

Self-Disclosure Decisions of University Students with Learning Disabilities

Emma V. Cole
Stephanie W. Cawthon
The University of Texas at Austin

Abstract

The number of students with learning disabilities (SLD) at postsecondary institutions has tripled over the past three decades and now constitutes about 11% of undergraduate students (Joyce & Rossen, 2006; U.S. Department of Education, 2013). Research has found that SLD who use accommodations at their postsecondary institution are more successful in university than those who do not (Denhart, 2008; Skinner, 1999). Yet, research suggests that SLD do not request accommodations at expected levels (Wagner, Newman, Cameto, Garza, & Levine, 2005). This study's purpose was to investigate differences in psychological attitudes and factors between SLD who disclose and who do not disclose. In addition, the study examined what factors SLDs consider when deciding if they will self-disclose their disability to university personnel. To achieve these goals, 31 undergraduate students with learning disabilities completed a mixed methods study comprised of quantitative scales (The Self-Determination Scale [SDS], the Attitudes Towards Requesting Accommodations Scale [ATRA], and the Revised Self-Disclosure Scale [RSDS]). Fifteen of these participants then were invited to complete a 30 minute semi-structured interview. Results indicate that the total scores on the ATRA, SDS, and the RSDS were significantly different between the groups of students who chose to disclose and those who did not. In addition, data from student interviews uncovered nine factors that students indicated influenced their decision to disclose and how deeply they disclosed.

Keywords: Learning Disability, accommodations, disclosure, university

Many high school graduates with disabilities enter postsecondary institutions at a disadvantage. On average, students with learning disabilities (SLD) have significantly more difficulty with academic skills including knowledge of how to prepare for and take academic tests, scanning of text material in order to locate specific answers, monitoring of errors in written material, taking notes from lectures, listening for comprehension, managing anxiety, processing of information, and self-testing than their peers without disabilities (Carlson & Alley, 1981; Reaser, Prevatt, Petscher, & Proctor, 2007). Despite this, 52.8% of students with disabilities (SWD) report that they want to attend a four-year postsecondary institution (Wagner, Newman, Cameto, Garza, & Levine, 2005).

In spite of their relative lack of preparation, SLD's attendance at postsecondary institutions has increased substantially over the past thirty years (Joyce & Rossen, 2006). In 2008, 11% of the national population of students attending postsecondary institutions in the United States identified as having a learning disability (U.S. Department of Education, 2013). There are many

reasons why SLD may be able to gain admittance to postsecondary institutions but have difficulty once they enroll. Many SLD have trouble navigating the postsecondary environment for reasons including challenging faculty interactions (e.g., difficulty accessing faculty and inadequate faculty knowledge about LD), difficulty receiving accurate information from their institution (e.g., information regarding scholarships and course requirements), poor self-advocacy (Field, Sarver, & Shaw, 2003), and academic difficulties (e.g., problems reading course materials and poor working memory; Mason & Mason, 2005).

In addition, the covert nature of learning disabilities may lead some SLD to struggle in obtaining a bachelor's degree. Learning disabilities are "hidden disabilities," so named because they "are less visible than other physical, sensory, or mobility impairments and thus may not be as readily apparent to the observer" (Wolf, 2001 pp. 387). For example, a professor or administrator is not able to recognize a SLD as she might a student affected by blindness or physical impairments. The conspicuousness of a

student's disability is important because, in the postsecondary education setting, accommodation access is built upon the concept of visibility. Postsecondary students with a disability must request accommodations for their disability from the disability services (DS) office on campus. Once these students receive accommodations through the university, they may be required to reveal their disability to their professors. It is only through disability self-disclosure that students can utilize course accommodations.

The accommodations protocol places SLD in a unique position. They are able to make a conscious decision to self-disclose their disability to their postsecondary institution, faculty, classmates, and university staff in order to receive and utilize accommodations or they can choose to remain hidden and forgo disability services. Even if SLD do decide to self-disclose their disability, they may still have difficulty using their accommodations in class, as research has shown that many professors' willingness to provide accommodations is based on how disabled a student appears (Rao & Gartin, 2003). Therefore, SLD who chose to reveal their disability to obtain institutional accommodations may still have difficulty utilizing those accommodations in a classroom setting (Rao & Gartin, 2003). It is thought that psychological factors and attitudes such as levels of self-determination, willingness to self-disclose, and attitudes towards accommodations may be elements that contribute to differences in SLD outcomes.

There are many examples of successful SLD, indicating that psychological elements can mitigate some of the obstacles SLD face in the postsecondary environment. For example, many of the characteristics possessed by academically successful postsecondary SLD are linked to high levels of self-determination (Sarver, 2000). Overall, SLD exhibit lower levels of self-determination and its characteristic components such as intrinsic motivation, competency, and autonomy compared to students without disabilities.

According to Deci and Chandler (1986), environments with little control and large amounts of freedom encourage the development of autonomy, supporting self-determination. However, students with LD often are given little freedom to control their environment within the educational setting (Yuen, 2001). This makes sense as SLD who are served within Special Education typically participate in more structured learning methods than their general education counterparts. This high level of control is not only seen within the classroom, but also at students' homes. Ryan and Grolnick (1986) found that the parents of children who were identified by teachers as having

learning problems were also more controlling than parents of children not identified as having learning issues. These higher levels of controlling behavior lead to lower self-esteem, intrinsic motivation, and less competence exhibited by students with learning difficulties (Ryan & Grolnick, 1986).

Students with learning disabilities also are at risk of having lower levels of perceived competence, another factor in cultivating self-determination. According to Izzo and Lamb (2002), students need to know they have control over their actions and that their efforts are effective to develop self-determination. Positive feedback has repeatedly been shown to increase intrinsic motivation (Ryan, 1982). Yet SLD may have great difficulty realizing the efforts of their work in the educational setting. They are also more likely to perceive that their academic outcomes are controlled by others (Grolnick & Ryan, 1990). It is not surprising, then, that research has shown that SLD are lower in perceived academic competence and intrinsic motivation than their nondisabled peer groups (Zisimopoulos & Galanaki, 2009). In fact, Deci, Hodges, Pierson, and Tomassone (1992) found that high school SLDs' perceived competence is a central predictor of adjustment to and achievement within the academic environment.

Overall, SLD generally show lower levels of autonomy, competence, as well as other internal motivation variables that contribute to self-determination than their general education counterparts. Yet, research has shown that SLD who are more internally motivated act autonomously, engage in self-regulating behavior, react to and respond to events in an empowered manner, and act in a self-realizing manner (Wehmeyer & Palmer, 2000). Students who exhibit these characteristics should be more likely to adjust well to the college educational and accommodation process. This is due, in part, to overcoming difficulties associated with obtaining accommodations such as self-disclosure. These students are theoretically better prepared to act independently and deliberately when navigating the accommodations process than their counterparts who have low levels of self-determination.

