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Student Learning Outcomes for Disability Services: What Evidence do you Have?  
From the Editor

During my tenure in higher education I have taught a course each year on the evaluation of educational programs. A portion of my preparation for the course involves reviewing the literature to find new resources to share with students. The contemporary literature follows a common theme: what evidence do you have that demonstrates what you are doing is making a difference? Some educators’ focus is backwards, focusing on what we do for students, rather than what students learn as a result of their interactions with us. Among the clients who use our services, programs, and facilities, is there a positive effect on their learning, development, success, or other intended outcomes?

There is a plethora of books and journals that focus on the importance of evaluation and assessment in contemporary higher education. Since the administrative home for many disability services offices is in academic or student support services, Student Affairs Assessment: Theory to Practice, authored by Gavin Henning and Darby Roberts (2016), may be a helpful resource for disability educators. Banta and Palomba (2014), Kuh et al. (2015), and Suskie (2014) are a few other prominent higher education authors from whom we can learn.

Alexander Astin’s (1991) early model of assessing institutional outcomes serves as a reminder that institutional interventions (e.g., programs, services, policies) cannot be isolated from other variables which may influence outcomes, such as background and entering characteristics. His IEO model (input, environment, outcomes) serves as a theoretical foundation for how precollege characteristics, and institutional effects of the academic environment, influence outcomes. Outcomes are influenced outside of the higher education bubble; they do not happen in isolation.

Educational outcomes provide information on how well your educational program or service accomplishes its goals. They are a measure of how clients, and their circumstances, change, and whether the educational programs (treatment) have been a factor in the change, and are effective. Outcomes are specifically about what you want at the end of your efforts. The lead article in this issue of the journal examines student learning outcomes in postsecondary disability offices. Jean Ashmore (Rice University) Ann Knettler-Smith (Delaware State University), and Sally Scott (Association on Higher Education and Disability) suggest that the expectation for defined student learning and development outcomes (SLOs) has become established in all elements of higher education and is reinforced by external agencies such as the Council for the Advancement of Standards in Higher Education. Within the realm of student services, many different departments link their programs to outcomes. Their study reports data from a 2016 survey of Association on Higher Education and Disability (AHEAD) members regarding knowledge and use of SLOs in disability resource offices.

In the next article, Maureen Squires, Beverly Burnell, Cynthia McCarty, and Heidi Schnackenberg (State University of New York at Plattsburgh) share a fascinating study on emerging adulthood from the perspectives of college students with disabilities. In that context, they specifically looked at student reasons for not disclosing their disability status or not pursuing relevant accommodations. Their findings include motivations to assert independence, avoiding stigma associated with others’ responses to disclosure and/or use of accommodations, and to develop an adult identity that includes, but is not defined by, disability. The third article reports on a qualitative investigation of bullying of individuals with disabilities on a college campus. Bridget Green (George Washington University) found that bullying influenced participants’ relationships with peers and interactions within the collegiate environment. Some of the participants reported that peers provided an important role in coping with bullying while attending college, and addressed a need to feel safe across different environments. The study concludes with suggestions for how disability student support services can advocate for these students.

In the fourth article, Ben Littlepage and Cindy Clemson (Murray State University) explore how student support service administrators responded to the observed transitional challenges of students with disabilities during a period of systemic imbalance. Their analysis revealed that students with disabilities, upon entering college, had unrealized expectations of postsecondary education, sought the same individualized attention experienced in secondary school, and misunderstood administrative processes, especially those associated with securing accommodations. They had multiple suggestions, including that early transitional planning with students be initiated during
their senior year of high school. The fifth article looks at predictors and trajectories of educational functioning in college students with and without attention-deficit/hyperactivity disorder. George DuPaul, Melanie Franklin, Brittany Pollack, Kristen Fletcher, Aliza Jaffe, Matthew Gormley (Lehigh University), Arthur Anastopoulos (University of North Carolina at Greensboro) and Lisa Weyandt (University of Rhode Island) examined the differences between ADHD and control participants in academic outcomes (i.e., semester GPA, credits attempted, credits earned) over the first two years of college, and factors that predict second year outcomes. They found that students with ADHD experienced more academic difficulties that persisted over two years, including motivation to study, suggesting the importance of providing services as early as possible to support students before they begin to struggle.

In the final article, a practice brief, Kiriko Takanashi, Lisa Uyehara, Hye Jin Park, Robert Stodden (University of Hawai‘i at Manoa) and Kelly Roberts (Northern Arizona University) demonstrate how Pacific Alliance, an internship to improve postsecondary persistence for students with disabilities in the science, technology, engineering, and mathematics (STEM) pipeline, improved students’ persistence by increasing their motivation, self-confidence, social and communication skills, and organizational and time management skills. The authors describe the project housed at the Center on Disability Studies at the University of Hawai‘i at Manoa and the experiences of interns.

The editorial team and review boards associated with the Journal of Postsecondary Education and Disability are proud to assist the disability services community by providing a forum for disability services educators to discuss our evidence for making a difference in the lives of the students and faculty members we serve.

Roger D. Wessel, Ph.D.
Executive Editor

References


Use of Student Learning Outcomes in Postsecondary Disability Offices

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Abstract

The expectation for defined student learning and development outcomes has become established in all elements of higher education and is reinforced by external agencies. Within the realm of student services, many different departments link their programs to these outcomes. Student learning and development outcomes, or more simply student learning outcomes (SLOs), are constructs integral to education put forth by a number of professional associations and academics. The SLOs from the Council for the Advancement of Standards in Higher Education (CAS) have been available for many years yet their adoption as part of program review and assessment has varied across institutional co-curricular units. Very little information is available about how disability resource and service (DRS) departments develop and use SLOs. This study reports data from a 2016 survey of Association on Higher Education and Disability (AHEAD) members about knowledge and use of SLOs in DRS offices. Data reported suggest limited use of SLOs in DRS when compared to other campus departments. Responses reflected divergent development, understanding, and use of SLOs. Implications for training and resource development for DRS professionals are discussed.

Keywords: Disability services, learning outcomes, student outcomes, member survey, program evaluation

The process of discussing and defining student learning and development outcomes has long been associated with the academic elements of higher education. Regulations from governmental and accrediting bodies typically establish expectations for academic disciplines and professional programs to define anticipated outcomes at the course level and beyond which then constitute core elements of assessment (American Association for Higher Education and Accreditation [AAHEA], 1996; Suskie, 2009). The expansion and use of a learning and development outcomes perspective to co-curricular entities on campus has been gradual and subject to resistance despite thirty years of discussion about assessment in student affairs (Elkins, 2015; Henning & Roberts 2016; Robbins, 2009). Leading professional associations, including the National Association of Student Personnel Administrators (NASPA) and the American College Personnel Association (ACPA), stated in the groundbreaking publication Learning Reconsidered, that, “all areas of college engagement provide opportunities for student learning” (NASPA, 2004, p. 20). They further state, “both academic and student affairs administrators should commit to holding all [emphasis added] campus educators accountable for the contributions their learning experiences make to overall student learning outcomes” (p. 28).

Student affairs professional associations have put forth various frameworks of student learning and development outcomes at divisional and departmental levels. These outcomes, for ease of reference, will be referred to as student learning outcomes or SLOs throughout this article. The Essential Learning Outcomes from the American Association of Colleges and Universities (AACU, 2005) presented four domains for structuring SLOs: knowledge of human cultures and the physical and natural world, intellectual and practical skills, personal and social responsibility, and integrative and applied learning. Similarly, the American College Personnel Association ([ACPA], 1996) introduced six categories of learning outcomes: complex cognitive skills, knowledge acquisition, intrapersonal development, interpersonal development, practice competence, and civic responsibility. Schuh and Upcraft (2001), longstanding scholars in assessment practices in student affairs, endorsed the six

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ACPA broad categories of outcomes while adding two they believe to be critical: academic achievement and persistence.

As additional professional organizations joined NASPA and ACPA to endorse and provide guidance on use of SLOs, Learning Reconsidered 2 (Keeling, 2006) was produced. This now seminal publication reflects the endorsement of seven professional organizations and extends the ideas presented in the earlier publication, Learning Reconsidered (NASPA, 2004), to report on campus experiences and challenge the field to continue to deepen the examination of student learning. This work clearly establishes that student learning occurs well beyond traditional classroom applications of the term and co-curricular entities such as student affairs have a role to play in identifying and assessing SLOs.

What are Student Learning Outcomes?

Student learning outcomes (SLOs) are statements, typically linked to methods of assessment, that indicate what a student should learn as a result of his or her participation in or interaction with a learning opportunity (Council for the Advancement of Standards in Higher Education [CAS], 2015). Developing meaningful learning outcomes requires a strong foundational structure typically achieved by connecting a well-developed mission statement with recognized program components that are the means through which outcomes are assessed. Schuh (2008) emphasized the importance of aligning departmental missions and activities with those of the institution for truly meaningful learning outcome statements and program assessment. To emphasize the importance of curricular, co-curricular, and extracurricular education to overall student learning and development, higher education communities must create and nurture integrated practices that allow students to meet SLOs (Robbins, 2014).

The value of learning outcome data is well recognized. While outcomes help students articulate what they are learning, outcomes also help staff to communicate to stakeholders what they are doing and the impact they are having (Henning, 2016). Developing or modifying program elements based on outcome data can lend strength to an appeal for resources. For example, evidence of achieved student learning outcome(s) linked to a dedicated orientation activity can justify continued or expanded funding. In a DRS related example, evidence of achieved practical competence with adaptive equipment is an outcome from a DRS program of training and thus supportive of expanding a program’s adaptive equipment resources. SLOs also provide rationale for practices, thus becoming and bolstering evidence-based practice. Ultimately, using SLOs brings the focus to student learning rather than student satisfaction, a distinct difference identified in Learning Reconsidered (NASPA, 2004).

The Council for the Advancement of Standards in Higher Education

The Council for the Advancement of Standards in Higher Education (CAS) provides professional standards and guidelines for the development and assessment of programs serving students in higher education. CAS was established in 1979 as a consortium of professional student affairs organizations. Each professional organization appoints a Representative and Alternate Representative to CAS (2015). The Association on Higher Education and Disability (AHEAD) has been a member of CAS since 1981. CAS Professional Standards and Guidelines are reviewed and revised on a recurrent basis with input from outside professionals in the respective fields. General standards apply to all functional areas, and specialty standards address specific areas of student services in higher education such as residence life, academic advising, and disability resources and services (CAS, 2015). As of 2016 there were 45 different CAS Standards and Guidelines covering a broad array of programs and services in higher education.

In 2008 CAS adopted a framework of learning and development outcomes. The model includes six broad categories called domains as well as more specific outcomes within each domain called dimensions. The domains are knowledge acquisition, construction, integration and application; cognitive complexity; intrapersonal development; interpersonal competence; humanitarianism and civic engagement; and, practical competence (CAS, 2015). The learning domains and dimensions are incorporated uniformly into the Program section of all CAS functional area standards. With the inclusion of learning and development outcomes in all standards, CAS promulgates the expectation that developing and assessing SLOs is integral to program structure and review.

Applying this expectation to the area of DRS, however, presents some inherent challenges. For example, most DRS offices would describe their role as one of supporting and assuring access on campus. Promoting an environment that does not discriminate against individuals with disabilities is key to compliance with federal laws. How does a learning outcomes perspective fit with this campus mandate? Do the typical tasks of reviewing disability documentation, meeting with students to discuss barriers and accommodations, and facilitating assistive technology and services promote student learning?
The CAS Disability Resources and Services Standards and Guidelines are a tool for SLO creation and assessment in the area of disability resources. They clearly outline the expectation that, similar to every other service area in higher education, DRS professionals need to understand and address the means through which disability-related services and professional roles contribute to students’ transformative educational experiences. Under the CAS model, all service areas need to develop and assess SLOs in order to provide a cohesive means of defining and measuring the impact of the given service area for students.

Increased member requests to AHEAD for training, workshops, and support shed light on expectations that SLOs and program assessment be implemented routinely. A search for disability resource specific research or reports on these topics revealed a void in this vital area of professional competence. Moreover, professional presentations at AHEAD conferences and other venues indicated DRS professionals had considerable interest in these topics and a need to know more.

To learn about current understanding and use of SLOs in disability resource offices, the authors conducted a survey of AHEAD members in the spring of 2016. The purpose of the study was to gather baseline data and learn more about how AHEAD members are experiencing and responding to national initiatives promoting the use of SLOs as part of institutional assessment activities. The main questions guiding this study included: (1) Are DRS offices using SLOs? (2) How are SLOs being developed in DRS offices? (3) What are examples of SLOs developed by DRS offices? (4) What professional development or training do AHEAD members need to respond to this form of institutional assessment?

Methods

Participants

Members of AHEAD were the target participants of this study. AHEAD is the “premier professional association committed to full participation of persons with disabilities in postsecondary education” (AHEAD, 2017, para. 1). A recent survey of AHEAD members found that 92% are full time employees and 94% work in a disability resource office in a postsecondary educational setting (AHEAD, 2016).

Instrument Development

Due to the specific nature of the questions under study, there were no existing instruments that met the needs of the current research. The principal author drafted an initial series of questions based on extensive experience interacting with the AHEAD membership through professional conference presentations and technical assistance on the topic of CAS Standards and SLOs. The research team developed the questions into a survey format consisting of multiple choice and open response items. A panel of five professionals with extensive experience in disability resources, professional development, and program assessment reviewed the initial survey instrument. Specific feedback was requested in regards to the clarity, formatting, and content of survey items. As a result of this feedback, some response options were further refined, directions were clarified, and a brief list defining key acronyms were added to the introduction to the survey. The survey was then piloted with three professionals to gather additional information about time required for completing the survey and to receive any additional suggestions for improving the instrument.

The final survey instrument consisted of five parts. Part 1 requested information about the respondent’s institution and disability resource department. The remaining four parts consisted of a total of 20 questions that paralleled the research questions presented above. Part 2, familiarity with SLOs and program standards; Part 3, use and development of SLOs on campus; Part 4, examples of SLOs used in DRS departments; and Part 5, professional development and training needs.

Procedures

The AHEAD member email distribution list was used to reach out to all members and invite them to participate in the study. The email invitation contained information that advised potential participants of the nature of the study and included a link to the online survey instrument. A follow-up email was sent two weeks after initial contact to encourage participation.

Survey Gizmo, an online survey software tool, hosted the survey. AHEAD had previously vetted this survey tool and found it to be an accessible platform compatible with use of a variety of assistive technologies. Anticipating the access needs of the target participants was an essential component of supporting response rate and working in alignment with AHEAD’s mission. Participants had access to the survey for a three-week period. Respondents replied anonymously unless they chose to provide their name and contact information as an indication they were interested in providing the researchers with more information.
Analysis

The researchers used Survey Gizmo to clean the data once the survey was closed. Complete responses, defined by Survey Gizmo as respondents who reached the final page of the instrument, were then examined. Basic descriptive statistics were run for each of the survey items including frequency counts, as well as mean and median ratings. Open ended response items for common themes were reviewed.

Results

Of the 2,916 AHEAD members, 472 responded to the survey. This reflects an approximately 16% participation rate. Respondents to the survey reported working at a variety of types of institutions of higher education. Of the 286 participants who reported on their employment settings, the large majority of respondents indicated they worked at a four-year institution. Four-year public (36.7%, n=105) and four-year private (35%, n=100) campuses were equally represented. Two-year public institutions were indicated by 28% (n=80) of respondents, and one participant (.3%) worked at a two-year private campus. Campus size ranged from student populations of 600 to 78,000 (M= 16,960; Mdn= 38,970; mode =3,000).

DRS offices also reflected a variety of settings. Participants reported numbers of students with disabilities registered with their campus DRS office ranging from as few as 15, to as many as 3,000 (M=655; Mdn=1,492; mode=350). The number of staff in the DRS office, including full- and part-time employees, ranged from 1 to 90 (M=5; Mdn=44; mode=1). Over half of respondents indicated their DRS office was administratively housed within Student Affairs/Student Life (55.5%, n=157). Other frequent reporting lines included Academic Affairs (23.7%, n=67), Student and Academic Services (5%, n=16), Diversity and Equity (3.2%, n=9), and Counseling and Health Services (3.2%, n=9).

Familiarity with Student Learning Outcomes

Respondents to the survey reported that they were familiar with SLOs. Ninety-three percent (n=260) indicated they were “somewhat or very familiar” with this concept. Far fewer respondents indicated they were knowledgeable about the CAS Disability Resources and Services Standards and Guidelines, with 31% (n=88) reporting very limited knowledge. A slightly greater number of respondents were “very familiar or somewhat aware” of AHEAD Program Standards (78%, n=217).

When asked if SLOs were being used in the respondent’s DRS office, only 28% (n=78) responded affirmatively. Among the 72% of respondents who said they were not currently using SLOs, 6% (n=17) indicated they had used SLOs in the DRS office in the past. While numbers are quite small, it is intriguing to note that of the campuses currently using SLOs in their DRS offices, almost half (49%, n=38) were public, four-year institutions. Private four-year institutions (27%, n=21) and private two-year institutions (23%, n=18) in this small sample report using SLOs much less frequently. In contrast to the infrequent use of SLOs in DRS offices, 72% (n=200) of respondents reported that SLOs are used by other departments on their campus.

Development of Student Learning Outcomes

Campuses that currently use SLOs in the DRS office indicated several factors leading to their use. The most common reason for adoption of SLOs was reported to be compliance with institution or division-wide requirements for their use (66%, n=57). Other influential factors included accreditation requirements (35%, n=30), departmental initiatives (30%, n=26), and program reviews using the CAS standards (19%, n=16) (see Figure 1).

When asked about how disability resource office SLOs were developed, respondents reported a variety of approaches (see Figure 2). The most frequently reported approach was that SLOs are established by the institution (38.5%, n=35). Other approaches included using the SLO structure in the CAS standards (17.6%, n=16) and developing SLOs for a specific program component (17.6%, n=16). Program components identified by respondents included such areas as academic coaching, transition programs, and self-advocacy development. Over a quarter of the respondents (26.4%, n=24) provided “other” approaches to SLO development. Frequent responses identified development as department driven, basing SLOs on DRS mission, and SLOs linking with larger division or campus priorities.

SLOs were most frequently reported as being developed by the department director (42.5%, n=37). Almost one third of respondents (28.7%, n=25) indicated departmental committees develop SLOs, with committees comprised of disability resource staff, ADA advisory group members, or various members from Student Affairs teams, for example. Other frequent responses included a DRS staff member or a university administrator such as a dean, vice president, or representative from the office of institutional effectiveness/research as the individual who developed SLOs.
Use of Student Learning Outcomes

The majority of respondents using SLOs reported that they currently assess SLOs within the disability resource office (55%, n=52) or have used and assessed SLOs in the past (9%, n=9). Many respondents noted that their SLOs were currently in development. Most respondents indicated they assess SLOs at a specific time of the academic year (42.5%, n=31) such as the end of each semester or annually. Others use the SLOs and assess them continuously (23.3%, n=17) such as when the SLOs are tied to programs, workshops, or training modules that are provided. Less frequently, respondents indicated the SLOs are used and assessed only during periodic program reviews (12.3%, n=9).

The SLOs serve various purposes for disability resource offices (see Figure 3). Most frequently, respondents reported using SLOs for assessment of program goals (66.3%, n=55), effectiveness of departmental components (42.2%, n=35), and compliance with accreditation requirements (39.8%, n=33). However, respondents also described a variety of other ways they have found SLOs useful. Several noted their usefulness in advocating for resources or funding. One respondent described SLOs as a means of assessing faculty learning about inclusive instruction. Another respondent noted, “The SLO assessment process has provided important guidance toward improving the instruction we provide to our students in the areas of: access to curricular and co-curricular programs, maintaining health, utilizing technology, developing self-awareness, and projecting self-confidence.”

Given the different approaches to development of SLOs, written by different professionals on campus, and serving different assessment purposes, it is not surprising that the examples of SLOs provided by survey respondents varied extensively in scope and clarity. For example, one respondent’s SLO focused on understanding department processes: “As a result of participating in the accommodation conference, students will demonstrate the ability to describe the process involved in requesting disability accommodations.” Another respondent provided an SLO that applied to all individuals attending a program: “By attending Ability Awareness Week, students will be able to identify three environmental barriers encountered by students with disabilities.” A third respondent provided an example with three different outcomes identified: “Students will be able to explain/articulate how to secure specific accommodations, how to communicate with faculty, and where to find specific services/supports on campus.”

AHEAD members almost unanimously (97%, n=271) indicated that professional resources on SLOs are needed. Online trainings and face-to-face workshops and conferences were the most highly requested format for training options.

Discussion

The findings of this study describe practices of DRS offices and their use of SLOs. Respondents reported they have knowledge of SLOs and are aware their peers in departments across campus are using SLOs as an aspect of program evaluation. Yet, DRS professionals state they have limited knowledge of the CAS Standards, and very few use SLOs as an aspect of program evaluation.

Among those respondents reporting use of SLOs, the definition and understanding of learning outcomes vary considerably. Many outcome statements from the survey refer to program results such as offering educational activities rather than individual learning outcomes. Some identify completion numbers such as the percentage of students who recognize the importance of effective communication as a result of using disability services as evidence of achieving learning outcomes. Given this wide variation, it is evident there is limited consistency in the use and definition of SLOs among respondents.

Development of SLOs occurs in different ways on different campuses but is most often reported as being in response to expectations from within the institution or from accrediting agencies. While commonly developed by a disability department’s director at the behest of the institution, survey results suggest that limited guidance is provided. This reactive use of SLOs mirrors the experiences of other areas of student services (Elkins, 2015). The inconsistencies in SLOs used by respondents to this survey reveal limited understanding of the CAS adopted domains and dimensions of student learning and development, thus suggesting an area where professional development would be extremely beneficial.

To better understand the dynamics influencing the limited use of SLOs, it is perhaps instructive to consider the field of disability services. Professionals enter the field from a wide array of backgrounds including psychology, education, social work, and counseling among others (AHEAD, 2016). The lack of advanced degree programs with a focus on postsecondary disability issues and services could be posited as a contributing factor. Limited graduate coursework and professional experience that incorporates program and student learning outcomes are likely contributors to a low level of SLO use in DRS assessment prac-
tices. There may even be a philosophical resistance to the suggestion that DRS professionals are conduits for student learning and development. Some might argue that the role of DRS offices is to promote an inclusive campus environment, not teach students. Additionally, does identifying and assessing SLOs such as increasing student self-advocacy skills reinforce negative “other” or “special” associations with disability? These are important questions for the field to continue to discuss and address while keeping in mind Schuh’s (2008) guidance that, “practitioners delivering support services to students cannot afford to ignore, obfuscate, or refuse to be engaged in assessment activities” (p. 358).

While survey results indicate the majority of programs using SLOs do assess them at particular intervals, the preponderance of program review by DRS units is not known. Anecdotal information suggests comprehensive program review, with or without use of SLOs, is not routine in many DRS departments. Higher education institutions often devote time and resources to assessment of programs and services in a reactive fashion, typically on a periodic basis and in preparation for an accreditation evaluation. The data in this study suggest that assessment is approached similarly in disability resources. This practice may miss the mark in truly assessing program effectiveness when student learning and development is not the motivating force. Periodic assessment does not allow for consistent improvement or higher level curiosity about how, what, when, where, and why students learn (Maki, 2002). In addition to the proactive, regular creation and assessment of SLOs, liberal education by nature should be integrative (Robbins, 2014). Incorporating SLOs into program design and identifying what students will learn from a program component leads directly to the means for measuring and assessing program effectiveness. As stated by Bresciani, Zelna, and Anderson (2004) outcomes must be meaningful, manageable, and measurable.

