

# College Students with Learning Disabilities Speak Out: What It Takes to Be Successful in Postsecondary Education

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## Abstract

*The purpose of this study was to identify variables that facilitate the academic success of college students with learning disabilities. Twenty recent college graduates with documented learning disabilities were interviewed using a semi-structured format. An analysis of the transcripts of the interviews revealed eight common themes, many of which were consistent with previous research. The themes included (a) the importance of knowledge of one's disability and concomitant accommodations; (b) limited explanation of results of psychoeducational evaluations; (c) a dearth of information relating to disability law; (d) the importance of self-advocacy; (e) the significance of accommodations and course alternatives; (f) the importance of support systems; (g) the recognition of the need to persevere under challenging circumstances; and (h) the positive effects of goal-setting. Implications of these results are discussed in relation to characteristics of educational programming that facilitate success among students with specific learning disabilities in postsecondary settings.*

Erin sat in her graduation regalia waiting patiently for her name to be called to receive her long-awaited college diploma. In many ways, the thoughts going through her mind were identical to those of her classmates: excitement, relief, pride, and an eager anticipation of the future. However, Erin was also experiencing many emotions that only her fellow students with learning disabilities could understand. She vividly recalled the frustration she had felt when making the transition from a high school system where all of her educational programming was prescribed by law and structured for her by teachers and parents, to the college setting where SHE was responsible for advocating for herself. She recalled the anger she had felt toward a high school experience that failed to prepare her for the strange new world college presented for a student with a learning disability. No teacher, counselor, or psychologist had ever discussed her specific weaknesses with her. Nor had school personnel described the laws that apply to students with disabilities after they leave the structured confines of public education. Furthermore, Erin hadn't had a clue as to the academic accommodations available to her. She remembered hearing about the section of Spanish modified for students with learning disabilities only AFTER she had failed the course in her first semester as a freshman. She also remembered how her trip to Disability Services changed her life. Gradually, with the assistance of DS, Erin learned the art of self-determination. Armed with proper documentation and support from DS personnel, Erin gradually

gained the confidence she needed to discuss her learning needs with professors and request legitimate accommodations. Erin also remembered the unwavering support from her family and her friends in the LD support group. But, most of all, Erin realized that her success was due to her perseverance, reflected in her willingness to spend large amounts of time studying, often while other students were socializing.

Suddenly, Erin heard her name called. Her thoughts immediately reverted back to the commencement ceremony. She proudly accepted her diploma, waved to her family in the audience, and walked off of the stage, confident in the belief that the skills, knowledge, and self-determination she had acquired in college would serve her well in the future.

Erin's story is a common one. College-bound students with learning disabilities (LD) are frequently unprepared for the challenges presented by higher education. Murray, Goldstein, Nourse, and Edgar (2000), for example, found that 80% of students with LD enrolled in postsecondary education had not graduated five years after completing high school. This compared to a nongraduation rate for students without LD of only 56%.

Despite the problems students with LD are likely to encounter in postsecondary programs, the number of students with learning disabilities enrolled in postsecondary institutions has increased dramatically over the past 25

years. From 1976 to 1990 the number of freshmen with documented learning disabilities entering postsecondary programs increased tenfold (Norlander, Shaw, & McGuire, 1990). Of the 9% of undergraduate postsecondary students reporting disabilities in 1996, students with learning disabilities accounted for approximately 35% - by far the most populous disability category (National Center for Education Statistics, 1996). As of the 1997-1998 academic year, an estimated 428,280 students with disabilities were enrolled in colleges in this country, almost half of them diagnosed as LD (National Center for Education Statistics, 1999).

Perhaps the greatest impetus for the increased focus on adults with LD and subsequent increases in college enrollments came in the form of the 1988 definition of LD proposed and adopted by the National Joint Committee for Learning Disabilities (NJCLD, 1999). Among other changes to the accepted definition of LD, the NJCLD definition focused on learning disabilities as a lifespan issue. This increased focus on late adolescents and adults with LD was also evident in dramatic increase in the number of articles appearing in the professional literature dealing with issues relevant to this population (Patton & Polloway, 1996).

In addition to the acknowledgment by professionals that learning disabilities typically presented life-long obstacles, other factors contributing to the rise in the number of students with LD enrolling in postsecondary education include (a) adherence to the legal mandates of Section 504 of the Rehabilitation Act of 1973, which require "reasonable accommodations" for students with disabilities; (b) a dramatic increase in compensatory technologies such as powerful word processing programs; and (c) transitions plans written into Individualized Education Programs (IEPs) in high school as a required by reauthorizations of the Individuals with Disabilities Education Act (IDEA).