In order to utilize accommodations in many postsecondary institutions, SLD must self-disclose their disability during at least one point in time to the DS office. Many SLD must also disclose a second time to their professors to utilize course accommodations; however, in some institutions the second disclosure to faculty is performed automatically by DS staff with the student's permission. Often times self-disclosure is not limited to just these one or two time points, but happens multiple times throughout a student's postsecondary career. For example, SLD may have

to self-disclose to teaching assistants who proctor exams, Deans of Students and advisors when developing courses of study, registration staff if priority registration is an accommodation, and other students either passively (e.g., a classmate notices a student using the accommodation of a calculator on an exam) or actively (e.g., when working on group projects).

A SLD's willingness to self-disclose is another psychological element that has been identified as being important in obtaining accommodations. Surprisingly, only 40% of SWD who utilized special education services in secondary school disclose their disability to their college or university. Of these students, 88% then go on to receive services from their DS office (Newman, 2005). Lynch and Gussel (1996) hypothesized that when SLD make the decision to self-disclose their disability to their university they may, intentionally or not, weigh the benefits and drawbacks to their self-disclosure. Research has found that college SWD take four factors into account when deciding if they will request accommodations. These factors are: (a) academic integrity, defined as the attitudes associated with requesting accommodations (e.g., "I have never felt like I needed accommodations" and "accommodations are for academically weaker students" [Barnard-Brak, Sulak, Tate, & Lechtenberger, 2010, p. 35]); (b) disability disclosure, defined as attitudes towards disclosing a disability to obtain accommodations (e.g., "I don't like to admit that I have a disability" and "The cost of talking about my disability to get accommodations outweighs the benefits" [Barnard-Brak, Sulak, et al., 2010, p. 35]); (c) disability acceptance, or attitudes associated with personal acceptance of disability and use of accommodations (e.g., "I prefer to be treated as a non-disabled person" and "I don't think I am disabled enough to need accommodations" [Barnard-Brak, Sulak, et al., 2010, p. 35]), and (d) the accommodations process, or attitudes about requesting accommodations and navigating through the accommodations process (e.g., "I don't trust Student Services to keep my information confidential" and "I didn't know anything about disability accommodations when I started college" [Barnard-Brak, Sulak, et al., 2010, p. 35]).

According to Lynch and Gussel (1996), students who need accommodations to succeed in their postsecondary institutions should be willing to self-disclose their disability more readily than those students who feel that they do not need accommodations to be successful at their postsecondary institutions. Students with more negative views surrounding these four accommodations areas (i.e., higher scores on the Attitudes Towards Requesting Accommodation Scale [ATRA]), were less likely to request accommodations

and had poorer academic outcomes than SWD who had more favorable views of accommodations (i.e., scored lower on the ATRA; Barnard-Brak, Sulak, et al., 2010). Based on the above research, self-determination, willingness to disclose, and attitudes towards accommodation may work in concert to affect SLD's decisions to pursue accommodations.

Although research has investigated these psychological elements individually, they have never been quantitatively combined into disability disclosure research. Furthermore, these components have not been explored for SLD, particularly those in a top-ranked institution of higher education. The combination of the psychological factors and attitudes may help explain SLD decisions to disclose. Thus, the current study was designed to answer two questions:

1. Are there differences in levels of self-disclosure, self-determination, and attitudes towards requesting accommodations between two disclosure groups (i.e., no disclosure [Level One Disclosure] and disclosure to professors in the classroom setting [Level Three Disclosure])?

It was hypothesized that students who choose to obtain accommodations will have higher levels of the psychological attitudes and factors than those students who choose not to obtain accommodations; and

2. What self-identified factors do SLD think are important to consider when deciding if they will disclose to university personnel?

The second part of this study utilized qualitative interviews to determine student-identified factors that influence their self-disclosure decisions.

Methods

Study Participants

Study participants were 31 SLD who were enrolled at a large, ethnically diverse, public Research One University in the southern part of the United States (University). The University is highly selective in its student admissions process. Students who are in the top 10% of their class have automatic acceptance to a state university, including the study site. In 2008, 81% of students at the University were admitted under the 10% rule, with a mean GPA of 3.08 and mean SAT of 1219. Therefore, the study sample was composed of only high achieving SLD, or those who entered the University under their standard admissions process. Study participant demographics are shown in Table

1. Eligible SLDs were recruited at the beginning of three semesters, from the Educational Psychology Department Subject Pool at the University (i.e., students enrolled in Individual Learning Skills, Human Sexuality, Adolescent Development, or Introduction to Statistics courses). Subject pool participants represent diverse major areas of study including, but not limited to, government, fashion, education, kinesiology, communication, chemistry, nursing, computer science, etc. Students enrolled in a Subject Pool course must either participate in research studies or complete an alternate essay assignment to receive course credit.

Students who participated in this study met several eligibility criteria. First, participants were undergraduate students. Second, participants were at least sophomores and were matriculated at the University for at least one year (transfer students were excluded). Third, participants primarily had a diagnosed learning disability. Diagnosis of learning disability was based on self-report; no documentation of disability was requested by the researchers. Individuals with co-morbid diagnoses were allowed to participate as long as the diagnosis was secondary to their learning disability and was appropriately managed. Secondary diagnoses were determined by answers to two specific questions on the study survey, “Do you currently have any additional disabilities, conditions, or diagnoses that may affect your college learning experience (e.g., ADHD, depression, physical impairments, etc.)?” and “If you do have additional disabilities or diagnoses, are they appropriately managed and how (e.g., ADHD managed by medication or Depression managed by medication/therapy)?” Determination as to if conditions were appropriately managed were determined both by participant determination (i.e., a participant indicated “yes” when asked if their secondary condition was appropriately managed) and by participant description of an appropriate method of management for that condition (i.e., medication for ADHD or therapy and/or medication for depression). Participants who did not meet all inclusion criteria were excluded from the study. In addition, participants who were not accepted to the University through the typical application method, such as scholarship athletes and transfer students, were excluded.

Procedure

Participants were screened for eligibility at the beginning of each current school semester using an Educational Psychology Research Pool Screener. Those students who responded “yes” to a screener question of “Do you have a learning disability?” were invited to participate in the study. Invited Participants

were then emailed a link that allowed them to complete the 20 minute quantitative survey components of the study. The survey was administered online through Qualtrics at <http://www.Qualtrics.com/>.

The Qualtrics survey was comprised of three parts: demographic information; information regarding level of disclosure and accommodation usage; and the quantitative study measures that measured the three psychological factors being examined in the study, which included attitudes towards accommodations (i.e., ATRA), self-disclosure (i.e., the Revised Self-Disclosure Scale [RSDS]), and self-determination (i.e., the Self-Determination Scale [SDS]). Demographic information included: (a) type(s) of learning disability (e.g., language, reading, writing, and math); (b) age of diagnosis of learning disability; (c) cumulative GPA; and (d) University major. This information was collected using checklist, multiple choice, and fill-in-the-blank formats. Levels of disclosure and accommodations usage were collected using descriptive measures. These sections were followed by the three quantitative scales used in the study: the SDS (Sheldon & Deci, 1993), the RSDS (Wheelees, 1978), and the ATRA (Barnard-Brak, Sulak, et al., 2010).