Student learning outcomes can be addressed at various levels across the institution. Maki (2002) presented a graphic on the interrelatedness of outcomes starting from institutional-level outcomes encircling program-level outcomes encircling course-based and individual service-based outcomes. From a values perspective and applicable to use of SLOs, Schuh (2008) stated, “What is important…is that institutions behave in ways that are consistent with what they indicate is important; that is, their enacted behavior must be aligned with their espoused behavior” (p. 359). These practices must be owned and embraced by faculty and staff alike, including disability resource professionals.

Implications for Practice

The authors suggest SLOs be thought of on a continuum. Some pertain to understanding and use of processes and services provided by the DRS office whereas others can be written such that they are developmental with periodic assessment reflecting a student’s development during their time at the institution. Both types of SLOs then become sources of feedback for staff with an expectation that the data will be used for continuous program improvement. Outcome data, itself, is a tool with which to discuss learning as a process with students reinforcing personal development and continual learning (Maki, 2010).

DRS units are often isolated and sometimes insular for reasons mainly focused on their unique responsibilities, especially when it comes to confidential services and legal compliance. However, the CAS standards for DRS indicate that institutional duties to advise, consult, and collaborate in creating an inclusive and accessible educational environment for students who experience disability is as or more important than provision of individual student services (Council for the Advancement of Standards in Higher Education, 2015). Institutional missions and values provide frameworks from which individual service units address their own missions with collaboration implicit or stated. Additionally, institutionally adopted SLOs can become lenses through which different populations of students’ experience and development can be viewed. Data from global outcomes can therefore be very informing for population-specific service units such as disability resources. Beno (2004) presented a strong argument for learning outcome work at an institutional level that can inform departmental programs with their own respective learning outcomes. An example of an institutional value that could very directly shape learning outcomes within departments would be the value of social justice. A corresponding SLO could be stated as, students will understand diverse philosophies and cultures within and across societies (Hawks, 2007). A DRS SLO, then, that is written to capture student understanding/value of social justice as evidenced by behavior could be, students identify physical or attitudinal barriers in the institutional environment through verbal report or use of an online tool.

Collaboration with colleagues is an important mission of DRS units. With the emergence of the academic discipline of Disability Studies, opportunities are emerging where SLOs may be mutually endorsed and shaped. An example of that would be the development of disability identity. A plausible learning outcome focusing on disability identity could be whether a student would endorse the
organizations such as AHEAD face inherent challenges. Note that this is not a positive or negative qualifying statement, implying that a student’s thinking could be affected in either direction. The authors posit that disability resource professionals should not consider assessment due to pressure from accreditation agencies a process with a discrete end point. Adopting an SLO perspective along with regular program review can have ongoing, beneficial results for the DRS program. Erwin (1991) described reaction to assessment as occurring in five stages: “discovery, questioning, resistance, participation, and commitment” (p. 26). Using these five stages as a guide in comparison with the results of this study, the field of disability resources can be seen in almost all aspects of the spectrum. Based on the volume and variety of response the authors have received when offering professional development opportunities centered around learning outcomes, assessment, and the CAS standards, it is apparent some DS professionals are moving through discovery toward questioning by attending workshops and beginning to raise questions about the necessity, or lack thereof, of assessment in their practice. Others are being spurred by accreditation standards and individual institution requirements to begin the reactive participation stage. While few in number, there are also disability resource professionals in the proactive commitment stage who view assessment as independently valuable and who are working to regularly incorporate the practice, using resulting data to guide their work. An outcome of embracing assessment, can be realization that, “evaluation and assessment provides real data on which to base innovations, justifications, and requests, and, as a result, may place an institution in a favorable position with external entities” (Robbins, 2009, p. 266). The results of this survey provide additional insight into the status of the progression of disability resource professionals in the proactive commitment stage who view assessment as independently valuable and who are working to regularly incorporate the practice, using resulting data to guide their work. An outcome of embracing assessment, can be realization that, “evaluation and assessment provides real data on which to base innovations, justifications, and requests, and, as a result, may place an institution in a favorable position with external entities” (Robbins, 2009, p. 266). The results of this survey provide additional insight into the status of the progression of disability resources within the arena of assessment, particularly the use of SLOs.

Limitations

There are limitations of the study that need to be considered in using and applying the findings. The target population for this work was focused on AHEAD members. While AHEAD is the largest professional organization comprised of individuals working in DRS offices, the experiences and perspectives expressed by these respondents may not be reflective of disability resource professionals overall. Among the population of AHEAD members, there was a fairly small response rate. While nonprofit organizations such as AHEAD face inherent challenges in survey response rates (Moss, Killam, Skillman, & Williams, 2014) the data presented are valuable for their descriptive use in exploring a relatively new aspect of disability resource work. The low response rate restricted the amount of additional data analysis that would result in meaningful findings and limited the ability to generalize the findings as reflective of the membership overall.

Conclusion

The survey on knowledge and use of SLOs in disability resource offices revealed a number of important results with implications for professional development and further research. Survey results and strong member response to professional development opportunities underscore interest in knowing about and using SLOs yet shows limited current use of outcomes that are consistent with guidelines put forth by CAS or other organizations. This inconsistency has the potential to put DRS units out of step with other student affairs units who are developing outcome statements aligned with nationally recognized definitions of SLOs thus creating potential vulnerability during internal or external reviews and accreditation. Collaborating with other institutional departments as review partners can broaden understanding and use of an outcomes perspective by disability resource professionals. NACADA, the professional association for academic advisors, has long promoted use of SLOs and program assessment thereby making advising staff potential mentors and partners for disability resource professionals as they strive to adopt learning outcomes along with program assessment and review.

The paucity of literature on SLOs and program assessment in the field of disability resources should serve as a call for action. Professionals in this field, especially given their varied educational and professional backgrounds, would benefit from resources and research on program review, assessment, and evaluation. Henning and Roberts (2016) astutely observed that fears of change, failure, and punishment can contribute to staff resistance to developing and using an SLO perspective. These factors need to be taken into consideration as the field develops professional training and workshops on SLOs, learning outcome definitions, and strategies for proactive utilization.

When taken broadly, SLOs are but one element of comprehensive assessment. Elkins (2015) stated that to prevent our being deemed unnecessary, or at the least misunderstood in our mission, “We can begin by claiming our responsibility for student learning, building relationships with faculty, and taking a ‘just-do-it’ attitude toward assessment of student learning”
(p. 46). Moving from reactive to proactive assessment further affords access to a continuum of data useful in not only daily work but also for shaping a department’s strategic mission and vision. Through use of comprehensive data, including achievement of identified learning outcomes, the disability resource department fulfills its duty to be a good steward of time, resources, and influence. Recognition for needed professional development and departmental resources to enhance comprehensive and consistent assessment practices in DRS is underscored by this study. ACPA (1996) has brought attention to the role of professional associations in preparing student affairs staff in general to focus on student learning. With the growing attention to this arena in the field of disability resources, AHEAD, as the premier association for disability resource professionals, is well situated to inform and assist its members in this important area.

Proactive use of a SLO perspective, rather than reactive in response to external pressures, can be difficult to adopt yet extremely beneficial to students, staff, collegial partners, and administrators. As Henning stated, “defining outcomes provides staff a road map to structuring programs and services as well as determining appropriate assessment methods” (2016, p. 26). Data drives decisions at all levels, and when the disability professional has a command of assessment data including that from meaningful, manageable, and measurable SLOs his or her voice is well heard.

References


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Figure 1. What Prompted Disability Resource Use of Student Learning Outcomes? Respondents could indicate more than one response.

Figure 2. How were Disability Resource Office Student Learning Outcomes Developed?
Figure 3. What Purpose do SLOs Serve for the Disability Resource Department? Respondents could indicate more than one response.
Emerging Adults: Perspectives of College Students with Disabilities

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Abstract

Qualitative data were gathered, via surveys and interviews, from students with disabilities enrolled in undergraduate and graduate professional preparation programs, with the intention to learn about their reasons for not disclosing their disability status or not pursuing relevant accommodations. Findings indicate their primary motivations are to assert independence, to avoid stigma associated with others’ responses to disclosure and/or use of accommodations, and to develop an adult identity that includes but is not defined by disability. Recommendations for higher education practice and further research are provided.

Keywords: College students, higher education, disability, identity development

Individuals with disabilities are increasingly pursuing degrees in higher education. According to one U.S. Department of Education study, during the 2008-2009 academic year, the most recent year for which data are available, “88% of 2-year and 4-year Title IV degree-granting postsecondary institutions reported enrolling students with disabilities” (Raue & Lewis, 2011, p. 3). During this same period, these institutions reported enrolling nearly 707,000 students with disabilities. To be eligible to receive accommodations at college or university, students with disabilities first have to disclose their disability to the disability services office.

The eligibility process is markedly different at the postsecondary level compared to the secondary level. In P-12 institutions, parents and teachers can advocate for students to receive the support services and accommodations to which students are legally entitled. In postsecondary institutions, students with disabilities are on their own. Authority for one’s education transfers from legal guardians to students themselves, which is often a confusing and challenging shift (Barnard-Brak, Sulak, Tate, & Lechtenberger, 2010; Cawthon & Cole, 2010; Field, Sarver, & Saw, 2003). Legally, students must self-identify as a person with a disability, self-disclose to the institution, request support, and communicate their needs to professors. Having reached the age of majority, these 18-year-olds (and older) are legally considered adults, capable of and responsible for governing their own lives, including their education. Myriad skills underlie a person’s ability to successfully be autonomous or independent.

As faculty in Teacher Education and Counselor Education programs, we have taught college students with disabilities. Some of these students openly discussed their disabilities, struggles, and successes during class sessions and/or office hours. Others chose not to self-disclose until they were failing a course, or they completed a course. These experiences served as the basis for this study. The current study focused on college students in pre-professional programs who self-identify as having a disability (through an IEP or a 504 plan) and who are eligible for specialized services from our small public college in New York. The purpose of this paper is to present results from a subset of a larger study regarding perspectives and experiences of those who decided not to pursue services in college. Our research question, specifically, for this subset was “What are the experiences of students with disabilities in the college’s professional preparation programs?” In this paper, we present implications for understanding and providing services and accommodations for students with disabilities.

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Literature Review

Disability in higher education is a growing field of study. Our perspectives of relevant literature have been strongly influenced by the voices of our study participants. We present material that asks readers to consider students with disabilities as college students undergoing developmental (e.g., maturation-al) processes parallel to those undertaken by college students without disabilities, as well as literature that acknowledges the significant, but not defining, influence disability contributes to those processes.

Emerging Adulthood

Emerging adulthood is the developmental transition period, generally, that occurs between ages 18 and 25, and is different from adolescence and adulthood. “Emerging adults do not see themselves as adolescents, but many of them also do not see themselves entirely as adults” (Arnett, 2000, p. 471). Emerging adults do not define adulthood by major life events (e.g., earning a degree, establishing a career, or embarking on marriage or parenthood) but rather by particular personal qualities or characteristics, reflecting “emphasis in emerging adulthood on becoming a self-sufficient person” (pp. 472-473).

Schneider, Klager, Chen, and Burns (2016) noted today’s young people receive complex and conflicting messages regarding when others consider them as adults, as well as the shifts in indicators of adulthood from those of earlier generations. In addition, young adults entering higher education are often academically underprepared, and have few supports and decreased financial resources, resulting in increased time to completion of degree and entry into the workforce, which often can only provide underemployment for those with bachelor’s degrees. Nevertheless, [M]any persons with disabilities have internalized society’s perceptions of being “less than” and often have created an image of being “Super Human” in order to combat their feelings of inadequacy. Persons with disabilities often believe that they need to prove that they belong as members of society and overcompensate by portraying that they do not need support in any way. (Gibson, 2006, p. 5, emphasis added)

While enrolled in institutions of higher education, college students with disabilities are participating in the same processes of identity development as are their peers without disability. They are identifying who they are with regard to gender, race, ethnicity, and sexual orientation, while also defining who they are with regard to their disability. The disability literature presents this self-defining identity process as requiring self-determination, another term for independence.

Disability Law

Three federal laws directly pertain to the rights of individuals with disabilities. These include the Individuals with Disabilities Education Act (IDEA) of 2004, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) of 1990. In P-12 settings, IDEA (2004) governs which students receive special education services and outlines the procedures by which these services are conferred. IDEA is composed of four sections. Parts A and D outline the foundation for the Act and over arching steps to be taken to enhance the education of children and youth with disabilities. Part B delineates guidelines for school children ages three to 21. This includes principles such as zero-reject, non-discriminatory evaluation, appropriate education, least restrictive environment, procedural due process, and parent participation (Turnbull, Huerta & Stowe, 2009). Part C provides guidelines regarding funding and services for children ages birth through two years.

Identity Development among College Students

College students are understood to be in the process of identity development, formation, or creation (depending on one’s theoretical lens); this process is further understood to be fluid and recursive, with identity “socially constructed ... through interactions with the broader social context in which dominant values dictate norms and expectations” (Torres, Jones, & Renn, 2009, p. 577). This broader social context includes institutions such as education, work, family, and economics “patterned by intersections of race, class, gender, sexuality, age, ethnicity, and disability (among others)” (Anderson & Collins, 2004, p. 216). Further, contemporary theories (e.g., critical race theory, queer theory, cited in Torres et al., 2009) argue that identity is characterized by intersectionality of a variety of identity dimensions (e.g., gender, race, ethnicity, sexual orientation). To these lists of identity dimensions and systems of power and inequality within which students are coming to define who they are, we would add ability.
Until its last reauthorization, IDEA outlined processes for schools and parents. With the addition of transition services, students were expected to take a more active role in their education “to facilitate the child’s movement from school to post-school activities, including postsecondary education” (IDEA, 2004). Yet even with recent amendments to IDEA, student involvement in the Individualized Education Plan tends to be limited at the secondary level and transition services tend to fall short overall (Cawthon & Cole, 2010; Barnard-Brak et al., 2010; Field et al., 2003; Lightner, Kipps-Vaughan, Schulte & Trice, 2012). Under-preparation of transition from secondary to postsecondary activities can leave students with limited self-awareness, self-regulation, and self-advocacy skills. This is a concern because college students with disabilities no longer qualify for services under IDEA and must, of their own accord, seek services under Section 504 and/or the ADA.

Subpart E of Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 pertain to institutions of higher education. These are civil rights legislation that prohibits the discrimination of individuals with disabilities. Specifically, Section 504 states that:

No otherwise qualified person with a disability… shall, solely on the basis of disability, be denied access to, or the benefits of, or be subjected to discrimination under any program or activity provided by an entity/institution that receives federal financial assistance. (P.L. 93–112)

Regarding postsecondary education, this pertains to recruitment and admission procedures and academic adjustments that do not fundamentally alter program standards or requirements (Squires, 2015).

ADA expands the rights of individuals with disabilities to private organizations. Its purpose is to create a “fair and level playing field” for qualifying persons who can “perform the most fundamental duties of the position (held or desired) with or without reasonable accommodation” (Gilbert, 1998, p. 323). For colleges and universities, this means providing reasonable and effective accommodations on an individual basis. Similar to Section 504, the accommodations granted under ADA should “permit students with disabilities the opportunity to learn by removing barriers that do not compromise academic standards” (Ferris State University, 2016). As previously stated, these laws differ from the IDEA of 2004 because they stipulate that college students with disabilities must initiate the process of obtaining services. The “responsibility for identification, documentation, and requesting accommodations [lies] solely in the hands of the student” (Field et al., 2003, p. 340).

**College Students with Disabilities**

Increasing enrollment numbers do not paint a full picture. Numerous studies report that significantly higher numbers of students with disabilities are attending U.S. colleges and universities (Barnard-Brak et al., 2010; Cawthon & Cole, 2010; Hong, 2015; Lightner et al., 2012; Sniatecki, Perry, & Snell, 2015; Summers, White, Zhang & Gordon, 2014). Yet even with such increase in enrollment, college students with disabilities typically under-perform their non-disabled peers in several ways. For example, they attend college at lower rates than students without disabilities (Barnard-Brak et al., 2010), earn bachelor’s degrees at significantly lower rates than those without disabilities (Summers et al., 2014), and take twice as long to complete their degrees as those without disabilities (Hong, 2015). Furthermore, compared to peers without disabilities, college students with disabilities “obtain lower GPAs, are more likely to take leaves of absence, and tend to change to easier programs that prepare them for less lucrative careers” (Lightner et al., 2012, p. 145). As these statistics suggest, postsecondary outcomes for students with disabilities are far less favorable than those of students without disabilities.

Researchers in the field have identified both internal and external challenges that affect the experience of college students with disabilities. The most frequently cited barriers include lack of awareness of faculty or staff (Agarwal, Moya, Yasui & Seymour, 2015; Cole & Cawthon, 2015; Denhart, 2008; Hong, 2015; Marshak, Van Wieren, Ferrell, Swiss, & Dugan, 2010; Sniatecki et al., 2015), student lack of self-awareness or self-advocacy (Cawthon & Cole, 2010; Cole & Cawthon, 2015; Lightner et al., 2012; Marshak et al., 2010), perceived stigma (Agarwal et al., 2015; Denhart, 2008; Hong, 2015; Lightner et al., 2012; Marshak et al., 2010), perceived usefulness or quality of services (Hong, 2015; Marshak et al., 2010), and academic difficulties (Cole & Cawthon, 2015; Hong, 2015). A combination of these barriers influence students’ decisions whether to access services and accommodations on campus.

The experiences of college students with disabilities are rich and complex. Research in this emergent field has mostly comprised of quantitative studies and focused on students with specific learning disabilities. The current study contributes to the literature in that it uses qualitative methods to capture the experience of college students with various disabilities in professional preparation programs. These voices, in and of
themselves, are important to document. Additionally, they are notable because the participants represent individuals preparing to work with patients, clients, and students who potentially will have disabilities.

Self-Determination

Self-determination has repeatedly been shown to be an essential skill set critical to success for students with disabilities in higher education (Field et al., 2003; Finn, Getzel, & McManus, 2008; Garrison-Wade, 2012; Sarver, 2000; Summers et al., 2014). Turnbull and Turnbull (2001) defined self-determination as “the means for experiencing quality of life consistent with one’s own values, preferences, strengths, and needs” (p. 58). Field et al. (2003) adopted the 1998 definition from Field, Martin, Miller, Ward, and Wehmeyer, who emphasized skills and dispositions in their definition:

Self-determination is a combination of skills, knowledge, and beliefs that enable a person to engage in goal-directed, self-regulated, autonomous behavior. An understanding of one’s strengths and limitations together with a belief in oneself as capable and effective are essential to self-determination. When acting on the basis of these skills and attitudes, individuals have greater ability to take control of their lives and assume the role of adults in our society. (pp. 339-340)

Wehmeyer, Agran, and Hughes (1998) identify 12 component skills that constitute self-determination. These skills include:

- choice-making; decision-making; problem-solving; goal setting and attainment; independence, risk-taking, and safety skills; self-observation, evaluation, and reinforcement skills; self-instruction; self-advocacy and leadership skills; internal locus of control; positive attributes of efficacy and outcome expectancy; self-awareness; and self-knowledge. (p. 11)

Getzel and Thoma (2008), in summarizing relevant literature, described self-determination as

a set of personal or interpersonal skills that include acceptance of a disability and how it affects learning, understanding which support services are needed, knowing how to describe one’s disability and the need for certain supports to service providers, and having the determination to overcome obstacles that may be presented. (p. 78)

These definitions of self-determination have several elements in common. Agency: an individual with a disability can, and should, make his/her own decisions and actualize those decisions. The combination of knowledge, skills, and dispositions: being self-determined requires an asset-based mindset, draws on both understandings of self and systems, and utilizes learned abilities. Intersectionality: to be self-determined is to act in a social-cultural-historical environment influenced by numerous internal and external factors. Interestingly, none of these definitions suggests that individuals with disabilities must act alone. To be self-determined is not to be an island. Yet this may not be the message received by students with disabilities from college faculty or staff.

The Influence of Stigma on Adulthood, Identity, and Independence of Students with Disabilities

Thomas, Curtis, and Shippen (2011) posited that individuals with disabilities are perceived as possessing more challenges than actually exist due to others’ lack of ability to comfortably interact with them. This discomfort of individuals without disabilities often increases as interaction with people with disabilities decreases, including fewer conversations and less physical and eye contact. Aggravating this increasing discomfort is the “hierarchy of stigma” (Smart, 2009, p. 34) associated with four primary categories of disabilities (in ascending order of amount of stigma):

- Individuals with physical disabilities have the least amount of stigma directed toward them; individuals with cognitive disabilities have more stigma; individuals with intellectual disabilities experience even more stigma; and, finally, those with psychiatric disabilities experience the greatest degree of stigma. (pp. 197-198)

Park, Roberts, and Stodden (2012) investigated faculty attitudes regarding students with disabilities. They found that instructor misconceptions about the needs and characteristics of students with disabilities often prohibited these same students from disclosing their challenges and asking for needed services and accommodations. Noble and Childers (2008) revealed the same result in their study with regard to college faculty and students requesting accommodations. Black, Weinberg, and Brodwin (2015) explored the perspectives of college students with disabilities on effective teaching methods/strategies. Students “expressed discomfort in discussing accommodations or disclosing their disabilities with professors” (p. 17). This was associated with perceived stigma of disability (particularly for individuals with invisible disabilities like
Specific Learning Disabilities or Emotional-Behavioral Disorders) and was an important factor influencing students’ decisions not to disclose.

Related to the notion of stigma is the assumption held by some, particularly individuals without disabilities, that individuals with disabilities are “less than” or “not normal.” This is a misconception that many individuals with disabilities actively try to disprove. Denhart (2008) indicated that college students with disabilities may elect not to pursue disability services because they perceive using accommodations as cheating. Interestingly, another finding from Noble and Childers’ (2008) study involved students’ reticence to disclose or ask for assistance as attributed to the students’ desire to be perceived as “normal” and “independent.” Similarly, Cole and Cawthon (2015) found that many college students with disabilities chose not to disclose the disability because they wanted to “maintain a ‘typical’ identity and avoid negative reactions/comments from peers” (pp. 170 & 172). Herbert, Welsh, Hong, Kurz, Byun, and Atkinson (2014) used the phrase “anxious for a new beginning” (p. 23) to characterize students with disabilities who choose not to self-identify due to the impact of the stigma of having a disability.

Methodology

Philosophical and Theoretical Underpinnings

We, the researchers, believe that all students can learn, that teaching and learning should be individualized to meet students’ developmental needs, and that an asset-based model best serves students. Such a model discovers, utilizes, and enhances students’ abilities. Correspondingly, viewing students as different, rather than deficient, positions individuals as unique beings with strengths; individuals who can contribute to and benefit from education. We believe that historically marginalized people, including individuals with disabilities, have been ignored and underserved. Education systems have played a role in this disempowerment, yet that does not have to continue. Education systems can always be renewed and improved.

Method

We designed a qualitative study using a phenomenological approach. Our primary goal was to understand the lived experiences of college students with disabilities in professional preparation programs. In answering our research question, “What are the experiences of students with disabilities in the college’s professional preparation program,” we explored and described “what” individuals experienced and “how” they experienced it. We believe that meaning is subjective and that individuals enter contexts with preconceptions. Therefore, our goal was not to “bracket” ourselves from the research but to acknowledge our biases, monitor ourselves throughout the study, and to elucidate how we derived our interpretations. Our intent was to document the “emic” perspective so as to (1) better understand the individual’s experiences and perspectives, and (2) present ways to facilitate students’ success in college as identified by the participants.

This study is naturalistic or situational in that it explored students’ experiences in their natural setting: the college campus, specifically in classes and through interactions with professors, advisors, and peers. It includes descriptive empirical data, collected from interviews and open-ended surveys. We utilized inductive methods where codes, categories, and themes emerged (bottom up) from data (Bogdan & Biklen, 1998; Stake, 2010). Data were analyzed, producing textural and structural descriptions, which revealed meaning about the essence of the phenomenon (Creswell, 2014). As with qualitative research, a recursive process, data were analyzed multiple times with myriad frameworks. Specific additional theories were used during these subsequent analyses and will be discussed later.