#### *Characteristics of Older Adolescent and Adult Learners with LD*

Our knowledge of the characteristics of older adolescents and adults with LD indicates that they are more likely than their nondisabled peers to experience problems successfully navigating higher education. We know, for example, that, similar to children with LD, adolescents and adults with LD are more likely than their non disabled peers to demonstrate (a) problems with study skills such as test-taking and preparation, note-taking, and listening comprehension; (b) difficulty organizing themselves for learning and life tasks; (c) social skill deficits; (d) academic deficits in reading, written expression, and mathematics; (e) low self-esteem; and (f) higher

school dropout rates (deBettencourt, Zigmond, & Thornton, 1989; Deshler & Lenz, 1989; Kish, 1991; Mercer, 1997; Omizo & Omizo, 1988; White, 1992). Increased demands placed on older adolescents and adults, such as employment and postsecondary education, typically make learning disabilities more complex to diagnose and treat (Mercer, 1997; Skinner, 1998; Polloway, Smith, & Patton, 1984).

#### *Characteristics of "Successful" People with LD*

*General adjustment.* Although much of the existing professional literature describes the weaknesses of students with disabilities, several investigators have focused on describing factors associated with the life, vocational, and academic adjustment of this population. Minskoff (1994), for example, identified several factors that are predictive of successful adjustment for people with LD. These included (a) severity of the LD; (b) degree of support from family; (c) socioeconomic status (SES); (d) completion of high school; (e) quality of education at elementary and secondary levels; and (f) quality of vocational and postsecondary experiences.

Working with "highly successful" people with LD (based on income, job classification, educational level, prominence in one's field, and job satisfaction), Ginsberg, Gerber, and Reiff (1994) found that, compared to the "moderately" successful group, "highly successful" people with LD demonstrated an ability to take control of their lives. They noted, for example, that highly successful people with LD expressed a strong desire to excel, were goal oriented, and were able to reconceptualize their learning problems into something positive and functional. External manifestations of these internal decisions included (a) persistence; (b) the ability to choose occupations in which they could capitalize on their strengths and minimize their learning problems; (c) "learned creativity" — or, the ability to devise novel means to an end; and (d) the ability and willingness to seek out and use supportive people.

*Adjustment to postsecondary settings.* Several studies have systematically investigated those characteristics of students with LD that are predictive of success specifically in postsecondary settings. Hartzell and Compton (1984), for example, conducted a follow-up study of 114 students with LD ages 15 to 27 years. People in their sample who graduated from college reported strong family support, the availability of individualized tutoring, and above-average verbal IQ. Graduates in this study also showed signs of "mild" to "moderate" learning disabilities, as opposed to "severe" learning problems.

Analyzing data from 107 students with LD who entered college between 1980 and 1988, Vogel, Hruby, and Adelman (1993) compared the characteristics of students who successfully completed their undergraduate degrees with students who had been dismissed or who had dropped out due to academic failure. Results indicated that, compared to nongraduates, graduates (a) were less likely to be placed in a self-contained classroom during elementary, middle, and high school; (b) had completed almost twice as many English courses; and (c) were more likely to have received private tutoring that lasted for an extended time period.

Greenbaum, Graham, and Scales (1995) investigated the status of 49 students with LD who attended the University of Maryland between 1980 and 1992. Results indicated several factors that the authors felt were essential to the success of these students, including (a) mild to moderate (versus severe) learning problems; (b) above-average IQ; (c) higher-than-average socioeconomic status (SES); (d) awareness of the nature of their disabilities; (e) motivation and perseverance; and (e) support and guidance from "significant others," including teachers, family, friends, and college faculty.

Analyzing the quantitative data from a 20-year longitudinal study of individuals with LD, Raskind, Goldberg, Higgins, and Herman (1999) identified six personal attitudes and behaviors that were good predictors of success. These include self-awareness, perseverance, proactivity, emotional stability, goal setting, and the use of support systems. Factors with considerably less predictive power included IQ, academic achievement, life stressors, age, gender, SES, and ethnicity.

Based on anecdotal reports and personal life stories, Smith, Dowdy, Polloway, and Blalock (1997) identified nine "strategies" frequently used by adults with LD to increase the probability of successful outcomes. These included:

1. proactiveness or taking control of one's life;
2. distribution of challenges over time (time management);
3. acceptance of one's learning disability and developing an understanding of both strengths and weaknesses;
4. development of a positive outlook on life;
5. realistic goal setting and goal-directedness;
6. positive stress reduction strategies;
7. overall perseverance;
8. ability to recruit, accept, use, and acknowledge support from others; and
9. ability to apply these attributes at the right time, in the right circumstances. (p. 263)

Although determined through varying research methodologies, the literature summarized above noted similarities in variables that appear to be predictive of successful adjustment to life, and, more specifically, college for students with LD. Briefly, successful students were likely to be self-directed and goal-oriented, aware of their learning strengths and weaknesses, willing to persevere under adverse conditions, and possess a strong system of family and/or professional support. The purpose of the present study was to add to this literature by further identifying variables that facilitate the academic success of college students with LD.