The SDS is a short, 10-item scale, with two five-item subscales designed to assess individual differences in the extent to which people tend to function in a self-determined way. The scales have good internal consistency with alphas ranging from .85 to .93 and adequate test-retest reliabilities ($r = .77$); Sheldon, Ryan, & Reis, 1996). The SDS was ultimately chosen for use in this study because of its shorter length when compared to other self-determination scales, good psychometric properties, and alignment with Deci and Ryan’s Self-Determination Theory.

The RSDS is a self-disclosure questionnaire that is (a) topic free and (b) able to measure a wide range of potential dimensions of self-disclosure. It is composed of 31 items and scored on a seven-point Likert scale. Other researchers who have used the revised scale (e.g., Stacks & Stone, 1984; Wheelless, Nesser, & McCroskey, 1986) have reported coefficient alphas ranging from $\alpha = .81$ to .91. Additional studies (Wheelless & Grotz, 1976; Wheelless et al., 1986; Wheelless, 1978) also confirm both the content and the construct validity of the scales. A confirmatory factor analysis was conducted using principal components. Factor loadings for each dimension were found to be between .75 - .87. These values signify that the factors accurately portray the scale items, suggesting that the questionnaire’s model is valid (Wheelless, 1976). This scale was chosen for the study because the topic free nature of the measure ensured that the questions

Table 1

Demographic Information

Demographic Category	Percentage
Gender	
Male	15 (48%)
Female	16 (52%)
Ethnicity	
White/Caucasian	24 (77%)
Hispanic	7 (33%)
Native Language	
English	30 (97%)
Spanish	1 (3%)
Participant Learning Disability	
Reading	26 (84%)
Writing	14 (45%)
Math	7 (23%)
Language	18 (58%)
Other	20 (65%)
Other Disabilities	
ADHD	19 (61%)
Depression	2 (6%)
Anxiety Disorder	2 (6%)
Grade Received Diagnosis	
Kindergarten-3rd	10(32%)
4th-6th	10 (32%)
7th-9th	3 (10%)
10th-12th	2 (7%)
College	6 (19%)
Year in College	
Sophomore	5 (16%)
Junior	12 (39%)
Senior	14 (45%)
GPA	
3.5-4.0	4 (13%)
2.5-3.49	22 (71%)
1.5-2.49	4 (13%)
1.0-1.49	1 (3%)

remained relevant within an educational setting. Second, previous studies have successfully used this scale to examine the connection between disclosure and successful participant outcomes in other areas apart from educational settings (Lai-yee & Leung, 2006; McCroskey & Richmond, 1977).

The ATRA is a 32-item Likert style scale with responses ranging from one (strongly agree) to five (strongly disagree) that was specifically designed to address SWD's attitudes towards disclosing to request accommodations. Previous studies (Barnard-Brak, Sulak, et al., 2010) have indicated that the ATRA has an acceptable level of internal consistency, yielding a coefficient alpha of .91. Additionally, a four factor model based on the Barnard-Brak, Sulak, et al. (2010) research also seems to accurately reflect collected data (χ^2/df ratio = 3.24, NNFI value = .93). The scale was chosen for the study because of its good psychometric properties and for its ability to specifically address SWD's attitudes towards disclosing to request accommodations.

The dependent variables of this study were the total scores on the SDS, RSDS, and the ATRA. Quantitative data was analyzed utilizing a one-way fixed effects multivariate analysis of variance (MANOVA). Two-tailed univariate and multivariate measures were used to describe the entire sample as well as to compare the methods of self-disclosure for the demographic and psychological (dependent) variables. Additionally, to obtain views about disclosure to faculty and DS staff, a convenience sampling of the first 15 students who completed the quantitative survey, five from each disclosure group, were asked to participate in a 30 minute semi-structured interview with the researcher. The semi-structured questions were expanded and modified versions of questions used in a previous study of self-disclosure in students with disabilities (Barnard-Brak, Lechtenberger, et al., 2010). Interviews were conducted over Skype v5.5 and audio recorded onto the Researcher's personal computer using MP3 Skype Recorder software. Qualitative data collected for this study were then transcribed into a Microsoft Word document and organized by participant.

The DS office at the University in which the study took place does not automatically disclose DS enrollment of students to professors. Therefore, the original study proposal called for three disclosure levels: no disclosure (Level One), DS only disclosure (Level Two), and DS and classroom disclosure (Level Three). However, as research progressed it became clear that no students identified as belonging to the Level Two disclosure group. Therefore, this group was removed from the quantitative study's independent variables. Instead, five interviews each were collected from:

students who did not disclose their disability to the University and as a result were not eligible to access accommodations (i.e., Level One Disclosure); students who both accessed and utilized their accommodations by registering with the University DS office and then self-disclosing their disability to their professors by presenting them with their official DS registration letter (i.e., Level Three-A Disclosure); and students who both accessed and utilized their accommodations by registering with the University DS office and then self-disclosing their disability to their professors by presenting them with their official DS registration letter and by speaking with them at length about their individual learning differences (i.e., Level Three-B Disclosure). Students' membership in the Level Three-A or -B group was preliminarily determined through e-mail when the Researcher scheduled the interview. In the scheduling e-mail the researcher requested that each participant describe how they disclosed to faculty by asking, "When requesting accommodations from a professor do you just give your accommodation letter to your professors without a discussion, or do you choose to talk in depth with your professor about your disability in addition to giving them your accommodation letter?" Preliminary group assignment was made based on participant response. Group assignment was confirmed after the interview, with students assigned to the Three-B group having to explicitly indicate how they discussed their disability with their professors and provide examples of such conversations during the interview. Students who indicated during the interview that they only handed their letter of accommodation to their professor and very briefly indicated their disability (i.e., "Here's my letter of accommodation; I have dyslexia") or could not provide examples of specific in-depth discussions with their professors were assigned to the Three-A group.