Participants. During the 2014-2015 academic year, participants were purposefully selected (Glesne, 2006) from eight professional preparation degree programs, including nutrition, nursing, communication disorders and sciences, social work, human development and family relations, school psychology, counselor education, and teacher education. (The researchers were faculty in some of those programs.) Participants were at least 18 years old, males and females, from diverse backgrounds, enrolled as undergraduate or graduate students, part-time and full-time. In total, 541 participants completed the open-ended survey.

In this subset of the larger study, participants included forty-five students who self-identified as having a documented disability. Participants were instructed to identify and describe their disability, then select the IDEA disability category to which it pertained. Disabilities represented in this sub-study include nine of the 13 categories listed in the Individuals with Disabilities Education Act of 2004. Specifically, these are Specific Learning Disability (28%), Other Health Impairment (28%), Emotional Disorder (16%), Autism Spectrum Disorder (7%), Physical Impairment (7%), Visual Impairment (4%), Speech-Language Impairment (4%), Hearing Impairment (4%), and Traumatic Brain Injury (2%). Seven participants indicated they had more than one disabil-
Surveys were conducted in 24 classes on campus after obtaining participants’ consent. Data collection was carefully designed so that researchers did not collect data from any students for whom they were a current instructor. These data were entered, verbatim, into computer databases and double checked for accuracy before analysis began.

Co-researchers engaged in a rigorous process to reach inter-rater reliability. This entailed independently reading, coding, and categorizing six surveys then coming together to discuss our analyses of Part B responses. As co-researchers shared analyses round-robin (one survey at a time, question by question), their codes and categories were recorded in a Word document. Verbatim key phrases from participants were written on this document with co-researchers’ ponderings, questions, ideas, etc. included in brackets. Then, we examined the comprehensive record and decided which codes to adopt, eliminate, or revise. We also created definitions for our codes, detailing what data “counted” or “did not count” in particular categories. The coding scheme went through several drafts. Before it was used in the final analysis of data, we piloted the coding scheme on two more surveys. Finding that the coding scheme captured the data we wanted, and that co-researchers were consistent in their use of codes, we began to use...
the coding scheme in actual analysis. Surveys were coded by at least two researchers independently.

As noted, of the 45 participants who disclosed a disability, twelve agreed to participate in a follow-up interview. Two co-researchers (not currently instructors of the participants) conducted each individual semi-structured interview. Interviews were held in private rooms on campus and ranged in length from 30 minutes to 75 minutes. Interviews were documented by notes and audio recordings, and then transcribed verbatim. Before interviews were analyzed, a copy of the transcript was emailed to each participant for member-checking (Glesne, 2006). Eight of the 12 participants responded affirmatively, indicating that the transcript adequately captured his/her voice; three participants did not respond; one email was undeliverable.

As with survey data, co-researchers worked to establish inter-rater reliability of interview data. Two co-researchers with extensive qualitative research experience manually coded all transcripts several times, initially using descriptive-emergent codes then using analytic codes. Codes were categorized and organized into a hierarchical coding scheme, which was revised as analysis progressed. Two co-researchers with extensive quantitative research experience then read and shared comments on transcripts to provide fresh perspectives and to challenge investigators “whose closeness to the project frequently inhibits his or her ability to view it with real detachment” (Shenton, 2004, p. 67).

Additionally, the following strategies were used to enhance the trustworthiness of this study: peer scrutiny (when data and interpretations were shared with a person not affiliated with the project and feedback solicited); iterative questioning in survey and interview construction; frequent debriefing among co-researchers; memos (of process, content, interpretations, and researcher-subjectivity); and steps to help ensure honesty in informants (e.g., building rapport, explaining participants’ right to withdraw from the study, emphasizing that researchers are not looking for a single “right” answer to questions) (Shenton, 2004).

Findings

Why Students Chose Not to Pursue Accommodations or Supports

Twenty-eight students indicated and then described in open-ended survey responses why they did not choose to pursue any accommodations or supports. Twelve students elaborated on their survey responses in the interviews. Responses included an array of internal and external factors, both positive and negative. The findings related to challenges and barriers will be discussed elsewhere. In this paper, we discuss factors related to identity development, including independence, challenging one’s self, accepting one’s self, and stigma.

Wanting to be independent: dealing with it on my own. The most frequent explanation provided in surveys and interviews for not pursuing services was independence. Survey participant #89 wrote, “I want to go through college and succeed without Disability Services.” According to survey participant #204, “I can succeed without the help.” Interview participant #76 remarked, “I’m kind of used to just figuring it out on my own and advocating for myself, so in that sense I’m less dependent on others.” In her interview, participant #541 explained that she did not seek supports from the disabilities office or student health services “because I wanted to be more independent about taking care of it.” Interview participant #50 stated that he “was raised to take ownership.” And survey participant #292 simply wrote, “I can deal with it on my own.”

Other participants elaborated, offering reasons for wanting to be self-sufficient. For example, one survey participant mentioned the life-long implications of having a disability. She explained, “I need to work on taking care of my own health, as I will throughout the rest of my life” (participant #541). A different participant wrote about having high self-expectations and being solely responsible for the disability. She wrote, “I will not hold myself to a different standard than my peers. I will either learn to be more efficient or I will not graduate” (participant #308).

For other participants, dealing with it on their own did not mean absence of supports, it meant using self-employed supports. For example, one survey participant wrote, “The accommodations on my 504 plan (preferential seating, for example) are self-directed. I found and could independently do accommodations on my own” (participant #74). In her interview, participant #74 revealed an extensive array of strategies she had researched and said her reason for forgoing supports was a “sense of wanting to do it myself, independence. I knew I could ask for help if needed, not to ignore the condition I have [but] I want to find a way to do it.” Another survey participant stated, “I have developed cognitive/behavioral strategies to cope” (participant #456). Interview participant #11 “read up on” her condition, learning the expected trajectory of her condition and that it went “hand in hand” with anxiety. Interview participant #207 described having taught herself an array of supports that included organization of materials and space, using to-do-lists and post-its, reading material multiple times, and structuring her environment so she has silence and can focus.
She gave an example that illustrated her strategy:

If I chew a certain flavor gum while I’m studying and then bring that gum with me and I chew it during the test, there’s a connection there... It does work, and no one knows. I can do it very discretely.

Interview participant #272 noted that because no one had explained to her what dysgraphia is, she had to look it up, and “to this day, I will still look up information about it because there is a lot that’s not known about it. I look at it quite frequently.”

Wanting to challenge myself: growing and overcoming my disability. Other participants indicated that not using supports would help them manage their disability. As one survey participant believed, refusing to use note taking services, which he was permitted, would “assist myself in note taking skills” (participant #52). Similarly, another survey participant wrote, “I don’t take extended testing time because I want to challenge myself to develop and sharpen my skills” (participant #207). In her follow-up interview, participant #207, a non-traditional student who had dropped out of high school and had been on her own since age 16, revealed that she was not assessed/diagnosed until college, after having achieved her GED on her own. She said that in middle and high school “teachers pushed me through” and that she had “no advocates in school or at home.” As a result, she developed her own strategies for learning and success, resulting in a 3.92 GPA. After her diagnosis, she had “opportunity for extended time” but:

my worry is if I take that time, I’m going to know I have that time, and I won’t be challenged ... I don’t want my sense to dull ... I just want to keep that challenge there, so I’m on my toes and I’m being challenged.

Participant #44 stated in his interview that he had used support services while in community college, but does not use them now because:

I feel like I’ve just adapted and grown. I think I do as well as anyone else; better regular study habits, better time management, I write notes ... I really think I don’t need them [adjustments] anymore ... I learned that my disabilities are all my responsibility. It’s no one’s absolute responsibility to do things for me. The bottom line is that it’s my responsibility to do anything for myself and to seek out help that I need and things like that.

Survey participant #218, simply wrote that he did not use services because he “wants to grow out of the aids.”

Accepting self and acknowledging their evolving self-perceptions. Related to the theme of independence is the theme of identity development, as these students with disabilities learn to navigate college and build their repertoires of college success strategies aside from or in addition to external accommodations for which they are eligible. Eight participants discussed this in their open-ended survey responses. Survey participants wrote, “I don’t need them [accommodations]” (participant #204) and “I don’t think it [supports] is necessary” (participant #141). Several survey participants indicated specific accommodations (e.g., extended testing time, lectures recorded, or notes provided) that they could have used but did not. Four survey participants compared their current need with past need, stating they did not need support “anymore” (participant #44), that “in high school I had extra time on tests; I don’t need accommodations/supports in college” (participant #17), that “since I did not really use the accommodations in school, why would I need them in college?” (participant #11), or “I feel that I was able to manage my condition in undergrad and didn’t need to use the services there, so I figure I would be good to go without them [as a graduate student]” (participant #156). In his interview, Participant #44 elaborated on this theme of not needing services: “I guess I like to be the person I am now and not always have to bring that up.” Participant #206 wrote, “I am at the same pace as everyone else so I do not need extra help.” Participant #44 wrote, “I am proud of my accomplishments and feel good about not having help ... I feel like I’ve just adapted and grown. I think I do as well as anyone else.”

Participant #207 demonstrates the evolution toward self-acceptance:

I basically have accepted it [her disability] because I tried so hard to change it and I just have accepted that that’s the way God made me ... I [felt it was a weakness]. I was really upset. I got the papers back from all the testing [evaluation] and I cried. I saw it on the paper and it was like I knew there was something wrong. I just had to process it. I had to absorb it and be like “Ok, how can we fix this? How can we deal with this?”

Two other participants illustrate this evolution. Participant #272 discusses self-compassion.

I’ve learned to be really patient with myself and realize that things are going to take me longer than it’s going to take someone else. Just like ac-
cept. I’ve learned to accept the fact that it’s going to take me twice as long to do something.

Participant #325 explains that it is alright to ask for assistance.

Everything with this is just you have to be aware of it and okay with yourself. It took me a long time to get there. But since I’ve been like this as long as I can remember, I had time to get there … As I’m getting older, I’m realizing more and more that it’s okay to ask for help. It’s like a private thing that I’m very, I like to be self-sufficient and independent. I don’t like to bother other people with my problems. I think as I’m getting older, I’m kind of realizing that it’s okay to need help.

Wanting to avoid the stigma of having a disability. Some participants identified perceptions that resulted in not disclosing and/or seeking services, such as embarrassment. Several participants identified stigma directly as a factor in their decisions to access services: “I don’t like the stigma” (participant #218); interview participant #272 gave up using assistive technology in the classroom because “there was too much stigma attached to it;” and interview participant #50 expressed his belief that “society sees ADHD as negative with a stigma attached.”

Other participants identified specific concerns that demonstrate stigma was a factor in their decisions to not access services. For example, several discussed feelings of embarrassment about being singled out. “I would ask not to be taken out of the classroom. One, because it’s embarrassing to have to leave when other kids are staying. Everyone sees you get up and leave with another teacher. That was always embarrassing” (participant #76). Participant #272 concurred:

when [professors] state that there’s no computers in the classroom, I don’t want to go ask for their permission to use it because ‘Why is she using a computer?’ kind of thing. I feel like somehow there will be a stigma attached if I’m the only one in the classroom using a computer.

The theme of embarrassment arose and was expressed in other ways, particularly when a participant did not know a professor well. “It’s awkward if I don’t know a professor well and they don’t know that I have diabetes, having to be like ‘Oh, can I take this test later?’” (participant #541). “It’s not so much a secret, it’s just that I don’t go into classes thinking that or making it known for the purpose of getting anything out of it. I don’t tell people to get adjustments or things like that” (participant #44). Survey participant #138 stated, “I feel belittled if people know I need accommodations.”

Several participants noted that their awareness of the stigma was imposed on them by others’ perceptions that they could not do what they wanted to do or were told they were limited, when maybe they were not (paraphrased from participant #74).

I was actually told by my advisor in the Department that maybe college wasn’t cut out for me and that I need to figure out personal problems before I could continue in this track. So I basically had no choice but to switch [majors] (participant #272).

Not that I need special exceptions made, but just… I have a professor who one time told me I should maybe think about switching my major because I forget to hand things in. That, to this day, makes me so angry because I know I’m going to be a dang good teacher. I’m 100% sure of that. It just made me so mad because depression can actually make you lose your memory (participant #325).

Sometimes disclosing isn’t always the best idea. It’s backfired on me…In college when I disclosed that I had a learning disability, it was suggested that I probably shouldn’t be going to college – that I definitely shouldn’t be in the field of special education (participant #76).

These findings are consistent with and add to previous research. Several studies present similar outcomes related to reluctance to disclose one’s disability and attitudes toward requesting accommodations. These include students’ desire to exert independence, avoid stigma, and be normal (Barnard-Brak et al., 2010; Black et al., 2015; Cole & Cawthon, 2015).

Discussion

The participants in this study present themselves as doing the developmental work of emerging adulthood, that is “accepting responsibility for one’s self and making independent decisions” (Arnett, 2000, p. 473). Our informants further place this developmental work in a context in which other domains of identity are developing concurrently, such as development of emotional and interpersonal competence, intellectual competence, and instrumental independence (Chickering & Reisser, 1993). These co-occurring processes are critical in moving an individual toward developing interdependence, understood on one level as
knowing when to rely solely on oneself and when to ask for help. As our study participants demonstrate, their understanding of themselves as capable college students, emerging professionals, and adults in development are at various stages. Moreover, these understandings co-occur with their deepening acceptance of themselves as persons with disabilities that are "‘part’ of who they are - not entirely who they are” (Gibson, 2006, p. 6).

The psychosocial development of students with disabilities is typical. Many of our participants said they want to “be normal” and their experiences suggest that they are “normal.” Their struggles are similar to the struggles of any college student. Yet, they feel that they are different. Moreover, many participants imply that being different than their typical peers implies that they are deficient. They often describe their disability as a hindrance, something that could be outgrown or should be overcome. Such thinking is dualistic, positioning disability and non-disability as antithetical.

This deficit-based misperception likely emerges from the way that students with disabilities, and those without, are socialized. Our educational systems, secondary and postsecondary, support a culture where categorization is rampant, and being “normal” is perceived as the goal of development. This creates groups that are considered “the other,” and students expend a great deal of effort to not be perceived as a member of those “other” groups. Moreover, the findings in this study reveal that most college students with disabilities are directly influenced by stigma, either actual or perceived. Here, participants reported perceptions about individuals with disabilities being negative and limiting. This, too, likely contributes to deficit-based thinking.

Additionally, college students with disabilities are saying that they want to be independent. They describe independence as acting in autonomous ways. More specifically, participants associate independence with individual effort. They discussed wanting to deal with their disabilities on their own and not wanting to rely on others. Some participants have experienced academic success when using “self-employed” and “self-directed” strategies. Others have not and are willing to sacrifice their degree rather than depend on outside services that they deem unearned because they provide an unfair advantage over individuals without disabilities. Participants appear to mis-perceive students without disabilities as being successful academically without receiving help from others or utilizing campus resources.

Interestingly, not all participants were focused on how society defined “being normal” or “being independent.” Some were coming to understand themselves as complex human beings with disabilities, and who constantly evolve. They described their experiences as opportunities for growth and adaptation. They also shared about how they have come to accept themselves, indicating that having patience with one’s self and asking for help were assets. As these examples indicate, development is not linear and does not happen in isolation. Nor does it occur in only one domain to the exclusion of all others while attaining some level of “completion.”

**Disability Identity Development**

Gibson (2006) presented her Disability Identity Development Model as a means of helping service providers understand people with lifelong disabilities. Gibson frames disability as one dimension of identity (as are ethnicity, gender, and sexual orientation), and notes that disability identity development is a fluid process; though presented as three stages, her model is consistent with the recognition among other contemporary identity theories that “disequilibrium,” “life changes,” or “dissonance” (Torres et al., 2009, p. 582) can lead an individual to view oneself in a manner thought to have been discarded in an earlier stage. In Gibson’s three-stage model, the second stage – Realization – is posited as occurring in adolescence/early adulthood. In this stage one sees oneself as having a disability, feels self-hate, asks “Why me?,” is concerned with one’s appearance and how others see one, and exhibits the “Superman/Superwoman” complex (2006, p. 8). As the individual moves from this stage to the third stage – Acceptance – conceptualized as occurring in adulthood, the focus shifts to embracing self, seeing self as relevant, incorporating others with disabilities into one’s life, becoming involved in advocacy, and integration into the world of the majority those without disabilities.

**Intersectionality of Identity**

Torres et al., (2009) noted that:

intersectionality is described [by Dill & Zambrana, 2009, p. 1] as “an innovative and emerging field of study that provides a critical analytic lens to interrogate racial, ethnic, class, physical ability, age, sexuality, and gender disparities and to contest existing ways of looking at these structures of inequality” (p. 588),

and that “intersectionality is also squarely focused on praxis...the intent and outcomes of an intersectional approach and analysis is the transformation of practice to address inequalities and promote social change” (p.
The responsibility for success in college does not belong solely to the person with the disability.

Whether students with disabilities are physically on campuses, at satellite campuses, or enrolled in online classes, it is their responsibility to self-advocate. At the same time, it is a shared responsibility to provide equitable experiences, which potentially lead to their success. Every member of the higher education community is their ally for inclusion. (Myers, Lindberg, & Nied, 2013, p. ix)

**Limitations**

As with much of social science research, we realize that our investigation was limited in scope. We investigated the stories and journeys of individuals at only one institution of higher education and documented their experiences. Moreover, inclusion criteria required participants to be enrolled in a professional preparation program, which excludes a large portion of student enrollment. Conclusions about participants’ perceptions and experiences are compelling and important, yet not generalizable to the broader population of students with disabilities attending college. In order to add more depth to the current study, a broader investigation, on a larger scale, would need to be conducted to find out the more global experiences of college students with disabilities. Additionally, it would be important to explore why and how college students with disabilities succeed, with or without services and accommodations. With more research and data to examine the collegiate experiences of students with disabilities, institutions of higher education may be willing to make substantive changes to serve this population and college communities in general.

**Implications for Practice and Future Research**

As noted above, our research revealed several important observations, and prompted more questions related to services for students with disabilities in college. Offering services to individuals with disabilities is required by law, but are these services that colleges and universities offer the wrong type, or are they perhaps offered in the wrong way? Are the perspectives and successful strategies that students with disabilities determine for themselves elicited and taken into account by student affairs professionals and/or faculty? Do students with disabilities take advantage of services that are already offered to all students (academic advising, career counseling, student health)? How are students made aware of the procedures to access accommodative and student services offered to all students? At present, institutional support systems exist that appear to be ill-fitted to the needs and desires of college students with disabilities. Through painful trial and error, participants came to self-identify supports and resources for academic success. This often occurred without the help of institutional support systems.

More inquiry is needed to deepen our understanding and rectify this situation. For example: What are the transition experiences of college students with disabilities? How are the experiences of college students with disabilities the same or different based on disability category, visible or invisible status, or prevalence? How are college students with disabilities acculturated to college? What additional services could be provided to all college students to assist their healthy development of self-determined adulthood?

Perhaps we (college faculty and professionals) need to redefine independence. Similar to the concept of normalcy, the idea of independence is likely socially constructed. Western societies, particularly the United States, prize autonomy and individuality. Such notions surface in schools as competition among students and ranking of students. In traditional schools, students have been trained to prize individual effort and knowledge over collective work and wisdom. For years, American society has proclaimed that to be independent, one of the greatest aspirations, is to stand on one’s own two feet. Such a posture disregards that we also stand on the shoulders of those who came before us. To be clear, we, the authors, believe that independence is not one person doing everything on one’s own. Rather, we believe that independence is using skills such as self-determination to achieve desired outcomes, and that independence occurs within an environmental context populated by helpers, mentors, or veterans of the processes. As such, we argue for a conceptual shift from independence to interdependence.

College faculty and professionals must examine their own preconceived notions of college students with disabilities and apply inclusive educational philosophies. College faculty and professionals can become more knowledgeable about identity development as a process, more aware of the services on campus and, most critically, use this information to modify the structure of their classes or interactions with individual students. As mentors, college faculty and professionals can be more explicit about the strategies and services they use, and have used, to be successful students and in defining who they are as individuals. College faculty and professionals can identify and implement processes that make disclosing disability and using services less stigmatizing.

For example, a student with a disability typically
must self-identify to college professionals in the accommodative services office, which then notifies the student’s faculty of the presence of a student with a disability in the faculty member’s classroom, as well as the need for particular accommodations. The faculty member is not considered a partner in this process, nor is the student encouraged to self-advocate directly with the faculty member. The two key members of this learning environment, the student and the faculty member, are disempowered by a process that treats the student’s disability as something shameful that must not be openly discussed, and the faculty member’s contribution as simply carrying out a legally required accommodation. It would seem that the expertise of the professionals in the accommodative services office would be better applied to educating faculty and students about disability, student and faculty rights and responsibilities, and preparing both for meaningful conversations about what best works for this student and how that accommodation can best be provided in this learning environment.

In sum, what we have learned from our participants leads us to believe that college faculty and professionals, and students with disabilities themselves, would benefit from identifying and building on the assets the students possess and have utilized throughout their educational journey. This would require open dialogue with a clear search for and focus on student strengths. The processes of asset-identification, self-advocacy, and collaboration can build self-confidence, interdependence, and a concomitant sense of “normalcy” for college students with disabilities.

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A Qualitative Investigation of Bullying of Individuals with Disabilities on a College Campus

Bridget Green¹

Abstract

The purpose of this study was to understand how individuals with disabilities experience bullying at a large university. This research consisted of a pilot study of two participants and the main study of seven participants. Each person participated in three semi-structured interviews that lasted between 10-60 minutes. The results of the study found that each participant experienced bullying in elementary school or high school. Every participant experienced bullying in college, with five of the seven participants experiencing bullying directly related to their disabilities. Past and current experiences of bullying influenced participants' relationships with peers and interactions within the collegiate environment. Some of the participants reported that peers provided an important role in coping with bullying while attending college, and addressed a need to feel safe across different environments. The results of this study reinforced a need to understand how minorities, specifically people with disabilities, experience bullying on college campuses. Colleges need to begin to create and implement bullying prevention programs that clearly outline supports at their respective institutions. Finally, disability student support services need to collaborate to ensure students feel comfortable reporting bullying in a safe, anonymous manner that provides the victim with opportunities to cope with the aggressive events.

Keywords: Bullying, people with disabilities, college

Bullying is a prevalent behavior in our school systems (U.S. Department of Education, 2015), and has been the subject of much research (Chapell et al., 2004; Chapell et al., 2006; Nansel et al., 2001). For this study, bullying is defined as occurrences between two or more individuals causing one person to be “exposed, repeatedly and over time, to negative actions and the individual is perceived to have lower social status, or is viewed as inferior to others” (Olweus, 1993, p. 9). Over the past decade, researchers have challenged earlier definitions of bullying, described various types of bullying (e.g., physical, verbal, relational), and examined the psychological and social impacts of being the bully, victim, and bully-victim as it relates to individuals with disabilities (Nansel et al., 2001; Rose, Monda-Amaya, & Espelage, 2011). An emerging body of research is examining trends in bullying incidents that occur outside of school campuses and on the Internet (Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Kowalski, Limber, & Agatston, 2012). The latter form, commonly referred to as cyberbullying, involves verbal bullying through the use of computers, cell phones, tablets, and other electronic devices (Hinduja & Patchin, 2015; Kowalski & Limber 2013).

In light of research at the elementary and secondary levels (Rose, Espelage, & Monda-Amaya, 2009; Swearer, Wang, Maag, Siebecker, & Frerichs, 2012), there is growing interest and concern surrounding bullying of students with disabilities on college campuses. The increasing number of students with disabilities attending college (11.1% of college students have a disability), coupled with the general lack of

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research on this issue intensifies this attention (U.S. Department of Education, 2016). To better understand the prevalence and nature of bullying involving students with disabilities at college, a literature review was conducted.