## Method

### *Participants*

Purposive sampling was used to select participants for this study. Purposive sampling, also referred to as "judgment sampling," requires the researcher to select a small sample of participants for in-depth study based on experience and knowledge of the group to be sampled (Gary & Airasian, 2003). The qualitative nature of this research (i.e., the use of extensive interviews and subsequent transcriptions) precluded the use of random sampling and the resulting large number of participants. In consultation with the director of Disability Services at the participating institution, 30 students who graduated between 1996 and 2001, were formally identified as LD, and had received assistance through Disability Services were identified. The goal was to obtain interviews from 20 participants, but 30 were identified to allow for lack of availability. As anticipated, availability issues precluded some graduates from participating, resulting in the desired sample size of 20. While random sampling was not used, an attempt was made during the selection process to choose a diverse group of participants in terms of gender, ethnicity, and academic achievement (i.e., GPA).

All 20 participants had graduated from the same mid-sized liberal arts college located in the southeastern United States. Most participants (i.e., 13) had completed their degrees during the 2000 or 2001 academic years. The other six participants had graduated between 1996 and 1999. Interviews were conducted during the 2001-2002 academic year. Ten males and 10 females participated in the study. The median age for participants was 26.2, with a range from 22 to 54. Ethnically, the group consisted of 14 Caucasians, 4 African Americans, 1 Asian/Pacific Islander, and 1 non-resident alien. Their mean GPA was 2.57. Participants graduated in a variety of disciplines, with business being the most popular and communications coming in a close second.

Twelve of the participants were identified as having LD during their college experience, although they all reported struggling throughout their elementary and postsecondary school years. Three students were identified in high school, two in middle school, and three were officially diagnosed as LD during their elementary years. Fifteen of the 20 participants received course alternatives during their college experiences. Specifically, 13 received alternatives to the language requirement and 5 qualified for and completed alternative math courses. Finally, all 20 students indicated that they were

deemed eligible for and had participated in various accommodations. Accommodations received by participants included:

1. extended time for testing - 17 students
2. separate testing facility - 12 students
3. alternate testing format (e.g., oral versus written) - 3 students
4. books on tape - 3 students
5. notetaker - 2 students
6. reader - 1 student
7. "other" - 3 students

### *Instrumentation*

Two instruments were used. First, a structured, written, pre-interview questionnaire was developed to collect preliminary information on each participant prior to the extended verbal interview. Information gathered with this instrument included gender, ethnicity, graduation information, time of LD diagnosis, course alternatives, and academic accommodations. The primary data

collection tool for the study was an extensive, semi-structured interview, consisting of 12 questions asked of all students interviewed (see Table 1).

Before data collection, pilot versions of both instruments were developed. Questions on the written pre-interview questionnaire were designed to elicit basic background information from each participant. The pilot version of the questionnaire was revised based on feed-

**Table 2**

*Common Themes\* Identified in the Transcripts of the 20 Students Interviewed*

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Code	Theme	Operational Definition
KN	Knowledge of disability and Concomitant Accommodations	Statements that describe the nature of a disability and/or provide insight into strategies that serve to overcome learning differences.
EPE	Explanation of Psycho-Education Evaluation	Statements that describe attempts by educational or psychological professionals to explain or interpret results of psychoeducational evaluations.
KDL	Knowledge of Disability Law	Statements in which the student makes reference to, implicitly or explicitly, public law that affects students in postsecondary settings.
SA	Self-Advocacy	Statements that document student experiences communicating their rights or needs to people in positions of authority or making decisions and/or acting independently.
ACA	Accommodations and Course Alternatives	Statements that describe student experiences with or opinions about accommodations or course alternatives.
SS	Support System(s)	Statements describing student experiences with or opinions about people or agencies who have provided educational or other kinds of support.
PER	Perseverance	Statements that describe the amount of time or effort exerted by students to complete educational or life tasks.
GS	Goal Setting	Statements that describe students' future educational, vocational or personal plans.

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\* Identified by 10 or more students.

back from the director of Disability Services, two graduate students, and input from the Institutional Review Board.

