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The Importance of Disability-Related Research in Higher Education: From the Editor

The lead article in this issue of the *Journal of Postsecondary Education and Disability* presents research guidelines for higher education and disability. The authors represent a range of study disciplines, possess an array of methodological experience, and are affiliated with numerous professional organizations: **Joseph Madaus** (University of Connecticut), **Lyman Dukes III** (University of South Florida), **Adam Lalor** (Landmark College), **Katherine Aquino** (St. John’s University), **Michael Faggella-Luby** (Texas Christian University), **Lynn Newman** (SRI International), **Claire Papay** (University of Massachusetts, Boson), **Stefania Petcu** (University of New Mexico), **Sally Scott** (Association on Higher Education and Disability), and **Roger Wessel** (Ball State University). The authors presented a series of research guidelines for studies focused on postsecondary education and disability, and suggestions provide key study elements to report. The guidelines highlighted the importance of methodological consistency as the field collectively promotes improved outcomes for individuals with disabilities. *This is a journal article for disability researchers to keep close as they plan research studies related to disability in higher education, gather data, and report findings and conclusions.*

In the next article, **Elizabeth C. McCarron** (Endicott College) examined academic accommodations provided by postsecondary faculty for students with learning disabilities (LD). This sequential mixed-methods study investigated whether faculty members, who said they were willing to accommodate students with learning disabilities, showed positive actions that demonstrated that commitment. Faculty respondents were grouped into four faculty types: Committed (high willingness and action); Well-Intentioned (high willingness, low action); Reluctantly Compliant (low willingness, high action); and Skeptically Resistant (low willingness and action). Results showed that knowledge and effort were the factors that contributed to faculty support actions. Knowledge, including personal experience with students with LD and familiarity with LD and its accommodations, influenced the willingness of faculty, as did effort, in terms of how difficult an accommodation was to provide and how supported faculty felt in its provision. In the third article, the impact of self-advocacy skills and academic performance among student veterans was examined. **Adam Kinney** (Department of Veterans Affairs, University of Colorado Anschutz Medical Campus), **James Graham** and **Aaron Eakman** (Colorado State University) collected data of self-advocacy skills and academic performance at six time points for 99 student veterans enrolled in the New Start for Student Veterans (NSSV) supported education program. They found that student veterans’ self-advocacy skills improved over time as they received supportive education services.

In the next article, **Minne Bakker** (Amsterdam University Medical Centers), **Florence van Mierlo** (Stichting Disability Studies in Nederland), **Geert Van Hove** (Stichting Disability Studies in Nederland, Ghent University), and **Alice Schippers** (Amsterdam University Medical Centers, Stichting Disability Studies in Nederland) presented perceptions of Dutch higher education students on disclosing their disabilities. In Dutch universities, access to accommodations must be requested at different levels, meaning that disclosure of ones’ disability is inevitable. These authors described the results of a qualitative cross-disability study regarding the disclosure strategies of students in higher education by reporting how Dutch university students deal with the disclosure of their disabilities to the university, teachers, and fellow students. In the final research article in this issue, a comparison of success trajectories among nontraditional students with varying abilities is presented. **David Jones** (Fresno Pacific University) compared and contrasted experiences of overcoming academic disqualification among nontraditional post-baccalaureate participants with and without impairments. The author found that participants, regardless of impairments, wrestled with online learning and postponed assistance-seeking, relied on relationships as a source of support, and learned to manage their time as a strategy for success. The findings prioritize support for the agency of nontraditional graduate students for achieving degree completion.

The issue concludes with two practice briefs. **Justin Freedman, Casey Woodfield** (Rowan University) and **Benjamin Dotger** (Syracuse University) described how to use simulated meetings to practice advocating for disability-related accommodations. Research suggests that students’ encounters with professors can be a barrier to students fully accessing disability-related accommodations. The authors reported the design and implementation of this practice, observations about relational dynamics, and students’ evaluations of the authenticity and benefits of the sim-
ulation as a learning activity. In the second practice brief, students with autism were taught how to gain independence through cooking classes tailored for them. Libby Gustin, Emily Parker (California State University, Long Beach), Holden Funk, Wendy Reiboldt, Rachael Blaine (California State University), and Nicole Smith (Citrus College) explained the impact of a six-week course designed to teach cooking skills to college students with ASD. Results from pre- and post-test questionnaires showed significant increases in cooking frequency and confidence in cooking ability compared with baseline.

The editorial team and review boards associated with the Journal of Postsecondary Education and Disability are pleased to provide this issue to enable college student disability educators and disability studies researchers, with data and effective practices that help college students with disabilities be successful in their chosen colleges and universities.

With this issue, my six-year tenure as JPED’s editor comes to a close. I trust that all the behind-the-scenes work done by the editorial team and reviewers have enabled significant contributions to the literature on college students with disabilities. The Association on Higher Education and Disability should be commended for the publication of this top tier journal focused on research and contemporary best practices related to college students with disabilities, college and university disability services offices, disability educators, and disability studies: each article includes practical implications for disability services educators in colleges and universities.

Working with such skilled colleagues as Valerie Spears (Editorial Assistant) and Richard Allegra (Managing Editor) has made the production of the journal possible. My respect goes to each member of the Research and Practice Brief Review Boards. Thank you former JPED editors for your work to sustain the journal and provide encouragement along the way. Thanks to David Parker, former JPED editor, for serving as my editor-mentor, and Stephan Smith, AHEAD’s Executive Director, for providing confidence and support while I served in this role. And, special thanks to Rita Wessel for being my lifetime editor, as well as my loving friend and partner.

Roger D. Wessel, Ph.D.
Executive Editor
Research Guidelines for Higher Education and Disability

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Abstract

The body of research in the field of postsecondary education and disability is wide ranging and continues to evolve. Specifically, the literature corpus includes contributions from a range of professions and a considerable number of journals. This breadth of diversity in perspective presents significant advantages; however, it also presents challenges such as how study data are collected and communicated. The article authors represent a range of study disciplines, possess an array of methodological experience, and are affiliated with numerous professional organizations. We present a series of research guidelines for studies focused on postsecondary education and disability, particularly related to describing the sample members and study locations in a clear, consistent manner. The most common currently employed research methodologies are summarized, and suggestions proffered with regard to key study elements to report. The guidelines are not intended to be prescriptive or restrictive, but instead highlight the importance of methodological consistency as the field collectively promotes improved adult outcomes for individuals with disabilities.

Keywords: postsecondary education, students with disabilities, research guidelines

In April of 1977, Section 504 of the Rehabilitation Act of 1973 was signed into law, mandating access to postsecondary education for otherwise qualified students with disabilities (Jarrow, 1991; Madaus, 2011). The subsequent growth in the number of students self-reporting a disability is evident in statistics that show less than 3% of all full-time first time freshmen in 1978 (Henderson, 1999) to over 11% of all undergraduates in 2011-2012 (U.S. Department of Education, 2016) to 19.4% in 2015-2016 (NCES, 2018). Also in 1977, a group of disability service providers convened the “Disabled Students on American Campuses: Services and State of the Art” conference, an event that served as the precursor for the development of a postsecondary disability service providers’ professional organization, the Association on Higher Education and Disability (AHEAD; Marx & Hall, 1977, 1978; Scales, 1986). In many ways, these events brought about a new and unique profession in higher education.

A Growing Literature Base

Along with growth in student access and programming came corresponding advances in the volume of professional literature addressing postsecondary disability services, an important development because professional journals influence a field’s practice, policy, and professional development (McFarland et al., 2013; Plotner et al., 2011). Madaus et al. (2018) conducted a comprehensive evaluation of publications addressing higher education and disability from 1952 to 2012 and reported that 233 distinct journals

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published 1,036 articles. Of these, slightly more than 40% did not report data. Furthermore, of the remaining articles (approximately 60%) that presented unique data (i.e., a study that collects unique survey, measurement, evaluation, observational, or interview data, and that describes the procedures to collect the data), the majority (54%) contained descriptive data only. In many cases, the study methodology was not clearly articulated, and many studies did not provide data on basic demographic variables, such as the location of the study, student class standing, disability type, and, in some cases, gender. With respect to topical area, most publications described the experiences of students with disabilities in higher education, set forth student profiles, and/or described program characteristics. There was, however, limited data-based research focused upon these topics essential for the success of college students with disabilities.

A Need for Rigorous Empirical Research

In contrast to the marked improvement in post-secondary education enrollment rates for students with disabilities, graduation rates of these students have remained flat over time (Newman et al., 2011). As the field matures, there is an increasing need for rigorous empirical research examining effective practice (Kimball et al., 2016) that utilizes a range of methodological approaches. Without research of this nature, the field will likely remain unable to develop and, ultimately, implement genuinely effective and replicable practices designed to improve outcomes of students with disabilities. The field may also be at risk of recommending practice myths that are ineffective and potentially detrimental for students (Madaus et al., 2018). Tankersley (2013) summarized the problem thusly: “If research is not conducted properly, the results can be misleading at worst, or at a minimum, can be meaningless” (p. 120). Peña (2014) and Kimball et al. (2016) highlighted the need for empirical research in higher education and disability relevant to the research being conducted in higher education and disability.

The Time for Research Guidelines in Postsecondary Education

Although the existing literature does not currently support the promulgation of research standards or quality indicators, the development of research guidelines focused on students with disabilities in higher education is a logical first step toward improving the usefulness of the professional literature, and with it, services for students. Hence, the following guidelines are offered for researchers working in this area. The guidelines are structured around three broad areas intended to promote rigorous research practice. Each area is followed by specific recommendations for the design and description of research and additional resources are presented in each.

Area 1: Clearly and Fully Describe Samples

Madaus and colleagues (2018) highlighted that, generally speaking, the extent higher education and disability literature does not clearly and fully describe the study samples. This is problematic insomuch as it impacts researcher ability to determine the efficacy of interventions for specific student populations. Clear descriptions of study participants are also necessary
in order to generalize findings, make comparisons in replication studies, and to be able to use data in research syntheses (APA, 2020). Trainor et al. (2020) noted that “providing richer descriptions and better assessments of study participants is an initial step in depicting a fuller portrait of the students for whom a practice has been shown to work (or failed to work)” (p. 9). The following section offers recommendations for improving the clarity and completeness of sample description. Additionally, readers are referred to the Human Rights Campaign (2020), and the U.S Census Bureau (2017) for examples of questions that can be used to collect demographic data on gender, sex, race/ethnicity, postsecondary credentials, and disability status, and to the 7th Edition of the American Psychological Association’s Publication Manual (2020) for guidance on bias free language.

**Recommendation 1A: Collect and Report Disability Data for Participants**

Of considerable concern is that only 75% of studies on disability and higher education presently provide well-defined data about participant disability labels/diagnoses (whether obtained by self-report or via the use of documentation; Madaus et al., 2018). Many studies still present students with disabilities as making up a single, homogenous group despite the well-documented differences between and within disability labels/diagnoses (Madaus et al., 2018; Peña, 2014). As such, it is difficult to develop a deep understanding of the lived experiences of students with specific disability labels/diagnoses, and to generalize findings to students with similar diagnoses.

Thus, the following recommendations are offered to researchers. First, the definition of the term disability and the specific labels/diagnoses should be provided in-text to make clear the populations/sample being discussed. Varying definitions of disability are available for use (e.g., the Individuals with Disabilities Education Act [IDEA], World Health Organization, American Psychiatric Association). Furthermore, as Trainor et al. (2020) observed in regard to IDEA special education category labels and criteria vary from state-to-state and “adult service systems and post-secondary programs tend to conceptualize disability quite differently than do schools” (p. 9). Thus, precise information about definitions employed is necessary.

Second, eligibility criteria for participant inclusion in the study must be well outlined for readers, including how disability status was determined. For some studies, documentation may be available that can be utilized to ascertain disability status (e.g., Individualized Education Program, psychoeducational testing, physician’s documentation, Social Security Administration documentation). This information may be obtained from a disability services office or directly from the student. In some cases, participant self-report may be used to determine disability status with participants being asked to indicate the disability labels/diagnoses with which they identify. Furthermore, participants with multiple disabilities should have the opportunity to identify with multiple disabilities.

Third, researchers should consider the significant implications regarding the fact that less than 30% of students who received K-12 accommodations disclose their disability in higher education (Newman & Madaus, 2015). Such limited disclosure impacts all aspects of research including design, sampling, findings, and limitations.

Finally, researchers are obliged to consider the language utilized when describing sample members, including the use of either person-first or identify-first language. According to the Publication Manual of the American Psychological Association (7th edition) (APA, 2020), the language to use where disability is concerned is evolving. The overall principle for using disability language is to maintain the integrity (worth and dignity) of all individuals as human beings. Authors who write about disability are encouraged to use terms and descriptions that both honor and explain person-first and identity-first perspectives. Language should be selected with the understanding that the expressed preference of people with disabilities regarding identification supersedes matters of style. (p. 136)

The APA (7th edition) also offers guidance related to language that avoids negative terminology and euphemisms when describing persons with disabilities.

**Recommendation 1B: Collect Sex and Gender Information in a Manner that Respects Participant Identity**

Only 57% of studies presently provide well-defined data about participant sex or gender (Madaus et al., 2018). Although improvements have been made regarding the use of the terms sex and gender, researchers sometimes still use these terms inaccurately and interchangeably. Researchers are encouraged to critically consider the purpose for inquiring about sex and gender. If deemed necessary given the research question, investigators should collect the demographic data most relevant to examining that question.

According to the American Psychological Association (2015) gender refers to “the attitudes, feelings
and behaviors that a given culture associates with a person's biological sex. Behavior that is compatible with cultural expectations is referred to as gender-normative; behaviors that are viewed as incompatible with these expectations constitute gender non-conformity” (p. 2). On the other hand, sex refers “to a person's biological status and is typically categorized as male, female, or intersex. There are a number of indicators of biological sex, including sex chromosomes, gonads, internal reproductive organs and external genitalia” (p. 5). Extant research studies in higher education and disability generally adhere to traditional binary identifications of sex and gender (i.e., male or female; man/boy or woman/girl) which serve to marginalize and exclude participants who identify as gender non-conforming and/or (depending on the demographic question) intersex. Some research suggests an association between gender variance, gender dysphoria, and autism (e.g., DeVries et al., 2010; Janssen et al., 2016), thus it is of particular importance that investigators provide inclusive options from which participants may choose when gathering gender and sex information. Exact phrasing of sex and gender demographic questions may vary based on factors including sample size, cultural factors, and research question. Researchers should consult with the most recent (7th edition) of the APA Publication Manual (2020) for more specific guidance related to describing and reporting gender related topics.

Recommendation 1C: Collect Race and Ethnicity Data in a Manner that Respects Participant Identity

Only 19% of studies have provided well-defined data about participant race and ethnicity (Madaus et al., 2018). As with the terms sex and gender, the terms race and ethnicity are often misused and used interchangeably. Although the subject of controversy, the United States Federal Government has set definitions for race and ethnicity. Race is defined as “a person’s self-identification with one or more social groups. An individual can report as White, Black or African American, Asian, American Indian and Alaskan Native, Native Hawaiian and Other Pacific Islander, or some other race...[and] may report multiple races” (U.S. Census Bureau, 2017, p. 1). Ethnicity is defined as “whether a person is of Hispanic origin or not. For this reason, ethnicity is broken out in two categories, Hispanic or Latino and Not Hispanic or Latino” (p. 1).

Given variation in the social construction of disability and disability labels/diagnoses, it is critical to understand the racial and ethnic backgrounds of participants. To be clear, perspectives on disability can vary across cultures, so differences in student experiences, beliefs, and attitudes related to disability may be impacted by race and/or ethnicity. The 7th Edition of the APA Publication Manual (2020) provides specific terminology guidance related to racial and ethnic identity.

Recommendation 1D: Collect and Report Student Age Data for Participants

Given decisions to delay college entry, take a college respite, reduce one’s course load, and other factors, students with disabilities often take longer to complete degrees (Knight et al., 2016). As such, students in the same class year with a similar number of credits earned may be of vastly different ages. To better understand differences between and among students with disabilities of different ages, data regarding student age should be obtained and reported. Readers are referred to the 7th edition of the APA Publication Manual (2020) for specific recommendations regarding reporting participant age, including recommended terminology for various age groups.

Recommendation 1E: Collect and Report Postsecondary Progression Data for Participants

Given that students with disabilities often take longer to graduate than their peers without disabilities (Knight et al., 2016), an alternative or complement to the traditional postsecondary progression measurement by class year (i.e., first-year, sophomore, junior, senior, master’s student, doctoral student) may be appropriate. Credit hours completed and academic term (e.g., semester, trimester, quarter) are measurements that offer supplementary information regarding a student’s academic status.

It is also important for researchers to identify the matriculation status of participants. Are the students enrolled full-time or are they pursuing a degree part-time, or taking a single class at the college/university level? If the student is pursuing a credential, the type of credential (e.g., certificate, bachelor’s degree, master’s degree, doctoral degree) is also important to report.

For graduate student focused research, it is recommended that investigators specify the school/program in which the participant is receiving professional training. For example, is the student enrolled in law school, medical school, a college of arts and sciences, or a college of education? However, caution must be exercised so as not to provide identifiable information, particularly when sample sizes are small.
Recommendation 1F: Collect and Report Demographic Data for Students Without Disabilities, if Appropriate

If students without disabilities are included, demographic information should be collected similar to that which is described in this section (with exception of disability). Given the large number of students with disabilities who do not self-disclose in college, investigators might consider asking whether students received special education via an Individualized Education Program or Section 504 services in K-12 school settings.

Recommendation 1G: Consider Sample Representativeness and Confidentiality

In some research designs, such as qualitative or single subject studies, sample sizes will be intentionally quite small. In such situations, it is recommended that investigators incorporate a statement regarding the extent to which the sample is representative of, or generalizable to, the larger population. Additionally, efforts need to be made to ensure participant confidentiality is maintained particularly in situations where participants identify as members of multiple underrepresented populations. In all research designs, researchers should only provide descriptions of the participants that are relevant to the particular question(s) being investigated and that impact interpretation of results (APA, 2020).