Conceptual Framework for Literature Review and Analysis
The conceptual framework for this literature review was based upon Vygotsky’s (1978) social development theory and Steinberg’s (2007) neuro-scientific theory of peer influences on decision-making and risk-taking. Using social constructionism, Vygotsky’s theory of social development was used to observe how higher psychological processes, such as social norms that evolve from college students, and how the culture of the college plays a role in the development of social skills and interactions. Through the use of communication tools, (e.g., smartphones, tablets, or computers), and identification of signs, that is, physical or observed behaviors that assist in navigating a culture (e.g., repeatedly posting an unflattering picture of a peer, Facebook groups providing information about campus activities), individuals learn how to communicate effectively with peers. As the students repeatedly observed and internalized certain behaviors that occurred in college, they begin to view said actions as cultural and social norms (Vygotsky, 1978). Tonkunaga (2010) argued through use of the lens of Vygotsky’s theory that cyberspace reinforces maladaptive behaviors that are prevalent on blogs or forums. This provides the idea that common, observed behaviors on campuses are socially acceptable.

Vygotsky’s (1978) theory of social development and higher processing and Steinberg’s (2007) theory of understanding adolescent brain development help explain the influence of peers’ words and actions on an individual’s social development and decision-making in high-risk environments. Steinberg (2007) maintained that there are two major networks within the brain which influence the decision-making process: socio-emotional and cognitive-control. The socio-emotional network is stimulated when the environment triggers an impulsive social or emotional response from the individual. This network is more sensitive in the individual’s teenage years (Gardner & Steinberg, 2005). As an individual matures closer to his or her mid-twenties, the cognitive-control network will more likely provide the primary response to the triggers in the environment. The researchers contend that the role of peers within the environment influences the severity of risk-related behaviors, particularly when controlling for age. The work of Vygotsky (1978) and Steinberg (2008) influenced the understanding of risk associated with various bullying behaviors, and the potential impact peers may have on social interactions. For example, an individual may learn from observations of interactions within various collegiate environments, that the only way to feel safe at college is to completely avoid places where he or she does not feel safe, or behaviors that are appropriate for different environments (e.g., social interactions in class versus at a fraternity). The individual can circumvent these hostile circumstances through the use of tools (e.g., smartphones) and signs (e.g., posts on Twitter), as defined by Vygotsky, to avoid environments where the aggressor may be present or where there may be a party. Finally, the individual will use his or her cognitive control networks to implement decision making skills to decide if it is safe to attend the activity, or cope with the event with peers.

Figure 1 provides insight to the conceptual framework. The center of this figure exhibits the communication between the individual’s socio-emotional network and cognitive network while interacting with people at college. These networks can be activated through peer activities, such as school clubs, social functions, and classes. Observation and interaction within these environments can assist the individual in understanding social norms of each environment. Students at college can begin to make meaning of social expectations, peer interactions, and perceived norms within the college environment as a person with a disability.

Findings from the Literature
Recent, life-threatening events have raised interest in research regarding the prevalence and occurrences of bullying on college campuses. For example, a Rutgers University student committed suicide after his roommate videotaped him with another man and posted the link on Twitter (Ashburn, 2010). Bullying in this setting frequently occurs online, as evidenced by the proliferation of blogs and websites dedicated to anonymous postings about students on various campuses (e.g., http://thedirty.com, http://campus-gossip.com, http://college convo.com). To more fully understand the extent of bullying on college campuses, a literature review was conducted to examine its prevalence, the forms it takes (e.g., cyberbullying), and the potential impacts collegiate bullying can have on the social, academic, and emotional development of students, including those with disabilities. The first section of the literature review analyzes research relating to bullying on U.S. college campuses; the second section focuses on cyberbullying occurring on college campuses.
Traditional Bullying

Within the past ten years, researchers have begun to investigate the prevalence of bullying at college campuses. Chapell et al. (2004) surveyed 1,025 undergraduate students at a northeastern university in the United States to determine whether the college students had observed peers bullying peers, had been victims of the bullying by peers, had witnessed teachers bullying students, had been bullied by a teacher, and had been bullied themselves. Using an adapted version of Olweus Bully/Victim Questionnaire, the researchers discovered that of the 1,025 students who responded, 18.5% reported being a victim of bullying by a peer more than once, 5% of the participants stated they occasionally experienced being the victims of bullying, and 1.1% reported that they frequently experienced bullying at college by peers. Furthermore, 29.4% of the participants observed a teacher bullying a student and 14.5% noted that they were victims of bullying by a teacher.

Chapell et al. (2006) conducted another study to examine the relationship between bullying in elementary school and high school, and the participation of bullying on a college campus. The researchers surveyed 119 undergraduate students. While bullying decreased as the participants aged, the researchers discovered that individuals who experienced bullying in elementary school were likely to experience bullying in high school. Furthermore, individuals who reported that they participated in bullying in high school were likely to participate in bullying in college.

Cyberbullying on College Campuses

Although there is a paucity of research regarding cyberbullying at two- and four-year college campuses, researchers are beginning to investigate and understand the foundation of cyberbullying in these settings. Koata, Schoohs, Benson, and Moreno (2014) interviewed 42 students from a Midwestern university who participated in six focus groups. The participants agreed that there is a difference between traditional bullying and cyberbullying on campus. However, they had a difficult time defining cyberbullying because the intent to harm is much clearer in traditional bullying. Crosslin and Golman (2014) echoed the difficulty of defining cyberbullying, noting that the definitions used at colleges are outdated, and that cyberbullying activities vary from campus to campus based on the culture of the schools. These findings corroborate previous research conducted by Brewer, Cave, Massey, Vurdelja, and Freeman (2012), who reported that 18 females participated in 3 focus group sessions and had a difficult time defining cyberbullying because it varied among people, peer groups, and age groups. Seventeen of the participants agreed that cyberbullying was perceived as a new term and therefore, it was difficult to arrive at a clear definition that accounted for factors such as age and race. Research by Koata et al. (2014), however, indicated that there were distinctions between high school cyberbullying and college cyberbullying. College students involved in this study noted that cyberbullying at college involved hacking social media profiles, discussing personal information that may damage another’s reputation on social media, and public shaming.

Gauging the prevalence of cyberbullying on college campuses remains challenging. In a 2011 survey of 170 U.S. undergraduate students, ages 18-24, 54% of the participants knew a peer who was cyberbullied by another individual at college, and 11% of the participants reported being the victim of cyberbullying (Walker, Sockman, & Koehn, 2011). Selkie, Kota, Chan, and Moreno (2015) surveyed 265 female college students and found that 27.2% reported participating in cyberbullying. The variation in results of these two studies reflect the differences in survey instruments, and the range of ways in which researchers and participants defined cyberbullying.

Cyberbullying of individuals with disabilities.

Only one study addressed cyberbullying of individuals with disabilities on a college campus. Kowalski, Morgan, Drake-Lavelle, and Allison (2016) surveyed 205 participants about bullying and cyberbullying on a college campus. Approximately 40% of the participants were students with disabilities; 60% of respondents were students with no known disability. Students with disabilities reported being the victim of bullying twice as often as students without disabilities (28% vs. 12.2%). They were also more likely to be the victim of cyberbullying when compared to peers without disabilities. Individuals with visible disabilities were more likely to be involved in cyberbullying as both the bully and victim. Individuals with disabilities also reported higher rates of depression, lower self-esteem, greater self-reports of ostracism, and physical responses to bullying and cyberbullying.

Causes and effects of participation in cyberbullying behaviors.

In studying the prevalence of cyberbullying on college campuses, some researchers are also attempting to understand why individuals engage in such behavior. Crosslin and Golman (2014) conducted six focus groups consisting of 54 total participants to understand the occurrence of cyberbullying on a Southern university campus. All of the participants disclosed that they had experienced cyberbullying. When questioned about the causes of cyberbullying behaviors, the participants said it was a way to “sabotage” another person’s reputation (p.
Students have also identified social acceptability as a barrier to combating bullying. For example, Brewer et al. (2012) found that the majority of the participants in their study would not speak to anyone on campus about cyberbullying because the student body perceived such behavior as socially acceptable. The purpose of this study is to better understand the bullying-related experiences of individuals with disabilities and the consequences of bullying and cyberbullying at a college campus.

Methodology

Participant Selection

Participants attended a large, metropolitan university campus and were selected using purposeful sampling. An inquiry was sent through the university’s Disability Support Services (DSS) listserv. The students who were interested responded to the director of DSS. After the researcher obtained the emails of interested students, a follow-up email was sent to those students inviting them to a one-on-one meeting with the researcher to review the goals of the study. After the initial meetings, nine respondents expressed interest. The first two respondents were used for the pilot study, and both participants recommended changing the wording of a question due to confusion. The remaining seven students participated in the qualitative research study; this study was approved by the university’s Institutional Review Board.

Following Seidman’s (2006) recommendation of a three-interview process, each participant was interviewed three times over the course of five weeks, with each interview lasting between 15 and 60 minutes. The first interview explored each individual’s history of bullying, disability diagnosis, and any previous interactions between the former and the latter. The second interview examined present experiences of bullying at college and how those experiences were influenced by previous bullying episodes. The third interview provided participants with opportunities to reflect on their previous and present experiences with bullying, with a specific focus on social media and college peers.

Data Analysis

Each interview was recorded by the researcher and transcribed. To prevent potential bias of the data obtained from interviews, targeted steps to ensure trustworthiness were implemented throughout the study. The researcher triangulated data obtained from the following methods: allowing participants to review and correct interviews through member checks, conducting interrater reliability interviews, and practicing reflexivity after each interview to be cognizant of the interpretation as a person with a dis-
ability. Using Vygotsky’s (1978) social processing theory, patterns across the various forms of data were observed for initial coding, and a second time for analytical coding to explain the participants’ experiences (Merriam, 2009). A deductive mode of analysis was also used when comparing the reflections in the participants’ interviews to experiences iterated in the literature on bullying and people with disabilities, and on bullying on college campuses.

Results

The identities of all nine respondents were protected by the application of pseudonyms. As noted above, a pilot study was conducted with the first two respondents of the DSS inquiry for the study. Sunny, an individual with epilepsy, and Michael, an individual who is hard of hearing, provided general insight into higher education, social media, and cyberbullying. Sunny stated that she does not see much bullying on campus, and although she does witness peers being mean to each other on social media, she does not view that as cyberbullying. She added that social media allowed girls in her dorm to be covertly mean to one another without any direct mention of a peer’s name. Sunny stated that without this explicit mention, it was more difficult to identify cyberbullying compared to traditional bullying, because it was harder to prove and easier to deny responsibility when the victims’ names were not associated with the post.

Michael made similar claims regarding the difficulty of identifying bullying and cyberbullying. He mentioned that at college, especially an institution that is known for diversity and academically competitive student body, bullying is “smarter.” He added that bullying is not simply being called a “slut” or “fat.” It is targeted towards the reputation of the individual as a student, causing them to feel intellectually inferior and leaving conversations thinking, “Wait, is he calling me stupid?” The pilot study provided insight as to how two participants viewed bullying at college, and how bullying behaviors in such settings are may manifest differently than in other environments (e.g., high school).

The following section will address the participants in the research study—specifically, their construction of bullying and how they personally experienced bullying and cyberbullying. Table 1 provides information on the participants who were interviewed for this study.

Construction of Bullying

Past and present experiences shaped how each participant defined bullying. All encountered bullying directly relating to their disabilities in elementary and/or secondary school. Additionally, they all had experiences with bullying at the collegiate level, as the bully, victim, or bully-victim. Each participant stated that bullying was a negative behavior with the end goal of causing another person physical or emotional harm. The aggressive behavior only needed to occur once to be considered a bullying event. A majority of the participants stated that bullying actions are purposeful, and typically have some underlying factor (e.g., a distinguishing characteristic in the victim).

Participants also identified cyberbullying as a prominent type of bullying in their collegiate settings. All participants acknowledged that, for most of their lives, social media (e.g., Facebook, Twitter, Instagram) played a large role in communicating with their peers. Phillip stated that there were positive and negative outcomes that occur from using the Internet, but the negative consequences do not prevent people from using social media. Four participants mentioned that cyberbullying was more severe than face-to-face bullying because of anonymity and the inability to see how the bully hurt the victim.

Participant definition of cyberbullying. All of the participants were active, daily users of social media. The most common social media outlets used by all participants were Facebook, Twitter, Instagram, and Yelp. All participants stated that in order for cyberbullying to occur, the ability to cause harm to another person through computers and/or cell phones had to exist. Amelia acknowledged that cyberbullying can be used to write things about an individual that would never be said in a face-to-face environment. Elizabeth claimed that the cyberbullying does not stop at written messages; it can also include photographs. Sarah noted that there is a power in cyberbullying, because it is harder to stop once the aggressive messages start.

Power of cyberbullying. Three participants mentioned the sense of power that cyberbullies have over their victims. Chris noted how public cyberbullying may be: “It can be direct or not direct, it can be private or it can be not private… It can be up to 100 people reading it.” Amelia stated that many people can read threads or comment history that contain malicious comments or images. Chris also stated that there was an emotional component to social media. He mentioned that he was able to see who defriended him because of comments he made in the past. This caused him to consider defriending a different form of social exclusion, and recalled thinking, “Okay, I guess we don’t exist to each other anymore.”

The participants further noted that anonymity is an important aspect of cyberbullying power. Sarah stated that cyberbullying is worse than face-to-face
bullying because “the person that’s bullying can hide behind the computer.” Phillip echoed this notion of hiding, stating that it allows a person to make more harmful remarks than he or she would in person, and to avoid the victim’s reaction. He further stated that computers allow a faster form of retaliation, where a person may be less apt to think about the consequences of immediately commenting online.

**Making Meaning of Bullying**

When a university takes a pervasive “this is your world” perspective – which I don’t think is necessarily wrong – students will understand that and respond. They will say, “Okay, this is our world. This is how we have fun in it,” or “This is how we create our culture within it.” And it can be too limiting. And the college bubble can be fun, but then it’s also pretty dangerous. (Participant in the study)

**Witnesses of bullying experiences.** Five participants stated that they were bystanders to a bullying event that occurred on campus. Matt said although he witnessed bullying on campus, he did not want to discuss it. Sarah mentioned that since she did not observe bullying that occurred and only saw the effects of the social exclusion, she did not feel comfortable discussing the details that occurred within her sorority. Chris explained a bullying event with his fraternity stating, “Whenever you force someone to drink, it crosses a line. Many lines are crossed when you pressure someone.” Amelia witnessed how gossip in her dormitory triggered social exclusion, causing her friend to be the victim of verbal bullying.

**Victims of bullying at college.** All participants experienced bullying at college as victims. They disclosed that bullies were peers, roommates, or professors. Five of the participants experienced bullying directly relating to their disabilities. Two participants did not experience bullying because of their disabilities, but both had non-visible disabilities. Matt, an individual with a learning disability, had his dorm room destroyed by a former roommate. He reported that he followed the college protocol to report the incident, but said disclosing the destruction made the bullying worse from peers. Elizabeth, an individual who is hard of hearing, was also bullied after she told her roommate that she was sexually assaulted. The roommate then began to inform Elizabeth that she “deserved it” and that she “didn’t fight hard enough.” After experiencing this, Elizabeth removed herself from that environment.

Two participants experienced bullying from professors after disclosing their disabilities. Phillip, an individual with dysgraphia, described interactions with his professor when he met with her for tutoring. He said that she would “allude to it [dysgraphia] impacting like my education and my grades and my intelligence.” Elizabeth stated that she felt uncomfortable saying that a professor would bully a student, but mentioned that she “received a weird backlash almost or just people downplaying it” from “faculty and TAs” causing her to feel isolated in class. When asked if she perceived isolation as bullying, she chose to not answer that question.

Amelia, Erin, Sarah, and Chris all experienced bullying from peers. Amelia, an individual with radial aplasia, was born with only four fingers. She recalled being in conversations that made her feel very vulnerable because peers would interrupt her and say, “Wait, do you have like four fingers? I only count four” causing people to look and try to touch her fingers. Erin, an individual with ocular motor dysfunction, has difficulty with discriminating different shapes and was asked to read aloud. She misspoke causing a peer to continuously bring up the incident and mock her in both private and public settings. Sarah reinforced the negative feelings associated with having individuals discuss her personal information in public settings. She provided an example: when her peers disclosed at parties that Sarah takes medication, they would announce that it was time for her to leave so she could take her prescription. Chris’s experience of bullying occurred after he was involved in an illegal incident while experiencing a manic state. The peer response to this incident caused Chris to be ostracized from social media, parties, and friendships. He stated his added frustration by saying, “I can’t come out and say, ‘Look, I’m bipolar and I didn’t do that, but I did this.’ You can’t do that, right? That’s still like too much public shaming.”

**Reporting bullying.** The participants stated that bullying situations should be handled on a case-by-case basis. Phillip described how complex the reporting is at college by stating, “it depends on the behavior, and it depends on the situation. It depends on the office that they would be going through.” Erin stated that she would only report bullying if she felt physically harmed by another individual, and that it was easier to ignore an incident without the physical scars. Elizabeth echoed this and said she would consider calling the campus police if she experienced anything physically damaging.

Matt and Elizabeth stated that they would be hesitant to report any bullying to the college because it is easy to be misunderstood. Matt mentioned that he would refrain from disclosing any bullying behaviors, because he does not want to “turn a non-situ-
ation into a worse situation.” Elizabeth echoed this stating that the majority of her friends are men and their jokes can be perceived as mean, but their intent is not malicious.

Sarah and Amelia both shared that they would not report bullying. Sarah mentioned that if she were to report, “so much could have gone wrong,” and Amelia stated she was afraid of how her peers would feel if she were to report instances of bullying. In contrast, Chris was the only participant who said that he would report bullying to the college.

**Consequences of reporting.** Although participants acknowledged that bullying should be reported on a case-by-case basis, they varied in their opinions on whether they felt there was a consequence to reporting bullying. Elizabeth was the only participant who stated that she did not feel that there was a consequence to reporting an incident or situation to college personnel and/or staff. Matt and Sarah stated that there were social consequences to reporting bullying: either isolation or increased bullying. Similarly, Amelia mentioned that reporting bullying could negatively affect her reputation and potentially cause the loss of friends. Phillip stated that reporting depended on one’s social group: you could be labeled as “a snitch or drama queen” or as “the person that took the action and leadership” necessary to end a bullying situation.

Chris and Erin focused on the consequences of reporting bullying when active in sororities or fraternities. Chris reflected on an instance when a brother reported hazing and, once Greek Life Office discovered this, the fraternity wanted the young man out of Greek Life. In fact, the brother who reported the incident “had some of the worse experiences with that” since the brother wanted to stay in the fraternity. Erin echoed this statement, saying that she witnessed girls being ostracized if they reported any aggressive behaviors. She further stated that there is an unspoken expectation that certain bullying behaviors were allowed in Greek life organizations.

**Coping with bullying.** Participants employed different behaviors to cope with bullying at college. Six participants used avoidance techniques to remove themselves from aggressive environments. They defined avoidance as actions that prevented the hostile individual from associating or interacting with them, either in person or on the Internet. Erin disclosed that she is hyper-aware of aggressive behaviors due to her past experiences with bullying, and that as soon as she feels people are being mean, she goes home. Sarah and Phillip both mentioned that they avoid places with people who were known to bully. Sarah used Facebook to stay abreast of the location of certain bullying people. Phillip said he could not completely avoid the bullying teacher, but he was able to control the amount of interactions he had with her, and refrained from scheduling any future classes with her.

Elizabeth and Chris also used avoidance behaviors to cope with the bullying, choosing to move to safer living environments. Elizabeth stated that she no longer felt safe in her dorm room, so she slept on friends’ couches until her roommate moved out. Chris stated that the constant social exclusion increased his social anxiety to a point where he chose to remove himself from the college environment completely. Matt, on the other hand, coped with his bullying by pretending it never happened. He avoided talking about it with peers saying, “if I spent time thinking about it, it wasn’t really gonna help.”

All participants mentioned that they were able to implement additional coping behaviors as they became more accustomed to the college environment. Matt observed how others react in different environments so he could prepare for “situations that you might get into.” Sarah stated she was skilled in small talk, and exercises caution by being aware of the exits and the location of her friends if she “feels the person or environment is unsafe.” Elizabeth mirrored this by saying if she felt unsafe, she would find someone she trusted for a sense of protection. Chris highlighted the important scanning his environment, since he needed to know how potential triggers could influence his bipolar behaviors. Phillip claimed his experience with bullying helped him communicate how he felt at all times to peers and adults to assist in understanding social interactions.

**Presence of social support.** Participants underscored the importance of social support, stating that it provided them, and students with disabilities in general, an extra layer of perceived protection to cope with bullying. They noted that at college, peers take on a more meaningful role than in high school. Erin reinforced this when she said that, at college, she was spending so much time with her peers that she was forced to bond with them in a deeper way than she had in the past. Four participants explained how peers helped to ameliorate the negative consequences of bullying. Elizabeth disclosed to her male friends that she was sexually assaulted, and stated that they quickly reassured her that, “this isn’t your fault.” She shared that hearing this from men allowed her to better accept what had happened to her. Matt claimed that his friends provided a sense of safety, acceptance of his interests, and encouraged him to adopt a healthier lifestyle. Amelia reported that she made a significant effort to make different type of friends and that these new relationships allowed her to become more confident. Sarah said her friends helped her process
bullying, noting that “I don’t think in the moment you really learn by yourself how to cope with bullying.” Conversely, Chris mentioned that he could not say peers supported his social life because he experienced such little support from them overall. He added that he has to be cautious of people with whom he interacts because he does not know how they might influence him or trigger his bipolar disorder.

**Discussion**

This was the first qualitative research study to examine how individuals with disabilities make meaning of bullying on a college campus. Pilot and research studies were conducted to inquire how individuals with disabilities construct bullying from past and present experiences, witness bullying at college, and experience the impact of bullying on their social interactions. Since attendance of individuals with disabilities in college is on the rise, understanding how these students experience bullying is of particular importance.

Vygotsky’s (1978) social development theory provided insight as to how the participants used social media to communicate with peers and how specific behaviors were internalized and implemented across different environments. Tools such as Facebook, email, and Twitter were used by the participants to stay informed about activities on campus and to see what peers were doing. Social media sites, while informative, were also used to cyberbully peers, which supports past research (Maher, 2008). Michael, an individual who is hard of hearing, stated the anonymity of Tumblr allowed individuals to respond negatively to his posts about his relationships with his partner.

Data from participants’ experiences with bullying yielded important information on how individuals with disabilities may respond to bullying or perceived aggressive environments, and whether they would participate in risk behaviors. Chris stated that alcohol was popular in fraternities and he was “forced to socially condemn” the brother who reported the fraternity for hazing. Therefore, Chris participated in risks that were related to underage drinking and in actions designed to prevent social exclusion of those who did not follow the internal code of Greek life. Comparatively, Erin and Sarah refrained from attending parties that promoted drinking, because they are not comfortable with the outcomes of students drinking alcohol. Erin and Sarah seemed to use the cognitive-control networks, as defined by Steinberg (2007), to scan the environment, weigh the pros and cons of possible outcomes, and make a decision based on their comfort levels. Triggering the cognitive-control networks prevented them from participating in a perceived risk and unsafe environment (Steinberg, 2007).

**Understanding College Bullying**

College is a little more [like] trying to stick a knife in you. They try to say things. I don’t know how to put it in terms, but it’s much more complex. It’s much more complicated. It’s much more smart. It’s much more piercing. It hurts…Yeah, but by now, we know calling someone a name is not gonna work. That’s so childish. It’s better to be like, “I heard you were failing this class.” Something like that. Something really mean…it’s no more calling a name, it’s more so attacking a character or reputation…It’s more complicated insults. (Participant in the study)

This study supported research by Chapell et al. (2006) and Curwen, McNichol, and Sharpe (2011), which found individuals who were bullied in college were likely to have been bullied in elementary and secondary schools. The participants were asked to construct a definition of bullying from past and present experiences. All of the participants had a different definition, ranging from bullying as playful banter between close friends to extreme hazing and social ostracism. This supports the work of Vaillancourt et al. (2008) who stated different definitions of bullying may shape how bullying is perceived.