The semi-structured interview instrument, the main tool for data collection used during the interviews, was developed using similar steps. Based on knowledge of the field, the existing literature, and discussions with personnel who work with college students with LD, the investigator developed an initial set of questions. This instrument was then administered to the graduate students who provided feedback on the pre-interview questionnaire. Changes were made in the instrument (e.g., wording, order of questions, length of questions, etc.) based on their feedback. Additional revisions were based on feedback from the director of Disability Services and the Institutional Review Board.

### *Design and Procedures*

After obtaining informed consent from participants, a written pre-interview questionnaire and an informed consent form were mailed to them. When participants returned the questionnaire and informed consent form, the investigator contacted them to arrange a time and date for the interview. Most interviews took place within one week after receipt of the pre-interview questionnaires. Five interviews were conducted face-to-face. Due to the relocation of many of the participants, 15 interviews were completed by telephone. The investigator conducted all interviews. All interviews were tape-recorded and later transcribed. All participants were asked the questions delineated previously. In addition, the researcher frequently asked follow-up questions and requested elaboration on specific statements. The average interview lasted 34.5 minutes, with a range from 23.6 to 45.8 minutes.

After the initial analysis completed by the investigator, 5 of the 20 transcripts were randomly selected and evaluated by a graduate student familiar with the project to provide an estimate of interrater reliability. The second reader was provided with the major themes and associated definitions initially identified by the investigator (see Table 2). She was asked to read the five transcripts and to identify themes from the table.

Coefficients of reliability ranged from a low of .82 to a high of 1.00. The mean coefficient across all five reliability checks was .91

## Results and Discussion

The 20 transcripts were analyzed based on procedures developed by Strauss and Corbin (1990) for evaluating qualitative data. Specifically, the constant-

comparison method was used. First, potential common themes were identified and refined during multiple readings of the transcripts by the investigator. These themes were labeled and operationally defined. For example, “knowledge of disability and concomitant accommodations” was a theme initially identified based on the first reading of the transcripts. This was defined as: “Statements that describe the nature of a disability and/or provide insight into strategies that serve to overcome learning differences.” During future readings, statements that fit this definition were coded as “KN” on the transcripts. The same procedure was followed for other potential “themes” identified during the initial reading. If a minimum of 10 students provided statements consistent with a specific definition and code, it was considered a “common theme” for data analysis purposes. Several questions, although resulting in interesting information, did not produce “common themes” as sought in the present study. For example, Question 1 (see Table 1) produced a wide range of responses concerning specific disabilities. However, participants’ responses to this question were typically very short and diverse, providing information that was not common across multiple participants. Participants responded to Questions 5, 6, and 7 in a similarly brief and diverse manner.

### *Themes*

As stated previously, analysis of the transcripts revealed eight common themes. These themes and their relationship to previous research are described in the remainder of this article.

*Theme #1: Knowledge of disability and concomitant accommodations.* Seventeen of the 20 students interviewed discussed the disability-related knowledge they had gained over their academic careers and strategies they had adopted to circumvent these problems. For example, a student dually diagnosed with a learning disability and attention deficit hyperactive disorder (ADHD) commented:

I’ve always had tremendous problems remembering information — from notes and textbooks. I had to come up with my own study scheme in which I used various colors - highlighted colors - to outline things. I mean, my notebooks were very outlined and detailed. The only way that I could remember is to associate it with a color. For example, if I took a test, I would remember that green was a major topic and blue was a subtopic and if it was an important issue within that subtopic it would be orange. (Interview #17)

Comments from other students consistently indicated that, although they might not be able to put an official label on their limitations (e.g., short-term memory deficit), they were well aware of them and had developed compensatory strategies. Samples of these comments include:

I retyped the italics in my book or boldface items and the concepts that went with them. I'm a slow typer so it really banged it in. Typing out things from the books or my notes allowed me to make my own study guide which really worked for me. I mean, studying for tests has always been difficult for me. But, I've learn little tricks that allow me to do better. (Interview #4)

Concentration — in class and when I'm studying — is a big problem for me. It always has been. In class, I sat right in front. I took my time, trying not to feel rushed and using a calculator whenever I needed it for math. I also used a dictionary or computer when I needed it. I try to do everything that is available. At home when I studied I never had other noise. I took a lot of notes on my reading and I rewrote them several times. It was a lot of repetition. But, rewriting my notes seemed to really help me remember. (Interview #9)

I was an obsessive-compulsive studier. I had to learn to manage my time. I would make little like schedules for myself — breaking it down to: "Ok, you get five minutes to eat between 5:10 and 5:15." I developed very good organizational skills growing up and I was able to use that in college with my study techniques. I'd highlight the chapters of the book and then go through and take notes on that. I was very into notetaking. I used notecards, too. They were great tools for organizing my studying. I put as much information down on a notecard as I could. That was very helpful. (Interview #2).