Recommendation 1H: Describe Participants Using Numbers and Percentages

To date, many studies present demographic data in a manner that requires estimation or recalculation to determine exact sample size (e.g., as percentages). For quantitative studies, researchers are encouraged to present frequency counts to describe participants in tables and in-text descriptions. Although the presentation of sample data as percentages can be used, it should always be used in conjunction with frequency counts. When graphs are used to display frequencies, frequency counts should be incorporated into the graph, if not described in-text.

Area 2: Clearly and Fully Describe Study Location

Study settings must be described with appropriate detail to help practitioners implement and replicate research-based practices with fidelity. The study setting includes the broader context of the college or university, as well as the specific location within the institution in which the study took place. The following section offers recommendations for describing the study setting. Again, researchers should use an appropriate level of detail; enough to allow for understanding the setting and for possible replication and generalization, but not excessive detail that goes above and beyond the research questions.

Recommendation 2A: Describe the Setting Using Established Classifications

Consistent descriptions of the institutional setting should be provided. For research in the United States, the terminology and definitions utilized by the National Center for Education Statistics (NCES, 2019) Integrated Postsecondary Education Data System (IPEDS) that describe the college or university are a well-regarded option. Table 1 provides a highlight of descriptors, based on IPEDS terminology, that are appropriate when describing the location of a project within higher education settings. It should be noted that these suggestions are not an exhaustive list of descriptors that could be provided. For example, other descriptors relevant to the study (e.g., residential campus; country in which campus is located) might be relevant to fully understand the results and should be included as appropriate. The list provided is the minimum that should be employed for studies that take place within one institution. For research conducted in Canada, Statistics Canada’s Definition and Classification of Postsecondary and Adult Education Providers in Canada provides useful guidance (Orton, 2009).

Recommendation 2B: Describe in Detail the Office (or Representative) that Serves Students with Disabilities at the Institution, if Appropriate

Research frequently is conducted both in and about offices for students with disabilities. Given the great variation across campuses with regard to these offices, it is critical that study locations are fully communicated. Researchers are encouraged to describe the disability service models using the following dimensions: Staffing and organizational placement (i.e., where the office is administratively housed), and program size and services.

At a minimum, the number of full-time professionals responsible for disability services should be enumerated and described, and ideally, the number of part-time and student-staff should be provided, if relevant to the study. For example, is a single individual responsible for providing disability accommodations/services or are accommodations/services provided by a staff of eight? As relevant to the study, a more complete and disaggregated count of full- and part-time disability services should be included.

Second, organizational placement, defined as the organizational division/unit in which the disability
services office (or representative) is located, should be described. For example, is it located in student affairs, academic affairs, or another division? Third, the total number of students registered with the office should be indicated. This information combined with information regarding staffing levels provides an understanding of the campus context. As noted, the number of students served by the office is not reflective of the full population of students with disabilities on campus, but it does provide some information regarding office workload and campus culture that have implications for generalizing findings of a study.

Finally, a descriptor, or descriptors, of the services available within the office will provide useful context for generalizability of results. For example, does the office provide basic accommodations, or can students receive additional supports, such as coaching or strategies instruction (and if so, if there is an addition fee for these services).

**Recommendation 2C: Describe the Intra-Institutional Location of the Study**

Characteristics of institutions of higher education vary greatly, as do the units that make up each institution. For example, a large university can include building and grounds; university administration units (e.g., computer services, library, registrars); auxiliary services (e.g., bookstore, housing and food services); and an array of student affairs’ units (e.g., athletics, chapel, counseling and testing, financial aid, health services, or student center; Eckel & King, 2007). Additionally, various affiliated organizations may be considered component units (e.g., athletic associations or research foundations) and play a major role in meeting institutional mission. Concomitant research may be completed in many of these locations. Descriptions, especially in the case of single subject research, must illustrate critical features of the physical and administrative setting with sufficient detail to allow for replication (Horner et al., 2005).

**Area 3: Appropriately Select and Fully Describe the Methodologies Employed**

The methodology for the study should be selected to meet the particular research questions under investigation, the particular expertise of the researchers, and in some cases, the available extant data set. These should be clearly and fully described, as appropriate to the methodologies utilized. As noted by Cook and Cook (2016), “one research design is not inherently better than another; they just address different questions. The important thing is to interpret and apply studies in a manner that is consistent with how they were designed” (p. 191). Moreover, a statement about the secondary transition literature base by Trainor et al. (2020) calling for “methodological pluralism” (p. 14) is fitting for research in postsecondary education and disability:

> answering the pressing questions of our field will certainly require the use of multiple methodologies…Mixed-methods studies or lines of inquiry that combine quantitative and qualitative approaches that include not only the utilization of extant datasets, direct observation, and experimentation, but also description and interpretation will be particularly important, as many of the issues the field faces must be examined from multiple vantage points to be fully understood. (p. 14)

Four broad categories of the most commonly used methodologies in research on postsecondary education and disability from 1952 to 2012 are subsequently described (Madaus et al., 2018). In order to assist researchers in appropriately selecting a particular research design, potential benefits and limitations of these four areas are presented, as are as suggestions regarding information to be provided within each. It is important to note that each of the research methodologies are comprehensively described in other sources including textbooks and online. Thus, the descriptions below and in the accompanying tables are intentionally general and references to additional readings are provided. Readers are also referred to the *Publication Manual of the American Psychological Association* (7th edition, 2020) that includes a chapter on basic journal reporting standards for Quantitative, Qualitative, and Mixed Methods research designs, including components to report in each section of a manuscript. The information that follows should also be combined with the recommendations previously presented in Area 1 and Area 2.

**Qualitative Research Methods**

Qualitative research is described as “a systematic approach to understanding qualities, or the essential nature, or a phenomenon within a particular context” (Brantlinger et al., 2005, p. 195). Data are collected in natural settings, and the researchers use their own impressions, judgments, and interpretations to inductively interpret and make sense of the data in regard to the meanings that the participants bring to them (Borg & Gall, 1989; Denzin & Lincoln, 2018). Gribich (2013a) noted that subjectivity has value in qualitative designs, and that “both the views of the participant and those of you as a researcher are to be respected, acknowledged and incorporated as data, and the interpretation of this data will be constructed by both of you” (p. 4). Because of the shift away from
a positivist and objective perspective in these approaches (described below), there is debate about the use of the term “research” versus “inquiry.” Readers are referred to Denzin and Lincoln (2018) for more regarding this important discussion.

Both Denzin and Lincoln (2018) and Gribich (2013a) described that new methods of qualitative research are continually emerging, some of which are being combined with prior perspectives, and others of which constitute new paradigms. While we acknowledge this, Table 2 presents an overview of the most common qualitative methods found to date in the literature on postsecondary education and disability. As noted earlier, no one methodological practice is favored over another, and this holds true for qualitative designs (Denzin & Lincoln), therefore, the list is presented in alphabetical order. Readers are referred to Denzin and Lincoln (2018), Gribich (2013a) and Given (2008) for more details about these designs, their uses and limitations, as well as for information on other designs and discussions regarding qualitative research methods. Additionally, readers are referred to Brantlinger et al. (2005) and, again, Gribich (2013a) who present an overview of the evaluation of particular qualitative designs, as well as strategies that researchers can employ to ensure trustworthiness of results and quality indicators in qualitative research.

It is critical that researchers ensure the confidentiality of participant data related to demographics and take steps to ensure anonymity. This is particularly important in qualitative research where participants may be few in number, data are disaggregated, and multiple demographic factors may be provided to describe individual participants. In such research, researchers must carefully evaluate the extent to which participants may be identified via participant descriptions.

**Quantitative Research Designs**

According to Borg and Gall (1989), quantitative research uses standardized instruments and techniques to collect data, and statistical methods “to analyze the data and draw conclusions” (p. 23). There is an emphasis on objectivity that can lead to explanations and understandings that can be generalized to a larger sample or population of individuals. A variety of methodologies fall under the umbrella of quantitative research and as noted previously, specific methodologies should be selected to meet the particular research questions under investigation, the training of the researchers, and in some cases, the extant data set available. Table 3 provides an overview of the purpose of some of the most common quantitative methodologies as well as their benefits and limitations, as derived from the work of Isaac and Michael (1990).

In sum, these methods present a continuum of options for researchers, as well as a range of design rigor. The designs can provide descriptive information about representative samples or samples of interest, describe specific settings, describe relationships among variables from simple relationships (that cannot explain causation), or can describe systematic cause-and-effect between variables. Results from any of these methods can be used as the basis for new theory, experiments, or improved measures (National Research Council, 2002). Guidelines exist for evaluating the quality of designs and evidence from correlational studies (Thompson et al., 2005) and from group experimental and quasi-experimental research in special education (Gersten et al., 2005). Table 4 presents a summary of the Gersten et al. guidelines for experimental designs as presented by Tankersley (2013). These guidelines, and the National Research Council’s 2002 report *Scientific Research in Education* can also serve as excellent resources for researchers planning to employ quantitative design.

**Mixed Methods**

Though frequently defined with subtle differences, Johnson and colleagues (2007) synthesized a definition from leaders in the field as:

Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., the use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth of understanding and corroboration. (p. 123)

Integration of the qualitative and quantitative components of mixed methods’ design, data collection, analysis, and reporting exists along a continuum, ranging from one component being more dominant to equal status/full integration of the two approaches. Importantly, mixed methodology can occur within a single study, but also within a programmatic line of research with related studies designed to inform one another as a whole, clarifying observed phenomena through mutually informative lenses (Johnson et al., 2007). Table 5 notes the benefits and limitations of using mixed methods.

**Single Subject Designs**

Single-subject research design serves to document causal, or functional, relationships between independent and dependent variables (Horner et al., 2005) when a high number of participants are not available. Gast (2010) described that “single subject research
design is a quantitative research approach in which …each participant is exposed to both a ‘control’ condition, known as a baseline, and an intervention condition” (pp. 13-14). Although these designs might only have one subject, they often involve as many as three to eight (Horner et al.). Researchers who select this research design in their work should include in the method section the description of all the critical features of the single-subject design as described by Horner et al. (2005). The inclusion of all these aspects allows further replication, which is necessary to enhance external validity as well as to promote the development of evidence-based practices (Byiers et al., 2012). Before detailing the critical features of the single-subject design, the researchers should specify the type of design. These may include the following: withdrawal/reversal design, time lagged designs (e.g., multiple baseline), comparison designs (e.g., alternating treatment designs, alternating treatment designs, simultaneous treatment designs, and combination designs (Hammond & Gast, 2010). Table 6 notes some of the advantages and limitations to single subject research, while Table 7 contains a list of the critical features that should be described and considered in such a design.

As was noted in the qualitative design section the confidentiality and anonymity of participants must be ensured in single subject designs, given that there may be small samples and multiple demographic factors may be provided to describe individual participants. Again, researchers must carefully determine if participant descriptions pose a threat to anonymity.

### Future Directions for Research Based on These Guidelines

Although the vast majority of articles on the topic of college services for students with disabilities are published in AHEAD’s professional journal, the Journal of Postsecondary Education and Disability, the fact that articles have appeared in 233 unique journals clearly demonstrates the diversity of professional perspectives related to this important topic (Madaus et al., 2018). The observations and guidelines presented are offered as a means to both increase and improve the extant research base. The recommendations are not intended to be restrictive or prescriptive; instead, they are offered as guidelines for researchers to consider as they plan, conduct, and report their work, with the goal of consistency in reporting and to guide replication.

It is anticipated that there will be debate about some of the elements, with researchers from particular disciplines finding certain aspects of the guidelines more relevant and beneficial than other guidelines. It must also be acknowledged that there may be minor, or even significant components that have not been included. This may be especially true in the qualitative design section; we understand that there are many additional types of qualitative designs (and more that are emerging) than what have been described. However, the categories described herein reflect those most commonly found in the special education literature to date. An observation by Cook et al. (2009) in regard to quality indicators in special education research is also fitting here: “it is important to note that authors of previous research write the body of extant research without foreknowledge of the future standards of methodological rigor to which it might be held and that they conformed to the external requirements of the day” (p. 380). By no means are these guidelines intended to minimize the existing body of research and the effort expended in its development. Rather, they are a starting point, and with the hope that the recommendations engender a healthy and collaborative dialog regarding how they might continue to advance quality research in the field.

Thus, it is hoped that the guidelines can be utilized, and indeed, debated by a range of professionals with different backgrounds, perspectives, and professional organizational affiliations, including but not limited to AHEAD, the Division on Career Development and Transition (DCDT) of the Council for Exceptional Children, the National Association of Student Personnel Administrators (NASPA), the American College Personnel Association (ACPA), the American Educational Research Association’s Division J (Postsecondary Education) and its Disability Studies in Education special interest group. The guidelines may also be of value to researchers working in the burgeoning field of inclusive higher education for students with intellectual disabilities. While researchers from each of these areas study topics relevant to students with disabilities in higher education with unique perspectives, interdisciplinary collaboration and discussion can inform all disciplines and ultimately, help advance the research base in the field overall.

### Continuing to Move Forward

We conclude with some additional questions for both researchers and journal editors to consider. Although these do not fit into the specific areas discussed thus far, they may influence the direction of the field’s research.

- How can researchers balance research interests and goals with the needs of practitioners in the field? What do practitioners find useful
and useable? What role might practitioners play in the design and implementation of studies that can more readily be translated into practice? How can research in this area be connected to practitioners in K-12 education who are helping students to prepare for, and transition to, postsecondary education?

• How can researchers involve students with disabilities in future inquiries? What are the topics that students with disabilities find important and meaningful to their lived experiences in postsecondary education? How can this research make a positive difference in the postsecondary (and beyond) experiences of these students?

• How can research address the experiences and needs of the majority of postsecondary students with disabilities – those who have not disclosed? And how might such work be targeted to a wider journal readership than those journals focused solely on students with disabilities?

• Relatedly, how can researchers collaborate with the editors of higher education journals focused on the broader population of higher education professionals to raise awareness of the need for this work not to be isolated to a limited number of journals? How can non-disability student affairs professionals and other campus administrators be made more aware of the experiences of students with disabilities, most of whom have not self-disclosed and are using a broad range of campus services?

It is our sincere belief that the answers to these questions, and those yet to be asked by future members of our research community, will continue to move forward in robust fashion as a result of widespread adoption of the aforementioned research guidelines. Research guided by a common set of principles is the greatest lever for improving outcomes for individuals with disabilities in postsecondary settings.

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Table 1

*IPEDS Glossary List*

**Carnegie Classification (2000):**
- Doctoral/Research Universities-Extensive.
- Doctoral/Research Universities-Intensive.
- Master's Colleges and Universities I.
- Master's Colleges and Universities II.
- Baccalaureate Colleges-Liberal Arts.
- Baccalaureate Colleges-General.
- Baccalaureate/Associate's Colleges.
- Associate's Colleges.
- Specialized Institutions.
- Tribal Colleges and Universities.

**Degree of Urbanization:**
- Twelve locale codes categorizing the urbanicity of the institution’s location, determined by population size.

**Sector:**
- Three control categories:
  (a) Public.
  (b) Private not-for-profit.
  (c) Private for-profit.
- Three level categories:
  (a) Four-year and higher (“4-year”).
  (b) Two-but-less-than four-year (“2-year”).
  (c) Less than two-year.

**Situational Instructional Format:**
- In-person/on-campus.
- Correspondence education.
- Distance education.
Table 2

Common Types of Qualitative Methods

Case study
Purpose: “A research approach in which one or a few instances of a phenomenon are studied in depth…case studies focus on one or a few instances, phenomena, or units of analysis, but they are not restricted to one observation” (Blatter, p. 2).

Benefits
• Provides a depth of analysis versus a breadth of analysis featured in large sample studies.
• Focus on descriptive components of a case.
• Can provide advantages in regard to construct and internal validity through the use of “more and diverse indicators for a theoretical construct and for securing the internal validity of casual inferences and/or theoretical interpretations of these cases” (Blatter, p. 3).
• Can include biographies and autobiographies (Brantlinger et al., 2005).

Limitations
• Less ability to describe causality.
• Less ability to apply findings to broader populations than large sample studies.

Grounded Theory
Purpose: “Research done to generate or discover a general theory or abstract analytical hunch based on study of phenomena in a particular situation(s)” (Brantlinger et al., 2005, p. 197).

Benefits
• “Useful in small-scale environments and micro-activity where little previous research has occurred” (Gribich, 2013b, p. 80).
• Allows for in-depth investigation of interactions between people and their environments (Gribich, 2013b).
• Focus on “theory generating research” rather than on theory directed research (Gribich, 2013b, p. 80).
• Provides “systematic, but flexible, guidelines for conducting inductive qualitative inquiry aimed toward theory construction” (Charmaz & Bryant, 2012).

Limitations
• Debates exist among major theoretical perspectives of Grounded Theory resulting in differing assumptions and approaches (Charmaz & Bryant, 2012; Gribich, 2013).
• Focus on the “bigger picture” can be lost because data can become fragmented (Gribich, 2013b, p. 80).

Phenomenological
Purpose: “Studies the meanings people make of their lived experiences” (Brantlinger et al., 2005, p. 197).

Benefits
• Useful in studying phenomena when little data exists.
• Allows the exploration and description of people’s experiences in rich detail.
• Can be conducted via interviews and reviews of a variety of types of documentation (e.g., literature, biography, texts) (Gribich, 2013c).

Limitations
• Multiple types of phenomenology exist and the type used might not be clear.
• Difficult to determine when the process of data interpretation is complete (Gribich, 2013c).
Table 3

Common Types of Quantitative Methods

**Descriptive Research**
Purpose: “To describe systematically the facts and characteristics of a given populations or area of interest, factually and accurately” (Isaac & Michael, 1990, p. 46).

Benefits
- Can describe existing problems, conditions, situations, events, or existing phenomena.
- Can be used to make comparisons among similar groups.
- Can be combined with other more powerful methodologies.
- Can include survey research.