When comparing perceived occurrences of bullying, participants mentioned the difference between earlier academic and current college environments. They noted that bullying does not occur as often in college as it does in elementary or secondary school settings, which supports past research (Chapell et al., 2006; Curwen et al., 2011). In this study, the research was conducted in a large metropolitan area, which may provide enhanced opportunities to make alternative friend groups. With fewer occurrences of bullying occurring at college, a pilot participant mentioned that she forgets bullying occurs. She said she only remembers that bullying is an issue at college when an extreme event occurs such as when people “kill themselves or they end up getting beaten.” Interestingly, this participant provided many personal experiences of bullying to support her definition of bullying, but she did not qualify them as bullying because no one was physically hurt.

**Past Experiences with Bullying**

Past experiences of bullying influenced participants’ experiences in their college environments. In a departure from their elementary and high school
settings, five participants described a level of normalcy since they did not have to publicly define themselves as having disabilities. Participants were able to develop positive self-perceptions as a result of institutional support. One participant stated that, at college, the DSS office allowed him to feel supported, something that he did not feel in his elementary and secondary schools. Sarah reinforced this sentiment, stating that she was dependent on teachers for academic performance and social safety in elementary and secondary schools, but, at college, she was forced to advocate for herself and learn to rely on peers for social support. She also noted the helpfulness of the support provided by the DSS office. More research is needed to understand how support in college enhances self-perception of individuals with disabilities, and if or how this assists in implementing positive coping behaviors in response to bullying events.

**Limitations of the Study**

There were four limitations to this research study. First, the study focused on the personal experiences of individuals with disabilities as victims, and not as the bullies. Second, since this is a qualitative study, the experiences of these particular participants cannot be generalized to the larger population of individuals with disabilities attending college. Third, the students interviewed for this study were all Caucasian, except in the pilot study where one individual was East Indian.

The fourth limitation, which emerged during meetings with potential participants, is that the researcher is an individual with a disability. All but two participants asked why individuals with disabilities were the focus of the study, and what the researcher’s knowledge was of people with disabilities. Thus, the researcher disclosed that she had a disability. To prevent potential bias of the data obtained from the interviews, steps to ensure trustworthiness were addressed in the methodology through triangulation, member check, and reflexivity after each interview.

**Recommendations for Future Research**

Although this study provides a foundation for how individuals with disabilities experience bullying in college, its findings cannot be generalized to the greater body of students with disabilities. Further research is necessary to uncover the full depth and breadth of this issue.

Bullying research lacks agreement on a common definition of bullying. Definitions vary across different schools, environments, and people, all of which can influence how people differentiate between bullying and non-bullying behaviors. A shared definition would provide a better understanding of the prevalence of bullying across different environments within college settings. The use of a common definition in further research could help the field better understand how the prevalence of bullying differs across public, private, and two- and four-year colleges, and how individuals with disabilities perceive bullying in these environments. Related research on the impact of race, ethnicity, religion, and visible and nonvisible disabilities could also yield illuminating findings.

Disability is a subgroup that transcends different races, ethnicities, religions, and socioeconomic statuses. Chris, a participant who identified as bipolar and bisexual, mentioned that these subgroups create an intersectional identity that is overlooked on college campuses. Michael echoed this sentiment as an individual who is hard of hearing and is also a gay man. More research is needed to understand intersectionality (Crenshaw, 1991), and the potential role it may have related to bullying and identity influenced by a collegiate environment.

Mental health is becoming a prevalent issue on college campuses (Han et al., 2016). Chris reported his frustrations with having a mental health disability because people, in general, have a negative response to his disability. This bias caused Chris to feel as though he is not supported, and can understand why students do not disclose mental health disabilities to university personnel. More research is needed to understand targeted accommodations for individuals with mental health needs at college. This can assist DSS to make more individualized, meaningful accommodations at college. From this research, trainings for DSS can occur so that they are affectively able to disseminate data to professors and administration to understand, accommodate, and include people with mental health needs throughout campus activities.

**Recommendation for Policy and Practice**

The U.S. Department of Health and Human Services (HHS), through guidance or regulation, can facilitate the implementation and use of a common definition of bullying. With a definition recommended by the federal government, colleges and universities could implement bullying prevention policies to ensure that students feel safe on campus, and gather consistent data on bullying activities (Lund & Ross, 2016).

Given that the reporting of bullying incidents emerged as a challenge in this study, colleges and universities should consider support services partnerships (e.g. disability support services communicating with counseling services) to facilitate safe and confidential reporting practices that foster trust in anti-bullying
practices. Likewise, college administrators and bullying experts could develop more trustworthy protocols and train administrators to treat bullying with more urgency (Lund & Ross, 2016). If individuals communicate the experience to designated personnel, the field will be able to better understand the occurrence of bullying as well as effectiveness of appropriate coping skills at college (Crosslin & Golman, 2014).

Many states are recommending that schools at various levels implement anti-bullying policies and programs. Since many anti-bullying programs rely heavily on the ability of individuals to read social interactions accurately, perhaps DSS at the college level could provide peer-support groups to help develop or improve these skills in students with disabilities. Anti-bullying programming and related social skill development at the elementary and secondary levels is also critical: practices and skills on preventing and addressing inappropriate behaviors could translate to higher education environments.

This research study provided insight in ways individuals with disabilities experience bullying at college. There are two key topics of relevance for college personnel, specifically DSS, which recurred throughout this study. First, it is important to understand the ways social media is used at the university so that school personnel will be better informed as to how conversations may be interpreted by students. DSS could create a training session each year to review and reinforce appropriate online interactions to support students with disabilities at college. Second, there is a need to assess how individuals understand requesting assistance for matters that may not be perceived as related to their disabilities. Participants in the study reported experiencing more independence and secondary school settings (Rose et al., 2009). Since individuals with disabilities are becoming a larger subgroup on college campuses (U.S. Department of Education, 2016), future research should understand how this specific minority population experiences bullying across different collegiate environments. The fields of bullying and higher education should more purposefully collaborate to ensure that individuals with and without disabilities are safe on college campuses. The more we learn about bullying on college campuses across various populations, the better prepared colleges can be to ensure students feel safe, and enjoy fruitful collegiate experiences.

**References**


**About the Author**

Bridget Green received her Ed.D. in Special Education and Disability Studies with a foundation in neuroscience from The George Washington University. Her experience includes working with adolescents with disabilities transitioning into postsecondary activities including college, independent living, and employment. She is currently an Assistant Professor of Special Education at Duquesne University. Her research interests include vocational assessment of transitioning individuals, emotional and executive needs of collegiate students with disabilities, and preparedness of individuals with disabilities for employment opportunities. She can be reached by email at green.bridget@gmail.com.
### Table 1

**Participant Background Information**

<table>
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<tr>
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*Note.* Each of the participants chose a fictitious name for this study.

**Figure 1.** Conceptual Framework

Social Constructionism occurs when we are embedded in a culture where we observe interactions to construct meaning (Crotty, 1998).

Vygotsky’s theory of social development discusses the ways in which individuals learn a new culture by observing behaviors and interactions between people and the environment (Vygotsky, 1978).

Communication between the socioemotional network and the cognitive network provides an understanding of influence peers can have in regards to an individual performing in risk related behaviors (Steinberg, 2007).
Transitional Challenges for Students with Disabilities During a Period of Systemic Imbalance

Ben Littlepage¹
Cindy Clemson¹

Abstract

The present study explored how student support service administrators responded to the observed transitional challenges of students with disabilities during a period of systemic imbalance. Administrators at four community colleges in Tennessee, responsible for the coordination of student disability services, participated in a multi-site case study. Analysis revealed students with disabilities had unrealized expectations of postsecondary education, sought the same individualized attention experienced in secondary school, and misunderstood administrative processes, especially those associated with securing accommodations, upon entering college. Although the transitional challenges were not unique, increased enrollments and an inadequate infrastructure added difficulty to administrators' ability to respond. Administrators sought opportunities for collaborative inclusion with stakeholders, internally and externally, to resolve the observed transitional challenges. Investigators suggest administrators initiate early transitional planning with students who complete a Promise scholarship application during their senior year of high school, utilize cross-trained temporary personnel during peak periods of inquiries, and project accommodation needs earlier to secure adequate resources and help students remain scholarship eligible.

Keywords: Tennessee Promise, organizational change, student disability services, community college

The transition from high school to postsecondary education can be problematic for students with disabilities (Johnson, Stodden, Emanuel, Luecking, & Mack, 2002; Madaus, 2005; Stodden, Jones, & Chang, 2002). Federal legislation governing how students with disabilities (SWD) are supported in high school is fundamentally different from legislation governing how students with disabilities are supported in postsecondary education. The Individuals with Disabilities Education Act (IDEA) prescriptively mandates that students with disabilities in K-12 institutions be identified, evaluated, and provided services and accommodations as part of their right to a free and appropriate public education (Frieden, 2004). The burden of compliance is placed on school administration. A detailed Individualized Education Program (IEP) is developed, in compliance with IDEA, to guide the services and support the student in order to guarantee the Free Appropriate Public Education (FAPE) in the Least Restrictive Environment (LRE) provision is met. The FAPE provision is designed to meet the unique education needs of the student with disabilities as adequately as the needs of students without disabilities. IDEA mandates that students who have IEPs be provided a Summary of Performance (SOP), as they exit secondary education.

According to IDEA Section 614(d)(1)(A)(i)(VIII), students “no later than age 16” must identify whether postsecondary education is a transition goal beyond high school. The identified transition goal and necessary support are reflected in detail on the IEP. Once SWD leave high school, legislation governing their accommodations in postsecondary education reflects provisions associated with the Americans with Disabilities Act Amendments Act (ADAAA) and Section 504 of the Rehabilitation Act. Section 504 and ADAAA mandate reasonable accommodations be provided to individuals with disabilities enrolled at postsecondary education institutions, but neither are prescriptive about identifying, evaluating, and accommodating the needs of students with disabilities. Therefore, much of the burden placed on administrators in the K-12 education environment is transferred to students with disabilities, once they elect to pursue a postsecondary education credential.

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Students at postsecondary education institutions must self-identify as a representative of the institution as having a disability, provide verification of the disability, and self-advocate to receive services and accommodations (Eckes & Ochoa, 2005; Foley, 2006; Gil, 2007; Milsom & Hartley, 2005). Despite transition planning before leaving high school, students, parents, and special education teachers are less familiar with provisional distinctions between IDEA and ADAAA and Section 504 of the Federal Rehabilitation Act of 1973 (Getzel & Thoma, 2008). As a result, students with disabilities are not adequately prepared for the transition to postsecondary education, specifically one for which they assume a new role in securing support services (Ankeny & Lehmann, 2010; Baer, Daviso III, McMahan, Queen, & Flexer, 2011; Landmark & Zhang, 2013; Milsom & Hartley, 2005). Students are hesitant to self-identify as having a disability, unable to articulate how the disability affects them in an educational setting, and unprepared to self-advocate for specific, reasonable accommodations after leaving high school (Cameto, Knokey, & Sanford, 2011; Newman, Wagner, , Cameto, Knokey, & Shaver, 2010). Students receive fewer accommodations and services as a result.

The Association for Higher Education and Disability (2012) developed professional standards and performance indicators to assist postsecondary education institutions, specifically the Office for Students with Disabilities, with supporting the transition challenges of SWD. The professional standards and performance indicators guide disability resource offices in ensuring SWD receive seamless access to the services, programs, and activities at postsecondary education institutions.

Enrollment Patterns

Students with disabilities comprised 11.1% of undergraduates in the 2011 - 2012 academic year (United States Department of Education, 2015). This is up from 10.9% in 2007-2008. According to the National Longitudinal Transition Study-2, 60% of young adults with disabilities reported enrolling in a postsecondary education institution within eight years after leaving high school (Newman et al., 2011). Community colleges were the preferred institutional type for SWD, representing 44% of those enrolled. Another 32% of SWD attended a vocational, business, or technical school during the same time frame.

Approximately 28% of postsecondary students, considered by a secondary school to have a disability, disclosed their disability to the Office for Students with Disabilities (Sanford, Newman, Wagner, Cameto, Knokey, & Shaver, 2011). The underutilization of disability-related assistance was consistent across the postsecondary institutional types: 25% received assistance at a community college; 11% received assistance at a vocational, business, or technical school; and 24% received assistance at a four-year college or university (Newman et al., 2011). Ironically, SWD identified expense of postsecondary education as the primary reason for early departure, not lack of disability-related assistance.

Tennessee Promise

In 2014, Tennessee Governor Bill Haslam and the state legislature approved a last-dollar scholarship and mentor program known as Tennessee Promise. Under Tennessee Promise, graduates of Tennessee’s high schools could enroll, tuition free, in associate degree programs across the state starting Fall 2015 (Tennessee Student Assistance Corporation [TSAC], 2016). The signature legislation bolstered a broader statewide education initiative to award a greater percentage of residents with a postsecondary education credential, by curbing the financial burden of tuition. Haslam understood in order to increase the number of residents with a postsecondary education credential, participants needed a reprieve from the financial burden and open dialogue with a trained mentor. In addition to Tennessee Promise, five other states have enacted similar statewide legislation offering tuition subsidies to all high school graduates: Missouri, Nevada, New York, Oregon, and Rhode Island (Mulhere, 2017).

Students can apply the Tennessee Promise scholarship to one of 13 community colleges, 27 colleges of applied technology, or, in some cases, a four-year college or university that offers associate degree programs (TSAC, 2016). As a last-dollar scholarship, qualifying students first apply their financial aid, such as Pell Grant and HOPE Scholarship, a lottery-funded, merit-based scholarship program in Tennessee, before Tennessee Promise covers the remaining balance of their tuition (Semuels, 2015). To receive the scholarship, high school seniors must apply to the Tennessee Promise program, complete the Free Application for Federal Student Aid (FAFSA), attend two mandatory meetings at a participating institution, apply and register for 12 credit hours or more at a participating institution, and complete eight hours of community service prior to the fall term immediately following their graduation from high school. Deadlines are associated with all eligibility criteria. To remain eligible for the Promise scholarship beyond the first semester, students must meet with an assigned mentor, attend mandatory Promise meetings, complete eight hours of community ser-
vice, maintain continuous, full-time enrollment status, and maintain a 2.0 GPA each semester enrolled at a participating institution.

In fall 2015, over 16,291 high school graduates took advantage of the new Tennessee Promise program, enrolling in community colleges and technology centers across the state (Tamburin, 2016a). Enrollment of first-time, full-time freshmen increased 24.7% at community colleges and 20% at technology centers (Tennessee Higher Education Commission [THEC], 2016). The number of high school graduates utilizing Promise increased in fall 2016 to 16,790 (THEC, 2017). The number of Promise scholarship recipients with a documented disability was not released to the public. Financial data does show the state has spent $25.3 million funding Promise since its implementation, with students receiving an average award of $1,090.

The level of student participation during the first two years of Promise invited systemic imbalance throughout postsecondary education in the state of Tennessee. Substantial increases in student enrollment, resulting from Promise, brought administrative challenges associated with infrastructure, personnel, processes, and communication (Tamburin, 2016b). The large-scale, unprecedented change to the entire statewide postsecondary education system has administrators of all institutional types searching for coherence. The actualized impact of the legislation has forced leaders at applied technology centers and community colleges to react quickly.

Pascale, Millemann, and Gioja (2000) likened organizations, such as postsecondary education institutions, to complex systems. Complex systems are less responsive to changes occurring around it while existing in a state of equilibrium. However, chaos galvanizes a living system and evokes experimentation in an effort to find balance. Components of a living system reorganize and new processes emerge. Fullan (2001) recognized that disturbing the system is how effective leaders achieve desired outcomes, even if a clear solution is not evident. The challenge is to disturb the system in a way to still get the desired outcome.

Perna and Finney’s (2014) research on college Promise programs acknowledged that in order for students to be successful in college, they need to have the required academic preparation, financial resources, and knowledge of support services. They found support for students depends on the resources and opportunities available at the respective institution for which the student is enrolled. However, variations in the resources available to students create structural differences in college opportunities and outcomes (Perna, 2016). Little research exists on how best to implement Promise programs with pre-existing support services.

The present study explores how student support service administrators responded to observed transitional challenges of students with disabilities as a result of Tennessee Promise. The transitional challenges referenced are those experienced when a student matriculates from one educational setting to the next. The purpose of Tennessee Promise is to equip residents with a postsecondary education credential, especially individuals enduring financial hardship and prone to attrition. Further understanding of how institutions respond to the transitional challenges experienced by students with disabilities offers guidance for other administrators entering a period of systemic imbalance as a result of similar legislation.

**Methods**

Investigators used a qualitative, multi-site case study design to understand the change phenomenon. Audet and d’Amboise (2001) recommended the multisite case study technique for strategic scanning if cross-case comparisons are the desired result. In multisite case studies, investigators inquire about the organizational structure of a case as a part of the exploratory process. A familiarity with the organizational structure helps investigators understand how a phenomenon impacts a case. Following this approach, investigators of the current study conducted interviews, as well as reviewed websites and documents as part of the data collection process.

The institutional type chosen for purposeful sampling was community colleges. The actualized impact of the legislation was immediate for associate-degree granting institutions like community colleges as evidenced by the immediate, substantial enrollment increases (THEC, 2017). All community colleges used as cases were selected based on shared similarities. The community colleges were exclusively two-year undergraduate institutions, had a high traditional-aged student population, and considered to be medium size enrollment profile by the Carnegie Classification System. The similar profile was important to understanding the phenomenon because Tennessee Promise subsidized first and second-year undergraduate students. The identities of the four participating institutions were protected and the following pseudonyms were employed: community college A, community college B, community college C, and community college D.

The investigators contacted five community college administrators, responsible for the coordination of student disability services (SDS), and asked each
to participate in the study; four of the five administrators agreed to participate. Student disability service administrators possess a familiarity for the organizational structure at the institution, can enact organizational change, and systematically interpret the impact of a phenomenon, such as Tennessee Promise.

Online documents and websites were reviewed for the four participating community colleges in advance of the interviews. The purpose of the document review was to learn about the institution, specifically its organizational structure and available disability services, as part of the exploration process. McMillian (2016) suggested the review of documents and websites offers investigators conducting a multi-site case study an enriched understanding for each case. Investigators accessed online documents like organizational charts, directory information, college and disability service mission statements, and student handbooks. Webpages pertinent to disability services and Tennessee Promise were also reviewed for each case. Investigators printed accessible materials and made observational notes. Notes were semi-structured, however both investigators commented on the ease or difficulty of locating and interpreting the information retrieved.

Interviews were conducted with four community college administrators, responsible for the coordination of SDS, at the end of the 2015-2016 academic year. Investigators desired to interview administrators after one year of change implementation took place. Investigators felt that community college administrators were in a unique position to observe the impact of Promise due to their direct service to students. As a direct service provider, administrators acutely observe and respond to observed transitional challenges of SWD who are Promise recipients. Through their response to these challenges, administrators can advise other practitioners facing similar legislation.

The two investigators used the same interview question protocol, and completed the interviews individually. Two broad questions were asked to all administrators, one inquiring about the organizational structure used to deliver student disability services and one inquiring about change or systemic imbalance influenced by the shared phenomenon, Tennessee Promise. Probe questions were planned to further capture data related to organizational structure, transitional challenges, and implemented changes. All interviews were conducted by phone. Investigators asked administrators the following questions:

- Describe the current student disability service operation at your institution.
- [Probe] What is the process for students seeking accommodations?
- [Probe] What accommodations are offered to students with disabilities at your institution?
- How has Tennessee (TN) Promise impacted SDS at your institution?
- [Probe] What changes have you implemented as a result of TN Promise?
- [Probe] What future changes do you anticipate making as a result of TN Promise?
- [Probe] Describe the process as to how your institution identified these needs for change.

Investigators manually transcribed interview recordings on password-protected computers. The typed transcriptions were stored on a shared cloud drive. Each investigator checked for response consistencies once interviews were transcribed. Administrators were contacted by individual investigators if an inconsistency was found, and further clarification was sought. Following clarification protocol, each investigator offered one another a peer research review to scrutinize perceived interpretations. The investigators shared with one another interview transcriptions, inclusive of digitally marked codes and larger themes, and observation notes derived from website and document reviews. Thematic analysis was applied by differentiating low and high-level codes, largely derived from frequencies and co-occurrence, on the transcriptions until larger themes were developed (Carspecken, 1996; Guest & MacQueen, 2012).

**Results**

Investigators identified three themes resulting from the multi-site case study. First, the four community college cases had organizational and procedural similarities. Second, the impact of Promise led to substantial enrollment increases and the awareness of an inadequate infrastructure. Enrollment increases and the inadequate infrastructure introduced challenges for both students and SDS administrators. Third, administrators responded similarly to new challenges by renewing collaborative partnerships with internal and external stakeholders. These themes were broadly categorized by procedures and services, impact of Promise, and changes implemented.

**Procedures and Services**

Administrators with student disability services (SDS) shared organizational and procedural similarities at the four community colleges. The number of
SWD served with reasonable accommodations ranged from 75 to 200, depending on the institution. Each community college had at least two staff responsible for serving the support needs of students; staff at two institutions provided services to students beyond the delivery of SDS. SDS staff at community colleges B, C, and D supported students with accommodations at four or more satellite locations.

The comprehensive intake procedure for providing students with reasonable accommodations was identical at all four community colleges. Students first contact the SDS office either through self-inquiry or a referral. Next, students complete enrollment intake and confidentiality forms. Disability diagnosis documentation, no older than five years, was submitted next by all students seeking an accommodation through the SDS office. The student and SDS staff next meet to discuss available accommodations, the individualized educational support plan, and shared expectations. The administrator at community college A said, “My job is to help students overcome barriers and learn on an equal playing field. These individualized meetings with our students allow us to stress the same expectations for all students.” The administrator at community college C said parents and students are sometimes “shocked” to learn the same accommodations and individualized attention available in high school cannot be offered at college. After the meeting, SDS staff finalize the educational support plan and secure resources listed in the plan. Emails are sent by an SDS representative to instructors at the beginning of each semester requesting reasonable accommodations be made for individual students enrolled in a particular section.

All community colleges shared similar accommodation services. Services to accommodate testing and note transcription were the most requested at all four institutions. Other common accommodations included low distraction testing environments, recording devices, and sign language interpretation.

Impact of Promise

Each administrator acknowledged Tennessee Promise presented challenges for both students and disability services at their respective institutions, with exception to community college D. The community college D administrator observed a less impactful transition in 2015-2016 because a similar last-dollar scholarship and mentor program, known as TnAchieves, was implemented in the college’s service region during the 2013-2014 academic year. The same challenges described by administrators at community colleges A, B, and C were experienced by the community college D administrator two years earlier. The community college D administrator felt “comfortable” with the actualized impact of Promise in 2015-2016, and was sought by other SDS administrators throughout the state for advice on forecasting anticipated changes.

Community college A, B, and C administrators acknowledged the Tennessee Promise scholarship impacted SDS operations the first year of implementation. All administrators observed an increase in the number of general inquiries regarding disability services and the number of participants. Community college B and C administrators observed a “significant increase” in the number of SWD served by SDS. Both commented that the number of telephone calls and in-person appointments were unprecedented during the months of July and August. The community college A and C administrators continued by acknowledging student inquiries did not necessarily matriculate to SDS participants. The community college A administrator said, “Incoming students would pursue accommodations to the point where they were accountable for paperwork. Either the intake form or diagnosis documentation would not be returned, and we would stop hearing from the student.” Community college D administrator acknowledged observing the same practice two years earlier and suggested, “Students with disabilities enter college expecting SDS staff to provide the same level of care [as experienced in high school]. Parents and students seem shocked to learn they are responsible for verifying service eligibility.”