It was clear from the comments from the sample of 20 students with LD who had successfully graduated from college that they were aware of their learning weaknesses and had developed strategies for minimizing them. These results are corroborated by findings of previous studies that emphasized the importance of student self-awareness of the nature of their disability as a precondition for academic success (Greenbaum et al., 1995; Raskind et al., 1999). Unfortunately, many high school graduates with LD enter postsecondary institutions with very little knowledge of their disability and its potential

effects on their learning (Aune, 1991; Brinckerhoff, Shaw, & McGuire, 1993; Dalke & Schmitt, 1987; Skinner, 1998). Students who lack an awareness of their specific strengths and weaknesses and matching compensatory strategies are more likely to experience academic failure.

*Theme #2: Explanation of psychoeducational evaluation.* In order for students with LD to develop an awareness of their disability, as described above, results of psychoeducational evaluations should be clearly explained to them, along with implications for potential compensatory strategies. Twelve of the 20 students in the study commented on the follow-up to the psychoeducational evaluation they experienced. Representative samples of comments include:

Oh, yes, I have the report. It is a huge long, long, long report — like 10 pages. But, I don't remember ever getting an explanation of the results from the psychologist. He did recommend that I go see a doctor to get medication. (Interview #4)

He did talk with me briefly, but I can't remember what all he told me. It was all kind of like a blur. My mom was there, too. I do have a copy of the report. But, I have not really talked about it with anyone or understand it. (Interview #12)

She sent the information to my family. But, I don't recall if we actually went into her office again and she talked to us about the results. I don't think she did that. She did send a copy of the report to my parents. (Interview #16)

Yes, she did. She had a conference with just me and with my parents. She explained the testing — what she found out — so it made my problems make sense to me. It answered some questions. Like: "Oh... that's why I have difficulty with math and remembering numbers — I can't remember a sequence of numbers. They all get jumbled." (Interview #8)

Of the 12 participants who made substantive comments about this topic, nine responses were similar to the first three cited above. That is, they remembered the experiences but had very little recollection of a detailed explanation of the results by the examining psychologist. Three of the students reported positive experiences with the debriefing by the psychologist, as illustrated by the statement from Interview #8. Although memory

may have played a role in how much information participants were able to recall, it is important to note that many of these participants were initially identified as LD in high school or college.

As emphasized previously, it is common for students with LD to enter the ranks of college students with very little knowledge of their learning problems (Aune, 1991; Brinckerhoff et al., 1993; Dalke & Schmitt, 1987; Skinner, 1998). Based on data from the present study, one likely reason for this dearth of information may well be the lack of time and effort devoted to explaining the results of psychoeducational evaluations. Students who lack this information may be more likely to experience failure. Also, they may be less likely to develop the ability to advocate for themselves; a skill essential to success in higher education.

*Theme #3: Knowledge of disability law.* All participants were asked the question: What federal laws are you familiar with that apply to people with learning disabilities? All 20 participants responded to this query. Typical responses included:

I have no idea. (Interview #15)

There was a law passed in the 1990s, I think. That law stated that we had to have some accommodations. (Interview #5)

The only law I know of is the Disability Act of 1976. I'm not sure what it says. But, I think that it applies to college — and high school, too. (Interview #2)

None of the participants were aware of their specific rights or responsibilities under Section 504 or the Americans with Disabilities Act (ADA). Considered in the context of students leaving a relatively controlled public school system, where student rights and educational programming are systematically taken care of by educators and parents, and entering a setting in which students must self-initiate the accommodation process, this almost total lack of knowledge of the legal underpinnings of disability services in higher education is alarming. The issue of self-advocacy becomes relevant here. That is, students are severely limited in their ability to advocate for themselves if they are not aware of their legal rights and, more important, responsibilities.

*Theme #4: Importance of self-advocacy.* Skinner (1998) describes students as self-advocates when they (a) understand their disability, (b) are aware of their legal rights, and (c) can competently and tactfully communicate their rights and needs to those in positions of

authority. Similarly, Ginsberg et al. (1994) defined self-advocacy as the ability to find and make appropriate use of supportive people. Self-determination is a broader and more contemporary term that includes self-advocacy. Schloss, Alper, and Jayne (1993) defined self-determination as “the ability of a person to consider options and make appropriate choices ....” (p. 215). Whatever term or definition is used, we know that the ability to be proactive by taking control over one’s life and learning is essential to the success of people with learning disabilities (Raskind et al., 1999; Smith et al., 1997).

