municipal Bond Trading, Mechanical Engineering, and Watershed Forestry.

Respondents had held an average of 2.6 jobs (*SD*=1.7) since graduation. The average length of time in a current position was 3.5 years (*SD*=3.0; Range = 1 Year to 16 Years). The most frequently reported annual salary range was $30,001 to $40,000 (19%), followed by those earning more than $90,000 (17%) and those earning

$40,001 to $50,000 per year (16%). Chi-square analysis revealed a significant relationship between gender and level of salary ($\chi^2(2, N=417)=54.253$, $p<.001$, Cramer's $V=.36$). Males were more likely than females to be earning in excess of $60,000 ($\chi^2(1, N=130)=44.431$, $p<.001$), and females were more likely to report earning less than $30,000 ($\chi^2(1, N=84)=8.048$, $p<.01$). No significant earning differences were found between males and females in the ranges of $30,001 to $60,000. Respondents who had been in their positions for longer periods of time reported earning more than those who had held their positions for less time ($\chi^2(8, N=410)=40.127$, $p<.001$, Cramer's $V=.221$).

Of the respondents who were employed, 76% reported receiving full employee benefits, 10% reported receiving partial benefits, while 14% reported not receiving employee benefits. Males were more likely to be receiving full benefits than females ($\chi^2(2, N=430)=6.622$, $p<.05$, Cramer's $V=.124$). However, the resulting effect size of the interaction was small and should be viewed cautiously.

Chi-square analyses revealed that males were more likely to be employed full time than females ($\chi^2(3, N=489)=30.533$, $p<.001$, Cramer's $V=.250$). Conversely, females were more likely to be employed part time, less than 20 hours per week, than males ($\chi^2(1, N=32)=18.000$, $p<.01$). There were no significant differences between males and females related to being employed or unemployed, or to being employed part time, 21-35 hours per week.

Twelve percent of the sample reported being not employed. Of these respondents, 61% noted that they were not currently seeking employment. Caring for children (41%) was the most commonly selected reason for not seeking employment, followed by being in school (22%) and medical reasons (8%).

Twenty-four percent of the respondents reported being laid off from a job. Of this group, most indicated the cause as being a company downsizing or a reduction in budget (51%). Thirteen percent reported that the reason was performance based, whereas 8% indicated that the company had closed. One respondent explained that, "My job was moved to a lower cost geography (India) with lots of technology jobs, 1 of about 16,000 employees laid off ..." Another respondent attributed a job loss to new educational legislation, writing, "No Child Left Behind Act–b/c I didn't have my credential my contract wasn't renewed." Other respondents noted the impact of their own performance, often in relation to disagreements with an employer or supervisor. One respondent described some of the difficulty faced in employment and the resulting outcome, writing "I guess I did not fit in. Probably the case for all my employments. One reason I started my own company." There were no significant differences between males and females related to being laid off from a job ($\chi^2(1, N=495)=1.295$, $p>.05$). Table 4 contains additional information about the employment characteristics of the sample.

Learning Disability and Work Experiences

Table 5 presents information about the impact of the learning disability on the repondents' work experiences. While nearly three quarters (73%) of the respondents indicated that their LD impacted their work in some way, only 55% percent reported that they self-disclosed to an employer. Chi-square analyses revealed that there were no differences between males and females related to rates of disclosure ($\chi^2(1, N=499)=2.069$, $p>.05$). Additionally, there was no relationship between length of time in a position and rate of disclosure ($\chi^2(4, N=427)=3.612$, $p>.05$).

Respondents who had disclosed were asked to indicate to whom they disclosed. Multiple responses were possible to more completely capture data on this important component of disclosure. Sixty-six percent reported disclosing to a supervisor, and 54% to coworkers. The most commonly cited reasons for self-disclosure were to make supervisors aware (42%) or to make coworkers aware (37%) of the LD. While a total of 55% of the respondents noted that they had self-disclosed in a job situation, only 12% reported requesting formal workplace accommodations. Of this group, 28% indicated that a formal accommodation request was denied.

Respondents who did not self-disclose were asked to describe the reasons for this decision. The most commonly selected response was that there was no reason to or need for accommodations (61%), followed by a concern for negatively influencing relationships with supervisors (30%) or coworkers (29%). Twenty percent indicated that they were concerned for their job security. Four percent reported not disclosing in a current job because of problems caused by a previous disclosure.

DISCUSSION

Taken as a whole, the results of this investigation paint a generally positive picture of the post-school outcomes for a sample of university graduates with LD. The employment rate, levels of income, and levels of benefits earned by the sample are comparable to those of the general workforce in the United States. These rates are much more favorable than data available on adults with LD who do not attend college. Thus, the present results support the statement that earning a college degree is beneficial for the employment outcomes of adults with LD.

Specifically with regard to employment status, the percentage of respondents who were unemployed and

looking for work represented 5% of the total sample, which mirrors the unemployment rate in the United States at the time of the final data collection (5.7%; United States Department of Labor, April 2004). Although nearly a quarter of the sample had been laid off from a job at some point in their career, most were able to successfully find employment. In fact, the largest cohort of those reporting being unemployed were not seeking employment, most often because they were caring for children or enrolled in school. The full-time employment rate also greatly exceeds the full-time employment rates of adults with disabilities in general (35%; National Organization on Disability, 2004), adults in general who do not graduate from college (64%), and of adults who have not completed high school (44%; National Center on Education Statistics, 2002). Additionally, the data in the present study suggest that the graduates were enjoying a degree of job stability, as measured by time in the current position. These findings contrast with Price and Gerber's (2005) summary of their interviews with adults with LD, most of whom were not college graduates. These researchers wrote that these individuals "are often un-employed or under-employed, with erratic job histories that include multiple entry level jobs with minimum wages and few benefits" (p. 1). Thus, according to these indicators, earning a college degree has an important impact on the eventual employment rates of this group of adults with LD.