Community colleges B and C experienced substantial enrollment increases of first-time freshmen in fall 2015, so SDS administrators anticipated more participants that fall semester. SDS offices at community colleges B and C more than doubled the number of students served with an accommodation. Despite the projected increase in SDS participants, both administrators acknowledged inadequate resources were available initially to arrange the requested accommodations. The community college C administrator said, “Classroom and testing spaces were unavailable, and the distance between our main campus and satellite campuses compounded the challenge.” The SDS office at community college A noticed a slight increase in participants, but anticipated more the second year of Promise. The administrator at community college D observed a substantial increase in SDS participants the first year of TnAchieves; the number of SDS participants has continued to increase annually since 2013.

All four SDS administrators found Promise recipients “needy.” When probed about the context of needy, administrators shared Promise recipients ex-
pected staff availability and accommodations to reflect secondary schools. The community college C administrator said, “Tennessee Promise has brought us a different type of student. I am more involved with students, parents, and faculty as a result of Promise than ever before.” Community college A and D administrators continued by making the comparison between traditional-aged Promise SWD and the non-traditional SWD, when probed about the context of “needy.” Both administrators shared non-traditional students communicate with the SDS office twice a semester, at the beginning to confirm accommodations and near-the-end to register for the next term. Traditional-aged Promise recipients struggled to differentiate IDEA and ADAAA provisions and adjust to the academic rigor and social dispositions expected at the collegiate level. The community college A administrator said Promise recipients consistently dropped by unannounced and requested accommodations by saying, “Momma said I have to come by here.” The community college D administrator said, “The neediness of Promise recipients is a learned behavior prior to arriving here. These students were never taught self-advocacy and self-determination skills in K-12. Promise has magnified the problem by conveying a message of entitlement.” Community college B, C, and D administrators noticed staff spending comparatively more time with Promise recipients and parents explaining the process to secure accommodations and the limitations of educational accommodations. All three administrators commented on the necessity for staff to remain knowledgeable of other services available to SWD. “Knowledge of services outside the scope of SDS was a must for our staff. The number of accommodation inquiries was overwhelming at times. Making referrals is an important service we provide,” according to the community college B administrator.

SDS staff at community colleges A, B, and C assumed an unanticipated role as eligibility advisors for Tennessee Promise. The three administrators observed SWD had difficulty completing the eligibility criteria for the Tennessee Promise scholarship. High school seniors must apply for the Tennessee Promise scholarship, complete the Free Application for Federal Student Aid (FAFSA), attend two mandatory meetings at a participating institution, apply and register full-time at a participating institution, and complete eight hours of community service prior to the fall term immediately following their graduation from high school. Deadlines are associated with all eligibility criteria. To remain eligible for the Promise scholarship beyond the first semester, students must meet with an assigned mentor, attend mandatory Promise meetings, complete eight hours of community service, maintain continuous, full-time enrollment status, and maintain a 2.0 GPA each semester enrolled at a participating institution. Although Promise recipients received multiple notifications, administrators at community colleges A, B, and C observed SWD struggled to maintain full-time enrollment, attend mandatory meetings, and complete eight hours of community service. When probed for reasons why criteria was problematic, administrators shared SWD are often reliant on others for transportation, fail to realize the academic rigor of college before enrolling, and community service partners lack accessibility accommodations. The community college D administrator observed similar challenges when TnAchieves was implemented in 2013.

Changes Implemented

The actualized impact of Tennessee Promise presented institutions and students with a number of transitional challenges. SDS administrators at the four community colleges responded similarly to the transitional challenges. Administrators sought opportunities for collaborative outreach with stakeholders and the need to effectively communicate collegiate expectations earlier to prospective SWD. The product of each response reflected the unique nuances of the institution. The broad initiatives were advised by colleagues at sister institutions who had experienced similar challenges in 2009 with KnoxAchieves and 2013 with TnAchieves. The community college D administrator said, “for two years, we worked to accommodate the needs of our office and the students we served [as a result as TnAchieves]. Last year [2015-2016] we were in a position to share those challenges as well as promising practices.” The community college D administrator continued by saying,

The state legislature, THEC [Tennessee Higher Education Commission], and TBR [Tennessee Board of Regents] made accessibility to education a priority with initiatives like Promise. This renewed focus on accessibility has helped SDS directors secure a position at the decision-making table.

SDS administrators embraced a renewed sense of inclusion with other internal administrative units, such as enrollment management, public relations, and information technology, governance groups, such as faculty senate and administrative council, and ad-hoc committees, such as the Promise planning and new-student transitions teams. Opportunities to serve internally in various administrative capacities, led to open dialogue and the exchange of ideas with
stakeholders. The political capital developed with institutional stakeholders inspired a culture of innovation and the concerns of SDS were acknowledged throughout planning phases. Community college A, B and D administrators shared that recruiters and orientation leaders were actively referring new students to SDS early in the recruitment process. The community college B administrator shared faculty were more responsive to requests for academic accommodations. Community colleges B and D shared information technology staff consulted with SDS staff about website modifications to better accommodate SDS students.

Outreach to external collaborators, such as guidance counselors, special education teachers and parents, was another response to transitional challenges the four administrators shared. All four administrators shared that students struggled to overcome misunderstandings about ADAAA and realize the academic and behavioral expectations of college. The community college A administrator said, “We need to reach student misunderstanding at the source.” Examples include participating in local high schools’ college nights, serve on IEP committees for college-bound SWD, contribute short announcements for high schools’ senior newsletter, and schedule appointments with guidance counselors and special education teachers to communicate SDS enrollment procedures, differences in IDEA and ADAAA accommodations, and academic and behavioral expectations of students.

The collaborative outreach efforts helped administrators at the four community colleges identify why misunderstandings existed and the appropriate message needed to educate SWD. SDS staff at all four community colleges developed documents and webpages to better assist SWD transition to college. Administrators acknowledged transitional challenges the first year of Promise implementation was the impetus for new and revised document development. The documents were designed to educate SWD on procedures, deadlines, accommodations, and expectations associated with SDS and Tennessee Promise. Frequently asked questions and responses, enrollment management calendars, and expectation overviews were examples of documents and webpages created. The administrators published documents and webpages online. The online content was referenced regularly to students and stakeholders by SDS staff. The documents were collaborative in nature. For example, guidance counselors and special education instructors helped generate frequently asked questions to rectify misunderstandings between IDEA and ADAAA. The enrollment management and transitions teams shared

We want students to attend who wouldn’t otherwise attend, which is the purpose of Promise. However, not everyone is developmentally prepared for college. There are needy students with no understanding for environment and expectations, academic rigor, lack of respect for professors, and lack self-accountability. We hope to educate students and parents on the expectations before they arrive.

**Discussion**

The study originally sought to understand how administrators responded to the observed transitional challenges of students with disabilities. The transitional challenges revealed in the study were not based on literary findings (Cameto, Knokey, & Sanford, 2011; Getzel & Thoma, 2008; Landmark & Zhang, 2013). SDS administrators observed SWD struggled to differentiate between IDEA and ADAAA provisions, complete the comprehensive intake procedure, and realize SDS staff were unable to provide the same individualized care as secondary school providers.

Administrators were accustomed to guiding students through those transitional challenges. However, the actualized impact of Tennessee Promise was enrollment increases and an inadequate infrastructure introduced difficulties for SDS administrators in responding to those transitional challenges. Perna (2016) suggested college Promise programs may have a range of consequences for colleges, both intended and unintended.
An increase in student enrollment at the four community colleges disrupted the existing system of practices and procedures, which made the response to transitional challenges more difficult. The number of Promise recipients doubled from the first-to-second year of the last-dollar scholarship program (THEC, 2017). Students who might have otherwise not pursued postsecondary education, elected to attend because of the tuition subsidy. As a result of the enrollment increase, all four administrators observed a greater number of traditional-aged students seeking accommodations. SDS offices at community colleges B and C more than doubled the number of students served with an accommodation as a result of Tennessee Promise. The traditional-aged population of Promise recipients were perceived to be “needy” by comparison. When probed about the context, administrators shared students demonstrated an elevated expectation of staff availability and comprehensive accommodations. An elevated expectation of service is not unique among students transitioning from secondary-to-postsecondary education environments (Shaw, Madaus, & Dukes, 2010). Rather, the number of “needy” students who possessed these expectations and transitional challenges made provisional support difficult.

An inadequate infrastructure also made responding to transitional challenges more difficult for administrators. All administrators anticipated an increase of SWD due to Promise, yet none were adequately prepared by way of personnel and spatial resources. The community college C administrator said, “Classroom and testing spaces were unavailable, and the distance between our main campus and satellite campuses compounded the challenge.” Three-of-the-four community college administrators support the needs of SWD at multiple satellite locations. An inadequate number of personnel inhibits SDS administrators from serving SWD, who study at one of the satellite campuses, with support services beyond the reasonable accommodations such as academic counseling, needs-based referrals, and career services. The unavailability of personnel and the geographic distance between campuses existed before Promise was implemented. However, an increase in participating SWD has magnified the infrastructure burden.

An inadequate infrastructure is problematic for student scholarship eligibility, and ultimately retention-to-degree completion. Promise recipients must comply with eligibility criteria to maintain last-dollar tuition scholarship subsidies. All administrators assumed the unanticipated, unofficial role as Promise scholarship eligibility advisors for SWD recipients. The administrators observed SWD had difficulty completing the eligibility criteria for the Tennessee Promise scholarship. Two eligibility criteria potentially impacted by an inadequate infrastructure are (1) maintaining continuous, full-time enrollment status, and (2) maintaining a 2.0 GPA each semester enrolled at a participating institution. SWD who are unable to enroll in classes due to limited enrollment capacities and physical space may be unable to maintain continuous, full-time enrollment status. Students who did not receive distraction-reduced testing accommodations, or have a transcriptionist present during classroom lectures, due to space limitations, may struggle to maintain a 2.0 GPA.

Implications

The actualized impact of Tennessee Promise for SDS administrators is the increased enrollments and an inadequate infrastructure added a heightened degree of difficulty when responding to the transitional challenges of SWD. Community college SDS administrators in states with recently approved Promise legislation, or a state considering similar legislation, are encouraged to consider advanced preparations to structural and functional systems. These findings support the research done by Harnisch and Lebioda (2016), which found that increasing enrollment at community colleges from “free community college tuition” programs may diminish the college’s ability to provide sufficient support services to all students.

Administrators can anticipate an increase of service inquiries among traditional-aged SWD who are recipients of the scholarship. Advanced planning and temporary personnel support can help SDS administrators serve in a capacity most advantageous to supporting the transitional challenges of new SWD. Outreach to guidance counselors, special education teachers, SWD, and parents in advance of the transition is a common practice. However, the practice needs to be emphasized by all parties, as advised by Milsom and Hartley (2005), to reduce the number of last minute inquiries in July and August. SWD who have completed the Promise scholarship application need to visit with an SDS administrator the fall semester of their senior year. The visit would address the student goals, accommodation discrepancies, procedural time lines, and frequently asked questions.

Given the increase of student inquiries, temporary personnel can help manage the initial calls, visits, and emails concerning the comprehensive intake process (Tamburin, 2016b). Trained, temporary personnel would assist SWD through the initial process, allowing SDS administrators to engage once the student qualifies for service and is available to discuss accommodations, the individualized educational sup
port plan, and shared expectations. All administrators shared that inquiries did not necessarily manifest into participants. Administrators, who spend a disproportionate amount of time on inquiries, struggle to adequately meet the needs of those who have completed the process and eligible for accommodations, especially those studying at satellite campus locations.

Adequate spatial resources are a shared concern for any institution recently experiencing a surge in student enrollment. To avoid an inability to serve SWD with reasonable accommodations, SDS administrators must ensure the interests of the functional area are well represented among decision makers. Early class registration and accommodation processing of SWD will help SDS administrators project resource needs. The number of terminals in the testing center, sections of freshmen-level classes offered on campus, and parking spaces for students with physical disabilities are considerations helpful with reducing the transitional challenges of SWD.

Lastly, SDS administrators found the Promise scholarship eligibility criteria as potentially problematic for SWD. Projecting accommodation needs, as previously described, will help students maintain the enrollment status and GPA required of recipients. SDS administrators need to take proactive measures to ensure other eligibility criteria like attend mandatory meetings and complete semester community service hours are met as well. Administrators are encouraged to provide students with advance notice of mandatory meetings. Advance notice would help SWD secure transportation for the meetings. Administrators can identify community service placements that are accessible and accommodate for individuals with disabilities. A list of community service placement options can be shared with SWD Promise recipients early in their transition to college.

Future Research

The purpose of Promise is to confer a higher percentage of Tennesseans with a postsecondary education credential, through legislation promoting accessibility and affordability. Investigators suggest a study of the same phenomenon on student populations at technical and vocational schools. Students with disabilities enrolled at a rate of 34% to technical and vocational institutions, according to the National Longitudinal Transition Study-2 (Newman et al., 2011). The investigators would be intrigued to know if the same transitional challenges exist, and how administrators respond to those observed transitional challenges at a different institutional type.

Promise programs appear to have the potential to increase the percentage of citizens with a higher education credential, especially for students from groups who have been largely underrepresented in higher education, including students with disabilities. With lawmakers in many other states considering similar proposals, future research should continue to look at the ways to mitigate the unintended consequences of the programs. In addition, future research should attempt to identify the best approaches for increasing higher education for particular groups of students.

Conclusion

The study sought to understand how administrators responded to the observed transitional challenges of students with disabilities. The transitional challenges revealed in the study were not unique to students with disabilities. However, the actualized impact of Tennessee Promise introduced difficulties for SDS administrators in responding to those transitional challenges. Administrators facing similar legislation are encouraged to initiate transitional planning with students earlier, utilize temporary personnel during peak periods of inquiry, and project anticipated needs to decision-makers in order to better serve the transitional challenges of Promise recipients. Perna (2016) suggested college Promise programs may have a range of consequences for institutions, both intended and unintended. Advanced preparations can help administrators facing similar legislation mitigate those consequences and better serve the transitional challenges of students.

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Predictors and Trajectories of Educational Functioning in College Students With and Without Attention-Deficit/Hyperactivity Disorder

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Abstract

College students with attention-deficit/hyperactivity disorder (ADHD) are at greater risk than peers for impaired educational functioning; however, little is known regarding their longitudinal academic outcomes. This study examined: (a) differences between ADHD and control participants in academic outcomes (i.e., semester GPA, credits attempted, credits earned) over the first two years of college, and (b) factors that predict second year outcomes. A sample of 456 students (50% with ADHD; 51.8% female; 71.7% Caucasian) from 10 universities completed two annual assessments. Compared to students without ADHD, students with ADHD experience more academic difficulties that persist over two years. Motivation to study reported in year one was a significant predictor of year two GPA, suggesting the importance of providing services as early as possible to support students before they struggle.

Keywords: Attention-deficit/hyperactivity disorder, educational functioning, longitudinal analysis

Attention-deficit/hyperactivity disorder (ADHD) is characterized by developmentally deviant levels of symptoms of hyperactivity/impulsivity and/or inattention among children, adolescents and adults (DSM-5; American Psychiatric Association, 2013). Although symptoms must manifest prior to the age of 12 to meet diagnostic criteria, they typically persist into adulthood along with functional impairments across multiple domains (e.g., work, home, social, school) (Barkley, 2015; Barkley, Murphy, & Fischer, 2008; Biederman, Petty, Clarke, Lomedico & Faraone, 2011; Bramham et al., 2012; Brown, 2000; Fischer, Barkley, Smallish, & Fletcher, 2005). ADHD symptoms have been found to persist into adulthood; however, cross-sectional investigations of ADHD symptoms at different ages have demonstrated developmental differences in symptom levels and associated impairment (Barkley, 2015; Zoromski, Owens, Evans, & Brady, 2015). For example, Zoromski and colleagues (2015) reported that symptoms of hyperactivity and impulsivity decrease during childhood and into adulthood, while symptoms of inattention increase over the same time period. Further, Weyandt et al. (2003) found that college students with ADHD report increased levels of internal restlessness and decreased motor activity relative to peers without ADHD. Finally, associations between symptoms and specific domains of impairment change between early childhood, middle childhood, and adolescence. Such changes are not surprising given increased demands on executive functioning as children and adolescents move through development (Best, Miller, & Naglieri, 2011).

As adolescents with ADHD transition into young adulthood, impairment in key areas such as educa-

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tional functioning may be particularly notable for emerging adults with ADHD who enroll in post-secondary educational institutions. Approximately 5% of first-year college students self-report a diagnosis of ADHD (Pryor, Hurtado, DeAngelo, Palucki Blake, & Tran, 2010) and among the population of college students with disabilities, approximately 25% are diagnosed with ADHD (DuPaul, Weyandt, O’Dell, & Varejao, 2009). Unfortunately, even when emerging adults with ADHD attend college, only a small proportion (5%) reach graduation (Hechtman, 2017; Hechtman et al., 2016). Despite the increasing numbers of students with ADHD who attend college, little is known about this group regarding academic experiences and predictors for academic success in college (Weyandt et al., 2013; Wolf, Simkowitz, & Carlson, 2009). Yet, because only a minority (21%) of individuals with ADHD pursue higher education (Barkley, Fischer, Smallish, & Fletcher, 2006), those who do are likely to display unique traits that differentiate them from the rest of the ADHD population, so additional information on this particular group is needed.

Research has demonstrated that when this subgroup of emerging adults with ADHD attends college, they are at risk for poorer academic performance (DuPaul et al., 2009; Heiligenstein, Guenther, Levy, Savino, & Fulwiler, 1999; Weyandt & DuPaul, 2006), experience more overall academic problems, and obtain lower GPAs than their peers without ADHD (Gormley, DuPaul, Weyandt, & Anastopoulos, 2016; Heiligenstein et al., 1999). One reason for this deficit may be related to the increased demands during college on executive functioning (i.e., processes such as organization and self-regulation that are necessary for cognitive control of behavior). These increased demands can potentially place a greater academic strain on these students than they had been accustomed to in their previous schooling (Brown, 2000; Weyandt et al., 2013). The novel challenges and stressors that are prevalent in the college environment may even initiate higher levels of ADHD symptom presentation and impairment and create a unique and potentially challenging environment for individuals with ADHD that warrants investigation (Fleming & McMahon, 2012).

Several factors limit conclusions based on currently available research regarding ADHD in college. First, cross-sectional, rather than longitudinal studies, currently make up the majority of the literature on academic outcomes of college ADHD populations. Although studies have shown that academic impairment in children with ADHD persists throughout childhood (Frazier, Youngstrom, Glutting, & Watkins, 2007; Loe & Feldman, 2007), few longitudinal investigations have been specifically conducted to examine academic outcomes over time for college students with ADHD. Second, there has been a paucity of research comparing this group’s academic outcomes with a non-ADHD control group to track significant differences in academic impairment. Third, of the studies that measure academic outcomes in college students with ADHD, few employ measures other than GPA. Although GPA is a major indicator of educational achievement, additional variables (e.g., credits attempted and earned, continued enrollment, study skills, symptom dimensions) that may influence academic success warrant investigation in this population to enable analyses of trajectories over time. Without examining these extended dimensions, predictors and outcomes of academic success may be overlooked. For example, given that one of the most ubiquitous research findings for children with ADHD is that symptoms of inattention predict academic impairment (Langberg, Dvorsky, & Evans, 2013), neglecting to include symptom dimensions (i.e., inattention and hyperactivity-impulsivity) as predictors of impairment may prevent identification of important factors related to academic success. Similarly, failure to consider comorbid conditions (e.g., depression) may hinder accurate conclusions given the documented impact of depression on GPA (Hysenbegasi, Hass & Rowland, 2005) and the increased rate of psychopathology among college students with ADHD (Anastopoulos et al., 2016). Including these additional indicators of academic functioning may also help to better explain differences in performance over time and provide a more comprehensive understanding of factors that influence the success of individuals with ADHD in the college environment.

Understanding the elements that influence academic outcomes over time for college students with ADHD may help provide a framework for creating and targeting interventions to bolster the success of these individuals. Increasing rates of students with ADHD are attending college (Pryor et al., 2010; Wolf et al., 2009) which necessitates research to broaden the understanding of academic outcomes over time. To address the gaps in the literature, this study examined: (a) whether differences between ADHD and control participants exist or appear over time with regard to academic outcomes (i.e., semester GPA, number of credits attempted, number of credits earned, and enrollment status) over the first two years of college, and (b) identification of factors that predict semester GPA and credits attempted and earned in the second year of college, after controlling for demographic characteristics (i.e., gender, IQ), comorbidity, medication status, and registration with disability resource
center status. It was hypothesized that college students without ADHD would exhibit greater academic success (i.e., higher GPA, more credits attempted and earned) than those in the ADHD group. Additionally, it was hypothesized that year one outcomes (including symptom dimensions, as well as motivation and engagement with studying) would predict academic performance in year two (while controlling for the variance accounted for by demographic characteristics, comorbidity, medication status, and registration with disability resource center status).

Methods

Participant Description

Participants for this study were recruited as part of a larger, longitudinal study examining the long-term outcomes of college students with ADHD across three primary sites in the eastern US. The purpose of the original study was to collect annual data across the first four years of college on educational outcomes; cognitive, social, and vocational functioning; and use of support services to better understand the long-term impact of ADHD on college students. At the time of the present study, the original study was ongoing (see Gormley et al., 2015 for a more detailed description). For the purposes of this study, data from assessment years one and two were used.

At the beginning of the study in year one, participants were college students (N=456, 220= Male, 236= Female) ranging from 18 to 22 years of age (M = 18.23; SD = .52). The original sample of participants was 71.7% Caucasian, 12.3% African American, 5.5% Asian, 3.9% more than one race, and 6.6% other/not reported. Of the total sample, 228 students met research criteria for the ADHD group and 228 students met research criteria for the Comparison group.

In year two, 86.6% of the sample was available for reassessment (N=395) (see Table 1 for demographic characteristics of entire sample as well as ADHD and Comparison group subsamples). Sixteen participants (3.5%) informed study personnel that they no longer wished to participate in the study. An additional 38 participants (8.3%) were unable to be reached. The demographic characteristics of the current analytic sample did not significantly differ from the original sample with regard to age, gender, race, ethnicity, number of comorbid diagnoses, highest parent education, or full scale IQ. However, individuals who dropped out of the study, or could not be reached, were less likely to take an ADHD medication during their first year of college (χ2 [1,420] = 3.9, p = .048) had significantly higher off-medication inattention severity scores (t[449] = -3.78, p < .001), and hyperactivity/impulsivity severity scores (t[449] = -2.77, p = .006).

Screening Measures

Demographic Information. Participants provided a range of demographic information including age, gender, race (i.e., White or non-White), ethnicity (i.e., Hispanic or non-Hispanic), parent educational level, and marital status in the first year of the study.

ADHD Rating Scale–Self-Report Version (ADHD RS-SRV). The ADHD RS-SRV, developed specifically for the purposes of this study, is a modified version of the ADHD RS-IV (DuPaul, Power, Anastopoulos, & Reid, 1998). The scale lists the inattention (IN) and hyperactive-impulsive (HI) symptoms in alternating fashion, which are rated on a four-point Likert scale (0=never or rarely, 3=very often). Symptom frequency counts for both IN and HI are calculated by summing the number of items scored 2 or 3. The ADHD RS-SRV addresses ADHD symptoms both during childhood and during the past six months, while also taking into account medication status (i.e., completed regarding symptoms on and off medication for those students receiving pharmacotherapy). Internal consistency reliability data suggest very good (.74) to excellent (.94) for the childhood and past six months reports of both IN and HI symptoms, regardless of medication status.