Eleven of the 20 students interviewed made comments that were relevant to their experiences with self-advocacy. All of these were related to approaching instructors for assistance, as exemplified below.

At first, I was petrified of the thought of asking a professor for accommodations — even if I had my letter from (Disability Services). I know that they thought I was just lazy. I got a little better at this as a junior and senior. Most professors were very helpful. (Interview #3)

I worked at becoming comfortable asking professors for help. There were some that said “no” — but, most were very helpful. I have a diplomatic type of personality. I don’t know if this is from my learning disability or what. I was comfortable asking professors for, like, untimed tests. Some of my friends in the program were afraid to approach professors. It did not bother me. (Interview #9)

My professors helped me a lot. I would go to them a lot. I would bug them constantly whenever I had a question or wanted to look over a paper or something like that. I guess that was another thing that I figured out that I needed to do — going to my professors and using them as much as possible. (Interview #14)

Reading these comments in light of Skinner’s (1998) definition of self-advocacy (i.e., knowledge of disability, awareness of legal rights, and the ability to competently and tactfully communicate rights and needs to those in positions of authority), students interviewed for this study reported adeptness at the third aspect of self-advocacy. That is, they expressed confidence in approaching instructors to request appropriate accommodations related to their specific learning disability. In turn, most students indicated that professors, with a few exceptions, were receptive to their requests. Related to “knowledge

of disability,” as mentioned previously, participants indicated a good awareness of strengths and limitations related to their LD. However, as suggested by the responses summarized in Theme #3, participants expressed virtually no knowledge of their legal rights and responsibilities. Thus, the successful students with LD in this study appeared to demonstrate competency in two aspects of Skinner’s definition of self-advocacy (i.e., knowledge of disability and communication of rights and needs to authority figures). However, they lacked the third component — an awareness of their legal rights.

*Theme #5: Importance of accommodations and course alternatives.* With proper documentation, students with disabilities at the college from which the participants in this study had graduated were permitted to request accommodations (e.g., extra time on examinations, note-takers, etc.) and course alternatives to the mathematics and foreign language requirements. As indicated earlier, most of the participants had at least one course alternative and all had received accommodations. Without exception, comments from participants indicated the critical importance of these academic adjustments to their success in college. Examples of comments include:

I’ve had huge problems with learning a foreign language ever since high school. The only way I even got credit for my high school Spanish classes was through a lot of hard work, tutors, and teachers who were very generous with my grades. There is no way I could have completed the language requirement. And, I had pretty good grades in my other classes. The only course I ever failed (in college) was my first semester of Spanish. (Interview #10)

I actually thought that the logic course I took in place of one of my math courses was harder than math. But, looking back now, it probably allowed me to graduate. I failed two math courses before I finally applied for (disability services). The psychologist said that I had a disability in math. In a way, I was glad to hear her say that. It made me realize that I was not stupid in math ... that I had a real problem. (Interview #11)

I was permitted to take extra time on tests — twice the time other students had. I also took tests in (the disability services office). It was sometimes a hassle to schedule and I know some of my professors did not like it. But, it was the only way I could really put down what I knew

on a test. It made a big difference in my grades in many classes. I took tests in the classroom with regular time limits in some classes. I tried to do that as much as I could. (Interview #16)

My handwriting is terrible. I’ve always had a really hard time taking notes in class. I just couldn’t keep up with the professor. I tried using a laptop. But, I had more problems with this. I mean, problems keeping up. I ended up getting a notetaker. She gave me a copy of her notes. I used her notes to fill in the gaps in mine. It allowed me to take more complete notes. It also helped my grade in several classes. (Interview #20)

These responses were typical of participants in this study. All were very positive about their experiences with course alternatives and accommodations, and many felt that they meant the difference between success and failure in their postsecondary experiences. Research evidence corroborates the participants’ perceptions. For example, in his descriptive study of over 700 successful (i.e., graduates) and unsuccessful (i.e., nongraduates) college students with LD, Skinner (1999) found that students who qualified for and took advantage of course alternatives to math and/or foreign language were significantly more likely to graduate compared to students who did not participate in alternative courses.