Data from the qualitative semi-structured questions were analyzed by two trained research assistants who were blind to the participants' disclosure level. These research assistants utilized the constant comparative method (Corbin & Strauss, 2008) to analyze data. The research team analyzed their transcripts by assigning code map codes. After an initial round of coding, research assistants and the researcher jointly combined codes that represented similar constructs into overarching concepts used to anchor interpretation of findings in this study. The coders were assessed for intra-coder reliability utilizing percent agreement. In this study, initial percent agreement before reconciliation averaged 75%. Final percent agreement reached 100% after reconciliation of differences. Remaining codes and concepts that were found in over 50% of the participants' responses (i.e., at least eight) were

Group (N=15)	No Disclosure (N=5)		Letter Only Disclosure (N=5)		Letter and Conversation Disclosure (N=5)	
Theme/Code	# Participants Who Mentioned Code		# Participants Who Mentioned Code		# Participants Who Mentioned Code	
	Positive Code Frequency	Negative Code Frequency	Positive Code Frequency	Negative Code Frequency	Positive Code Frequency	Negative Code Frequency
Knowledge						
Student Knowledge of Accom.	5		2		1	
	0	15	0	2	2	0
Experiences						
Demeanor of Professors	1		4		5	
	3	3	8	5	15	2
Experience with SSD	1		3		5	
	1	0	4	1	9	0
Experience with Professors	2		5		4	
	3	2	10	9	10	4
Experience with Classmates	2		2		5	
	3	1	0	2	1	4
Academics	5		3		5	
	3	7	0	4	1	11
Self-Awareness						
Need/Do Not Need Accom.	5		5		5	
	2	10	13	12	10	9
View of Disability	5		3		4	
	3	7	5	7	9	2
Supports						
Coping Mechanisms	5		5		5	
	14	1	13	1	11	1

Figure 1. Total Participants Discussing Code and Frequency of Positive and Negative Codes by Group.

considered to be major factors or themes that affect disability disclosure. Please see Table 2 for a code map that resulted from the data analysis.

Results

Quantitative Results

A one-way between groups MANOVA was performed to investigate the first research question: are there differences in levels of self-disclosure, self-determination, and attitudes towards requesting accommodations between the two disclosure groups (i.e., no disclosure [Level One Disclosure] and disclosure to professors in the classroom setting [Level Three Disclosure])?

The omnibus MANOVA indicated a non-directional statistically significant difference on combined dependent variables: $F(3, 27) = 8.50, p = .000$; Pillai's Trace = .994; partial eta squared = .486. When the results for the dependent variables were considered separately, all three psychological factors reached statistical significance ($p = .05$): attitude towards accommodations ($F(1, 29) = 23.14, p = .000$, partial eta squared = .444), self-determination ($F[1, 29] = 5.97, p = .021$, partial eta squared = .171) and self-disclosure ($F[1, 29] = 5.55, p = .025$, partial eta squared = .161). An inspection of mean scores (see Table 3) indicated that the No Disclosure Group (Level One) reported higher scores ($M = 107, SD = 4$) and therefore worse attitudes towards requesting accommodations than the Disclosure group (Level Three; $M = 81, SD = 3$).

Overall, Level One SLD reported lower levels of self-determination achieving an average score of 7.84 points out of a maximum of 14.00 points ($SD = 1.48$) than Level Three students (Mean = 9.65, $SD = 1.99$). Level One SLD also reported lower levels of self-disclosure achieving a mean score of 120.88 out of a possible 217 points ($SD = 5.50$) than Level Three SLD (Mean = 135.86, $SD = 3.39$).

Qualitative Results

A qualitative analysis of interview data was performed to investigate the second research question: what self-identified factors do SLD think are important to consider when deciding if they will disclose to university personnel? After coding and analysis of participant interviews, nine major codes arose that were combined into four themes outlined in Table 2. Differences were observed in the number of participants per disclosure group who mentioned specific codes in their interviews as well as the proportion of positive/negative characterization of codes mentioned by disclosure group (see Figure 1).

No Disclosure Group

The No Disclosure Group had multiple findings that distinguished them from the Disclosure groups (i.e., Letter Only Disclosure group and Letter and Conversation Disclosure group). First, poor knowledge of accommodations seemed to be an important differentiating code between the No Disclosure group and the Disclosure groups. Overwhelmingly, individuals who chose not to disclose made negative Knowledge of Accommodation statements. These statements indicated that they did not have accurate information about the accommodations available at the University and the process by which one applies for accommodations. For example, one No Disclosure student remarked, "[I didn't get] help because I didn't feel like my problems would qualify compared to people who were blind or deaf." This student mistakenly thought that his learning disability would not be "serious" enough to qualify for institutional accommodations and, as a result, he never pursued them.

Second, the No Disclosure group had an overwhelmingly negative View of their Disability compared to the other two Disclosure groups. No Disclosure students made many more negative comments surrounding their disability than the other two Disclosure groups. These students described their disability as "a stigma," "excuse," "problem," and "handicapping" and described thinking of themselves as a sellout or becoming uncomfortable at the thought of using accommodations. For example, one No Disclosure student said, "I haven't yet adapted to the point where I'm like, I have [a disability] or whatever, but and it's not just an excuse I'm coming up with. So I haven't adjusted yet at this point."

Third, No Disclosure students overwhelmingly felt that they either did not need accommodations or that accommodations would not be helpful to them as represented by the large number of Do Not Need Accommodation codes. One No Disclosure student who did not think accommodations would be helpful stated, "I think I would use [extended time] as more of a crutch than, you know, I'd slack off and get behind in my assignments even more than I am now." Another participant did not feel that she needed accommodations to be successful, saying, "Coursework wise it's been fairly easy... I haven't felt like I've really needed to [enroll with DS.]" This is in contrast to the Disclosure groups who were able weigh whether they needed to use accommodations in specific classroom settings as represented by their more balanced Need and Do Not Need Accommodation codes.

Last, many No Disclosure students indicated that they choose not to disclose in order to maintain a "typical" identity and avoid negative reactions/comments

Table 2

Qualitative Code Map

<i>Theme/Code</i>	<i>Description</i>	<i>Example</i>
<i>Knowledge</i>		
Knowledge of Accommodations	When a student makes a statement that describes knowledge about or lack of knowledge about available accommodations	"I don't even know what accommodations I would get if I did talk to them"
<i>Experience With People</i>		
Demeanor of Professor	When a student describes a professor's demeanor as making them more or less likely to disclose	"Some of my professors are just nicer to begin with and I can tell that they're more open to suggestions"
Experience with DS	Student describes a positive or negative experience with DS	"[DS has] actually been really supportive and helpful way more than I've expected "
Experience with Professor	Student describes a positive or negative experience with a professor	"But there's only been one class that I've had horrible problems with, uh with using my accommodations, and...it was with my professor"
Experience with Classmates	Student describes a positive or negative experience with classmates	"but for the most part they've [peers] been very accepting of it and don't see me any differently and just sort of forget about it."
Experience with Academics	When the student describes academic performance as influencing their decision to disclose	"I was always just worrying about academics"
<i>Self-Awareness</i>		
Need Accommodations/ Don't Need Accommodations	When a student describes a conscious decision to use or not use (i.e., a need for) accommodations	"I mean you know there's some things that I'm like I need to use this I have to use this and other things it's there .. I may need it but most of the time I don't"
View of Disability	Student expresses opinions or views on their disability	"I try to keep [my LD] to myself...I don't want to feel different"
<i>Supports</i>		
Compensating Mechanisms	Student describes having or not having compensating mechanisms	"I've sort of learned coping mechanisms to kinda of cope with my disabilities so I could get through college and get good grades"

Table 3

Means and Standard Deviations of Psychological Factors by Disclosure Level

Disclosure Level		RSDS	SDS	ATRA
Level One	Mean	120.89	7.84	99.00
	N	9	9	9
	Std. Deviation	16.53	1.48	12.44
Level Three	Mean	135.86	9.65	76.00
	N	22	22	22
	Std. Deviation	15.89	1.99	11.94
Total	Mean	131.52	9.12	82.67
	N	31	31	31
	Std. Deviation	17.24	2.01	15.93

from peers. Their choice to not disclose exposed them to fewer negative Experiences with Classmates than the Disclosure groups because they were able to more successfully manage their disability disclosure than students who did disclose, who at times must use public accommodations. It is not surprising that students who do not disclose tried to seem typical to their classmates, as these peers sometimes made uneducated and careless comments to SLD when they discovered that they had a learning disability as represented by the negative Experiences with Classmates codes seen in the other two Disclosure groups.