ADHD Rating Scale-IV: Parent Version. The ADHD Rating Scale-IV: Parent Version was sent to parents to obtain multi-respondent diagnostic information (DuPaul et al., 1998). The scale is identical to the ADHD Rating Scale-Childhood and Past 6 Months versions; however, the wording on each item reflects that the questions are asking about the individual’s child. Parents completed the form by indicating two ratings of their child’s behavior when they were not on medication, both from the ages of 5-12 to measure childhood symptoms and in the past six months to measure current symptoms.

Semi-Structured ADHD Interview. The Semi-Structured ADHD Interview was created for this study to address symptom presentation and impairment. The interview is based on DSM-5 adult ADHD criteria and includes nine questions about symptoms of inattention and nine questions about symptoms of hyperactivity/impulsivity to assess for symptom presence and severity (American Psychiatric Association, 2013). Additional questions explore the degree to which symptoms impair functioning as well as the age of onset of symptoms. Coefficient alphas for both the IN and HI portions of the interview were excellent (.90 and .85, respectively).
Structured Clinical Interview for DSM Disorders (SCID-I). The SCID-I is a computer-based semi-structured interview based on the DSM-IV-TR criteria (American Psychiatric Association, 2000) that is used to test for clinically significant presentations of psychiatric disorders (First, Gibbon, Spitzer, & Williams, 2002). Because DSM-5 criteria for many non-ADHD conditions had not yet been finalized at the time these first year data were collected, DSM-IV-TR (American Psychiatric Association, 2000) guidelines were used to assess these non-ADHD conditions. Certain disorders, such as anxiety and mood disorders were routinely assessed, while others (e.g., eating disorders) were only evaluated when indicated from participants’ personal/family history. Trained graduate students in Ph.D. or Masters level clinical and school psychology programs and Ph.D. level staff conducted the SCID-I interviews. The SCID-I has adequate inter-rater reliability with kappa levels between .70 and 1.00 (First et al., 2002).

Expert panel classification. The expert panel consisted of four PhD-level psychologists with expertise in the assessment and treatment of ADHD, including the three principal investigators of the larger longitudinal study and one consultant, who specializes in the assessment and treatment of adult ADHD. The panel utilized the data described previously to determine the eligibility for each student enrolled in the current project. Classification of ADHD or non-ADHD Comparison for the present study was based on the unanimous decision reached by the four-member expert panel. In addition, the panel made final decisions regarding psychological classifications (e.g., anxiety or mood disorder) that may have been exclusionary or comorbid with ADHD. In instances in which the panel members came to different classifications, the entire panel discussed the case until consensus was reached.

Dependent Measures
Educational data. College GPAs were collected for each participant through a combination of registrar (423 cases=year one, 363 cases=year two) and self-report information (33 cases=year one, 56 cases= year two) from the participants’ respective college’s Registrar offices. College GPAs were calculated on a four-point scale either ranging from 0.0-4.0 or 0.0-4.3. To adjust for this discrepancy across sites, the range for college GPA was capped at 4.0 (i.e., any value equal to or above 4.0 was recorded as 4.0). GPA was recorded for each of the first four semesters of college.

Credits attempted and earned. The number of credits attempted and credits earned per semester were collected for each participant. Credits attempted was defined as the number of credits students registered for at the start of each semester. Credits earned was defined as the number of credits participants ultimately received at the end of each semester.

Enrollment status. Information regarding enrollment status (i.e., whether a participant was still enrolled as a student at the university they were enrolled in the previous year) was collected yearly for each participant. In addition, we identified the percentage of students in each group that had withdrawn from one or more courses, been placed on academic probation, or been suspended from college in year one. Finally, the percentage of students who transferred to another university in year two was identified for each group.

Predictor Measures
Several previously described measures were used as predictor measures in addition to the measures listed below, including demographic information, ADHD Rating Scales, and expert panel classification.

Cognitive ability. Two subtests (i.e., vocabulary and matrix reasoning) of the Wechsler Abbreviated Scale of Intelligence- Second Edition (WASI-II) were administered as a standardized measure of general cognitive ability (Wechsler, 2011). The two-subtests combined to form a composite full scale IQ (FSIQ-2) and provided an estimate of each participant’s cognitive ability. Adequate average reliability for an adult sample was demonstrated for the vocabulary subtest (α=.92), matrix reasoning subtest (α=.90), and FSIQ-2 (α=.94) (Wechsler, 2011).

Learning and Study Strategies Inventory, Second Edition (LASSI). The LASSI is an 80-item measure used to collect information on students’ awareness about and use of learning and study strategies (Weinstein & Palmer, 2002). Students rate their skill, will, and self-regulation components of strategic learning on a five-point Likert Scale (a= not at all typical of me, e= very much typical of me). The LASSI is comprised of 10 subscales that measure anxiety, attitude, concentration, information processing, motivation, selecting main ideas, self-testing, study aids, test strategies, and time management. Each subscale of the LASSI has demonstrated adequate reliability, with coefficient alphas ranging from .73-.89.

Year one medication status. Year one medication status was collected for each participant in their first year of the study. Participants provided information on whether or not they were taking medication that year, or had been taking medication for ADHD or related issues in the past.

Year one disability services registration. Year one Disability Services Registration status was collected for participants in their first year of the study.
Participants provided information on whether they were formally registered with the Office of Disability Services on their campus.

**Beck Anxiety Inventory (BAI).** The BAI is a self-report measure of anxiety symptom severity in adults (Beck & Steer, 1993). The scale includes 21 items that measure symptom severity over the past week. Each item is rated on a four-point Likert scale (0 = not at all, 3 = severely), with higher scores indicating greater severity of anxiety symptoms. Individuals who score higher on the BAI are more likely to be experiencing more severe symptoms of an anxiety disorder. The BAI has adequate levels of internal consistency (α = .92) and concurrent validity (Beck, Epstein, Brown, & Steer, 1988).

**Beck Depression Inventory—Second Edition (BDI-II).** The BDI-II measures depression symptom severity among adults, where adults report symptom severity over the past two weeks (Beck, Steer, & Brown, 1996). The scale includes 21 items, and each item provides response options rated on a four-point scale (0 = not at all, 3 = severely). Higher ratings on each question indicate greater severity of depression symptoms. The BDI-II has strong internal consistency (α = .93) and concurrent validity with other depression measures in the assessment of college students (Beck et al., 1996).

**Procedure**

All procedures for the larger study were initially approved by the institutional review board (IRB) at all three project sites. Participants were recruited through university disability service offices as well as via summer orientation activities, campus newspaper, social media, and campus postings soliciting participation in the project. As part of the original study, following provision of informed consent, each participant first underwent a screening process to determine group designation and eligibility for the study.

ADHD and non-ADHD comparison group status was determined via multi-method assessment procedures that included expert panel review. The first stage of this assessment included the completion of a self-report ADHD Rating Scale (DuPaul, Power, Anastopoulos, & Reid, 1998), which was modified to address current and past ADHD symptoms, in addition to medication status. If a participant’s self-report or parent-report indicated frequent displays of 4 or more symptoms of either inattention or hyperactivity-impulsivity during childhood and a past 6 months, a semi-structured interview for adult ADHD was then administered to address full DSM-5 criteria for ADHD, which included the requirement of 5 or more symptoms of either inattention or hyperactivity-impulsivity being present. This same interview was administered to potential Comparison participants whose self- and parent-reported responses to the ADHD Rating Scale indicated the presence of 3 or fewer symptoms for both inattention and hyperactivity-impulsivity during childhood and during the past 6 months. Participants whose interview responses continued to suggest the presence of 3 or fewer symptoms from both symptom lists were deemed eligible for the Comparison group. A panel of four ADHD experts (i.e., the three principal investigators and a nationally recognized adult ADHD consultant) reviewed all potentially eligible cases. Unanimous panel agreement was required for final determination of ADHD and Comparison group status, as well as for determination of non-ADHD psychiatric comorbidity status. For detailed information regarding ADHD diagnostic results as well as the prevalence and nature of comorbidities within the present sample, the reader is referred to a related publication by our team (Anastopoulos et al., 2016).

Once eligible for the study, participants completed a variety of measures in a standardized order over a series of meetings conducted by graduate students and doctoral level staff trained on all assessment procedures (see Anastopoulos et al., 2016; Gormley et al., 2016 for detailed description). All data used in this study were collected in the first two years of four planned annual assessments following the same procedures, with the exception of the WASI-II that was administered in the first year only. For the purposes of the current study, only year one data were used for LASSI and ARS-IV scores. Demographic information was obtained through self-report ratings and archival data. Participants were provided with monetary incentives at the completion of each meeting and a report of their overall functioning for each year they participated in the study.

**Statistical Analysis**

For the first hypothesis (i.e., students without ADHD would exhibit greater academic success than those in the ADHD group), three 2 (group) x 4 (semester) analyses of variance (ANOVA) were conducted to examine main effects of group, time, and their interaction on semester GPA, number of credits attempted, and number of credits earned. When GPA or credit data were missing, we used last observation carried forward (LOCF). An a priori statistical power analysis using alpha level of .05 to obtain power of .80 with a moderate effect size (d = .50) indicated that 24 participants would be needed for each group. Group differences in enrollment status (enrolled, not enrolled) in the fall and spring semesters of year two
were examined with chi-square analyses. For the second hypothesis (i.e., year one outcomes [symptom dimensions, motivation, engagement with studying] would predict academic performance in year two) hierarchical regression analyses were conducted with the full sample (N = 395) of participants, and each group separately. In each analysis, demographic factors (gender, IQ, race, ethnicity, parent education level, medication status, registered with disability resource center) that may be associated with educational outcomes were entered as predictors first. Next, ADHD symptom dimension scores, and presence/absence of comorbid disorder(s) were entered into the regression model. Finally, first-year LASSI scores were included in the model. A power analysis using alpha level of .05 to obtain power of .80 assuming a multiple R of .40 and inclusion of 15 predictors indicated that 131 participants were needed.

**Results**

Means and standard deviations for all variables including the analyses are presented in Table 1 for the analytic sample and separately for students with and without ADHD.

**Group and Semester Differences in Academic Outcomes**

The 2 (group) x 4 (semester) ANOVA for semester GPA indicated statistically significant main effects for group ($F[1, 408] = 19.36, p < .001$; partial eta squared = .045) and semester ($F[3, 1224] = 8.31, p < .01$, partial eta squared = .02). The group x semester interaction was not statistically significant. Mean semester GPA was significantly higher for students without ADHD than for those with ADHD across all four semesters (see Figure 1). This group difference was small to medium in magnitude (Cohen’s $d = 0.43$). Trend analyses indicated that the semester effect was comprised of statistically significant linear ($F[1, 408] = 14.49, p < .001$) and quadratic ($F[1, 408] = 5.55, p < .05$) components. For both groups, semester GPA decreased in a linear fashion across the first three semesters with a plateau between the third and fourth semesters (see Figure 1).

The 2 (group) x 4 (semester) ANOVA for credits attempted indicated statistically significant main effects for group ($F[1, 316] = 6.98, p < .01$; partial eta squared = .022) and semester ($F[3, 948] = 7.12, p < .001$; partial eta squared = .022). The group x semester interaction was not statistically significant. Students without ADHD attempted more credits than those with ADHD across all four semesters (see top panel, Figure 2) with this difference in the small range (Cohen’s $d = 0.15$). The semester effect was comprised of statistically significant linear ($F[1, 316] = 7.12, p < .01$), quadratic ($F[1, 316] = 5.98, p < .05$), and cubic ($F[1, 316] = 8.06, p < .01$) components (see top panel, Figure 2).

As hypothesized, similar results were obtained for semester credits earned. The 2 (group) x 4 (semester) ANOVA for credits earned indicated a statistically significant main effect for group ($F[1, 316] = 7.38, p < .01$; partial eta squared = .023) and semester ($F[3, 948] = 7.12, p < .001$; partial eta squared = .022). Once again, the interaction between group and semester was not statistically significant. Students without ADHD earned significantly more credits across all four semesters relative to those with ADHD (see bottom panel, Figure 2). This group difference was small to medium in magnitude (Cohen’s $d = 0.31$). As was the case for credits attempted, the semester effect was comprised of significant linear ($F[1, 316] = 6.94, p < .01$), quadratic ($F[1, 316] = 5.27, p < .05$), and cubic ($F[1, 316] = 9.52, p < .01$) trend components (see bottom panel, Figure 2).

**Group Differences in College Enrollment Status**

For the fall semester of year two, significantly more students with ADHD (9.1%) were no longer enrolled in college (i.e., had dropped out) relative to non-ADHD controls (3.3%). The association between group membership and dropout rate was small (Cramer’s $V = 0.12$; $\chi^2[1] = 5.21, p < .05$). In similar fashion, significantly more students with ADHD (9.8%) were not enrolled in the spring semester of year two relative to those without ADHD (2.8%). The association between group membership and dropout rate was again small (Cramer’s $V = 0.14$; $\chi^2[1] = 6.91, p < .05$).

Students with ADHD were significantly more likely to withdraw from one or more courses ($p = .004$) in year one. A greater percentage of students with ADHD (12.1%) were placed on academic probation in year one relative to control participants (7.0%), suspended from college in year one (2.45% vs. 0.5%), or transferred to another university in year two (7.5% vs. 3.5%); however, none of these group differences were statistically significant ($p$ values range from .06 to .11).

**Prediction of Year Two Academic Outcomes**

Twelve hierarchical regression analyses were conducted to examine the degree to which year one ADHD symptoms, comorbid disorders, medication status, registration with campus disability services, and study attitudes and behaviors predict year two academic functioning while controlling for demograph-
ic variables (i.e., gender, IQ, parent education level, race). When including the entire sample, the first and third stages of the regression model were statistically significant for predicting year two fall semester GPA (see Table 2) with a multiple $R = .38$ (adjusted $R$-square = .09; $F [20, 326] = 2.69, p < .001$). Statistically significant regression weights were obtained for race ($p < .05$; see Table 2) and LASSI motivation ($p < .001$). Higher year two fall GPA was predicted by White racial status and higher scores for motivation on the LASSI in year one. Similarly, stages one and three of the regression model predicting year two spring semester GPA for all students were statistically significant (see Table 3) with a multiple $R = .39$ (adjusted $R$-square = .10; $F [20, 326] = 2.89, p < .001$). Statistically significant regression weights were found for race ($p < .01$) and LASSI motivation ($p < .001$; see Table 3). Again, higher year two spring GPA was predicted by White racial status and higher LASSI motivation scores in year one.

Hierarchical regression analyses conducted only with students in the ADHD group failed to reach statistical significance for both year two fall and spring semester GPA. However, the full model predicting year two spring GPA approached significance for this group with a multiple $R = .42$ (adjusted $R$-square = .06; $F [20, 145] = 1.52, p = .082$). A statistically significant regression weight was found for LASSI self-testing and LASSI information processing (both $ps < .05$) such that higher year two spring GPA was predicted by higher LASSI self-testing scores and lower LASSI information processing scores.

Among students in the comparison group, the third stage of the hierarchical regression analysis for year two fall semester GPA was statistically significant (see Table 4) with a multiple $R = .46$ (adjusted $R$-square = .11; $F [20, 160] = 2.10, p < .01$). Statistically significant regression weights were found for race ($p < .05$), LASSI attitude ($p < .05$), and LASSI motivation ($p < .001$). Higher GPA was predicted by White racial status and higher scores for attitude and motivation on the LASSI in year one. Similarly, only the third stage of the hierarchical regression analysis for year two spring semester GPA was statistically significant (see Table 5) with a multiple $R = .44$ (adjusted $R$-square = .09; $F [20, 160] = 1.91, p < .05$). The only statistically significant predictor was year one LASSI motivation such that higher scores predicted higher year two spring semester GPA.

The first stage of the hierarchical regression analysis for year two credits attempted by the entire sample was statistically significant with multiple $R = .25$ (adjusted $R$-square = .04; $F [7, 283] = 2.75, p < .01$). The two subsequent regression stages did not contribute significantly more variance to the prediction model. The only significant predictor was WASI IQ ($p < .05$). Interestingly, lower IQ predicted higher number of credits attempted in year two. In similar fashion, only the first stage of the prediction model for year two credits earned was statistically significant with multiple $R = .24$ (adjusted $R$-square = .04; $F [7, 283] = 2.52, p < .05$). The only significant predictor was WASI IQ ($p < .01$) although there was a nonsignificant trend for first year medication status ($p = .064$). Again, higher IQ predicted lower number of credits earned in year two.

Among students in the ADHD group alone, only the first stage of the hierarchical regression analysis for year two credits attempted was statistically significant with multiple $R = .32$ (adjusted $R$-square = .06; $F [7, 130] = 2.19, p < .05$). Similar to the combined sample, the only significant predictor was WASI IQ ($p < .01$) such that lower IQ again predicted a higher number of credits attempted in year two. Only the first stage of the prediction model for year two credits earned was statistically significant with multiple $R = .32$ (adjusted $R$-square = .06; $F [7, 130] = 2.17, p < .05$). Again, the only significant predictor was WASI IQ ($p < .01$) with higher IQ predicting a lower number of credits earned.

Finally, among only students in the comparison group, hierarchical regression analyses for both year two credits attempted and credits earned failed to reach statistical significance.

**Discussion**

In accordance with the research literature (e.g., Weyandt & DuPaul, 2006), it was hypothesized that college students with ADHD would fare worse than college students without ADHD on measures of academic success. The results of this study were generally in line with this hypothesis. Specifically, students with ADHD earned lower GPAs than those in the control group; this difference was small to medium in magnitude. This disparity in GPA persisted across the first two years of college even as GPA for both groups declined through the fall of the second year of college, reaching a plateau in the spring of the second year. This main effect of ADHD status on GPA aligns with the hypothesis and previous work suggesting that college students with ADHD tend to obtain significantly lower GPAs than their peers without ADHD (Gormley et al., 2016), as well as with the larger body of literature indicating that younger students with ADHD experience academic impairment in school (e.g., Biederman et al., 2011). The small to medium effect size obtained in this study (.40) is smaller than the ($d =$
.71) effect size reported in the Frazier and colleagues (2007) meta-analysis of children with ADHD. This difference may be indicative of the fact that college students with ADHD are an educationally more successful subgroup of the ADHD population.

Although the GPA trajectories were similar for the two groups, differences in enrollment status were observed over the first two years of college. Participants in the ADHD group were more likely to withdraw from one or more courses in year one and were approximately three times more likely to be listed as non-enrolled (e.g., as a result of dropout) in year two. This finding that college students with ADHD experience greater difficulties in maintaining their enrollment status is not surprising given the current literature suggesting that individuals with ADHD are less likely to attend college than their non-ADHD peers (Hechtman, 2017) and when they do enroll, are less likely to earn a degree (Barkley, Fischer, Smallish, & Fletcher, 2002; Hechtman et al., 2016).

In addition to enrolling in fewer courses, students with ADHD also completed fewer credits. Specifically, college students with ADHD completed, on average, one less academic credit per semester than individuals in the control group. This group difference was consistent across the first two years of college. For both groups, credits earned peaked in the spring of the first year and then declined in the second year. Although speculative, it is possible students may face increased time pressures (e.g., employment) or that courses may become more difficult in the second year of college. It is also possible that college students with ADHD may be responding to advice from academic advisors to enroll in fewer credits. In general, these findings are consistent with the research hypotheses and the larger body of literature indicating that college students with ADHD are at risk for poorer academic outcomes than students without this disorder (e.g., Advokat et al., 2011; Lewandowski, Gathje, Lovett, & Gordon, 2013).

Several variables including motivation, IQ, comorbidity, medication status, and registration with disability services were further examined as potential predictors of academic outcomes. Different variables in year one predicted GPA and credit status in year two. For analyses that included the entire sample or comparison students only, student race and the LASSI subscale for motivation emerged as predictors of GPA, with first-year motivation being the strongest predictor of year two GPA. GPA prediction models for the ADHD subsample were not statistically significant, perhaps due to limited statistical power. Alternatively, WASI IQ in year one was the only significant predictor of the number of credits that students attempted and earned in the second year of college for analyses including the entire sample or the subsample of students with ADHD. Interestingly, higher IQ predicted lower number of credits attempted and earned. It may be the case that students with higher IQs selected fewer but more difficult courses than students with lower IQs. Surprisingly, given the importance of symptom dimensions in predicting outcomes for children with ADHD (e.g., Langberg, Dvorsky, & Evans, 2013), symptom ratings did not emerge as a significant predictor of academic outcomes for college students in any of the analyses. It is possible that other predictors (e.g., medication status) are correlated with symptom ratings and account for similar variance in academic functioning. Overall, these findings are consistent with the study’s prediction that college students without ADHD experience greater academic success in the first two years of college than students with ADHD.

**Strengths and Limitations**

The current study adds a longitudinal perspective to the literature describing the educational outcomes of college students with ADHD. The longitudinal design of the present study allows for an examination of patterns over the first two years of college, which are critical for identifying points of intervention to bolster later success. Additionally, the large and heterogeneous sample comprised of students from several colleges and universities, included a non-ADHD Comparison group. The current study also controlled for demographic variables (e.g., IQ) such that the findings explicate the degree to which year one variables impact year two academic functioning above and beyond factors typically associated with educational success.

Findings from this study should also be interpreted in light of its limitations. First, study skills data were collected via self-report, so students may have been biased in reporting on their own study habits. Second, descriptive analyses demonstrated possible multicollinearity evidenced by significant correlations among the LASSI subscales. However, inspection of both the VIF and Tolerance variables indicated that all variables were within the accepted limits of below 4 and above 0.1, respectively (Field, 2009). Thus, the assumption of multicollinearity was not violated; however, a cautious interpretation of analyses including the LASSI subscales as predictors is still warranted.

Several characteristics of the sample also represent limitations to the current study. Participants were first-year college students and recruited from four-year east coast universities. Thus, results may not
generalize to other college populations, such as students in community colleges with broader age ranges. Participants with ADHD as well as non-White participants were more likely than those without ADHD to drop out of the study between year one and year two. Among dropouts, students with a higher level of hyperactivity-impulsivity symptoms while on medication were overrepresented. Further, the “last observation carried forward” method of observation may have biased the results, potentially overestimating student GPA and credits attempted/completed.

**Implications and Future Directions**

Clinicians and educators working with college students can use findings from the current study to recognize that students with ADHD are at a heightened risk of negative academic outcomes (i.e., fewer credits completed and lower GPAs) within their first two years of college, which in turn can impact their chances of graduation and subsequent professional success. Although a matter for additional empirical study especially given the possible limitations of typical support strategies such as educational accommodations (Lewandowski, et al., 2013; Miller, Lewandowski, & Antshel, 2013), it is assumed that college students with ADHD may benefit from academic counseling, coaching, and other supports to ensure that they are prepared to graduate. Given the fact that college students with ADHD tend to lag behind their peers in credit completion, disability service providers can help students with ADHD plan for the possibility of needing to make up credits (e.g., by taking summer courses or an extra semester) so they remain on-track with a realistic time frame to graduation.

Based on findings demonstrating that good study habits and motivation to study are predictive of GPA, college-based practitioners should consider offering services that help students improve their study skills and increase their academic self-efficacy and motivation to study. Time effects found in the present study show the importance of providing services early on in college. Similar to students who do not have ADHD, students with ADHD may benefit most from receiving services at the beginning of their college career as well as during the transition from high school to college. This may be accomplished through screening to identify incoming college students with ADHD who are at the highest risk of academic difficulties or dropping out to target that group as early as possible. Based on the present findings, symptom dimensions may not be as useful an indicator of risk for academic difficulties relative to measures that tap motivation and attitude towards studying. It may be especially important to provide supports for non-White students with ADHD and students with poor study skills, as these individuals face heightened academic risks compared to the general population of college students with ADHD. College-based clinicians may wish to build in opportunities for students to learn about services that are available to them, as these services may not be well known.