*Theme #6: Importance of support systems.* All 20 participants emphasized the importance of support from family, friends, instructors, and/or academic support personnel (e.g., Disability Services, College Skills Lab, etc.) to their success in college. Examples of typical comments included:

My family was my main source of encouragement. Everyone in my family has a degree in something. It was just expected. My parents provided tutoring throughout my school years. They made it clear that they expected me to graduate, but, not in a pressure sort of way. They were always there to help — very supportive. (Interview #19)

For me, it was definitely my professors ... and (Disability Services). But, for me, for my kind of disability, it was nice to go and talk to the professors one-on-one and have them explain it to me. At times it was frustrating, of course — trying to get to see them. But, most were there a lot ... when you needed them. I lucked out. I

had amazing professors my four years of college. They were friendly and very willing to be there for me. (Interview #6)

The College Skills Lab was also very important to me. The Writing Lab especially got me through some very difficult assignments. They were also very friendly. It was also nice to know that students getting help there were not just LD like me. ALL students came here for help. That was kind of comforting feeling for me — very different from getting special permission to take extra time on tests. (Interview #2)

I made friends with a few students in the same situation as I am — having a learning disability. It was great for support — and my grades! We organized “study parties” on the weekends. We were able to have some fun while working at the same time. (Interview #10)

The positive effects of strong systems of support for students with LD are well documented in the literature. The longitudinal study conducted by Raskind et al. (1999), for example, documented the use of support systems as one of the salient characteristics of successful adults with LD. Similarly, in their study of “highly successful” people with LD, Ginsberg et al. (1984) emphasized the ability and willingness to seek out and use supportive people, and Greenbaum, et al. (1995) focused on the importance of support and guidance from “significant others,” including teachers, family, and instructors. Finally, Hartzell and Compton (1994) also emphasized the positive relationship between family support and success for people with LD.

*Theme #7: Importance of perseverance.* Seventeen of the 20 participants interviewed emphasized the hard work involved in their success in academia. Many also noted that the long hours they put in studying were often at the expense of social experiences and relationships. Sample statements relating to perseverance include:

I wish that I could talk to the new students in the program and let them know that they will have to work a lot harder than their classmates if they are going to make it. They really need to know this if they are going to be successful. For every one hour my friends worked, I worked at least two or three hours. I guess I just came to accept that. But, it was hard. (Interview #11)

If I were talking to students in high school with LD thinking about going to college, I’d tell them to get used to working harder than many of their friends. Just accept it and don’t let it bother you — if that’s possible. It starts in high school and continues on into college. It bothered me a lot at first — they would be partying on a Thursday night and I was working. But, I’ve seen the good consequences and it doesn’t bother me as much anymore. (Interview #5)

As was true for the effects of support systems, the existing literature corroborates the importance of perseverance to the probability of success for student with LD (e.g., Ginsberg et al., 1994; Greenbaum et al., 1995; Raskind et al., 1999). It is important for students with LD in postsecondary programs to acknowledge that, despite accommodations and course alternatives, they will ultimately have to spend more time for the same academic outcome as compared to their peers without LD.

*Theme #8: Goal setting.* Sixteen of the 20 study participants indicated that they set goals for themselves and consciously planned their lives to accomplish these challenges. For many in the sample, the major objective of concern was completing a college education. Typical comments that reflected goal setting included:

My parents helped me to make decisions about things that I wanted to do in life. We had a lot of talks about this. In fact, when I was in high school, they had me list the five major things I wanted to accomplish by the time I was 25. That was hard. But, it seemed to help me get focused. One of the items on the list was to graduate from college. Well, I didn’t do it at 22 like I predicted, but I got it done ... I think I still have that list somewhere. (Interview #13)

I just always knew that I was going to college and was going to graduate. I really never even thought of not doing it. Even with my problems with reading and writing, I think I’ve done a good job in school — all the way through. Part of my success in school, I think, is that I’ve always had a plan. I’m sure that some of this comes from my family. My brothers have both done really well in college. But, a lot of it is just me. I am determined. That really helps. (Interview #20)

In a broader sense, the students' goal orientation might best be interpreted in the context of proactivity. Ginsberg et al. (1994) and Smith et al. (1997) identified proactivity as a common feature among successful adults with LD. That is, successful people with LD appear to take "control" of their lives. They act in purposeful ways that increase the probability that they will be successful. Setting goals is one manifestation of this control.

### Summary and Conclusion

The semi-structured interviews conducted in the present study indicated eight commonalities among the responses of participating college graduates with LD. Specifically, many participants indicated a sound knowledge of their specific disability(ies) and had learned to request or create learning accommodations and adaptations they needed to be successful. However, responses also suggested that the disability-specific knowledge they had gained was not due to a thorough explanation and interpretation of assessment results. To the contrary, most participants indicated that very little was done by examining psychologists to translate the results of often times expensive and time-consuming evaluations into information usable for educational programming. For students who received them, academic accommodations and course alternatives were perceived as extremely important contributors to their success. Most of the 20 participants emphasized the importance of self-advocacy and described how they had grown in this domain. However, virtually no respondent revealed a working knowledge of legislation related to disability programming in higher education — a likely prerequisite for successful self-advocacy in higher education settings (e.g., Skinner, 1998). Finally, strong support systems, perseverance, and the ability to set goals, all of which are supported by previous research, were commonly described as playing major roles in participants' ability to successfully navigate higher education settings.