The sample also evidenced annual earnings that are consistent with those of nondisabled peers. The median income range was $40,000-$50,000, which is nearly identical to the median salary of college graduates in the U.S. workforce ($42,877) (United States Census Bureau, 2003). The finding that males reported higher salaries than females is also reflective of data compiled by the Bureau of Labor Statistics, which indicate that the average salary for males with a bachelor's degree was $56,334, compared to $40,415 for females (cited in NCES, 2002). The present findings exceed statistics for adults with LD who do not attend college (Blackorby & Wagner, 1997), supporting the conclusion that attending college can make an important difference in the life of an adult with LD.

Of those in the present sample who were employed, over 85% reported receiving full or partial employee benefits. Although the respondents were not asked to break out the types of benefits received, one of the examples in the stem of the question was health insurance. According to the Congressional Research Service (Levine, 2000), the figure reported here is nearly identical to the rate at which workers with less severe disabilities received private health insurance through their employer (77.5%), and is similar to the rate reported for adults without disabilities (80%). In comparison, only a third of adults with more severe disabilities (33.7%) received private health insurance.

In summary, this group was obtaining and holding varied types of work at levels consistent with non-LD peers, with competitive salaries and levels of employee benefits. The group reported high levels of satisfaction with their jobs, and reported a good match between their jobs and their skills (Madaus et al., 2005). Other studies of adults with LD have reported less positive perceptions of employment situations, including feelings of being underemployed or unchallenged in their jobs (Roffman, 2000; Witte et al., 1998). Given the importance of job satisfaction on overall life satisfaction, these findings also point to the importance of a college degree for individuals with LD.

While the results of the study are generally favorable, the data related to disclosure rates and rationales raise some concerns. Nearly three quarters of the sample indicated that their LD impacted their job in some way, but only slightly more than half self-disclosed in a job setting, and less than 10% requested accommodations. The majority of the respondents who did not self-disclose indicated that there was no need to do so. Preferably, this is a positive situation resulting from a "goodness of fit" between career and the LD (Gerber, 1997), but many respondents did not self-disclose because of fear of negative impact on relationships with coworkers, supervisors, or clients. Others expressed concern about job security.

Clearly, much needs to be done to more fully understand the dynamic of a hidden disability and the workplace. Such information would be critical to both secondary and postsecondary programs that help students with LD transition to work. Without these facts about workplace realities, such programs must rely on professional hunches, which may be inaccurate (Price, Gerber, & Mulligan, 2003). The stakes are too high for this to continue.

Limitations

The results of this investigation must be considered in light of some limitations of both the sample and the use of a mailed survey. First, the sample size as reported is small (35%). Although multiple attempts were made to increase the response rate, the investigator was reliant on the records of the participating programs and on the contact person to gather up-to-date records. Whether the non-respondents did not receive the survey or received it and chose not to respond remains unknown, raising the possibility of selection bias on the part of the respondents.

An additional limitation is that the respondents were overwhelmingly white, and graduates of institutions

that offer formal learning disability support programs. Caution must therefore be taken before generalizing these results to students with LD from minority groups or to college graduates with LD who attend colleges with minimal LD support programs. However, the ethnic profile of the sample is consistent with the ethnicity of graduates reported in similar investigations (e.g., Greenbaum et al., 1996; Vogel & Adelman, 2000; Witte et al., 1998). Additionally, formal LD support programs are more likely to maintain comprehensive records of their students, which is critical in such a followup mailing.

Implications for Practice

Price and Patton (2003) commented that research on the impact of LD across the life span may be "messy" because of some of the concerns noted above (e.g., participant identification), but "must be pursued" nevertheless (p. 336). Despite these limitations, the current study reflects the largest set of data to date on the employment outcomes of university graduates with LD. Understanding what happens to adults with LD in the post-school years has importance for understanding and refining transition practices and policy. The many positive employment outcomes of the graduates in these data reinforce the importance of postsecondary education for students with LD. In turn, they emphasize the importance of careful transition planning at the middle and secondary school levels to prepare students for college-level work. The importance of best practices in early transition planning is even more important under the reauthorized IDEA 2004, which raises the age of transition planning from 14 to 16. Losing two years of planning and preparation may have implications that last a lifetime. Despite the mandates of the law, the importance of early transition planning should not be overlooked, however.

Followup studies should be conducted periodically to gauge the status of college graduates with LD as the national economy changes, or as the status of educational practice and relevant legislation changes. More optimally, research in this area will continue and be expanded to samples from a broader range of institutions (e.g., community colleges, smaller colleges) and from other cohorts of graduates with disabilities, and should be supplemented with in-depth case studies that fully capture the workplace experiences of graduates. Such efforts would continue to solidify the research base in an effort to improve best practices in transition for both secondary and postsecondary programs. Vast amounts of research are funded, conducted, and published annually on instructional practices and interventions for children with LD in such areas as reading, writing, and mathematics. This should be the case. However, there is a risk of jeopardizing or minimizing the impact of these interventions and the gains they bring if decisions related to transition planning cannot be based on empirical data.

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