In summary, No Disclosure students were distinguished from the other disclosure groups by having more negative Knowledge of Accommodation, View of Disability, and Do Not Need Accommodation codes than the Letter Only and Letter and Conversation Disclosure groups. In addition, the No Disclosure group also had fewer negative Experience with Classmates codes than either of the other two disclosure groups.

Disclosure to Professors: Letter and Conversation

There were also multiple findings that separated the individuals who disclosed with a letter and conversations (i.e., more deeply disclosed; Level Three-B) from the other two disclosure groups. First, students in this group tended to mention the Demeanor of Professor code with a positive connotation more often than the other disclosure groups. Professors whose demeanor tended to elicit disclosure in this group were described as: “willing to be helpful or understanding,” “really sweet and totally accepting,” “very kind,” and “on my side to help me.”

These students also had more positive than

negative experiences with professors as noted by their higher positive to negative Experiences with Professor codes. One Level Three-B Disclosure student described a positive experience with her professor, saying:

I’ll usually say [to the professor], “I see from the syllabus that your class is heavily based on reading and I struggle with that so what do you suggest I do to get around that?” And then they’ll give me some kind of pointer that says, “Oh, just come to class and you’ll be fine” or “Oh man, this class is basically a lot of reading; you’re just going to have to put in the time.” But it just really depends on what they say. So that has helped; it’s helped...to have the professor know me to some certain extent, so he knows that I struggle with reading, so he’s on my side to help me, he knows when I come to office hours, and when I turn in a paper, so that’s good.

Although these students also have negative experiences with professors, their positive interactions seem to outnumber the negative experiences, unlike the other two disclosure groups who have more mixed interactions with faculty.

Last, these students mentioned their disability in a much more positive light than the No Disclosure or Letter Only Disclosure groups. These students tended to use positive View of Disability statements such as, “I’m not any different,” “I’m reaching my full potential,” and “not an issue.” One Level Three-B student simply stated, “[My disability] is just one of those things where I really don’t think anything of it. It just means that I have to work harder, not that I’m any different.”

Overall, the codes that differentiate this group from the No Disclosure and Letter Only Disclosure groups are more positive Demeanor of Professor, Experience with Professor, and View of Disability codes than either of the other two groups. These codes are generally skewed more negatively in the No Disclosure group and mixed in the Letter Only Disclosure group.

Letter Only Disclosure

The Letter Only Disclosure group (i.e., Level Three-A) had more mixed experiences than either the No Disclosure or Letter and Conversation Disclosure groups. These students tended to have more mixed experiences with their professors as noted by their more evenly distributed positive/negative Experience with Professors codes when compared to the Level Three-B group who had overwhelmingly positive interactions with professors. For example, one Level Three-A Disclosure student described mixed experiences with professors by remarking, “Typically the majority allow me to use the computer, but on occasion I will have to go in and fight with a professor; argue the points.”

These students also had more mixed views of their disability as noted by more evenly distributed positive and negative View of Disability comments than either the No Disclosure group (mostly negative codes) or the Letter and Conversation Disclosure group (mostly positive codes). For example, one Level Three-A student stated, “I didn’t want to admit [I needed accommodations], to take the easy way out; I like working for my grades.” Another student remarked, “[My disability is] not something, really something that I think of as an issue anymore. I think of it as something that I triumphed [over] and something that made me who I am.”

In general, the Letter Only Disclosure students seemed defined by having more mixed positive and negative Experience with Professor and View of Disability codes than the No Disclosure group (more negative codes than positive) and the Letter and Conversation group (more positive than negative codes).

General Factors

Two codes were found to be equally represented amongst the three disclosure groups. First, all groups mentioned the Experience with Academics code much more negatively than positively, indicating academic difficulties. No Disclosure students described their academic struggles with statements such as, “I’ve struggled” and “I didn’t do so well in school.” Letter Only Disclosure students had similar experiences, stating, “I started failing, so I had never come close to failing a class. I had never really failed any exams” and “I remember I studied so hard for my first

government exam and got a 70 in it, and I was just, like, completely letdown.” Letter and Conversation Disclosure students also experienced academic difficulty. As one student in this group reported, “I was always just worrying about academics,” “It’s been a struggle,” and “It has been hard.”

Perhaps as a result of academic difficulty, all disclosure groups mentioned the development and utilization of extensive compensating mechanisms though positive Compensating Mechanisms codes. All students in each disclosure group reported utilizing various supports to succeed in college. Common compensating mechanisms described included additional time spent on assignments and studying, study strategies, class selection, pursuing alternate materials (e.g., simplified texts), and time management. This code seems to reflect an aspect of the university experience that is shared by all SLD disclosure levels.

Discussion, Conclusions, and Recommendations

Discussion

The first research question asked if there are differences in levels of self-disclosure, self-determination, and attitudes towards requesting accommodations between the two disclosure groups (i.e., no disclosure [Level One Disclosure] and disclosure to professors in the classroom setting [Level Three Disclosure])? As hypothesized, the ATRA, SDS, and RSDS differed across the two main disclosure levels. Qualitative results indicate that many of the factors that SLD identify as being important to them when they make disclosure decisions are represented in their attitude toward accommodations and the ATRA scales. Codes that seemed to reflect factors represented in the ATRA were: Need/Do Not Need Accommodations, View of Disability, Experience with Classmates, Experience with Professors (disability disclosure), Knowledge of Accommodations, and Experience with DS.

Similarly, many codes identified as important themes in SLD disclosure decisions were represented by the SDS and linked to students’ self-determination, including View of Disability, Knowledge of Accommodations, Compensating Mechanisms, Need/Do Not Need Accommodations, and Academic Experiences. For example, the View of Disability code seems to reflect the behavior of relatedness, which research (Deci & Ryan, 2002) has indicated is more typically shown in highly self-determined students.

Last, many codes identified as important themes in SLD disclosure decisions were reflected in willingness to self-disclose, represented by the RSDS including Experience with Professors, Demeanor of Professors,

View of Disability, Experience with Classmates, and Need Accommodations/Do Not Need Accommodations. For example, the Need/Do Not Need Accommodations code seems to reflect the disclosure concept of relevance in that individuals are more likely to disclose information if it is relevant to the topic being discussed (or class being taught).