Results of this study, combined with previous research, clearly delineate factors that are predictive of success in postsecondary education for students with specific learning disabilities. Nevertheless, facilitation of these abilities and characteristics is often not a high priority for high schools preparing college-bound students with LD or for colleges working with freshmen who have identified themselves as having LD. College and high school preparatory curricula for students with LD transitioning into postsecondary settings should facilitate self-advocacy, impart knowledge concerning the legal aspects of disability, provide competence in the use

of learning strategies, teach social skills for working with peers and professors, and provide students with the knowledge necessary to interpret and use assessment results. Although few in number, materials and programs do exist that are designed to facilitate this transition. In their book *Postsecondary Education and Transition for Students with Learning Disabilities*, for example, Brinckerhoff, McGuire, and Shaw (2002) provide students, teachers, and parents with a detailed description of the knowledge and competencies needed by students with LD if they are to be successful in postsecondary environments. The book provides an extremely useful document titled: "A Timetable for Transition Planning for Students with Learning Disabilities and ADHD" — an extensive and detailed task analysis of what learners with LD must do, starting in Grade 8 and proceeding through Grade 12, to prepare themselves for postsecondary success.

Some high schools have created programs designed to prepare students with LD for postsecondary educational pursuits. For example, Spartanburg (South Carolina) County School District No. 7, as a part of the School/Community Integration and Transition Grant funded by the South Carolina Developmental Disabilities Council, created *I Can Do This! An Instructional Unit in Self-Advocacy for Students with Disabilities* (Bresette, Green, Moore, Palmer, Prysock, Walker, & Whitaker, 1994). The comprehensive *I Can Do This* materials prepare students for success in postsecondary settings. Specifically, the program provides detailed lesson plans that include objectives, materials, procedures, and evaluation strategies. The program also includes a comprehensive packet for students titled: *Handbook for Transition into Postsecondary Schools* (Whitaker, 1994). Although growing in number, more of these preparatory programs are needed on the high school and early college levels.

At the inception of this article you were introduced to Erin, a student with a learning disability reflecting on her college experiences as she was about to graduate. Erin's story represents a composite of the stories of many students with LD who are attempting to successfully find their way through higher education while dealing with the challenges presented by learning differently from many of their peers. High school and college preparatory programs, grounded firmly on research that documents the correlates of success in higher education for students with LD, can be the catalyst to increasing the number of students with LD who graduate from college.

## Limitations and Need for Additional Research

As is true with all research, the present study has limitations. First, data were collected from a sample of students attending a medium-size liberal arts institution where the student-professor ratio is fairly small and the faculty are informed of their responsibilities under the Americans with Disabilities Act and Section 504. As such, results should be generalized with caution to students in other settings. Second, 12 of the 20 students involved in the study were not identified as LD until early in their postsecondary careers. Future studies should focus on students identified at earlier ages and involve a variety of postsecondary environments. Third, studies should be conducted that are more quantitative in nature and use randomized procedures for sample selection. The nonrandom, purposive sampling technique used in the present study, although appropriate for this primarily qualitative investigation in which in-depth information from a select group of participants was the goal, is limited in its ability to generalize to larger populations. Fourth, only “successful” students were interviewed. Additional information can be gained in future studies if “unsuccessful” students are included in the sample. Students who have not experienced successful outcomes in postsecondary settings are in a better position to tell us what *doesn't* work. Fifth, the data analysis could have been improved with the addition of at least one more reader during the examination of the transcripts for common themes. Although the high reliability figures provided confidence in the consistency of the analysis in relation to the themes identified by the investigator, another reader would likely have identified additional relevant information. Finally, several interview questions were unsuccessful in eliciting relevant information from participants. Validation procedures did not highlight the limitations of these questions. Additional information may have been elicited from participants had all questions prompted comprehensive responses.

## A Final Word

Although increasing in quality and quantity, the body of literature relating to adult learners with LD remains limited. We are just now uncovering correlates of success in postsecondary settings for students with LD. Additional studies, both quantitative and qualitative, are required to more fully understand the characteristics of this unique group of learners and to delineate procedures likely to facilitate their positive academic outcomes.

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