Limitations
- Purely descriptive data; does not explain relationships, test hypotheses, make predictions, explain meaning or make predictions.

**Correlational Research**
Purpose: “To investigate the extent to which variations in one factor correspond with variations in one or more other factors based on correlation coefficients” (Isaac & Michael, 1990, p. 49).

Benefits
- Allows for measurement of several variables and their interrelationship.
- Allows for the determination of the strength of relationship among variables.
- Useful with variables do not allow for experimental or controlled manipulation.

Limitations
- Does not identify cause and effect relationships among variables.
- There is less control over independent variables.
- Can lead to a “shot-gun” approach that indiscriminately uses data and can identify misleading, arbitrary, or ambiguous relationships with little to no reliability or validity (Isaac & Michael, 1990, p. 49).

**Causal-Comparative Research**
Purpose: “To investigate possible cause-and-effect relationships by observing some existing consequence and searching back through the data for plausible causal factors” (Isaac & Michael, 1990, p. 50).

Benefits
- Allows for examination of cause-and-effect relationships when experimental designs are not possible.

Limitations
- Limited control over independent variables, so results must be examined against other possible or plausible rival hypotheses.
- Results may be caused by a combination or interaction of factors, rather than a single factor.

(Table 3 continues on next page)
True Experimental Research
Purpose: “To investigate possible cause-and-effect relationships by exposing one or more experimental groups to one or more treatment conditions and comparing the results to one or more control groups not receiving the treatment” (Isaac & Michael, 1990, p. 52).

Benefits
• Management of variables and conditions by control or via randomization.
• Minimization of extraneous variables that might impact outcomes but that are not under study.
• Minimization of error, including error of measurement.
• Seeks to maximize internal and external validity.

Limitations
• Most restrictive and artificial design; subjects are not studied in real world situations and may respond differently in controlled situations.

Quasi-Experimental Research
Purpose: “To approximate the conditions of the true experiment in a setting that does not allow the control and/or manipulation of all relevant variables. The researcher must clearly understand what compromises exist in the internal and external validity of his design and proceed within these limitations (Isaac & Michael, 1990, p. 54).

Benefits
• Can be used in applied settings where only some variables can be controlled, allowing the researcher to get as close as possible to the rigor of a true experimental design.

Limitations
• Subjects may not be randomly assigned to treatment or control groups, although some quasi-experimental methods like propensity analyses attempt to statistically control for differences between treatment and control groups.
### Table 4

**Essential Quality Indicators of Experimental Designs**

<table>
<thead>
<tr>
<th>Category</th>
<th>Questions</th>
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</table>
| **Describing Participants**                  | • Was sufficient information provided to determine/confirm whether the participants demonstrated the disability(ies) or difficulties presented?  
• Were appropriate procedures used to increase the likelihood that relevant characteristics of participants in the sample were comparable across conditions?  
• Was sufficient information given characterizing the interventionists or teachers provided?  
• Did it indicate whether they were comparable across conditions? |
| **Implementation of Intervention and Description of Comparison Conditions** | • Was the intervention clearly described and specified?  
• Was the fidelity of implementation described and assessed?  
• Was the nature of services provided in comparison conditions described? |
| **Outcome Measures**                          | • Were multiple measures used to provide an appropriate balance between measures closely aligned with the intervention and measures or generalized performance?  
• Were outcomes for capturing the intervention’s effect measured at the appropriate time? |
| **Data Analysis**                             | • Were the data analysis techniques appropriately linked to key research questions and hypotheses?  
• Did they appropriately linked to the unit of analysis in the study?  
• Did the research report include not only inferential statistics but also effect size calculations? |

Table 5

Mixed Methods

**Purpose:** Research that includes the collection and analysis of both quantitative and qualitative data in one study.

**Benefits**

According to Bryman, 2006 and Greene et al., 1989,

- Corroboration of findings through triangulation of multiple sources of data;
- Clarification of results observed with one method enhanced with complimentary data from the second method;
- Development of one method in light of results from another especially related to sampling, implementation, and measurement decisions;
- New ways of thinking about the field as potentially contradictory results across methodology initiates new more nuanced understandings; and
- Expands the breadth of understanding of an observed phenomenon with the addition of the second method.
- Uncovering unexpected patterns and generating new research questions (Schutt, 2015).
- Potential to fill gaps introduced by exclusively qualitative or quantitative designs (Teddlie & Tashakkori, 2012).
- Can reflect the diversity of students and their postsecondary school experiences, which are complex and embedded in multiple contexts.
- Particularly useful in research when “comprehensive baseline” information is limited and where little is known about the participants and their lived contexts, as is the case with many aspects of research focused on postsecondary students with disabilities (Klingner & Boardman, 2011).
- Provide contextual depth of information to data from large scale data sets; can answer “why or why not” and “how” research questions.

**Limitations**

According to Bryman, 2007,

- Projects being structured in a way that makes integration difficult.
- Quantitative and qualitative component timeline differences.
- Researchers’ methodological preferences.
- Researcher skill specialization focused predominantly in either the quantitative or qualitative tradition.
- Potentially different audiences.
- Publication issues, such as bias toward a type of research and length restrictions making it difficult to discuss two sets of findings.
Table 6

*Single Subject Research*

**Purpose:** To document causal, or functional, relationships between independent and dependent variables (Horner et al., 2005).

**Benefits**
- Allows for manipulation and observation of the relationship between an independent variable and changes to a dependent variable (Horner et al., 2005).
- The individual is the unit of study; allows for cost effective and realistic identification of functional relationships when samples are small and can be done in typical educational settings and with students with lower incidence disabilities. This is especially beneficial when sample sizes are too small for the statistical power needed in other group designs (Horner et al., 2005; Kratochwill et al., 2010; Simonsen & Little, 2011).
- Allows for decision making regarding the appropriateness of an intervention for specific students because individual differences are not covered by larger group averages (Gast, 2010; Simonsen & Little, 2011).
- Designs offer flexibility; additional data points can be collected as needed (Kratochwill et al., 2010).
- Can determine characteristics of both responders and non-responders to an intervention (Horner et al., 2005).

**Limitations**
- If not replicated, results can have limited external validity and generalizability (Horner et al., 2005; Simonsen & Little, 2011).
- Multiple threats to internal validity exist if the study is not carefully designed and carried out (Kim, 2018; Kratochwill et al., 2010).
Table 7

Key Components to be Clearly Described in Single Subject Research

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<tr>
<th>Independent Variables</th>
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<tr>
<td>• Participants (number, type of disability, year in college, etc.).</td>
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<tr>
<td>• Training of the person(s) conducting the intervention.</td>
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<td>• Intervention used by the researcher.</td>
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<td>• Instructional materials used in the research.</td>
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<tr>
<td>• Measurement of fidelity.</td>
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<tr>
<th>Dependent Variables</th>
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<td>• Clear, quantifiable, and operationally defined description of targeted behavior.</td>
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<td>• Clear description of measures used.</td>
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<tr>
<td>o If using a published measure, describe the technical characteristics (date, validity, reliability, norm sample).</td>
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<tr>
<td>o If developing a new measure, provide information about the instrument and its development</td>
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<tr>
<td>• Information on the mode of administration of the instrument (e.g., oral, written, email).</td>
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<tr>
<th>Data Collection Procedures</th>
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<tr>
<td>• Time periods in which data was collected.</td>
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<tr>
<td>• Training of the data collectors.</td>
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<tr>
<td>• Procedures for inter-rater/scorer reliability.</td>
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<th>Baseline Procedures</th>
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<tr>
<td>• Describe with replicable precision.</td>
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<tr>
<th>Experimental Control and Internal Validity</th>
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<tr>
<td>• Show at least three demonstrations of experimental effect at three points in time.</td>
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<tr>
<td>• Describe design controls for threats to internal validity.</td>
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<th>Social Validity</th>
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<tr>
<td>• Provide clear demonstration that the results are socially important.</td>
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<tr>
<td>• Provide clear demonstration that the intervention is practical and cost-effective.</td>
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Note. Horner et al. (2005).
Faculty are responsible for providing academic accommodations needed and used by students with learning disabilities (SWLD). Since learning disabilities (LD) are hidden, faculty may question the need for, efficacy of, and fairness of accommodations. Yet academically accommodating SWLD is important to academic success and persistence. This sequential mixed methods study investigated whether faculty who said they were willing to accommodate SWLD showed positive actions that demonstrated that they were. First, quantitative data was gathered via an online survey. Respondents were grouped into four faculty types, based on two measures: (1) willingness to accommodate; and (2) action— to what extent accommodations were provided. Faculty types included Committed (high willingness and action), Well-Intentioned (high willingness, low action), Reluctantly Compliant (low willingness, high action), and Skeptically Resistant (low willingness and action). Statistical analyses were performed to explore how the four types differ. Next, a sample of faculty from each type was interviewed. Results showed that knowledge and effort were the factors that contributed to faculty support actions, with Committed and Reluctantly Compliant faculty showing the most positive support actions. Knowledge, including personal experience with SWLD and familiarity with LD and its accommodations, influenced the willingness of faculty; as did effort, in terms of how difficult an accommodation was to provide and how supported faculty felt in its provision. Only Committed faculty “practiced what they preached;” they said they were very willing and very able to accommodate SWLD, and their actions supported that.

Keywords: academic accommodations, learning disabilities, faculty willingness to accommodate

Postsecondary faculty hold the academic fate of students in their hands—they create course content, decide how it will be presented, and design the methods to assess whether learning goals have been accomplished (Murray et al., 2008). Faculty are also responsible for accommodating students with learning disabilities (SWLD). Since learning disabilities (LDs) are hidden, faculty may question the need for accommodations, and question whether accommodations provide an unfair advantage or compromise course integrity. They may resent intrusions on their time, teaching style, and academic freedom. Yet accommodating SWLD is important to academic success and persistence and is required by law.

Faculty Attitudes
Faculty do not determine accommodations but are responsible for providing them. Therefore, faculty attitudes toward accommodating students with disabilities (SWD) “may be particularly salient in student success” (Sniatecki et al., 2015, p. 259). Timmerman and Mulvihill (2015) found that faculty buy-in was very important to academic success of SWD. If SWLD sense that faculty have issues with providing accommodations, they will not self-identify and will not get the help they need. “Instructors who provide accommodations in a neutral or unwilling manner decrease the likelihood that students will assert themselves by requesting appropriate and documented accommodations” (Skinner, 2007, p. 41). Social psychological researchers have examined the relationship of attitudes to behavior, theorizing that attitudes are not reliable predictors of behaviors; therefore, other variables specific to the circumstances and situation must be explored (Ajzen & Fishbein, 1982, as cited in Bourke et al., 2000). While the current literature on faculty attitudes does not explore this incongruence, it can be assumed that while faculty attitudes are important in influencing positive support behavior, they alone are insufficient in predicting faculty actions. Faculty
need to be both *willing* to accommodate and *able* to accommodate.

**Faculty Willingness to Accommodate**

While most faculty claim to be willing to accommodate SWLD, some research identifies faculty as unwilling or unable to provide accommodations. Unwillingness can have its roots in faculty personal beliefs about educating and accommodating SWLD and/or in the perceived ease or difficulty of accommodation provision.

**Faculty personal beliefs.** Beliefs and attitudes can help or hinder the provision of accommodations (Bourke, et al., 2000). Faculty may resent what they see as infringement on their academic freedom by being told how they must accommodate SWLD. They may question why they are not told which specific disability a student has, or how/why an accommodation was chosen (Wolanin & Steele, 2004). Zhang et al., (2010) studied faculty willingness and found that faculty personal beliefs were the only factor that had a significant direct effect on accommodation provision.

Due to Americans with Disability Act (ADA) protections, faculty are told only that they must accommodate a student in a certain way, and nothing specific about the student’s disability. Withholding this information from faculty “results in a lack of faculty ownership of the accommodation plan, and thus also diminishes their commitment to implementing it” (Wolanin & Steele, 2004, p. 41). Vickers (2010) wrote that this perceived secrecy raised concern for faculty, especially around accommodating SWLD and Attention Deficit Hyperactivity Disorder (ADHD).

Willingness to accommodate declines when faculty feel an accommodation compromises the integrity of the school, the program, or the course. Bourke et al. (2000) found that faculty struggle with the ethical concerns of helping SWLD to the detriment of academic integrity. Jensen et al. (2004) found that most faculty realized they had a duty to accommodate and were willing to do so as long as academic integrity was protected.

Several studies show that faculty believe in a hierarchy of disabilities and are more comfortable dealing with students who have visible disabilities (medical disabilities like blindness, deafness, or physical impairments) and less comfortable with invisible disabilities (LD and psychological disabilities). Jensen et al. (2004) found that faculty viewed “learning disabilities differently from other disabilities” (p. 81) questioning whether invisible disabilities were legitimate. The hidden nature of LD made it hard for faculty to distinguish between SWLD and students who were unprepared. Students with hidden disabilities like LD “may experience more negative characterizations because of others perceiving them as not disabled and, thus, not worthy of the benefits of claiming a disability” (Barnard et al., 2008, p. 169). Sniatecki et al. (2015) found that 96.7% of faculty agreed or strongly agreed that students with physical disabilities can be academically successful at the postsecondary level; only 90.2% believed the same about SWLD.

**Perceived level of difficulty.** Willingness to accommodate declines as the perceived difficulty of providing an accommodation rises. Skinner (2007) concluded that faculty are more willing to provide accommodations that require less time and effort. Cook et al. (2009) found that faculty were unwilling to provide alternate or extra credit assignments; creating additional tests or assignments can intrude on faculty time, especially if multiple students need different testing or assignment vehicles. Murray et al. (2008) found that faculty are more willing to provide minor, as opposed to major, accommodations that do not compromise program or teaching quality.

**Faculty Ability to Accommodate**

Ability to accommodate can depend on faculty’s lack of knowledge and/or support perceived/received.

**Lack of knowledge.** Faculty lack of knowledge may be in one of three areas: (1) the law, (2) learning disabilities, and/or (3) accommodation practices. Postsecondary faculty need to understand their legal responsibilities regarding academic accommodations. Yet they “have little knowledge about legislative mandates regarding their obligation in serving students with disabilities” (Katsiyannis et al., 2009, p. 36). West et al. (2016) found that a significant number of surveyed faculty did not feel confident in their knowledge of the ADA (47%) and Section 504 (58%) laws.

Murray et al. (2008) found that knowledge of LD was positively associated with inviting student disclosure and providing accommodations; having insufficient knowledge was negatively associated with willingness to provide accommodations. Cook et al. (2009) found that faculty believed it was important to understand the characteristics of various disabilities, and that the institution was not giving them the resources to gain that knowledge.

One factor that influenced providing accommodations was “level of comfort in interacting with individuals with disabilities” (Zhang et al., 2010, p. 276). Lack of experience in working with SWLD may contribute to negative personal beliefs about them. Skinner (2007) found a positive association between LD-related faculty training and willingness to accom-
moderate. Murray, et al. (2008) corroborated when they found that disability-related training predicted faculty willingness to provide, and implement, instructional and testing accommodations.

Jensen et al. (2004) found that faculty revealed “a deep mistrust of how learning disabilities are assessed and how far faculty and instructional staff should be expected to go” (p. 83) to accommodate SWLD. Similarly, Sniatecki et al. (2015) identified gaps in faculty knowledge about disability services offices and accommodation provision that could have a detrimental impact on students.

**Support received.** Bourke et al. (2000) found that if faculty perceived support from the institution, it influenced how easy they thought it was to provide instructional accommodations. The greater their perception of department support, the greater their belief that accommodations help SWD succeed. The greater their perception of support from disability services, the greater their understanding of the need for accommodations. Skinner (2007) concluded that a supportive disability services office is critical for faculty. Murray et al. (2008) found that faculty who believed they had limited resources were less likely to be willing to invest time supporting SWLD. Zhang et al. (2010) determined that perception of institutional support directly influenced faculty personal beliefs and level of comfort in dealing with SWD.

**Sensitive Subjects and Political Correctness**

A great deal of research suggests that most faculty are generally willing to accommodate (Cawthon & Cole, 2010; Cook et al., 2009; Jensen et al., 2004; Marshall et al., 2010; Murray et al., 2009; Murray, et al., 2008; Quinlan et al., 2012; Skinner, 2007; Vickers, 2010), but several researchers indicate that faculty participating in studies may be giving lip service about their willingness because they know it is the politically correct thing to say (Cook et al., 2009; Lombardi & Murray, 2011; Vickers, 2010). Vickers (2010) found that faculty shared a widespread criticism of current accommodation practices that was unlikely to surface publicly (p. 9) because they did not want to be associated with an anti-disabled (p. 9) position.

**Gaps in the Literature**

Studies show that most faculty claim to be willing and able to accommodate students with disabilities. However, no study provides evidence that what these willing faculty say is reflected accurately in what they do. Since postsecondary faculty are a critical piece of academic success for SWLD (Jensen et al., 2004), this study sought to determine whether faculty who said they were willing and able to accommodate SWLD acted in a way that reflected that.

**Research Questions**

Five research questions were employed: (1) What factors influence the positive actions of faculty in support of SWLD? (2) Do the four types of faculty differ on those factors, and if so, how? (3) Which types are more likely to show positive support actions? (4) What themes emerge when faculty explain their experiences supporting SWLD? and (5) In what ways do the actions of faculty explain their self-reported willingness and ability?

**Method**

**Research Design**

This study used an explanatory sequential design. It started with quantitative data collection and analysis, followed up with selection of interview participants and development of an interview guide, proceeded to qualitative data collection and analysis, and concluded with the integration and interpretation of results. Quantitative data were gathered via an online survey to answer the first three research questions. Then, qualitative data were collected via faculty interviews to explain quantitative results in more depth and to answer the fourth research question. Finally, data from both strands was combined to answer the fifth research question.

**Participants**

For the quantitative portion of the study, the population was the faculty of a medium-sized private institution in the northeastern United States that is considered a business school but also offers degrees in the liberal arts. All current faculty received an email explaining the study’s purpose and inviting them to participate in the online survey. A survey question asked if respondents were willing to be interviewed. For the qualitative portion of the study, all faculty volunteers were divided by faculty type and then randomly chosen for interviews.