While findings from the ATRA, SDS, and RSDS makes sense in light of the qualitative codes generated, there were individual codes that were expected to differ by disclosure level but did not. One area in which qualitative and quantitative findings seem to diverge is the qualitative code of Compensating Mechanisms. According to Wehmeyer's (1999) self-determination theory, it is expected that students who have higher levels of self-determination (i.e., Level Three students) should have better developed and more frequently used compensating mechanisms than students who have lower levels of self-determination (i.e., Level One students). However, qualitative results indicated that all students exhibited well developed compensating mechanisms regardless of disclosure level. This was unexpected given the quantitative significance of the SDS.

The Compensating Mechanisms code may not have differed between disclosure levels because, while Level Three SLD were more self-determined than Level One SLD, Level One SLD still exhibited moderate levels of self-determination. In other words, all students were at least moderately self-determined. It may be that Level One SLD had high enough levels of self-determination to enable them to develop adequate compensating mechanisms that allowed them to not need formal accommodations. It would make sense that all students who participated in this study already had or were able to develop compensating mechanisms, given the very selective and high achieving population from which the participants were recruited (i.e., a Research One flagship university). It may also be that once SLD reach some critical level of self-determination, increased levels of this psychological factor do not significantly add to the development of compensating mechanisms.

The second research question asked, what self-identified factors do SLD think are important to consider when deciding if they will disclose to university personnel? Qualitatively, students indicated that there are many factors that influence their disclosure decisions (see Table 4).

Choice to Disclose

Knowledge of Accommodations, Need Accommodations/Do Not Need Accommodations, Experience with DS, and Experience with Classmates emerged as themes that help to explain why some students disclose and others do not. First, it seems that students who

chose not to disclose lacked knowledge about DS and available accommodations. In light of this information, it is unsurprising that these students would choose not to disclose that they have a learning disability. They had no reason to disclose, as they did not know that there are relevant services available and/or did not accurately understand what DS could provide.

Second, most students who chose not to disclose did not feel that they needed to seek accommodations. Overwhelmingly, students who did not disclose felt that they did not have a need for specific accommodations, that accommodations would not help them, or that accommodations would be detrimental to them. It made sense that students who do not perceive a need for accommodations for any of these reasons would choose not to disclose their disability, as they would have nothing to gain from doing so.

Third, results indicate that Level One students' choice not to disclose may have been affected by Experiences with Classmates. Previous research suggests that students who choose not to disclose may do so in an attempt to maintain a "typical" identity; that is, as a student who does not have any disability-related needs (Braithwaite, 1991). Students who do disclose tend to have more negative experiences with classmates than do students who do not disclose, as their public utilization of accommodations reveals their hidden disability. Level One students' efforts to blend in with their peers may in part have been an attempt to avoid misunderstandings about disability or generally uncomfortable situations with peers that can arise when other students are aware a student is using accommodations.

Last, students who disclosed had considerably more Experiences with DS than students who did not. This finding is unsurprising, as students who disclose must interact with DS to obtain and utilize their accommodations. Students who did not disclose did not mention experiences with DS, most likely because they were unaware of the office and/or had no reason to interact with the office because they were neither pursuing nor utilizing accommodations.

Depth of Disclosure

The Demeanor of Professors, Experience with Professors, and the View of Disability themes seemed to affect students' depth of disclosure. As mentioned above, students who had more professors with positive demeanors tended to disclose more deeply (i.e., have personal conversations with professors during disclosure) than students with equal numbers of professors with positive and negative demeanors (i.e., those who only handed professors their accommodation letter). This distinction may be because it is easier for students

Table 4

Factors Affecting Disclosure Decisions

Disclosure Decisions	Qualitative Code
Choice to Disclose	Knowledge of Accommodations Need/Do Not Need Accommodations Experience with DS Experience with Classmates
Depth of Disclosure	Experience with Professors Demeanor of Professors View of Disability
Global Issues	Compensating Mechanisms Academic Experiences

with professors who have positive demeanors to decide that those professors will be persons who will accept deeper disclosures appropriately. Students experiencing mixed professor demeanor may be unsure as to whether a professor will be accepting or dismissive of deep disclosure and therefore feel hesitant to disclose at more than a surface level.

Similarly, students who reported more positive than negative experiences with professors tended to disclose more deeply than students who had more negative experiences. Positive experiences with professors may help students continue to disclose even if they have had a negative experience in the past. In fact, many students indicated that positive experiences often “made up” for poor experiences. Therefore, students who have more positive experiences with professors are more likely to feel comfortable disclosing deeply to faculty.

View of Disability was the last theme that seemed to influence the depth of disclosure. Students who had more positive views of their disability tended to disclose more deeply than those students whose disability views were equivocal. This may be because SLD tend to disclose more deeply if they view the information to be disclosed as fairly innocuous, as the deeper disclosers did. Conversely, individuals who see their disability as more personal and negative, as the No Disclosure and Letter Only Disclosure students did, are less likely to reveal that information.

Issues Affecting Both Disclosure Groups

Finally, the themes of Compensating Mechanisms and Academic Experiences did not seem to contribute to differences between disclosure groups. Students in each disclosure group mentioned having many compensating strategies and felt that academics were difficult at the University. It may be that students in the No Disclosure group used compensating mechanisms to keep their academic achievement at an acceptable level without utilizing formal accommodations, thus avoiding the need to self-disclose. This idea is supported by the fact that 90% of the Level One participants achieved a cumulative GPA of 2.5 or higher while attending the University. The high GPA of the No Disclosure group supports the notion that these students may have been managing their education effectively though the utilization of compensating mechanisms that do not include formal accommodations. These students may be making positive self-determination choices by prioritizing the continuance of successful compensating mechanisms over the consideration of accommodations that may not have been needed. However, students who did disclose overwhelmingly indicated that they felt that they needed both formal accommodations and informal compensating strategies to succeed in school. These two themes seemed to represent shared aspects of being an SLD at the University regardless of disclosure level.

Implications for Interventions

In addition to the contribution of this study to knowledge surrounding factors affecting SLD disclosure, there are practical implications for university faculty, DS staff, and classmates working alongside SLD.

Disability Services. The participants recommended a number of ways that DS could improve to better serve SLD. First, SLD requested that the DS office increase its visibility on campus. Many students reported that DS was neither mentioned during orientation nor pointed out during tours. Many students seemed to hear about the office by word-of-mouth or chance. Students reported that they wished they had been given information about DS as soon as they enrolled at the University. Having DS and accommodation information given to all incoming students as standard practice will be especially important in helping those SLD with lower levels of self-determination obtain accommodations. These students may be less likely than those with higher levels of self-determination to search out such information on their own.