In the future, researchers can build upon the current study by seeking to determine what strategies are most effective in working with students with ADHD from the beginning of college. This may include programs that help students transition from high school to college or coaching for study skills. Researchers can also continue to examine patterns across all four years of college, or differential patterns for a more diverse sample of students. Trajectory analyses can help determine the key time point for intervention, which, based on findings of the current study, appears to be as early as possible in a student’s college career. There is also a need to examine post-college outcomes for college students with ADHD to understand the long-term effects of students’ early college experiences.

**Conclusion**

This is the first study to examine the trajectory of educational outcomes for college students with ADHD in comparison to their peers without ADHD. As hypothesized, findings revealed that students with ADHD experience more academic difficulties, including having lower GPAs, attempting and earning fewer credits, and being more likely to drop out of school, than students without ADHD from the very beginning of college. These patterns were shown to persist as students with ADHD continued through their second year of college. Study skills and habits, particularly related to motivation, reported in year one were found to be important predictors of year two outcomes, suggesting that providing services that may presumably boost motivation as early as possible in college is essential, to target students before they begin to struggle. These longitudinal findings are preliminary, representing only the first two years of this four-year study. Subsequent studies will more fully address the longitudinal trajectories of these students over the later college years. The implication of these preliminary results is that universities should be encouraged to offer programs to enhance student study skills and increase academic motivation. These findings can be incorporated into clinical practice by professionals working with college students with ADHD and future research is warranted to examine the most effective strategies for supporting this population’s educational success.


**About the Authors**

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Aliza Jaffe is a Ph.D. student in School Psychology at Lehigh University in Bethlehem, PA. She received her B.A. degree in Psychology and Education Studies at Washington University in St. Louis, and she received her M.Ed. degree in Human Development from Lehigh University. Aliza’s research interests include determining predictors of academic and socioemotional functioning in children and adolescents with ADHD, as well as care coordination within pediatric psychology. She can be reached by email at arj215@lehigh.edu.

Matthew J. Gormley received his B.A. degree in psychology from the State University of New York, College at Geneseo and Ph.D. in school psychology from Lehigh University. He is currently an Assistant Professor in the Educational Psychology department at the University of Nebraska-Lincoln. He is interested in the development and application of individualized and continuous supports across major (e.g., secondary to post-secondary) and minor transitions (e.g., second to third grade) within, to, and from academic settings. Additionally, he is interested in the intersections and collaborations between families, schools, and healthcare settings. He can be reached by email at mgormley2@unl.edu.

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Table 1

Demographic Data and Means (Standard Deviations) for Analysis Variables

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<th>Variable</th>
<th>Total Sample</th>
<th>ADHD Only</th>
<th>Comparison Only</th>
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<td>Disability Services (% registered)</td>
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Note. All LASSI scores are percentiles. ADHD = attention-deficit/hyperactivity disorder. GPA = grade-point average. WASI = Wechsler Abbreviated Scale of Intelligence. LASSI = Learning and Study Strategies Inventory.
Table 2

*Hierarchical Regression Analysis Summary for Year One Variables Predicting Year Two Fall GPA in Combined Sample*

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<td>.06</td>
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<td>.03</td>
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</table>

Note. GPA = grade-point average. WASI = Wechsler Abbreviated Scale of Intelligence. ARS = ADHD Rating Scale. LASSI = Learning and Study Strategies Inventory. *p < .05. **p < .01. ***p < .001.
### Table 3

**Hierarchical Regression Analysis Summary for Year One Variables Predicting Year Spring Fall GPA in Combined Sample**

<table>
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<th>( \Delta R^2 )</th>
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**Note.** GPA = grade-point average. WASI = Wechsler Abbreviated Scale of Intelligence. ARS = ADHD Rating Scale. LASSI = Learning and Study Strategies Inventory. *\( p < .05 \). **\( p < .01 \). ***\( p < .001 \).
### Hierarchical Regression Analysis Summary for Year One Variables Predicting Year Two Fall GPA in Comparison Students

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*Note.* GPA = grade-point average. WASI = Wechsler Abbreviated Scale of Intelligence. ARS = ADHD Rating Scale. LASSI = Learning and Study Strategies Inventory. *\( p < .05 \). **\( p < .01 \). ***\( p < .001 \).
Table 5

Hierarchical Regression Analysis Summary for Year One Variables Predicting Year Two Spring GPA in Comparison Students

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*Note. GPA = grade-point average. WASI = Wechsler Abbreviated Scale of Intelligence. ARS = ADHD Rating Scale. LASSI = Learning and Study Strategies Inventory. *p < .05. **p < .01. ***p < .001.
Figure 1. Semester GPA by ADHD vs. control group.

Figure 2. Credits attempted per semester by ADHD vs. control group (top). Credits earned per semester by ADHD vs. control group (bottom).
Internship to Improve Postsecondary Persistence for Students with Disabilities in the STEM Pipeline
(Practice Brief)

Kiriko Takahashi¹
Lisa Uyehara¹
Hye Jin Park¹
Kelly Roberts²
Robert Stodden¹

Abstract
Pacific Alliance project staff developed an internship program for postsecondary students with disabilities (SWD) in the science, technology, engineering, and mathematics (STEM) pipeline. The aim of the internship was to improve students’ persistence in postsecondary education by improving their motivation, self-confidence, social and communication skills, and organizational and time management skills. In this practice brief, the authors describe the Pacific Alliance project housed at the Center on Disability Studies at the University of Hawaii at Manoa, its internship program, and the experiences of three interns as examples of successful outcomes of the Pacific Alliance internship program. The authors conclude with a discussion on the importance of one-on-one coaching and support beyond academics for SWD to succeed in the STEM pipeline.

Keywords: Internship, students with disabilities, STEM, persistence

Many colleges provide internship opportunities for their students to better prepare them for careers after graduation. Internships are often seen as a bridge between the academia and career (Amponsah, Milledzi, & Kwarteng, 2014). Such internship opportunities are beneficial to all students, including students with disabilities (SWD) (Briel & Getzel, 2001; Burgstahler, 2001; Shandra & Hogan, 2008). In a five-year database analysis of SWD who participated in bridge to work programs, Fabian, Lent, and Willis (1998) found that completion of internships, along with numbers of hours worked and days absent, predicted whether students were prepared to be employed upon graduation. Similarly, in their systematic review of literature, Test et al. (2009) found that paid internship was one of the predictors of employment for SWD with a moderate level of evidence ranging from small to large effect size. In their study, Rabren, Eaves, Dunn, and Darch (2013) found that both education and training are important during the transition from postsecondary education to employment. They also noted that education and training influenced SWDs’ satisfaction with the postsecondary education experience; so in addition to the aforementioned benefit of increasing the likelihood of employment for SWD after graduation, other benefits of internships for SWD include improving academic performance, motivation, and self-confidence, as well as assisting in their understanding of disability-related needs.

Burgstahler and Bellman (2009) conducted a study of participants in DO-IT (Disabilities, Opportunities, Internetworking and Technology at the University of Washington), which provides work-based opportunities for high school and college SWD in the STEM fields. The participants, who were involved in an internship between 2002 and 2008, were asked about perceived benefits of internships on career-related attitudes, knowledge, and skills. Sixty students (20 high school and 40 college) responded to the survey. According to survey results, all respondents—regardless of disability, gender, or education level—indicated that participating in their internship increased their motivation to study and work toward a career. Participants also reported learning communication and problem-solving skills, how to work with other individuals, the operations of the organization, and about building self-confidence through their internship experience.

¹ University of Hawaii at Manoa; ² Northern Arizona University
Although researchers agree that activities to support and encourage employment—such as internships—are necessary to help SWD find employment upon graduation, there is need to strengthen support between local education agencies, institutions of higher education, state development disability authorities, and state vocational rehabilitation services and SWD in higher education, (Butler, Sheppard-Jones, Whaley, Harrison, & Osness, 2016). Briel and Getzel (2001) identified effective strategies used to support SWD participating in Virginia Commonwealth University (VCU) internship programs, which provide internship opportunities for SWD as part of their supported education model (Getzel, McManus, & Briel, 2004). These support strategies include: modeling the task and having students immediately repeat the same task; assisting students to break large tasks into smaller tasks; role-playing leadership activities; role-playing social interactions; identifying stress management strategies; providing direct feedback to the students; and having students write out processes step-by-step before completing tasks. In addition to support strategies, the authors found that support through one-on-one coaching on matters such as how to communicate effectively with supervisors, master specific job skills, and address issues of disclosure of disability and work accommodations enhanced the internship experience for their VCU participants.

**Depiction of the Problem**

**Pacific Alliance Project**

To broaden participation of individuals with disabilities in postsecondary STEM education and the workforce, the Center on Disability Studies at the University of Hawaii at Manoa was awarded a five-year grant through the National Science Foundation (HRD #09-29079) and implemented the Pacific Alliance project. One approach to increase the number of SWD in STEM postsecondary education programs and ultimately careers in STEM was to provide internship opportunities for SWD.

During the first four years of the five-year Pacific Alliance project, the project was highly successful in transitioning high school project participants into postsecondary education through mentoring and academic support. This success is in line with the increased number of SWD attending postsecondary education (Newman et al., 2011). However, once the students were in a postsecondary program, most were unsuccessful in gaining internship opportunities—a key predictor for employment success for SWD. In fact, of the 136 student participants who transitioned from high school to college through the Pacific Alliance program, only two students sought an internship in the STEM fields. Participants who were interested in an internship but did not apply for or follow-through with an internship indicated various reasons for not pursuing an internship, including their lower grade point average, part-time student status, and number of credit hours; however, the one common reason for not pursuing an internship was their lack of confidence in applying for a STEM internship. Thus, the Pacific Alliance Internship was created as a steppingstone to foster students’ motivation and confidence to work in the STEM fields by providing students with internship opportunities and addressing the development of soft skills—such as social and communication skills, and organizational and time management skills—deemed necessary for employment post-graduation.

**Participant Demographics and Institutional Partners/Resources**

Over the five years of the Pacific Alliance project, 394 SWD from 17 high schools and five colleges on Oahu, Hawaii participated in Pacific Alliance. Of the 394 participants, 162 students were high school participants and 232 were college participants. Of those students who reported their disability type (N=322), the most common disability was a learning disability (24%), followed by ADD/ADHD (24%), other (13%), and Autism Spectrum Disorder (11%). Participants were also ethnically and racially diverse with 41% of the participants reported as Native Hawaiian or Pacific Islander, 37% White, 19% Asian, 12% Hispanic, and 7% American Indian/Alaskan Native (N=308). With regard to gender, 37% of the participants were women and 63% were men (N=308).

As a summary of the project effects, the project successfully supported 136 high school students with disabilities to transition into postsecondary students, and 117 students out of the 136 (86%) particularly transitioned into STEM programs. When comparing college participants who participated in the project during the first two years of their postsecondary studies and those who did not participate their first two years, those who participated accumulated more STEM and general credits and were more likely to have continuous enrollment across four semesters (Park, Takahashi, & Roberts, April 2015).

**Description of Practice**

**Pacific Alliance Internship**

One component of the Pacific Alliance project was to provide career support to participating students with an internship opportunity. In addition to
connecting students with outside STEM-related employment or research internships, the Pacific Alliance offered its own internship stipend program to provide college participants a competitive opportunity in a supported and safe environment to improve motivation, self-confidence, social and communication skills, and organizational and time management skills. The goals of the Pacific Alliance internship program were to: (1) increase and improve interns’ communication skills, (2) increase interns’ confidence by providing duties and expectations in a professional work setting, and (3) increase interns’ self-determination and persistence in completing their degree program. The role of the interns was to be the Pacific Alliance representative, a project liaison for students and faculty, for his/her respective college campus. By creating a career-learning environment and providing participants with opportunities to interact with their peers with disabilities and STEM faculty on their college campuses, the Pacific Alliance Internship program projected increasing the students’ persistence in postsecondary education (Deil-Amen, 2011; Mamiseishvili & Koch, 2011).

Recruitment. Pacific Alliance staff contacted via email all current college participants who had already participated in the Pacific Alliance project for at least one full semester and invited them to apply for the internship. Interested participants were required to complete an internship application, as well as write an essay about why they want to be a Pacific Alliance Intern at their college campus, and how the internship will help them with their current and future endeavors in the STEM field. After receiving and reviewing the applications, Pacific Alliance staff then interviewed prospective candidates. All applications, essays, and interviews were scored on a rubric. Based on their scores, a maximum of four interns from different college campuses within the state system of colleges were selected for one academic semester. In total, 11 students became Pacific Alliance Interns over the three semesters that the Pacific Alliance Internship program was implemented.

Internship participants. The eleven student interns included six males and five females. They were asked to report all the races they have: six of the interns reported they were Asian, three reported Native Hawaiian/Other Pacific Islander, five reported White, and two reported Hispanic. They were also asked to report all of their disabilities: four reported Autism Spectrum Disorder/Asperger’s Syndrome, two reported Attention Deficit Hyperactivity Disorder, three reported systematic health disorder, three reported psychological disorder, two reported learning disorder, and one reported visual impairment.

Tasks and responsibilities. The interns’ main responsibilities were to provide support by acting as role models for their postsecondary education peers with disabilities, to recruit other SWD to the Pacific Alliance project, and to assist Pacific Alliance project staff with planning and facilitating special events, such as academic camps and conferences. The Pacific Alliance Internship Orientation Handbook outlines the following as general expectations of a Pacific Alliance Intern. Each Pacific Alliance Intern is expected to meet the following: (1) Work a minimum of eight hours per week for one semester (or agreed upon time frame); (2) Attend an Intern orientation; (3) Participate in Communities of Practice (COP) meetings on their college campus; (4) Assist and attend Pacific Alliance high school sessions; (5) Assist and attend Pacific Alliance special events (e.g., Pacific Rim International Conference on Disability and Diversity, The Pacific Alliance Winter/Summer Institute for High School Students, The Pacific Alliance Winter/Summer Institute for College Students, The Pacific Alliance Math Camp, The Pacific Alliance Reading and Writing Camp); (6) Hold monthly information sessions about Pacific Alliance on their college campus; (7) Attend a face-to-face monthly meeting with Pacific Alliance staff and other Pacific Alliance Interns; (8) Meet virtually (e.g., phone, chat, Skype, Blackboard Collaborate) with other Pacific Alliance Interns twice a month; (9) Work on holidays and/or weekends as needed; (10) Accurately keep track of and record Internship hours; (11) Enter weekly hours and a description of activities on the provided software program; (12) Assist in organizing speakers and role models for events and/or meetings; (13) Provide campus guided tours of their campus; (14) Fill out necessary paperwork including a final report/survey about their Internship experience.

Orientation and training. As indicated in the expectations above, the interns had various tasks, which required different skills; therefore, Pacific Alliance staff facilitated a four-hour orientation and training, which took place over the course of two days, to review these tasks with the interns. The training and orientation session used a project-developed internship orientation handbook to introduce the interns to the Pacific Alliance Internship program and outline their tasks and responsibilities as interns. The orientation covered the following topics: (1) About Pacific Alliance Project; (2) Critical Junctures for Students with Disabilities and Laws and Regulations; (3) General Expectations of a Pacific Alliance Intern; (4) Managing Time and Stress Levels; (5) Professionalism; (6) Confidentiality; (7) Teamwork; (8) Communities of Practice; (9) Mentorship; and (10) Internship
Log and Reporting. Pacific Alliance staff also provided the interns with ongoing informal trainings throughout the semester on organization, leadership, and communication. Both the formal and informal trainings included opportunities for the interns to practice skills—such as responding to questions about the project, telephone etiquette, presenting in front of an audience, approaching STEM faculty, and interacting, tutoring, and mentoring other SWD in the project—necessary to complete their internship tasks.

Coaching. In order to build additional rapport between the interns and the project team, Pacific Alliance staff paired with interns to provide one-on-one coaching as advisors. Advisors monitored interns’ workload and stress levels, including how they were coping with the rigors of exams, papers, and classroom demands along with their internship responsibilities.

Evaluation of Observed Outcomes: Cases

At the beginning of the internship, most of the interns said they had trouble with time management and organization skills. Some of them expressed anxiety with interacting with other students. They also expressed that they were unsure of whether they could complete the internship. However, commonly across cases, throughout the internship, they showed improvement in their leadership skills, social confidence, and social skills, organizational and time management skills and determination to persist in postsecondary education. The outcomes of the Pacific Alliance Internship program are illustrated through three cases. The internship experiences of these three interns varied by: when they became a Pacific Alliance participant (i.e., at high school, community college, or a four-year university); the stage of postsecondary education they were at when beginning the internship (e.g., community college or a four-year university); types of disabilities; and individual maturity levels.

Spencer

Spencer (all names are pseudonyms) has Asperger’s, an Autism Spectrum Disorder. He had successfully transitioned from community college to the University of Hawaii at Manoa and was learning to live on his own at the time of this internship. Although he was aware of college resources—such as the disability services office—that could help him persist with his college education, Spencer was often forgetful and had a State mental health provider to ensure that he remembered to utilize the campus supports and resources available to him.

Spencer joined the Pacific Alliance project as a high school senior and continued as a college participant. As a college student, he wanted to become a Pacific Alliance intern to “help get people into the STEM fields.” He felt that he could be a good role model of going to college for others with autism. At the beginning of Spencer’s internship, he struggled with time management and needed frequent reminders about coming to work. He also had difficulty maintaining eye contact and having casual interactions with peers and faculty he spoke to about Pacific Alliance, but was able to answer questions about the project when asked and could carry on the conversation from there. At the end of the internship, Spencer reflected that he could now maintain eye contact and respond more naturally when interacting and conversing with others.

Although he was apprehensive at first about how he would be able to balance school and work as he had never had a “real” job before, as well as working with others involved with the project, Spencer reported that the internship program helped him grow and develop in many ways, such as strengthening his ability to work in a team, developing his leadership and social skills, managing his time better, and overcoming obstacles that would have previously prevented him from working as an intern. In his post-internship reflection essay, Spencer stated that “the internship gave me a chance to experience a working environment firsthand. I feel more confident that I can accomplish tasks in a working environment.” He also explained that before the internship he felt that he would be easily overwhelmed and upset with the demands of the internship and would be unable to control his feelings. At the end of the internship, Spencer reported that he learned to cope with “trouble or distractions” that arose in the workplace and that he felt confident that he was responding appropriately to those troubles or distractions.

Spencer’s pre-post internship survey results aligned with his reflection. His response improved from “below average” (pre-survey) to “average” (post-survey) for the question, “Skills needed to advocate for the needs of students with disabilities in postsecondary education,” and improved from “average” (pre-survey) to “excellent” (post-survey) for teamwork skills, communication skills, and work ethic. Spencer is still enrolled in the university and is pursuing a degree in computer science.

Josie

Josie reported having ADHD. She was a transfer student to the University of Hawaii at Manoa and, at the time of becoming a Pacific Alliance participant,
she struggled with her higher-level science courses. She participated in the Pacific Alliance project for one year prior to becoming an intern during her junior year at the university. Josie applied to be a Pacific Alliance Intern because she believed that the tutoring, mentoring, online resources, and stipends provided through the Pacific Alliance project would help her and others improve their academic performance and GPA. She stated in her application essay that “if more students knew that help was readily available on campus, more freshman and sophomores would feel capable of declaring a STEM major.” Thus, as an intern, she posted flyers about Pacific Alliance opportunities around campus and talked to her department about the Pacific Alliance project to let others know of help provided through the Pacific Alliance project. Josie also acted as a role model for perspective STEM students by meeting with high school participants and talking about how she chose Biology as her major. She even created and delivered a poster presentation on Polymerase Chain Reaction (PCR) to demonstrate what she studies in her STEM field. Josie shared that researching, organizing, and reviewing techniques and procedures on PCR for her Pacific Alliance poster presentation actually helped her studies as it aided in her success at the reproductive biology lab and helped her complete the required directed research credit for her Biology degree.

Upon reflecting on her internship experience, Josie realized that the internship helped to enhance her resume, increased the competitiveness of her academic profile, and will improve her prospects of gaining admission to the Genetic Counseling Master’s program. Also, working with other SWD helped her become more patient and understanding, and helped strengthen her organization and time management skills, and her ability to work with others. Furthermore, participating as an intern gave Josie the confidence to manage working part time while enrolled as a full-time student, continuing her directed research at the reproductive biology lab, and teaching interns for the introductory genetics course. Since participation in the internship, Josie has successfully graduated with a Bachelor of Science degree in Marine Biology and applied to graduate school.

Kainoa

Kainoa is an older, non-traditional student who reported his disability as autism. He studied ethnopharmacognosy at one of the community colleges. He was a Pacific Alliance participant for just one semester before applying for the internship. From the internship, Kainoa wanted to: (1) learn about assistive technology; (2) increase his opportunities in STEM fields; and (3) develop communication skills and build self-confidence. Through the internship, Kainoa engaged well with high school SWD. He helped facilitate high school sessions with Pacific Alliance staff and introduced students to ethnopharmacognosy through presentations. He also held information booths on his college campus to disseminate information on Pacific Alliance, and delivered a poster presentation about the project at the Pacific Rim International Conference on Disability and Diversity.

In his post-internship reflection essay, Kainoa shared that participating in high school sessions, presentations, and conferences about topics he was familiar with helped him become comfortable with talking and connecting with people, gave him opportunity to practice teaching, and gave him confidence in his choice of study. At the beginning of the internship, Kainoa self-assessed his communication skills as “above average,” but at the end, he marked his communication skills as “above average.” Kainoa also wrote that he learned organizational skills and time management. In addition, he shared that having the internship commitment helped him to push forward and overcome a personal life event that he had been struggling to get through. He has since graduated from community college and was accepted to the Department of Plant and Environmental Protection Sciences program at the University of Hawaii at Manoa.

Implications and Portability

Providing a guided internship opportunity can help postsecondary SWD in the STEM pipeline develop their motivation, self-confidence, social and communication skills, and organizational and time management skills. Similar to the findings of Burgstahler and Bellman’s (2009) interns, the Pacific Alliance interns reported that they improved their communication skills and built self-confidence through their internship opportunities. In addition, the interns unanimously expressed their growth in social interactions while also indicating that they came to be more active in seeking support to help persist with their college and internship experiences. The Pacific Alliance internship program’s one-on-one coaching, modeled after the VCU internship program (Briel & Getzel, 2001), contributed to the success of the internship program as it created a supportive environment for the interns and allowed the project staff to build relationships with them. Furthermore, as may be seen from the outcomes of the three cases described above, the interns’ positive experiences with and skills gained from their internships have contributed to their persistence in their pursuit of a postsecondary education degree.
Eight other student interns, who were not highlighted in this article, also made successful transitions to postsecondary STEM studies with project support. Three students began participating in the project in high school, entered a community college, and graduated with a STEM degree; three students began while they were at a community college and made a transition to a four-year university STEM program; and two students began and are continuing their STEM study at a community college.

Although the Pacific Alliance Internship program was successful, there were also challenges to implementing it. Many of the Pacific Alliance participants were hesitant to apply for the internship because they doubted they could juggle the internship commitments successfully while already struggling with the demands of postsecondary education. Therefore, even when they are aware of the benefits of internships, SWD may still need additional encouragement to apply for internship opportunities. Thus, the participants who apply for internships are probably the students who are more likely to persist in the postsecondary education over those who do not apply. Another challenge for the project was staffing. Having the one-on-one coaching was crucial to the internship program, but it would not be feasible if there were insufficient staff to facilitate the one-on-one coaching with an increased number of interns.

While the Pacific Alliance Internship program was very successful, and continues to operate even after the project’s lifespan, it is important to investigate institutionalization of the promising supports that were provided. Internships like the one created by the Pacific Alliance project should be integrated within existing services on all college campuses. For example, the disability services can create an internship program for students registered with the office. Interns can assist with proctoring tests, arranging for note-takers, converting written text into electronic text, holding a booth about the disability services, and talking to faculty about the disability services available for SWD. Through these internship opportunities, SWD in postsecondary education can improve communication, social, and job-related skills, and gain the self-confidence necessary to persist with their education and secure employment in the workforce upon graduation.

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**About the Authors**

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