**Quantitative sample.** This study used two non-probability sampling methods to find survey participants: (1) a voluntary sample, made up of people who self-selected into the survey, which was also (2) a convenience sample, made up of people who were easy to reach. Using a sample size calculator (Kohn et al., 2019) it was determined that using $\alpha = .05$, $\beta = .2$, an effect size of .5 (considered moderate) and 1 standard deviation, 126 responses would be desirable. A link to the online survey was sent to all faculty on the institution’s faculty email distribution list ($n=509$), and 136 faculty responded (26.7%). Of 136 respondents, 19 did not finish the survey (13.9%); two of
the 19 completed all but the demographic questions so their data was included. With the reduced sample size, the effect size increased from .5 to .52.

**Qualitative sample.** Forty-two respondents volunteered to be interviewed, and 14 (33.3%) were purposefully selected from among the four faculty types; three faculty each from the RC and CO faculty groups, and four each from the SR and WI groups. Nine interviewees were from business departments and five were from arts & sciences departments.

**Instrument**

Several existing surveys dealing with faculty willingness were reviewed for question examples. Questions were drawn from surveys by Murray et al. (2008), Zhang et al. (2010), Baker et al. (2012), and Sniatecki et al. (2015). Questions were recombined, edited, and added to, to suit this study’s needs.

**Measures**

Measures used to analyze the quantitative results included demographics, self-rankings, and scales created to define four faculty types.

**Demographics.** Table 1 summarizes demographic information for the sample (n=118) and the population (n=461). The sample is fairly descriptive of the population based on gender and age. Full-time lecturers are disproportionately represented, but they are the faculty who teach the most classes so are integral to the sample. There were slightly more survey respondents from business disciplines (n=69, 58%) than arts & sciences disciplines (n=50, 42%) which seems accurate given the institution’s reputation as a business school.

**Self-Rankings.** Respondents were asked to rank their willingness and ability to provide academic accommodations to SWLD using a five-point Likert scale. This data was gathered to compare faculty self-rankings (how willing they say they are) and results of the data analysis (how willing the data shows them to be). It was hypothesized that most faculty would rate themselves as willing and able. Of 133 respondents, 126 faculty (94.73%) ranked themselves as willing or very willing; three faculty ranked themselves as very unwilling. Of 121 respondents, 112 faculty (92.56%) ranked themselves as able or very able; none ranked as unable.

**Scales and sub-scales.** Scales were created to combine variables that focused on the related topics of willingness, ability, and actions. The Willingness scale (M = 23.54, SD = 4.96, α=.776) was created to measure actions faculty have taken in support of SWLD. Two Ability subscales were created: knowledge, and effort. The knowledge subscale (M = 26.92, SD = 4.888, α=.707) was intended to assess knowledge of the institution’s academic accommodation process. The effort subscale (M = 30.18, SD = 5.237, α=.826) was intended to assess how much effort it takes to provide accommodations. The Action scale (M = 23.54, SD = 4.96, α=.776) was created to measure actions faculty have taken in support of SWLD.

**Procedure**

Quantitative data were downloaded in CSV (comma-separated value) format and uploaded into SPSS for analysis. Scales were analyzed for reliability and internal consistency, and inter-item correlations were obtained. To answer RQ1, measures were tested for any relationship with faculty actions (dependent variable) using Pearson’s correlations. Then faculty willingness and action scales were used to create a 2x2 matrix: (high vs. low willingness) x (high vs. low actions) to answer RQ2 and RQ3. Statistical analyses (means, one-way ANOVA, Tukey post hoc tests, and multiple regression) were performed to explore how the four types differ. Based on the matrix, 14 faculty were purposefully selected from among the four faculty types to be interviewed to answer RQ4; three faculty each from the RC and CO faculty groups, and four each from the SR and WI groups. More people from the latter two groups were selected because it was felt that faculty with low Action scores would have more interesting stories to tell. Audio files of interviews were transcribed and then uploaded into NVivo software for analysis. Data was filtered to search for patterns and was used in a descriptive fashion to answer RQ4. Finally, combining both strands of data provided the answer to RQ5.

**Results**

**RQ1: What factors influence the positive actions of faculty in support of SWLD?**

There were no correlations found to indicate a relationship between demographics and Actions. There were also no correlations found to indicate a relationship between Actions and faculty self-rankings of willingness and ability. It was hypothesized that faculty scores on Actions would correlate more strongly with Willingness and Knowledge than Ability; that is, that even if faculty have the tools to provide accommodations, they need to know how to accommodate and be willing to do so. As table 2 indicates, there were
weak correlations between Actions and Willingness as well as between Actions and Ability. A moderate correlation existed between Actions and Knowledge, indicating that faculty knowledge was the factor that most affected faculty actions. In addition, the Effort subscale showed a moderately positive correlation with Willingness, indicating that the effort that it takes to provide accommodations influences how willing faculty are to provide those accommodations.

**Effects of knowledge and effort on actions.** A multiple regression analysis was run to predict Actions from Knowledge and Effort. Together, these variables statistically significantly predicted Actions, \(F(2, 108) = 9.553, p < .0005, R^2 = .150\). Coefficients test results showed that statistically, only Knowledge added significantly to the prediction, \(p < .05\), which corroborated the results of the Pearson’s correlation tests.

**Effects of knowledge and effort on willingness.** A multiple regression analysis was run to predict Willingness from Knowledge and Effort. Together, these variables statistically significantly predicted Willingness, \(F(2, 109) = 10.03, p < .0005, R^2 = .155\). Coefficients test results showed that statistically, only Effort added significantly to the prediction, \(p < .05\), which corroborated the results of the Pearson’s correlation tests.

**Faculty types.** Most faculty said they were willing or very willing to accommodate, but there were weak correlations between Willingness and Actions scores. To explore this disparity, a 2 x 2 typology of faculty types was constructed (see Figure 1). Participants were grouped into four types, based on their Willingness and Actions scores. “Committed” faculty (CO) scored above average on both Willingness and Actions; “Skeptically Resistant” (SR) faculty scored below average on both Willingness and Actions; “Well-Intentioned” (WI) faculty scored above average on Willingness but below average on Actions; and “Reluctantly Compliant” (RC) faculty scored below average on Willingness but above average on Actions. Framing the issue in this way allowed the investigation of RQ2.

**RQ2: Do the four types of faculty differ on those factors, and if so, how?** Statistical analyses were performed to explore how the four types differ, especially in terms of Knowledge and Effort. Both Knowledge and Effort were coded so that higher scores equaled a more positive attitude (a high Effort score means that faculty think providing accommodations is NOT too much Effort). Figure 2 shows the means of Knowledge and Effort for all four faculty types. ANOVA results showed that for both Effort (\(F(3,107) = 6.055, p = .001\)) and Knowledge (\(F(3,107) = 4.998, p = .003\)), there was a statistically significant difference among the faculty types.

**Differences based on willingness.** Both WI and CO showed above average Willingness but differed in their level of Actions. The WI claimed to be willing to accommodate SWLD’s, but scored low on Action – why? Two possible hypotheses were that the WI (1) did not know what to do (low Knowledge), or (2) thought it was too much work (low Effort). The WI differ substantially from the CO in terms of their Knowledge. That is, Knowledge—not Effort—explains why the WI do less than the CO. The Tukey post hoc test revealed that Knowledge was statistically significant for both faculty types (\(p = .015\)), but there was no statistically significant difference for Effort (\(p = .998\)). Therefore, the differences between the means are not likely due to chance and are probably due to Knowledge. Both RC and SR faculty showed below average Willingness but differed in their level of Action. The RC provide accommodations, even though they do not really agree with them—why? They either (1) thought it would not require much Effort, or (2) had Knowledge of what to do. The means suggested that Knowledge was the answer, but the Tukey post hoc test revealed no statistically significant difference for either Knowledge (\(p = .446\)) or Effort (\(p = .983\)); the differences in the two groups must have been due to a mediating variable.

**Differences based on actions.** RC and CO faculty both showed above average Action but differed in their level of Willingness. The CO were willing and able to provide accommodations as required, but why? The two hypotheses were (1) they thought it would not require much Effort, or (2) they had Knowledge of what to do. Graph results show that CO faculty differ from RC both in terms of their Knowledge and their estimate of how much Effort it takes to accommodate. The Tukey post hoc test revealed that Effort was statistically significant for both faculty types (\(p = .008\)), but there was no statistically significant difference for Knowledge (\(p = .352\)). Therefore, the differences between the Means are not likely due to chance and are due more to Effort than to Knowledge.

SR and WI faculty both showed below average Action but differed in their level of Willingness. The SR do little in the way of action – why? The two hypotheses were (1) they thought it would require too much Effort, or (2) they did not have the Knowledge of what to do. Graph results showed that both groups have equal knowledge, but the SR have a lower level of Effort. This suggests that Effort explained how the SR are different than the WI. The Tukey post hoc test revealed that Effort was statistically significant for
both faculty types ($p = .045$), but there was no statistically significant difference for Knowledge ($p = .998$). Therefore, the differences between the means are not likely due to chance and are probably due to Effort.

**RQ3: Which types are more likely to show positive support actions?**

CO faculty have the highest Willingness and Action Scores, as well as the highest Knowledge and Effort scores. They willingly provide positive support actions. They know what to do and how to do it, and they have a good attitude about how much effort it takes to provide accommodations to SWLD.

**RQ4: What themes emerge when faculty explain their experiences supporting SWLD?**

Emergent themes showed the influences of Knowledge and Effort on willingness, ability, and actions.

**Willingness issues.** Willingness to accommodate was affected by Knowledge in terms of personal experience that influenced attitudes about SWLD. Knowledge was also a factor in two beliefs about accommodations: (1) that they were unfair and (2) that they left SWLD unprepared for the real world. Willingness was affected by Effort in terms of attitudes about accommodations.

Faculty responses showed that personal experience was a type of a *posteriori* knowledge that influenced their attitudes about SWLD. Many of the interviewed faculty had some personal experience with LD, either their own or those of a close relative. This experience had a strong impact on their beliefs and their willingness to support SWLD. However, this influence could either be positive or negative. For some faculty, personal experience made them more aware of the difficulties that SWLD encounter—and more committed to advocating for these students, even when the students do not self-advocate. For example, all the CO faculty (highest Knowledge scores) had immediate family with LD that had positively affected their willingness to accommodate. In contrast, there were some interviewees whose personal experiences led to the opposite effect. For example, two of the RC (high Knowledge) faculty had LD but successfully navigated college without accommodations. One discussed what he needed to do to succeed academically, stating "I have an invisible disability as well and I've been working with it for 38 years. I describe it as 'I just suck it up and do it.'" He never received help for his LD in college: "I just had to discipline myself, budget my time." While CO faculty had positive personal experiences, and RC faculty had negative ones, most of the SR (low Knowledge) had no personal experience with SWLD, and the WI (low Knowledge) had mixed personal experience. Positive personal experiences with SWLD influenced the willingness of the CO faculty; having negative, or no, experience resulted in the other faculty types being less willing to accommodate.

Responses showed that familiarity with LD influenced faculty attitudes. This was especially true regarding the fairness of accommodations and how SWLD will fare once they leave college. One theme was whether providing accommodations would give SWLD an unfair advantage. High-willingness faculty believed that accommodations were necessary and merely gave students tools they needed to succeed. One CO faculty member pondered non-willing colleagues’ issues with fairness based on LD being hidden: "If they don't see something that's either extreme or something that's physical, that they can't sort of quantify … they think it's just some ploy to gain an advantage over other students.” Low-willingness faculty felt that giving an alternate assignment or exam would be to the detriment of other students; they also worried about how much attention SWLD would need, meaning “less time to go around to everybody else.” Another theme that emerged about accommodations was how students would fare once they left academia. Positive responders were hopeful, but unsure. Negative responders worried about what happens to SWLD in the real world, and whether it was fair that students who had been accommodated would be judged as *equal* to someone else vying for a job. One RC faculty member stated that in the real world, "you are not going to have double time to do your work, and you're not going to be able to say 'well gee, I just don't feel well today so I guess I'll stay home,'” adding that hidden disabilities are “invisible, which makes it even worse.”

Qualitative results showed that willingness was affected by Knowledge, in terms of personal experience and beliefs about accommodations, and affected by Effort, in terms of attitudes about accommodations.

To faculty from the groups with the highest Effort scores (CO and WI), accommodations were seen as part of the job and necessary for SWLD to succeed academically. A CO faculty member stated, “Some of these accommodations are really not that hard. They're just not.” Faculty from the groups with the lowest Effort scores (SR and RC), were less enthused. Some accommodations required more effort for some faculty; in addition, many faculty questioned whether accommodations were actually needed. A third theme was that the more effort accommodations took, the less willing faculty were to implement them. This was especially true for exam modifications, the most common accommodation seen at the institution. No
CO faculty mentioned issues with exam accommodations, and WI faculty had the fewest issues. RC and SR faculty, with the lowest Effort scores, had the most problems with providing exam accommodations. A final theme that emerged was that accommodations may be unnecessary, especially extended exam time. CO and WI faculty had no issues with extended time; RC and SR faculty had issues with the fairness and efficacy of extended time, believing it gives an unfair advantage, and suggesting that most students do not use the extra time, so they must not need it.

**Ability issues.** Ability to accommodate SWLD was affected by Knowledge, in terms of training or lack thereof, and Effort, in terms of support received. Responses showed that training can impact the ability of faculty to accommodate SWLD. For some, training made them more aware of the need for accommodations and ways to improve the educational experience. For example, CO faculty had specialized training or personal experience through parenting and were also open to additional training. Faculty without training were unaware of institutional processes and resources which hampered the effective provision of accommodations. This was especially true for WI faculty, none of whom had formal training. One did not know about the existence of the Test Center, and one was unaware that many SWLD have multiple diagnoses and therefore multiple accommodations. One admitted to not reading accommodation forms because “it’s usually they just need more time on exams...I don’t do exams, so it doesn’t matter.” SR faculty also had no formal training, did not mention training as an issue, and did not seem bothered by their lack of knowledge.

Responses showed that support received can impact the ability to accommodate. Support can come from colleagues, a department, or the disability services office (DSO). CO and SR faculty (high Effort) helped colleagues with exam accommodations, using conference rooms or offices and proctoring others’ exams. In some departments all students with extended time accommodations for a course take the final exam in the same room to make it easier to proctor. Receiving support from faculty and colleagues increases the ability of faculty to provide testing accommodations. However, faculty had mixed feelings about seeking support from DSO. Many non-CO faculty believed it took too much effort to use the Test Center; SR faculty balked at the “tricky” and “cumbersome” Test Center rules.

**Action issues.** Several interview questions sought to determine what types of actions faculty would take in the support of SWLD. Knowledge was an issue when faculty wanted more information about students than DSO provided; Effort was an issue when faculty were questioned about changing the way they teach or test.

Knowledge, or the lack thereof, about specific SWLD proved to be an issue for some faculty. They wondered about information not included on accommodation forms, about students with undiagnosed LDs, and about what to do when SWLD did not follow the institution’s rules. Faculty from all groups were unsatisfied with the information provided on accommodation forms. Some felt left out of the process since they are told nothing about the students’ disability; others complained that students did not say anything about why accommodations are needed.

Three scenarios were employed to ascertain what actions faculty would take in support of SWLD. The first scenario asked interviewees what they would do if they believed that, based on a hand-written assignment, a student might have LD but had not given them an accommodation form. The CO and the RC (high Action) would take positive steps to help the student, including reaching out to the student or to DSO, though one RC faculty member thought it would be insulting to ask a student if they needed help. The WI and SR (low Action) were much less likely to take action. Only one WI respondent would take responsibility to help the student; the others assumed someone else would. Similarly, only one SR faculty member would take positive actions; the rest reported they would do nothing to help.

A second scenario about test accommodations asked what actions they would take if a student who needed test accommodations did not follow the rules for requesting the accommodation for a particular exam. The CO and RC (high Action) would take, and have taken, positive actions to accommodate. CO faculty set up the accommodations in advance and took the initiative to remind the students that they need to make plans to get accommodated. RC faculty also reminded students, but more out of a sense of duty. The WI and SR (low Action) had mixed responses. Some would do nothing. One SR faculty member considered it the student’s responsibility: “Even if they have a learning disability, they can put a note in their phone to remind them to remind me.”

While faculty did not always have the knowledge they wanted or needed, they still made accommodation decisions. Actions taken without appropriate Knowledge may have helped or hindered their students. Supportive action was also affected by the amount of effort it would take to provide accommodations.

The third scenario asked faculty whether they would consider modifying coursework or the course itself if an increasing number of students in a course
needed accommodations. The CO and the WI (high Effort) were willing to change course and assignment formats, but not necessarily exam formats. CO faculty had already taken different learning styles into account, planning classwork and offering assignments and exams to suit a wide variety of students. For example, one assigned mostly papers but offered choices wherever possible on other work. Like CO faculty, the WI were more open to changing the way they teach as opposed to changing the way they test. However, it seemed they had more questions than answers, and were not as willing to put the effort into modifications. The SR and the RC (low Effort) were less willing to change course and assignment formats, and fairly unwilling to modify exam formats. SR faculty were reluctant to create alternate exam types. One had issues with the possibility of needing to adapt a course because of an increased number of accommodations. RC faculty were concerned about the fairness of providing alternate assignments and exam types. For example, one would create an alternate exam but not “beyond what an accommodation might require.”

RQ5: In what ways do the actions of faculty explain their self-reported willingness and ability?  