In conjunction with information about services, students asked that SWD testimonials be provided (preferably online). This practice would allow SLD who were thinking about utilizing DS to not only see what accommodations were offered, but also gauge the accommodations process and the helpfulness of the accommodations based on other students' experiences. Availability of accommodations information and student accommodation "reviews" may specifically impact students with poorer attitudes towards accommodations who are less likely to pursue accommodations.

Second, students asked that DS provide explicit instructions to first-time students reviewing how to utilize and access their accommodations. For example, many SLD reported that they did not know how to go about taking an exam at DS or did not even know they could do so. SLD wished they had some sort of a step-by-step manual or outline that described in detail the actions and timelines required to access certain accommodations. Again, a manual would be especially beneficial to those SLD with lower levels of self-determination who may not be as intrinsically motivated as more self-determined SLD to research this information themselves.

Third, SLD asked DS to provide faculty with more information about available services, disabilities, and professors' role and responsibilities in the accommodation process. Students reported that they generally had to instruct their professors on DS protocol. As a result, SLD felt that they needed to continuously monitor their professors to ensure that they were fulfilling their part of the accommodations process.

Professors. The first recommendation for faculty by SLD was for instructors to increase their knowledge of disabilities and accommodations and to streamline their accommodation management. SLD reported that, when they approached faculty with their accommodation letters, professors often did not seem to know what to do. SLD often had to take on an expert role and help faculty members navigate through the DS accommodations process. Students expressed that they would prefer to not have to assume this role as it tended to be stressful given the professor-student power dynamic.

Second, students requested that professors work with them to create a standard plan for accommodation utilization during the semester. Students wanted to have their accommodations work the same way consistently throughout a particular class. A standardized accommodation utilization plan may alleviate some of the planning that both professor and student have to complete before each instance of accommodation use. Having an agreed-upon plan may also help students partially relinquish their expert role and reduce stress.

Third, professors should strive to appear open and willing to help students who need accommodations. Many students appreciated the standard disability statement on syllabi and were pleased when professors mentioned this on the first day of class. SLD were thankful for faculty who worked with them without complaint and grateful for those professors who went above and beyond what was required of them. Increased professor openness and flexibility may be particularly important for encouraging accommodation use in those SLD who are less willing to disclose their disability.

Last, SLD asked faculty to be more aware of individual learning differences. Most SLD felt that they were not very different from students without disabilities and that generally minor, informal attempts by faculty to teach to different learning styles would make their experience at the University easier while also benefitting students without disabilities.

At the time of this study the University DS office provided faculty with in-person training regarding SWD in their classes via seminars. The Student Services Building, which houses DS, was reviewed during freshman orientation tours. In addition, the DS office maintained a website that instructed new students how to register for accommodations as well as a general list of accommodations that the University provides; students with further questions were invited to contact the DS office directly. After the completion of this study, results and suggestions were presented to a representative from the University DS office. Since then, the University DS office has added resources to their website, including: a step-by-step explanation of

how to access accommodations; instructional videos about self-disclosure (e.g., how SWD can introduce themselves, disclose their disability, request accommodations, and conclude their conversations with faculty); faculty-directed webpages reviewing disability law, how to create accessible classroom programming, rights and responsibilities for both faculty and students, and how to make referrals to DS; as well as FAQs covering a variety of topics including disability-oriented transitions to college.

Limitations of the Study

This study had four main limitations. The first and most significant limitation was the low number of participants in the quantitative study. The study planned for 46 students in a balanced design that would have yielded a power ($1-\beta$) of 0.8. However, despite numerous Researcher efforts over three semesters, only 31 participants could be recruited. This resulted in a post-hoc power ($1-\beta$) of .57, which is slightly above chance for a medium effect size (Cohen's d) of 0.4.

The second limitation of the study was that the qualitative participants represented a convenience sample and were not matched between disclosure groups based on any demographic characteristics (e.g., GPA, disability, or gender). This may have skewed the results as participants who completed the online survey first were typically those chosen to participate in the interview portion of the study. These students may have unique characteristic or viewpoints not shared by other study participants.

The third limitation of the study was the use of chosen self-determination and self-disclosure scales. A majority of the self-determination and self-disclosure scales used in research are unpublished and therefore unavailable for use or evaluation of psychometric properties. Of those scales that were available, many had little, no, or poor psychometric data.

The last limitation was the population measured. The population for this study was comprised of high achieving SLD at a large, public, Research One University. As such, the results are not likely to generalize to SLD in a smaller, private, less rigorous, or non-research-oriented educational settings. Furthermore, because there is no standard for determination of eligibility for university accommodations (outside of ADA requirements) it is possible that the specific DS guideline practices at the University may have affected results.

Implications for Future Research

Future research needs to examine the Psychological Factors in a broader population of SLD. It is possible that factors that affect disclosure may differ depending on institutional and student characteristics, such as severity of disability, overall level of academic achievement, academic rigor of institution, and accommodation services available. Of particular importance in this study is the high achieving nature of the participants who participated. It is possible that SLD who are not as high achieving as the University SLD may have different levels of psychological factors than the participants in this study.

Another area for future research would be to confirm the presence and severity of learning disability in the SLD participants. It is possible that the students, especially Level One SLD, may not have had a formal diagnosis of the learning disabilities that they reported. Furthermore, this study did not investigate the severity of their self-reported learning disability. Therefore, it is possible that severity of learning disabilities differed among disclosure groups.

In conclusion, this study found that there are important differences in willingness to disclose, attitudes towards accommodations, and self-determination between students who choose to pursue accommodation and those who do not. Students themselves also identified factors that impact their decisions to apply for accommodations and the manner in which they disclosed their disability once they had been granted institutional accommodations. This information has important implications for postsecondary institutions and illuminates ways that DS and postsecondary faculty may encourage increased accommodation usage within their SLD population.