The survey asked respondents to rate their willingness and ability to accommodate SWLD on 5-point Likert scales (1 = Very Willing or Very Able, 5 = Very Unwilling or Very Unable). Interviewed faculty were asked to identify where they fell on a range of opinions. On one end of the range, at a 1, were people who felt that SWLD are just as smart and hard-working, and just as likely to succeed in their careers, as their peers, but they need a little extra help to be academically successful in college. On the other end of the range, at a 10, were people who felt that SWLD are just not as capable as their peers, and are not going to be successful, so it is a waste of resources to try and push these students into careers that they are not suited for—and also, it is unfair to give them an advantage when they are competing against other students for grades. Comparing the self-reported range from the interviews with the self-rankings from the survey showed that the majority of faculty reported that they were willing and able to support SWLD. However, where they locate themselves on the opinion range more closely correlated with the group they were placed into based on quantitative data. Only CO faculty claimed to be willing and able and acted in a way that demonstrated that willingness and ability.

Discussion

This study explored whether faculty who say they are willing to accommodate SWLD are acting in a way that demonstrates that they are—are they practicing what they preach? CO faculty are the only group “walking the walk”—they say they are very willing and very able, and the data showed that their actions support that. The WI claimed to be willing, which they were, but their lack of knowledge led to lack of action. All but one of the SR claimed to be willing and able, but they were neither. Their low willingness and low knowledge result in low action. (The one who rated himself very unwilling, was in fact unwilling.) Finally, the RC claimed to be willing and able but put themselves on the end of the range that agreed that SWLD “just aren’t as capable as their peers and are not going to be successful.” Their high knowledge led to high action, but they provided accommodations because “that’s the rule” as opposed to because it would help students. In fact, they believed that accommodations hurt students’ career prospects.

Willingness

Most faculty reported that they were willing to accommodate. However, their willingness was affected by personal beliefs and the perceived ease of providing an accommodation.

Personal beliefs. Personal beliefs can influence how a faculty member feels about the need for accommodations and the types of disabilities with which they feel comfortable. An overwhelming majority of surveyed faculty (92%) agreed that SWLD could be successful at the college level, but only 62% believed that SWLD had similar IQs to their peers. When asked if some students take advantage of the system and get accommodations that they do not need, 60% agreed or were unsure. When asked if too many people were being diagnosed with LD these days and whether it was the latest fad in medical diagnosis for students, 35% agreed or were neutral. Yet 95% of these faculty rated themselves as willing or very willing to accommodate. Differences in personal beliefs were evident once faculty were divided into the four faculty types, especially concerning their personal experiences with SWLD.

Ease or difficulty of providing accommodations. A majority of surveyed faculty (76%) agreed that they had no problems providing accommodations, corroborating a study by Bourke et al. (2000). However, there were differences found based on the type of accommodation and perceived difficulty of provision, corroborating a study by Murray et al. (2008) that found faculty were more willing to
provide minor accommodations. CO faculty had no problem providing any accommodations, and in fact looked for additional ways to help students. RC faculty had issues with extended exam time accommodations, which were sometimes hard to schedule and which they felt provided an advantage in some courses. They also had trouble with distraction-free exam locations, not wanting to use the Test Center where they could not be present to answer student questions. WI faculty had no issues providing accommodations, most of which were for extended exam time. None had thought about whether the accommodations helped; they just provided what was requested. All the SR mentioned extended exam time accommodations, and the fact that most of the students do not use it, concluding that they do not need it. They found that extended time on final exams was hard to schedule, most mentioning the difficulty of dealing with the Test Center.

**Ability**

Confirming Ajzen and Fishbein (1982), a willing attitude was not the only predictor of positive support actions. While most faculty (92%) reported that they felt able to accommodate SWLD, support they received as well as lack of training and knowledge affected ability.

**Support received.** Slightly more than half of faculty (57%) agreed or strongly agreed that DSO adequately supported them. This number is lower than results of Bourke et al. (2000) who found that 75% of faculty believed they received adequate support from their DSO. Their study showed that this type of support influenced the understanding that accommodations are important and the belief that accommodations work. Skinner (1998) concurred that a supportive DSO is critical for faculty providing accommodations.

Quantitative data showed that 79% of surveyed faculty knew whom to contact with questions about accommodation requests, but only 14% “almost always” or “sometimes” call DSO to ask questions about a specific student’s disability. Slightly more than half of surveyed faculty (53%) have never visited the DSO website. These issues highlighted the need for additional or revised faculty training from—and about—DSO. Bourke, et al. (2000) found that department support influenced the belief that accommodations helped students succeed academically. Results showed that different faculty get and provide different levels of support from and to departments and co-workers.

**Lack of training.** Lack of training can be a barrier to faculty ability to accommodate. Several studies (Cook et al., 2009; Jensen et al., 2004; Katsiyannis, et al., 2009) mentioned that college faculty do not receive training in how to teach, let alone how to accommodate. This was corroborated in this study, since less than a quarter (23%) of respondents had attended DSO training. The CO faculty had all received specialized training, confirming findings of Skinner (2007), which showed a positive association between LD-related faculty training and willingness to accommodate. All the RC and SR faculty, and most of the WI faculty, had never received formal training on the accommodation process or on SWLD. This corroborates the findings of Murray et al. (2008) who showed that disability-related training predicted faculty willingness to provide, and use, instructional and testing accommodations. In this study, non-CO faculty lacked training. One RC respondent said, “I think they really need to educate us.”

**Lack of knowledge.** Lack of knowledge about SWLD and accommodations “could negatively impact students” (Sniatecki et al., 2015, p. 259). Several studies (Sniatecki et al., 2015; Timmerman & Mulvihill, 2015; Zhang, et al., 2010) have shown that faculty knowledge is important in determining how able faculty feel to provide accommodations. Results of this study confirmed those findings—the quantitative data showed that knowledge (r = .358) was the only factor that contributed to positive faculty actions in providing accommodations. CO and RC faculty had the highest levels of knowledge, and consequently the highest levels of Action.

**Implications of Findings**

The findings showed that different types of faculty have different commitment to accommodating SWLD. Knowledge, especially personal experience, and Effort, especially how cumbersome faculty believe an accommodation is to provide, can have a significant effect on willingness and ability. This information would benefit DSO staff and administrators. The findings justify the creation and revision of faculty professional development and training. Faculty would benefit from additional knowledge about the process and the students. SWLD would benefit by taking courses with instructors who respect their learning differences and provide accommodations with no skepticism or reluctance.

Overall, the two factors that influenced faculty actions regarding accommodations were Knowledge about what do, and the Effort required to do it. The two faculty groups with the highest Knowledge scores, CO and RC, also scored highest on Action. The two groups with the highest Effort scores, CO and WI, also scored highest on willingness.
With two faculty types, Knowledge resulted in increased support. The CO faculty, with the most Knowledge and positive personal experience, showed very positive actions in support of SWLD. The RC faculty also showed positive support actions, but their negative personal experiences resulted in compromised willingness; no one had accommodated them, yet they succeeded on their own, so they did not understand why their students could not do the same. They provided accommodations, though begrudgingly, and with trepidation for the career prospects of SWLD; they did not think the effort to accommodate was worth it. The other two faculty types lacked Knowledge. The WI had lower Knowledge scores than CO faculty, and their lack of knowledge caused them to be confused about providing accommodations and how best to help SWLD, resulting in low Action. The SR had Knowledge scores equivalent to the WI, but their personal experience providing accommodations led them to conclude that it required too much effort.

Since CO and RC faculty provided required accommodations (high Action), the other two faculty groups would cause the biggest implications. Nearly everyone in the WI and SR groups stated that they were "very willing" or "willing," yet their actions showed them to be far less willing than average. This implied that either they really believed they were willing (self-delusion) or they told the researcher what they thought was politically correct. Either way, their low Action scores could imply that their SWLD were not receiving appropriate accommodations or were subjected to bad faculty attitudes. In addition, not complying fully with accommodations could open the institution up to legal issues (Learning Disabilities Association of America, 2016).

**Practical Application/Recommendations**

It is important that the institution demonstrates its commitment to SWLD and the disability service providers (DSPs) that support them. For example, Barnard et al. (2008) found that faculty may not consider disabilities a piece of a campus’s wider diversity initiatives. If institutional diversity training does not include a portion of disabilities, this should be remedied. In addition, if DSOs are understaffed or lack sufficient resources and funding, or if DSPs lack training and experience, they may have trouble implementing recommendations.

The findings of this and other studies show that faculty willingness can be affected by personal beliefs and the perceived ease or difficulty of providing accommodations; ability can be affected by support received, as well as lack of training, lack of experience, and lack of knowledge. There are some factors that the institution and its faculty have no control over, including classes with standardized content and exams; the number of students to be accommodated in any given class; and students not seeking help and not following rules. But the institution can do something about faculty knowledge, which this study showed is one way to influence faculty actions. Since the level of knowledge differs in the four faculty types, the recommendations differ as well. Based on the findings the institution has three distinct problems to solve: (1) increasing the Knowledge of the SR and the WI; (2) persuading the SR that providing accommodations will not require as much Effort as they think, and that accommodations make a difference; and (3) convincing the RC that SWLD can be successful in their chosen careers.

**Increasing knowledge of SR and WI faculty.** The easiest ways to increase faculty knowledge are providing training and easier access to information. Training faculty does not guarantee their willingness or ability, but it may influence their actions. For non-CO faculty, training may be perceived as inadequate or inconvenient; some stated that current training options did not cover necessary topics, including legal requirements. Topics should include the institution’s accommodation process, the academic challenges SWLD face, the types of LD and typical accommodations, and classroom scenario training. Faculty should be generally familiar with the diagnoses that make up LD and the kind of issues SWLD may experience as well as ADA regulations. While difficult to provide personal experiences with SWLD, training could inform faculty of other faculty’s (or students’) experiences. CO faculty should help design and deliver training. They are fully on-board with supporting SWLD and can contribute their personal experiences and knowledge. Training should be offered online as well as in person; informational brochures or videos should be available online on-demand.

The institution should also consider offering training in Universal Design for Instruction (UDI) and/or Universal Design for Learning (UDL). While most respondents had not heard of UDL, many were already using some of its principles, e.g. offering oral vs. written exams, including several different types of questions on exams, and splitting class sessions into multiple activities to engage different types of learners. Training in UD may be an easier sell, especially to the SR, because it focuses on improving learning for all students; this would help alleviate their concern about giving special treatment.

**Persuading the SR.** SR faculty need to be convinced that providing accommodations will not require as much effort as they think and that accom-
modifications make a difference. Since support received can influence ability, the institution, specifically the DSO, needs to work with faculty to help them provide accommodations. One way is by following up with faculty - once a student requests accommodation, no one ensures the accommodations are taking place or asks if they are being used or seem to help. Early in each semester, DSO staff could survey faculty who have received accommodation forms. In addition, DSO could use the institution’s progress report system to solicit faculty feedback.

SR faculty had no personal experience with SWLD and no training in the accommodation process. This contributes to their lack of effort, and their refusal to take responsibility for helping students with accommodations. This also makes them hard to convince about the need for and benefits of accommodations. They will not willingly attend training and in fact think they do not need it. They may be persuaded by DSO following up on accommodated students. In addition, hearing personal stories from CO faculty of accommodations that were relatively straightforward, and that really worked for a student, may change their thinking.

**Convincing the RC that SWLD can be successful in their careers.** RC faculty expressed concern about SWLD once they get out into the real world. DSO should convene a panel discussion of graduates with LD and have them discuss how they are coping in their jobs – do they receive accommodations? Do their LDs make any aspects of the job more challenging, and how do they deal with that? This would help faculty see how graduates fare in the real world and may alleviate some of their concerns; it would benefit current SWLD as well, so they know what they can expect once they are employed.

**Limitations and Future Research**

The study was undertaken at a single institution which may affect the generalization of findings to a larger population and therefore the external validity. Considered a “business school” it may employ significantly different faculty than would be found at another institution. Quantitative data collection limitations included a small sample size; the online survey was only accessible to respondents via computers or smartphones which may have precluded some people from responding. Faculty self-selected to participate in the survey, so the respondent population could have been skewed to include people who were already passionate about the topic. To address sample size limitations, the researcher invited all faculty of the institution to complete the survey and sent several reminder emails before the survey closed. A small number of faculty who started the survey did not finish; this may have been caused by survey fatigue or disinterest in the topic. The researcher reviewed the survey progress data to ensure that there was not a common question or place in the survey where a high percentage of people stopped. The selection of faculty interviewees could have been biased by the researcher. To address this, faculty were purposefully selected from the four groups in survey-response order, contacting the next person when someone declined or did not reply. Any interview could have been affected by recall error, reaction to the interviewer, or self-serving responses (Patton, 2002). Interviews were transcribed verbatim so as not to interject any personal biases.

Future researchers should replicate this study at other types of institutions to see if similar results are found. They may want to add additional, more specific, open-ended survey questions to allow respondents to explain some answers more fully. While this study found no correlation between demographics and willingness, other studies have (Bourke et al., 2000; Hong and Himmel, 2009; Murray et al., 2008; Skinner, 2007). Researchers should consider adding more demographic questions to the survey, perhaps about ethnicity or department. Specifically, a question that asks if respondents have personal knowledge of LDs – either their own or that of a spouse or child – should be added.

**References**


Cawthon, S. W., & Cole, E. V. (2010). Postsecondary students who have a learning disability: Student perspectives on accommodations access and obstacles. *Journal of Postsecondary Education and Disability, 23*, 112-128.


**About the Author**

Elizabeth McCarron received her MBA in Management Information Systems from Babson College and Ed.D in Educational Leadership in Higher Education from Endicott College. Her experience includes more than twenty-five years working in higher education in both administrative and faculty roles. She is currently a lecturer in the Computer Information Systems Department of Bentley University. Her research interests include student self-advocacy skills and the student/faculty relationship, especially pertaining to students with learning disabilities. She can be reached by email at: emccarron@bentley.edu.

**Acknowledgement**

This manuscript is based on data used in a doctoral dissertation when the author was a student at Endicott College.
Table 1

*Population Demographics vs. Survey Respondent Demographics*

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Population</th>
<th>Sample</th>
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<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>279 (60%)</td>
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</tr>
<tr>
<td>Female</td>
<td>182 (40%)</td>
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<tr>
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<td>3 (3%)</td>
</tr>
<tr>
<td>Age Range</td>
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<td></td>
</tr>
<tr>
<td>Under 25</td>
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<td>2 (2%)</td>
</tr>
<tr>
<td>25 to 35</td>
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<td>56 to 60</td>
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<td>Over 60</td>
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<td>44 (37%)</td>
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<tr>
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<tr>
<td>Full time</td>
<td>284 (62%)</td>
<td>86 (72%)</td>
</tr>
<tr>
<td>Part time/Adjunct</td>
<td>177 (38%)</td>
<td>33 (28%)</td>
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<tr>
<td>Current position</td>
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<tr>
<td>Professor</td>
<td>83 (29%)</td>
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<td>Associate Professor</td>
<td>76 (27%)</td>
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<tr>
<td>Assistant Professor</td>
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<tr>
<td>Senior lecturer/Lecturer</td>
<td>86 (30%)</td>
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Table 2

*Correlations Among Variables*

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<th>Ability</th>
<th>Knowledge</th>
<th>Effort</th>
<th>Actions</th>
</tr>
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<tr>
<td>Ability</td>
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<td>--</td>
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<td></td>
</tr>
<tr>
<td>Knowledge</td>
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<td>.807</td>
<td>.270</td>
<td>--</td>
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<tr>
<td>Actions</td>
<td>.100</td>
<td>.256</td>
<td>.358</td>
<td>.046</td>
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</table>
**Figure 1**

*The four faculty types based on actions vs. willingness.*

![Diagram showing the four faculty types based on actions vs. willingness.]

**Figure 2**

*Means of Knowledge and Effort for all four faculty types.*

![Bar chart showing the means of knowledge and effort for different faculty types.](image)
Supported Education Among Student Veterans:
Impact on Self-advocacy Skills and Academic Performance

Adam R. Kinney¹,²
James E. Graham³
Aaron M. Eakman³

Abstract

Veterans enrolled in postsecondary education may experience service-related health conditions that undermine their success on campus. Supported education services can target student Veterans’ self-advocacy skills, thereby facilitating their acquisition of academic accommodations that foster academic success. The purpose of this study was to (1) investigate change in student Veterans’ self-advocacy skills and academic performance over time receiving supported education services, and (2) investigate factors that influence change in their self-advocacy skills and academic performance. We collected measures of self-advocacy skills (Student Veterans Self-advocacy Skills Assessment [SV-SASA]) and academic performance (grade point average) at six time points for 99 student Veterans enrolled in the New Start for Student Veterans (NSSV) supported education program. We used multilevel modelling to determine whether self-advocacy skills and academic performance changed over time receiving supported education services, and whether first-generation status and dosage of intervention explained change in these outcomes. We additionally investigated whether SV-SASA score influenced change in academic performance. Results indicate that student Veterans’ self-advocacy skills improved over time receiving supported education services. Further, a greater dose of NSSV services was associated with greater self-advocacy skills across the semesters, irrespective of how long they received services. Student Veterans’ academic performance did not change over time spent in the supported education program. We discuss the implications of findings for research and practice.

Keywords: self-advocacy skills; student Veterans; service-related health conditions; academic accommodations; supported education

Since October 2001, approximately 2.77 million United Stated service members have been activated for Operation Enduring Freedom, Operation Iraqi Freedom, and/or Operation New Dawn (Wenger et al., 2018). Compared to previous military campaigns, military personnel serving in these conflicts experienced longer deployments, more frequent re-deployments, and shorter durations between deployments to combat zones (Hosek et al., 2006). These extended and modern military campaigns impose unique physical and psychological trauma on Service Members and have resulted in high rates of service-related health conditions such as PTSD and depression at high rates (Madaus & Miller, 2009; Shackelford, 2009). Compared to civilian students, student Veterans report more severe posttraumatic stress disorder (PTSD), depression, and physical symptoms such as pain or fatigue (Eakman et al., 2016). Service-related health conditions such as PTSD and depression have been associated with decreased academic performance (Bryan et al., 2014; Eakman, et al., 2019) and limited integration into the campus community (Barry et al. 2014). As such, it is imperative that student Veterans receive supports to maximize their success on campus (Church, 2009).

Supported education programs are capable of fostering academic success among student Veterans with service-related health conditions (Smith-Osborne, 2012a, 2012b). Supported education services, including environmental supports, enhance the academic

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2 University of Colorado Anschutz Medical Campus; 3 Colorado State University
success of students with disabilities by empowering them to access resources that compensate for health-related impairments (Mowbray et al., 2005). One such resource for student Veterans is the availability of academic accommodations (Shackelford, 2009). Academic accommodations alter elements of the classroom activities and/or environment to facilitate academic success (e.g., presence of a note taker), and are available to all students with disabilities due to federal legislation (e.g., the ADA Amendments Act of 2008; Pub. L. No. 101-336). In order to implement academic accommodations, however, student Veterans must play an active role in their acquisition, including initiating contact with the university’s disability support office (Lynch & Gussel, 1996). Unfortunately, student Veterans connect with disability services at low rates. For example, a survey of student Veterans revealed that while 77.9% reported functional limitations due to PTSD symptoms, only 5.2% accessed disability-related services (Elnitsky et al., 2018). Supported education services can reduce this discrepancy by promoting student Veterans’ self-advocacy skills (Kinney & Eakman, 2017).

**Self-advocacy Skills Among Student Veterans**

*Self-advocacy skills* are defined as one’s capacity to communicate, and make informed decisions regarding, one’s support needs (Stodden et al., 2003). Self-advocacy skills in the college environment represent the ability to select, acquire, and effectively implement academic accommodations. Accommodations increase academic success among students with disabilities (Keim et al., 1996; Trammell, 2003). Indeed, more effective self-advocacy skills have been linked to better grade point averages among both civilian (Lombardi, et al., 2011) and Veteran students (Kinney & Eakman, 2017) with disabilities. Self-advocacy skills are composed of three essential components: (1) knowledge of self, (2) knowledge of rights, and (3) communication (Test et al., 2005). Supported education services are capable of targeting each component of self-advocacy skills. Many student Veterans require such services to become effective self-advocates (Kinney & Eakman, 2017).

Knowledge of self refers to student Veterans’ appraisal of their strengths, weaknesses, and the ways in which their health condition affects daily functioning (Test et al., 2005). Service-related health conditions experienced by student Veterans are often newly-acquired, and as such, they may need ongoing support to develop an understanding of how their health condition impacts classroom performance (Kinney & Eakman, 2017). Psychoeducational approaches can improve student Veterans’ knowledge of self and how to apply this understanding to selecting and implementing effective academic accommodations (Summers et al., 2014).

Knowledge of rights refers to student Veterans’ awareness of available accommodations and other disability-related services, and an understanding of the process by which one acquires them (Test et al., 2005). Student Veterans with newly-acquired disabilities may have limited awareness of available supports and/or the rules governing their provision (Kinney & Eakman, 2017). Thus, effective interventions educate students on available supports and their responsibilities in securing those supports (Palmer & Roessler, 2000; White & Vo, 2006).

Communication refers to student Veterans’ ability to effectively communicate their needs through articulating their support needs to those who provide them (Test et al., 2005). Service-related health conditions such as PTSD and depression may produce cognitive and emotional impairments that limit interpersonal skills (Daggett et al., 2013; Resnik & Allen, 2007). Effective communication skills can also be enhanced through targeted education and role-playing (Palmer & Roessler, 2000; Walker & Test, 2011).

In sum, self-advocacy skills are an important, and potentially modifiable, target for supported education services seeking to foster academic success among student Veterans with service-related health conditions. However, the impact of supported education services on both self-advocacy skills and academic success among student Veterans remains poorly understood (Kinney & Eakman, 2017). The purpose of this study was twofold. First, we sought to investigate whether a supported education program for student Veterans with service-related health conditions improved their self-advocacy skills and academic performance. Second, we sought to investigate whether features of the student Veteran and/or service delivery helped explain program outcomes. Understanding factors that influence response to treatment is critical for the development of interventions, and can inform efforts to maximize their effectiveness (Fleury & Sidani, 2012). Specifically, we investigated whether first-generation status (i.e., parents have no college experience) and dosage of supported education services explained student Veterans’ response to the intervention.

We hypothesized that (1) student Veterans’ self-advocacy skills would improve over time receiving supported education services. Additionally, we hypothesized that (1a) first-generation student Veterans would experience lesser improvement in self-advocacy skills compared to continuing-generation student Veterans, and that (1b) student Veterans
with higher dosages of supported education services would experience greater improvement in self-advocacy skills. Further, we hypothesized that (2) student Veterans’ academic performance would improve over time receiving supported education services. Moreover, we hypothesized that: (2a) first-generation student Veterans would experience lesser improvement in academic performance compared to continuing-generation student Veterans; (2b) student Veterans with higher dosages of supported education services would experience greater improvement in academic performance; and (2c) student Veterans with greater self-advocacy skills would experience greater improvement in academic performance.

**Method**

**Participants and Procedures**

This is a prospective longitudinal design study. Participants were student Veterans with service-connected injuries who received New Start for Student Veteran (NSSV) services, a supported education program for Veterans with disabilities at Colorado State University (CSU). NSSV is a person-centered supported education program for Veterans with service-connected disabilities attending college. Individualized supports are provided by three trained student Veteran coordinators in face-to-face meetings throughout the academic year. The foundational structure is hour-long weekly meetings, but the frequency increases or decreases based on a participant’s changing circumstances and needs over time. Most meetings occur in the coordinators’ offices; however, coordinators occasionally meet participants on campus or in the community to address specific challenges. The NSSV team also meets weekly to discuss recent challenges and successes, upcoming issues and opportunities, and to ensure program fidelity.

The multifaceted services are broadly classified into five categories: (1) social support, (2) academic advising and study skills, (3) connecting with campus and community resources, (4) health and wellness, and (5) community integration and participation. The types and intensities of services provided are based on the perceived needs and preferences of the participants as well as the clinical judgment of the coordinators, and they vary over time and circumstance. However, the common thread across all services and activities is enhancing student Veterans’ self-advocacy skills. The NSSV program is grounded in the belief that effective self-advocacy is fundamental to all aspects of one’s life including interpersonal relationships, academic achievement, career success, and overall health and wellbeing.

This study received approval by CSU’s Human Subjects Review Board, and each participant completed an informed consent. A NSSV practitioner familiar with each participant completed an online survey to assess participants' self-advocacy skills every semester from fall 2015 to spring 2018, yielding six possible measurement occasions. 99 participants were eligible for analysis, with 76 receiving a second measurement (76.77%); 44 receiving a third measurement (44.44%); 24 receiving a fourth measurement (24.24%); 11 receiving a fifth measurement (11.11%); and seven receiving all six measurements (7.10%). Additional data for each participant was obtained through institutional and clinical records.

**Instruments**

**Self-advocacy skills.** We measured self-advocacy skills at each measurement occasion using the seven-item Student Veteran Self-advocacy Skills Assessment (SV-SASA), a valid and reliable measure of self-advocacy skills among student Veterans (Kinney & Eakman, 2017). A practitioner with a thorough understanding of the student Veterans’ self-advocacy skills scored each item on a scale of 1 (poor) to 4 (excellent), with higher scores indicating that less practitioner support was needed to implement the skill. We used Rasch analysis to improve the measurement precision of the SV-SASA. Specifically, we evaluated each SV-SASA item regarding effective use of the rating scale and revised the rating scale to improve measurement precision according to guidelines by Bond and Fox (2007). We then constructed a Rasch score for the SV-SASA; scores ranged from 0-100, with higher scores indicating more effective self-advocacy skills.

**Academic performance.** We obtained semester grade point average (GPA) through institutional records. We were unable to obtain semester GPA for 16 participants, leaving N = 83 participants with baseline GPA data, 64 with two GPA measurements (77.10%); 40 with three GPA measurements (48.19%); 22 with four GPA measurements (26.51%); 10 with five GPA measurements (12.05%); and seven with six GPA measurements (8.43%).

**Time in NSSV.** We measured length of time receiving NSSV services by calculating the difference (in years) between the initial assessment date and dates of the measurement occasions.

**Dosage of NSSV services.** Dosage reflects the total hours of services received in a given semester.

**Demographic characteristics.** Age and first-generation status were obtained by accessing institutional records.
Self-reported health conditions. Participants were asked to disclose any health conditions they were experiencing; these self-reported conditions were used to profile the sample. Health conditions were classified into the following discrete categories: PTSD; physical/orthopedic injury; brain injury; sensory impairment (e.g., visual deficits); anxiety; depression; cognitive impairment (e.g., memory deficits); developmental condition (e.g., attention deficit disorder); other psychological condition (e.g., bipolar disorder); other neurological condition (e.g., spinal cord injury); other physical condition (e.g., cancer); and sleep disturbance.

Data Analysis

All analyses were performed using R statistical software (R Core Team, 2015). We calculated descriptive statistics for study variables at each measurement occasion. We tested hypotheses using multilevel modeling (MLM), which is a flexible approach to analyzing longitudinal data. Data from participants with varying numbers of observations can inform the calculation of estimates, as opposed to other methods which exclude participants with incomplete data (Singer & Willett, 2003).

We modeled repeated measures of our two outcomes: (1) SV-SASA score and (2) semester GPA. Models were specified using the “lme4” R package (Bates, et al. 2015) with restricted maximum likelihood estimation. We initially specified models with each of the outcomes, but no predictors, to calculate the intra-class correlation coefficient (ICC). The ICC provides insight into sources of variation in the outcome by indicating the proportion of total variability in the outcome that lies between participants (Singer & Willett, 2003; Tabachnick & Fidell, 2013).

We then added predictor variables (first-generation status [0 = continuing generation; 1 = first generation]; dosage of NSSV services) in a stepwise fashion. Variables failing to meet the a priori level of significance (α = .05) were removed. We examined the main effects and interactions with time in NSSV for each predictor variable to assess the overall relationship between predictors and outcomes, and whether the relationships vary over time (Singer & Willett, 2003). We included SV-SASA scores to the model predicting GPA. Additionally, we controlled for age and the baseline values of each outcome.

Results

The average age for participants at baseline was 31.3 (SD = 5.9). Forty-six participants were first-generation students (46.46%). On average, participants self-reported 2.00 health conditions (SD = 0.10). The most commonly reported condition was posttraumatic stress (n = 55 [55.6%]), followed by a physical/orthopedic injury (n = 38 [38.4%]) and brain injury (n = 34 [34.3%]). See Table 1 for a comprehensive summary of self-reported health conditions.

Table 2 presents descriptive statistics for study variables across measurement occasions. Means for the SV-SASA scores indicate a substantial decrease in SV-SASA scores from the fourth to the fifth measurement occasion. This is likely an artifact of the reduction in sample size from the fourth (n = 24) to the fifth (n = 11) measurement occasions. The use of MLM compensates for such discrepancies by using characteristics of those with varying numbers of measurement occasions to inform the calculations for estimates of change (Singer & Willett, 2003). As such, relative to reviewing change in the observed means over time (Table 2), a more robust estimate of change in the outcomes is the fixed effect of time in NSSV (Table 3).

The ICC for both models supported the use of a MLM approach. The ICC for the model explaining self-advocacy skills indicated that 58.8% of the variability in SV-SASA scores was attributable to individual-level factors. The ICC for the model explaining semester GPA indicated that 71.0% of the variability in semester GPA was attributable to individual-level factors.

Model Explaining Self-advocacy Skills

Self-advocacy skills improved over time in the NSSV supported education program (b = 3.92, SE = 0.96, p < .001). It is important to reiterate that this estimate reflects change in self-advocacy skills among those with identical baseline levels of self-advocacy skills, thereby strengthening support for the assertion that exposure to NSSV services may have influenced the student Veterans’ ability to self-advocate. Dosage of NSSV was also statistically significant, indicating that irrespective of how long the participant received NSSV services, a greater dose of NSSV services in a given semester was associated with greater self-advocacy skills (b = 0.21, SE = 0.10, p = .041). However, the interaction between dosage of NSSV services and time in NSSV was not statistically significant (b = -0.19, SE = 0.14, p = .174). With respect to first generation status, the main effect (b = -2.80, SE = 2.99, p = .349) and its interaction with time in NSSV (b = 2.22, SE = 1.98, p = .262) were not statistically significant. See Table 3 for final model results.

Model Explaining Semester GPA

GPA did not change over time in NSSV supported
education services \((b = -0.02, \ SE = 0.04, \ p = .564)\). First-generation status \((b = 0.11, \ SE = 0.12, \ p = .374)\) and its interaction with time in NSSV \((b = 0.01, \ SE = 0.08, \ p = .880)\) were not statistically significant. Similarly, dosage of NSSV services \((b = -0.01, \ SE = 0.01, \ p = .412)\) and its interaction with time in NSSV \((b = 0.00, \ SE = 0.01, \ p = .594)\) were not significant. Lastly, self-advocacy skills \((b = 0.00, \ SE = 0.00, \ p = .362)\) and its interaction with time in NSSV \((b = 0.00, \ SE = 0.00, \ p = .393)\) were both statistically insignificant. See Table 3 for final model results.

## Discussion

It has been proposed that supported education programs are capable of bolstering the self-advocacy skills of student Veterans with service-related health conditions, thereby providing them with the tools needed to achieve academic success (Kinney & Eakman, 2017). Our study is the first to provide evidence supporting this proposition. Specifically, student Veterans’ self-advocacy skills improved as they spent more time receiving services that supported their: (1) reflection upon their personal strengths and weaknesses; (2) knowledge of disability-related supports (e.g., academic accommodations) and the processes by which they access them; and (3) clear communication with those who provide disability-related supports. This finding suggests that self-advocacy skills may be an important and modifiable target of supported education services for student Veterans with disabilities. Previous studies have shown that supported education programming for civilian students improved outcomes such as academic achievement (Unger et al., 2000), academic-related behaviors (e.g., study skills; Getzel et al., 2004), and interpersonal skills (Gutman et al., 2009). However, further research is needed to refine our understanding of the impact of supported education services upon the self-advocacy skills of both civilian and Veteran students (Webb et al., 2008).

Higher dosages of NSSV supported education services was associated with more effective self-advocacy skills, across semesters, but irrespective of time receiving NSSV. In other words, student Veterans tended to be more effective self-advocates when they received more NSSV services within a given semester. This bolsters our limited understanding of the optimal dose-response relationship for student Veteran supported education programs. Understanding the dose-response relationship is a critical component of systematically developing effective interventions (Fleury & Sidani, 2012). While our findings suggest that higher dosages of supported education services may be linked to more positive outcomes among student Veterans, continued research is necessary to establish the precise amount of treatment that is most cost-efficient, safe, and effective (Whyte & Barrett, 2012).

None of the variables included in either model demonstrated a statistically significant interaction with time receiving NSSV services. This indicates that factors influencing student Veterans’ responsibility to supported education services remains poorly understood. Understanding the characteristics of individuals for whom an intervention is more, or less, effective is a crucial component of systematic intervention development (Whyte & Barrett, 2012). Such an understanding allows service delivery to be precisely tailored to individuals with particular characteristics, thereby maximizing the intervention’s efficacy (Fleury & Sidani, 2012). Continued research is necessary to understand variability in responsiveness to supported education services across different subgroups of student Veterans. For example, we did not include standardized assessments of symptoms of health conditions (e.g., PTSD symptoms). Future research should consider if student Veterans with differing profiles of health-related symptoms respond differently to supported education programming (Whyte & Barrett, 2012).

Our study indicated that student Veterans’ academic performance did not change over time receiving supported education services. Further, greater self-advocacy skills did not contribute to an improvement in academic performance as hypothesized. These null findings may be attributable to our chosen method of assessing student Veterans’ academic performance. Grade point average (GPA) was relatively stable over time in our sample of student Veterans, which is an acknowledged quality of this particular metric of academic performance (e.g. Hartnett & Willingham, 1980). As such, once we controlled for baseline GPA, there may have been little variability for our proposed variables to explain. Future research should employ measures of academic-related ability that exhibit greater variability and sensitivity to change. For example, previous studies have employed measures of student Veterans’ academic-related behaviors (e.g., difficulty studying) that demonstrated ample variability (Bryan et al., 2014; Eakman et al., 2019). Employing such assessments could therefore foster an understanding of modifiable factors capable of promoting academic success of student Veterans with service-related health conditions.

## Limitations and Future Research

This study employed a longitudinal design, and therefore compares favorably to cross-sectional de-
signs with respect to satisfying criteria for causal assertions (Menard, 2002). However, our design is unable to completely satisfy criteria for causality, and should not be interpreted as such. In particular, we were unable to adjust for several variables in our models that could potentially influence responsibility to supported education services, including the (1) service provider assigned to each individual student Veteran; (2) time since deployment, (3) severity of combat exposure, and (4) severity of health-related challenges. Nonetheless, our study lays a foundation upon which future research could support causal claims by employing designs capable of doing so (e.g., experimental designs). In addition, we used a relatively small sample of student Veterans with health conditions that was drawn from one university. As such, our sample may not be representative of all student Veterans with health conditions, thereby limiting the generalizability of our findings. Future research should attempt to replicate this study using larger samples from multiple sites.

While this study linked more time receiving supported education services to improvement in self-advocacy skills, future research should attempt to link specific components of the intervention to outcomes of interest. To be sure, self-advocacy skills training is a foundational component of NSSV services. However, it remains a multi-component intervention that includes services that are distinct from self-advocacy skills training (e.g., development of study skills; see Kinney & Eakman, 2017). Testing links between specific components of supported education services and outcomes of interest (e.g., self-advocacy skills training and self-advocacy skills) will provide more precise guidance on the aspects of the intervention that are contributing to intended benefits (Fleury & Church, 2009). Returning veterans on campus experience worse mental health stigma than their peers? A comparative study in a national sample. Journal of Rehabilitation Research and Development, 51, 1035-1046.


Conclusion

This was a longitudinal study that investigated whether student Veterans’ self-advocacy skills and academic performance changed over time receiving supported education services. In addition, we investigated whether specific factors influenced their response to the intervention. Our findings indicate that student Veterans’ self-advocacy skills improved over time receiving New Start for Student Veterans (NSSV) supported education services. Further, a greater dose of NSSV services was associated with greater self-advocacy skills within each semester. However, time spent receiving NSSV services was not linked to change in academic performance.