References

- Barnard-Brak, L., Lechtenberger, D., & Lan, W. (2010). Accommodation Strategies of College Students with Disabilities. *The Qualitative Report, 15*(2), 411-429.
- Barnard-Brak, L., Sulak, T., Tate, A., & Lechtenberger, D. (2010). Measuring college students' attitudes toward requesting accommodations: A national multi-institutional study. *Assessment for Effective Intervention, 35*(3), 141-147.
- Braithwaite, D. (1991). "Just how much did that wheelchair cost?;" Management of privacy boundaries by persons with disabilities. *Western Journal of Speech Communications, 55*, 254-273.
- Carlson, S.A., & Alley, G.R. (1981). *Performance and competence of learning disabled and high achieving high school students: An essential cognitive skill*. Lawrence, KS: University of Kansas Institute for Research in Learning Disabilities.
- Corban, J., & Strauss, A. (2008). *Basics of qualitative research*. California: Sage Publishing.
- Deci, E., & Chandler, C. (1986). The importance of motivation for the future of the LD field. *Journal of Learning Disabilities, 19*(10), 587-594.
- Deci, E., Hodges, R., Pierson, L., & Tomassone, J. (1992). Autonomy and competence as motivational factors in students with learning disabilities and emotional handicaps. *Journal of Learning Disabilities, 25*, 457-471.
- Deci, E., & Ryan, R. (2002). *The handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Denhart, H. (2008). Deconstructing barriers: Perceptions of students labeled with learning disabilities in higher education. *Journal of Learning Disabilities, 41*, 483-498.
- Field, S., Sarver, M., & Shaw, S. (2003). Self-determination: A key to success in postsecondary education for students with learning disabilities. *Remedial and Special Education, 24*(6), 339-349.
- Grolnick, W., & Ryan, R. (1990). Self-perceptions, motivation, and adjustment in children with learning disabilities: A multiple group comparison study. *Journal of Learning Disabilities, 23*(3), 177-184.
- Izzo, M., & Lamb, M. (2002). *Self-determination and career development: Skills for successful transitions to postsecondary education and employment*. Unpublished Manuscript.
- Joyce, D., & Rossen, E. (2006). Transitioning high school students with learning disabilities into postsecondary education: Assessment and accommodations. *NASP Communiqué, 35*(3).
- Lai-Yee, M., & Leung, L. (2006). Unwillingness-to-communicate, perceptions of the Internet and self-disclosure in ICQ. *Telematics and Informatics, 23*, 22-37.
- Lynch, R., & Gussel, L. (1996) Disclosure and self-advocacy regarding disability related needs: Strategies to maximize integration in postsecondary education. *Journal of Counseling and Development, 74*, 352-358.
- Mason, A., & Mason, M. (2005). Understanding college students with learning disabilities. *Pediatric Clinics of North America, 52*(1), 61-70.
- McCroskey, J., & Richmond, V. (1977). Communication apprehension as a predictor of self-disclosure. *Communication Quarterly, 25*(4).
- Newman, L. (2005). Postsecondary education participation of youth with disabilities. In Wagner, M., Newman, L., Cameto, R., Garza, N., and Levine, P. (Eds.) *After high school: A first look at the postschool experiences of youth with disabilities. A report from the national longitudinal transition study-2 (NLTS2)*. Menlo Park, CA: SRI International. Available at www.nlts2.org/reports/2005_04/nlts2_report_2005_04_complete.pdf.
- Rao, S., & Gartin, C. (2003). Attitudes of university faculty toward accommodations to students with disabilities. *The Journal for Vocational Special Needs Education, 25*(2), 47-54.
- Reaser, A., Prevatt, F., Petscher, Y., & Proctor, B. (2007). The learning and study strategies of college students with ADHD. *Psychology in the Schools, 44*, 627-638.
- Ryan, K. (1982). Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory. *Journal of Personality and Social Psychology, 43*, 450-461.
- Ryan, R., & Grolnick, W. S. (1986). Origins and pawns in the classroom: A self-report and projective assessment of children's perceptions. *Journal of Personality and Social Psychology, 50*, 550-558.

- Sarver, M. D. (2000). *A study of the relationship between personal and environmental factors bearing on self-determination and the academic success of university students with learning disabilities*. Unpublished doctoral dissertation, University of Florida, Gainesville.
- Sheldon, K., & Deci, E. (1993). *The self-determination scale*. Unpublished manuscript, University of Rochester, Rochester, NY.
- Sheldon, K., Ryan, R., & Reis, H. (1996). What makes for a good day? Competence and autonomy in the day and in the person. *Personality and Social Psychology Bulletin*, 22(12), 1270-1279.
- Skinner, M. E. (1999). *Characteristics of "successful" and "unsuccessful" college students with learning disabilities*. Paper presented at the annual convention of the Council for Exceptional Children, Charlotte, NC.
- Stacks, D. W., & Stone, J. D. (1984). An examination of the effect of basic speech courses, self-concept, and self-disclosure on communication apprehension. *Communication Education*, 33, 317-331.
- U.S. Department of Education, National Center for Education Statistics. (2013). *Digest of Education Statistics, 2012* (2014-015).
- Wagner, M., Newman, L., Cameto, R., Garza, N., & Levine, P. (2005). *After high school: A first look at the postschool experiences of youth with disabilities. A report from the National Longitudinal Transition Study-2 (NLTS2)*, Menlo Park, CA.
- Wehmeyer, M. (1999). A functional model of self-determination: Describing development and implementing instruction. *Focus on Autism and Other Developmental Disabilities*, 14(1), 53-61.
- Wehmeyer, M., & Palmer, S. (2000). Promoting the acquisition and development of self-determination in young children with disabilities. *Early Education and Development*, 11(4).
- Wheless, L. (1976). Self-disclosure and interpersonal solidarity: Measurement, validation, and relationships. *Human Communications Research*, 3, 47-61.
- Wheless, L. (1978). A follow-up study of the relationships among trust, disclosure, and interpersonal solidarity. *Human Communication Research*, 4(2), 143-157.
- Wheless, L. & Grotz, J. (1976). Conceptualization and measurement of reported self-disclosure. *Human Communications Research*, 2(4), 338-346.
- Wheless, L., Nesser, K., & McCroskey, J. (1986). The relationships of self-disclosure and disclosiveness to high and low communication apprehension. *Communication Research Reports*, 3, 129-134.
- Wolf, L. (2001). College students with ADHD and other hidden disabilities. *Annals of the New York Academy of Sciences*, 931, 385 – 395.
- Yuen, J. (2001). *Internal locus of control: A catalyst for building self-determination skills in postsecondary students with disabilities*. Unpublished manuscript, College of Education/Center for Disabilities Study, University of Hawaii, Manoa.
- Zisimopoulos, D., & Galanaki, E. (2009). Academic intrinsic motivation and perceived academic competence in Greek elementary students with and without learning disabilities. *Learning Disabilities Research & Practice*, 24(1), 33-43.

About the Authors

Emma V. Cole received her B.S. degree in Biology from Georgetown University and Ph.D. in Educational Psychology from the University of Texas at Austin. Her experience includes working as a school psychologist for Tukwila School District in the Seattle suburbs. She is currently the Postdoctoral Resident in Clinical Pediatric Neuropsychology at Alexian Brothers Women and Children's Hospital in suburban Chicago. Her research interests include issues pertaining to college students with disabilities, higher education, and the neurological underpinnings of neurodevelopmental disorders. She can be reached by e-mail at: EmmaVCole@gmail.com.

Stephanie W. Cawthon received her B.A. and M.A. degree in psychology from Stanford University and Ph.D. in Educational Psychology from the University of Wisconsin-Madison. Her expertise is in access issues for students with disabilities, particularly around issues related to standardized assessment. She is currently an Associate Professor in the Department of Educational Psychology at The University of Texas at Austin. Her research interests include assessment policy; impact of accommodations; measuring the effects of professional development; and access to education, employment, and independent living for individuals who are deaf or hard of hearing. She can be reached by email at: stephanie.cawthon@austin.utexas.edu