References


About the Authors

Adam Kinney received his B.A. in Psychology and Statistics from St. John Fisher College, his M.S. in Occupational Therapy from Ithaca College, and his Ph.D. in Occupation and Rehabilitation Science from Colorado State University. At the time of this study, he was a PhD Candidate at Colorado State University. He is currently a Polytrauma/TBI Advanced Postdoctoral Fellow in the Rocky Mountain MIRECC for Suicide Prevention, Department of Veterans Affairs. His primary research interests include investigating factors that influence the successful implementation of guideline-concordant care among Veterans with a history of mild traumatic brain injury. He can be reached by email at: adam.kinney@va.gov.

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Table 1

Self-Reported Health Conditions of Student Veterans (N = 99)

<table>
<thead>
<tr>
<th>Health Condition</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of self-reported health conditions (M ± SD, min – max)</td>
<td>2.00 ± .96 (0 – 5)</td>
</tr>
<tr>
<td>PTSD</td>
<td>55 (55.6)</td>
</tr>
<tr>
<td>Physical/orthopedic injury</td>
<td>38 (38.4)</td>
</tr>
<tr>
<td>Brain injury</td>
<td>34 (34.3)</td>
</tr>
<tr>
<td>Sensory impairment</td>
<td>22 (22.2)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>15 (15.2)</td>
</tr>
<tr>
<td>Depression</td>
<td>8 (8.1)</td>
</tr>
<tr>
<td>Cognitive impairment</td>
<td>6 (6.1)</td>
</tr>
<tr>
<td>Developmental condition</td>
<td>5 (5.1)</td>
</tr>
<tr>
<td>Other psychological condition</td>
<td>4 (4.0)</td>
</tr>
<tr>
<td>Other neurological condition</td>
<td>4 (4.0)</td>
</tr>
<tr>
<td>Other physical condition</td>
<td>4 (4.0)</td>
</tr>
<tr>
<td>Sleep disturbance</td>
<td>3 (3.0)</td>
</tr>
</tbody>
</table>

Note. PTSD = post-traumatic stress disorder; one participant reported no health conditions; participants eligible to report multiple conditions.
Table 2

Descriptive Statistics for Study Variables at Each Measurement

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement Occasion</th>
<th>M (SD)</th>
<th>1 (n = 99)</th>
<th>2 (n = 76)</th>
<th>3 (n = 44)</th>
<th>4 (n = 24)</th>
<th>5 (n = 11)</th>
<th>6 (n = 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-advocacy skills</td>
<td></td>
<td>46.29 (17.23)</td>
<td>49.48 (18.71)</td>
<td>53.02 (20.35)</td>
<td>61.82 (21.74)</td>
<td>51.38 (25.26)</td>
<td>52.16 (24.34)</td>
<td></td>
</tr>
<tr>
<td>Semester GPA</td>
<td></td>
<td>2.85 (1.03)</td>
<td>3.06 (0.70)</td>
<td>2.89 (1.01)</td>
<td>3.21 (0.59)</td>
<td>2.93 (0.94)</td>
<td>2.77 (0.46)</td>
<td></td>
</tr>
<tr>
<td>Time in NSSV (years)</td>
<td></td>
<td>0.68 (0.63)</td>
<td>1.12 (0.60)</td>
<td>1.63 (0.58)</td>
<td>2.20 (0.64)</td>
<td>2.65 (0.45)</td>
<td>3.09 (0.42)</td>
<td></td>
</tr>
<tr>
<td>Dosage of NSSV services (hours)</td>
<td></td>
<td>5.68 (8.24)</td>
<td>6.30 (9.35)</td>
<td>7.66 (8.84)</td>
<td>6.30 (9.35)</td>
<td>6.80 (8.24)</td>
<td>7.66 (8.84)</td>
<td></td>
</tr>
</tbody>
</table>

Note. GPA = Grade point average; Student Veterans. Sample sizes at each measurement for semester GPA are as follows: n = 83 at first measurement, n = 72 at third measurement, n = 22 at fourth measurement, n = 10 at fifth measurement, n = 9 at sixth measurement, and n = 7 at sixth measurement.
### Table 3

Parameter Estimates From Final Multilevel Models

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final model explaining self-advocacy skills (N = 99)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>4.72</td>
<td>2.99</td>
</tr>
<tr>
<td>Time in NSSV (years)</td>
<td>3.92***</td>
<td>0.96</td>
</tr>
<tr>
<td>Age</td>
<td>-0.04</td>
<td>0.15</td>
</tr>
<tr>
<td>Hours of NSSV service</td>
<td>0.21*</td>
<td>0.10</td>
</tr>
<tr>
<td>Baseline level of self-advocacy skills</td>
<td>0.82***</td>
<td>0.06</td>
</tr>
<tr>
<td>Random effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept variance</td>
<td>35.56</td>
<td>5.96</td>
</tr>
<tr>
<td>Residual variance</td>
<td>127.91</td>
<td>11.31</td>
</tr>
<tr>
<td>-2LL</td>
<td>2053.83</td>
<td></td>
</tr>
<tr>
<td>AIC</td>
<td>2072.97</td>
<td></td>
</tr>
<tr>
<td><strong>Final model explaining semester GPA (N = 83)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>0.41**</td>
<td>0.13</td>
</tr>
<tr>
<td>Time in NSSV (years)</td>
<td>-0.02</td>
<td>0.04</td>
</tr>
<tr>
<td>Age</td>
<td>-0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Baseline GPA</td>
<td>0.87***</td>
<td>0.04</td>
</tr>
<tr>
<td>Random effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept variance</td>
<td>0.01</td>
<td>0.11</td>
</tr>
<tr>
<td>Residual Variance</td>
<td>0.23</td>
<td>0.48</td>
</tr>
<tr>
<td>-2LL</td>
<td>306.03</td>
<td></td>
</tr>
<tr>
<td>AIC</td>
<td>340.64</td>
<td></td>
</tr>
</tbody>
</table>

Note. SE = standard error; NSSV = New Start for Student Veterans; GPA = grade point average; *p ≤ .05; ** p ≤ .01; *** p ≤ .001
Disclosing the Undisclosed? Perceptions of Dutch Higher Education Students on Disclosing their Disabilities

Minne Bakker¹
Florence van Mierlo²
Geert Van Hove²,³
Alice Schippers¹,²

Abstract

Research has shown that students with disabilities who do use accommodations are more successful in terms of final degree classification compared to those who do not. However, in Dutch universities, access to accommodations must be requested at different levels, meaning that disclosure of ones’ disability is inevitable. The official numbers of Dutch students with disabilities registered differ greatly from self-stated numbers (9.4% vs 30%) (Steenkamp, 2015; Van den Broek et al., 2013). This implies that not all students disclose their disabilities at university. Little is known about how and why students choose (not) to disclose their disabilities. This paper describes the results of a qualitative cross-disability study regarding the disclosure strategies of students in higher education by reporting how Dutch university students deal with the disclosure of their disabilities to the university, teachers, and fellow students.

Keywords: university students, disability, disclosure, perceptions

Over the last decade, the number of students with disabilities entering higher education in Western society is increasing (Gil, 2007; Hong, 2015). In the Netherlands, although the numbers are increasing, they are still relatively low. According to official statistics, in 2010 6.5% of full-time students in both higher vocational and university education had a disability, and in 2015 this number had increased to 9.4% (Steenkamp, 2015). The self-stated numbers are higher. In 2015 30% of students in higher education self-stated that they have some form of disability, of whom 10% said they experienced challenges or barriers related to their disabilities that affect their ability to study (Van den Broek, Muskens, & Winkels, 2013).

In order to reduce the potentially negative effects of the barriers, the international community has introduced legislative interventions, including the United Nations Convention on the Rights of Persons with a Disability (UN CRPD, United Nations, 2006). In July 2016, the Netherlands ratified the UN CRPD, meaning that Dutch higher education institutions are expected to take active steps to support inclusive higher education. Up to a certain level, the Dutch government tries to facilitate students with disabilities to study by giving them the possibility of requesting special funding to compensate for any study delay. The increased numbers of students with disabilities accessing university have an impact on institutional support services, and support structures. Williams et al. (2017) have reviewed the models of support of disabled students in higher education in the UK. This study shows the trend towards more in-house support, meaning that the support staff is directly employed by the higher education institute, provided through a combination of central support and faculty level services focusing on academic concerns.

Although the institutions’ support system seems to be shifting towards a more social model of disability (where it is the society that disables individuals), many current funding systems still emphasise on an individual (medical) model, requiring individual disclosure to secure financial funding (Williams et al., 2017). A recent Dutch national survey shows that support funding is rarely used by students with disabilities in the Netherlands (Inspectie van het Onderwijs, 2018). Indeed, research shows a vast gap between the broad perspective of possibilities created by national legislation and the actual support given by higher education institutions to students with disabilities (Lane, 2017). At the same time, research has shown

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that students with disabilities who do use accommodations are more successful in obtaining their degree than those who do not (Denhart, 2008; Dryer et al., 2016; Getzel & Thoma, 2008; Grimes et al., 2017).

Not only when applying for national funding, but also when applying for in-house support at universities, self-disclosure is requested for accommodations. As in many university systems, in the Netherlands students with disabilities must request access to accommodations at the student office of the university. This demands disclosure of their disabilities, often accompanied by specific levels of proof of the disabilities. This proof can be difficult, costly, and time-consuming to obtain—and sometimes it needs to be done multiple times. Once the students receive accommodations through the university, they often again are required to reveal their disabilities to individual teachers as well.

When looking at the numbers, research shows particular increases in the proportion of individuals with mental health conditions and specific learning difficulties (Centrum Hoger Onderwijs Informatie [CHOI], 2018; Williams et al., 2017). In the Netherlands, 35% of the university students with disabilities report mental health problems, compared to 5% students with physical problems (CHOI, 2018). The extent to which an individual can hide their disabilities plays a pivotal role in the disclosure process. Students with invisible disabilities have to actively decide whether to disclose their disabilities, when, to whom and to which extent (Norstedt, 2019). Having to actively decide about disclosure often brings along multiple dilemmas for the person concerned. Not disclosing one’s disabilities and thereby choosing for the strategy of passing as “normal” (Goffman, 1986) can evoke negative emotions and feelings of shame for misrecognizing who one is and can as a result cause feelings of “internal dissonance” (Samuels, 2003, p. 239). Disclosing, on the other hand, can cause barriers such as being granted less opportunities or in general being treated differently (e.g., by students and staff), being stigmatized or discriminated (Åsbring & Närvånen, 2002; Norstedt, 2019).

Recently, some studies have looked into the reasons for students to choose (non-)disclosure to the higher education institute (Cole & Cawthon, 2018; Grimes et al., 2018). Although these insights are relevant, it remains unclear how and why students choose to disclose to specific individuals, such as teachers or fellow students. In addition, most former studies focused on specific groups of students, such as students with mental health problems or learning disabilities (Cole & Cawthon, 2018; Lightner et al., 2012; Martin, 2010; Roth et al., 2018), whereas in this study a cross-disability perspective is used. An overview of disclosure strategies of students in higher education is, to our knowledge, still lacking. Therefore, the aim of this article is to give insight into how and why Dutch university students deal with the disclosure of their disabilities to university, teachers, and fellow students. Better understanding of the reasons for students to either disclose or not disclose their disabilities to different parties has the potential to improve support mechanisms for students with disabilities.

Methods

Design

The general aim of the study was to investigate experiences of students with disabilities during their studies at the VU University Amsterdam, in which disclosure was one subject. A qualitative research design was chosen (Guba & Lincoln, 1989). As a qualitative research instrument, semi-structured interviews were chosen, as these are preferred for gaining an understanding of personal experiences (Lincoln et al., 1985). Content analysis was used to explore the data (Elo & Kyngäs, 2008; Kvale, 1996).

Data Collection

Purposive sampling was used to capture diversity in respondent characteristics. Characteristics such as gender, field of study, academic year, and type of disability were taken into account during the recruitment process. A call for respondents was spread through leaflets provided to different departments and via an online student platform. In addition, snowball sampling was used after each interview, by asking respondents if they knew any other students who could be approached.

During the interviews with students at VU University Amsterdam, a topic guide was used. This guide was developed based on relevant literature about barriers experienced by Dutch higher education students with disabilities (e.g., Steenkamp, 2017; Van den Broek et al., 2015). Afterwards, topics were discussed with experts from www.ervaringswijzer.nl, a platform where people with disabilities exchange experiences of living with their disabilities. The guide contained topics that covered themes about how nondisclosure played a role in students’ study experiences, any problems they encountered, how the university, the teaching staff such as lecturers, mentors and teachers, and fellow students handled these problems, and their expectations concerning support of these three groups. In consultation with the respondents, interviews took place at the university. All interviews were held face-to-face and were carried out.
by students of the VU University Amsterdam. Prior to data collection the students followed a training on how to conduct qualitative interviews.

After respondents’ permission, interviews were audio-recorded and transcribed verbatim. The interviews were conducted between November 2014 and April 2015, and lasted 45 minutes on average. All respondents took part voluntarily. Confidentiality was maintained through restricted access to the data, destruction of the audio files following transcription, and decoupling the transcripts from identifying information.

**Respondents**

Sixteen students, nine females and seven males, ranging from 19 to 26 years of age agreed to participate in the study. Respondents were studying at VU University Amsterdam in different faculties (i.e., Faculty of Science, Medical Faculty, Faculty of Law, Faculty of Behavioural and Movement Sciences, Faculty of Social Sciences, and Faculty of Economics and Business Administration). Students were diagnosed prior to their enrollment at VU University Amsterdam with physical, mental health problems and/or learning disabilities. Diagnoses varied widely, and included Multiple Sclerosis, Crohn’s disease, Delayed Sleep-Phase Syndrome, dyslexia, depression, and obsessive-compulsive disorder (Table 1). Following the UN CRPD, a cross-disability approach was chosen deliberately, meaning that respondents were not grouped based on diagnosis, but on shared experiences. This decreases the risk of stigmatisation (as it does not focus on specific illness characteristics) and increases insights into the common elements of different diseases or disorders (Hoppe et al., 2011). Most respondents had experienced disability-related symptoms during the period when the interview was conducted. Several respondents were behind in their studies, while others were still on schedule. It should be noted that all respondents had non-visible disabilities, meaning that they actively choose to either disclose or not. Their considerations will be discussed in the results.

**Data Management and Analysis**

During an initial process of inductive open coding of the wide-ranging interviews, in which the first and second author went through the data in detail to identify all the themes that could characterize what is being said. We looked for in vivo categories used by participants themselves to describe the world. In this first open coding different themes were identified. These were for example themes regarding choices of going to university, expectations students had towards themselves and the university and experienced societal expectations. Also the theme of disclosure was identified as an important theme, as this played a role in many aspects of the respondents’ experiences. Based on this first open coding, the decision was made to focus the further analysis on the theme of disclosure. Following the thematic coding process (Green & Thorogood, 2018), all interviews were then again thoroughly read. Afterwards, interviews were coded, resulting in a coding scheme with themes and sub-themes. In this phase, deliberation about codes by the first two authors took place to improve confirmability of the findings (Frambach, Van der Vleuten, Durning, 2013). In the last coding phase, codes and themes were organized and structured. After finishing the coding process, corresponding quotes were compared, and the most suitable were selected for the final report.

**Results**

In this section, an overview of the findings is given. First is described how students with disabilities consider disclosure to fellow students, then to teachers, and finally considerations regarding disclosure to the university are given.

In general, the analysis showed that students considered disclosure at different moments showing that disclosure is not static or singular event, but rather something that has to be handled on a daily basis (Samuels, 2003). Overall, two moments can be distinguished; the first is during enrollment, when the university asks new students to fill out forms that include questions about special needs or disabilities. This specifically involves disclosure to the university. Disclosure to individuals (teachers of specific courses and fellow students) finds place during the academic year. This shows that disclosure to the university happens at a different time and in a different manner than to individuals. The respondents made different considerations regarding their disclosure which will be discussed hereafter, but for all it was something they explicitly thought about: “I think sometimes it is hard to disclose. It took me half a year before I even mentioned it [the disability] at all” (Respondent 1, multiple sclerosis).

**Disclosure to the University**

In general, most disclosing students informed the university about their disabilities right at the start of their education, by filling in a general university form that is sent to all students and includes questions related to special needs. The main reason for respondents to disclose to the university was a desire for information and advice, but they also saw it as a precaution in case something went wrong.
during their study due to their disabilities.

At the start of my study I told the study advisor about my disability. Not because I was suffering at that time, but just in case if something should happen, they are already aware and they are able to help as good as possible. (Respondent 4, complex regional pain syndrome, imbalance problem, hyperacusis)

Respondents hoped that the university would take their disabilities into account and help them with adjustments if needed. Some students hoped the university would take initiative upon their disclosure of their disabilities. They pointed out that expecting them to request support themselves creates a high threshold. They also did not expect having to discuss their disabilities time and time again.

I think that the student advisor should contact the students that have given notice of their disability. Then it also seems he or she is interested, and I think that will be better than the other way around…If you don’t like to talk about it, I think you wouldn’t easily send an e-mail or make an appointment. (Respondent 13, eating disorder)

A couple of respondents decided not to disclose their disabilities at all upon enrollment. They felt that nobody would take their needs into account, and therefore disclosure would not be beneficial. The fact that the university is a large institute where people are not known individually also seems to play a part in the decisions of some respondents not to disclose.

I already had in mind that the chance [of doing an exam verbally] is zero [laughing]. So, with this idea I thought “whatever,” I am going to do it just like I always did, which means I have to study more than two hours every day. That is how I dealt with it. . . . The dean is not interested in individual students anyway. (Respondent 10, dyslexia)

Disclosure to Fellow Students

The context of the university, and especially the way in which classes are organised, had an impact on the disclosure strategy of respondents. In Dutch universities, students often change classes and classmates per course, meaning that they do not work with the same group of students over a longer period. This creates a higher barrier for students as they consider disclosing their disabilities, as they know they will have to do so again in every new course. Due to the changing composition of the classes, students seemed to feel less part of a group, and they expected other students to not have too much interest in them either: “Because I am always with different people, I do not know them very well. That is why I do not tell them I have autism. It is no use to them anyway” (Respondent 12, autism).

Some respondents chose not to be open about their situation, even when they needed to explain their absence. This seemed to be more often the case for respondents with non-physical barriers. The barrier to being open about their situation was experienced as higher by students with mental health and learning disabilities.

When my situation became worse and I was absent, I always said that I was just ill and then I did my share [of the assignment] just another time. I do not think my fellow students really need to know what disorders or diseases I have. (Respondent 13, eating disorder)

On the other hand, there were also respondents who explained that they chose to be open about their situation. Sometimes they did not give a lot of detail about their condition, but they decided to provide enough information so that fellow students understood the situation and could act upon it. This was especially the case for respondents who needed help from fellow students because of their disabilities. In these situations, it is considered that non-disclosure can create risks if an emergency situation occurs and bystanders are unaware of the practical or medical measures that must be taken. Disclosing necessary information to avoid risks is a common strategy in these situations (Charmaz, 2010; Norstedt, 2019).

I did not inform them [students] about CRPS [Complex Regional Pain Syndrome]. However, I did tell them about the hyperacusis and the imbalance problem. I briefly explained what it is and that it is possible that I get ill unexpectedly. And because we also have practical courses, also in a research lab, I told my study partner and teacher just what to do or what not to do in case of an attack. So everybody is a bit prepared of what can happen. (Respondent 4, complex regional pain syndrome, imbalance problem, hyperacusis)

In general, the respondents who disclosed to fellow students chose to be open about their disabilities to only a small group of students, often those with whom they worked on assignments. One of the respondents explained that by being open about her situation, she hoped to get some support from fellow
students during assignments, and also to deal with the possibility that her health could get worse.

I let them [students she works with on an assignment] know that I hope they will take this [the disability] into account. And explain to them that when I’m in the hospital, that I appreciate them to come visit me or something. (Respondent 5, cystic fibrosis)

One respondent seemed to have a more idealistic reason for her disclosure. She hoped that by being open about her disability, it would create more understanding, and taboos might be broken. This respondent chose to be open about her disability and explain aspects of the disability to fellow students. She felt this could lead to more acceptance and respect. “Above all I would say, talk about it! It is not something weird and it only helps if you talk about it” (Respondent 16, obsessive-compulsive disorder).

Overall, the respondents showed to be hesitant in disclosing their disabilities to fellow students, mainly due to the regularly changing class composition.

**Disclosure to Teachers**

The results show that the respondents have different reasons to disclose their disabilities to mentors and teachers, compared to fellow students. The main reason to voluntarily disclose their disabilities was because they hope to receive some understanding of their situation. “I told my mentor in advance, like okay, I have Asperger’s. Merely so he can keep this in mind for evaluations or gradings” (Respondent 9, Asperger syndrome).

I also always inform the teacher, because we have obligatory meetings and the chances are high that I’ll miss one, and I do not think it would be fair if they would decline further participation in the course because of that. (Respondent 5, cystic fibrosis)

Until recently, it was necessary for students to report their disabilities to every course coordinator, as the system did not automatically inform the coordinators about the special needs of the students. This was experienced as very frustrating by the respondents, because it also meant that they sometimes were obliged to disclose their disabilities in front of fellow students.

I indicated my anxiety disorder at enrollment, so I do not understand at all why I have to explain it again and again in each course, and that they are not able to connect this to my student number. In this way anyone would be able to see that I have this when they check my number. (Respondent 14, anxiety disorder)

However, for a variety of reasons, most respondents chose not to inform their teachers about their disabilities. First, they felt that telling about their disabilities would probably lead to people treating them differently, either by feeling sorry for them or by stigmatizing them.

Yes, indeed that is weird, I just do not want to give in and I do not want to be treated differently. That is also the reason why I have not chosen to make exams in separate rooms. Because, you know, you just want to be normal. (Respondent 3, attention deficit hyperactivity disorder)

On the one hand, you explain to people that you have a quite serious disease, and that it also has many implications for what you can and cannot do and that you often are in the hospital and things like that. But on the other hand, I have never wanted to be treated as the “sick girl.” (Respondent 5, cystic fibrosis)

Second, respondents seemed to use their time at university as a foretaste of their later work life, and in a way compared their relationship with their teachers with that of an employer. Students with different kind of disabilities said they did not expect their future employer to take their needs into account. They follow the same strategy as many employed people with invisible disabilities (Norstedt, 2019) and try to pass as “normal” (Goffman, 1986). They felt that others see their disabilities as something negative, which they therefore try to hide. “The thing is that you don’t want people, in the future in the work field, to know this of you because it is a weakness. Yes, yes it’s a weakness” (Respondent 10, dyslexia).

Then I decided for myself, well okay, I could go to people and ask for help, but I cannot do that forever and so I will have to manage things myself. So in fact that is what I am going to do. (Respondent 9, Asperger syndrome)

**Discussion**

This paper has given insight into how university students deal with the disclosure of their disabilities to the university, teachers, and fellow students. Findings from this study suggest that, although it is not
always a choice to keep one’s disabilities a secret, most respondents seemed reluctant about being open about their disabilities. If they choose to be open, they seemed to carefully weigh to whom, when and to what extent they wanted or needed to disclose. An overview of how and why students do not disclose is given in figure 1. The aspects taken into account when deciding about disclosure are similar between students that disclose and students that do not disclose. The same downsides and benefits are mentioned by both groups; however, individuals weigh the benefits differently, resulting in different outcomes.

The results show that disclosure is experienced as a difficult process, where costs (e.g., stigmatization) and benefits (e.g., getting the needed accommodations) are constantly balanced. Accommodations offered by the university after disclosure should lead to inclusion of students with disabilities, but effects of stigma and labelling can work against this (Roe et al., 2010). The use of labels for disabled people is very much linked with the debate surrounding power. Due to what Foucault (1985) called biopower, individuals desire to live up to the norms of normality. This power exists “everywhere” and is constantly exercised by the state through the systemic application of law, policy, and administration (Ostiguy, 2018). The fact that the Dutch universities require students seeking accommodation due to their disabilities to engage prescribed policies and procedures for their request, is one such example. In a more subtle way, this power leads to restricted choices of the students with disabilities (Harvey, 2018), for example where students feel that some courses (e.g., ones with multiple written exams) are not the right choice for them (e.g., for students with dyslexia).

Apart from these power-structures on a societal level, the effects of stigma and labelling also play a role on a micro level, namely in the interaction between individuals. Looking at the interactions between students with disabilities and their fellow students or teachers, can give insight into how stigmatized identities are created (Åsbring & Närvänen, 2002). It relates to the meaning of having a disability, which is a symbolic meaning, that is constantly modified through experience (Blumer, 1969). The fact that students in our study express their disabilities as “a weakness” is a result of interactions with people. The meaning of disclosure therefore not only depends on hierarchical arrangements and specific policies, but also on the social values and norms that are experienced in individual interactions with others (Charmaz, 2010).

As discussed above, disclosing one’s disability inevitably means getting a label. Although labels have impact on people’s identities, they should not be seen as essentialist entities. They can be handled in very different ways. Our results show that nondisclosure is an active process, which gives insights into the active role that students with disabilities can play when dealing with their label. They can be very open (even taking an activist role) or they can hide their label. What choices are made can differ over time or in different contexts (Åsbring & Närvänen, 2002). This implies that there is as certain fluidity of identity, instead of essentialist ideas about what it means to have a label (Braidotti, 1994). One should be very careful not to treat people with a label as victims of their label, as this reinforces stigmatization.

**Strengths and Weaknesses**

All interviews were conducted by relatively inexperienced interviewers. This may have affected the quality of the interviews. In order to increase the quality of the interviews, the topic lists were thoroughly viewed by senior researchers.

All of the respondents were students at VU University Amsterdam. The diversity of degree programmes and diagnoses among the respondents was high, but research at another university might uncover different characteristics and results. For example, for someone with agoraphobia, the choice to study at the Open University, which provides education through online distance learning, implies a different starting-point and situation than the choice of studying at a traditional campus-based university like VU University Amsterdam. There could be something specific to the Dutch education system, students’ expectations of a top science university, or to the reputation or actual practices of the VU University Amsterdam regarding disability support or accommodations, that could skew respondents’ choices, but did not show up in this study.

**Recommendations**

The fact that access to services in Dutch universities is gained through the use of labels, creates a dualism between ability and disability (Harpur, 2012), between disabled students and their non-disabled peers (Harvey, 2018). Harvey (2018) suggested that “perhaps it would be better to reconceptualise higher education as a space where ‘the student’ is classified as the heterogeneous entity” (p. 108). By following this suggestion, labels such as “disabled student” or “student with special needs” would become unnecessary.

This principle of seeing society and more specifically students in a heterogeneous manner, is much in line with the principles of the Universal Design of Learning (UDL; Rose & Meyer, 2006). UDL stands
at the forefront of contemporary efforts to create universal access to educational curricula for all students, including those with disabilities. Flexible schedules, full (online) accessibility to study materials (multiple means of representation), providing information in different types of meetings (multiple means of engagement), different types of examinations (multiple means of expressing knowledge) are just some simple examples (Rose et al., 2006). Although the philosophy of UDL is upcoming in the Netherlands, inclusive universities do not yet exist (CHOI, 2018). At this point the VU University Amsterdam scores second to last of all Dutch universities if it comes to supporting students with a disability. This made this university especially interesting for this study. However, research on a broader group of students, from different universities is recommended. This could give insight, not only in why and how students disclose, but also in aspects that were helpful in this process.

In this study, only the perspectives of students were taken into account. Future research could also focus on the perspective of service providers, teachers and fellow students, in order to gain a broader view.

References


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Alice Schippers, Ph.D., worked for twenty years in policy, management, research and higher education in the disabilities field. She holds a coordinating senior research position at the Disability Studies unit of the Medical Humanities department of the Amsterdam UMC. Her interests are on (family) quality of life, inclusion, and collaborative research.

**Acknowledgement**

We would like to thank the students who helped us with the data collection for their work on this study. We also want to say a special thanks to the respondents, for their openness and honesty about their experiences.
Table 1

Respondent Characteristics

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Gender</th>
<th>Study</th>
<th>Disability</th>
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<tbody>
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<tr>
<td>2</td>
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<td>Psychology</td>
<td>Fibromyalgia</td>
</tr>
<tr>
<td>3</td>
<td>Female</td>
<td>Cultural Management and Organization</td>
<td>Attention deficit hyperactivity disorder</td>
</tr>
<tr>
<td>4</td>
<td>Female</td>
<td>Biomolecular Sciences</td>
<td>Complex regional pain syndrome, imbalance problem, hyperacusis</td>
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<td>Cystic fibrosis</td>
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<td>Criminology</td>
<td>Crohn’s disease</td>
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<td>Female</td>
<td>Medical sciences</td>
<td>Obsessive-compulsive disorder</td>
</tr>
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</table>

Figure 1

Overview of Results

Note. D stands for disclosure and ND for non-disclosure.
A Comparison of Success Trajectories Among Nontraditional Students with Varying Abilities

David R. Jones¹

Abstract

Graduate students with impairments achieve at lower rates than peers without impairments. A social model of disability perspective suggests that the disparity results from interactions between individual and situational traits rather than individual characteristics alone. This inquiry compared and contrasted experiences of overcoming academic disqualification among nontraditional post-baccalaureate participants with and without impairments. Comparisons occur within and across dyads: three participants with impairments were matched to participants without impairments and comparisons were made within their experiences and then across other dyads. Participants, regardless of impairments, wrestled with online learning and postponed assistance seeking, and relied on relationships as a source of support and learned to manage their time as a strategy for success. Those with learning needs used prescribed medication strategically and managed identity to avoid stigma or explore autonomy. The findings prioritize support for the agency of nontraditional graduate students for achieving degree completion.

Keywords: social model of disability, higher education, persistence, nontraditional students, graduate education

Students with impairments pursue higher education less often than those without impairments, and only a third of those with impairments complete their degrees (United States Department of Education, 2011). The disparity between completion rates of those with and without impairments implicates a cause beyond innate ability. A lack of degree completion within either population results in pervasive obstacles, including stagnate employment status and pay (Kim & Baker, 2014), lost lifetime earnings and national capital (Schneider & Yin, 2011), and social immobility for offspring (Monaghan, 2017). Supporting the degree aspirations of individuals with impairments not only remediates poor outcomes and improves quality of life, but also strengthens the workforce and increases social adaptiveness.

Graduate, nontraditional students with impairments have virtually no representation in published research. Ignoring the needs of graduate, nontraditional students with impairments informs the design of graduate classrooms that perpetuates their exclusion. Despite the benefit of eradicating barriers or developing supports, no efforts have yet materialized for graduate, nontraditional students with impairments. The following passages rely on a review of previous studies conducted amongst undergraduate populations.

Applying a Social Model of Disability Lens

Recently, inquiries exploring the success of higher education students with impairments have built upon the social model of disability framework (e.g., Connor, 2012; Moriña, 2017). The social model emphasizes the role of context and circumstance in prescribing disability status. Moreover, the social model appreciates the capacity (i.e., agency) of individuals with impairments to orchestrate their direction and overcome or avoid impediments to an optimal life. The present inquiry assumed the social model framework by re-orienting from a deficit view of impairments that emphasizes resources applied to the individual and toward an actualizing perspective, emphasizing the individual’s self-enhancement. This inquiry explored commonalities and distinctions related to overcoming academic disqualification among individuals with and without impairments.

Needing in Context

Framing a narrative that characterizes students striving to overcome learning barriers rather than students receiving accommodations engenders a commiserate shift from a deficit-ridden view, that emphasizes fixing students, to a view that recognizes

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the situational factors that provoke need. Such a shift in conception epitomizes the social model of disability—emphasizing how impairments arise from an interaction between individuals and contexts.

Madriaga et al. (2010) contended against the ghettization of students with impairments by demonstrating an overlap in the types of needs among students with and without impairments. Using a sample of matched participants, Madriaga et al. elicited self-reports of comparable needs that outnumbered the needs unique to one or the other group. In an analysis of 30 responsibilities and instructional strategies, the researchers found significant differences regarding eight expectations (e.g., writing, note-taking during class) but comparable benefits among 22 instructional strategies (especially those that aided comprehension and that provided more time to complete work). Madriaga et al. asserted that instructional interventions are “not the preserve of disabled students” (p. 656), but rather adaptive instructional supports that benefit a wider population of higher education students. One might contend that Madriaga et al.’s findings represent needs imbued by nature of the context—in this case, higher education.

The shared appreciation for instructional interventions (Madriaga et al., 2010) suggests that, despite the presence or lack of an impairment, higher education students equally benefit from certain approaches to instruction. That suggestion epitomizes the social model of disability by noting that the population’s (i.e., students’) context (i.e., higher education) fosters obstacles (demonstrated through reliance on instructional interventions in order to achieve expected outcomes). Such an observation also supports the importance of inclusive curricula. However, less support derives for Madriaga et al.’s mantra that everyone is impaired. Their findings warrant a more modest claim that appreciates a broader range of variables: the interaction of person and context yields impairments.

Active Agents

Students with impairments engineer and implement their own strategies to overcome barriers to success in higher education (Connor, 2012; Hadley, 2017; Moriña, 2017). Connor (2012) discovered that students with impairments independently decided to and modified their use of prescription medication, course load, institution of enrollment, and social interactions. Modifications responded to the interaction between their needs and the demands of higher education. The modifications that Connor found reflect an adaptive and proactive exploration of individual capacity rather than passive receipt of assistance.

Participants in Moriña’s (2017) study demonstrated agency like those in Connor’s (2012) study. However, participants in Moriña’s study also implied a preference for their own agency over support from the university. For example, one student “sought out strategies to overcome [barriers], without waiting for others to eliminate them” (p. 220). The distinction evoked from Moriña’s study, however, may reflect dissatisfaction with university services (Hadley, 2012; Vickerman & Blundell, 2010) rather than an innate predisposition.

However, Ben-Naim et al. (2017) found a reason to worry about students’ self-reliance. In a study of 438 college students (149 of whom declared they had impairments), agency related negatively to having an impairment. In other words, those with impairments reported less agency and faced less favorable academic outcomes than their peers. Personal resources (or a lack thereof) compounded the negative association, pointing to direct and indirect ways that impairments impact academic self-efficacy.

Exploring ability and managing identity. Students with impairments wield their agency in part by subscribing publicly (or not) to the categorization of disabled. Students vary in the degree to which they refrained from or informed others of their impairments. They choose to pass, disclose to select peers, use disclosure in negotiations with instructors, or generally disclose information about their impairments (Connor, 2012; Hadley, 2017; Moriña, 2017). An unwillingness to disclose might reflect nontraditional students’ “need to know oneself in terms of the disability and how to explain it” (Moriña, 2017, p. 219). Students’ need for self-knowledge may manifest as a desire to—at least temporarily—forfeit supports in order to gauge their academic potential.

That students postpone disclosure while pursuing self-knowing finds explanation in Connor’s (2012) argument that impairment manifests differently across students. If, as Connor concludes, having an impairment fails to elucidate a singular prognosis, then students—like those in Moriña’s study—will set out to understand how their ability fits (or does not) within the context of higher education. Then the exploration represents self- and group-identity exploration—determining the extent to which certain labels and stereotypes apply to oneself.

Moriña’s (2017) participants also attributed their reticence to disclose to instructors’ doubt about the veracity of invisible needs (i.e., those needs that lacked easily observed sources). Those participants suggested that lacking physical indicators of a need for accommodation imposed a persistent obligation for students to prove their need. Students who en-
counter insufficient affirmations, such as Moriña’s participants, might predictably forfeit accommodations in light of a barrage of psychological and emotional affronts. As a result of such affronts, they might pursue alternative solutions.

Dynamism and negotiation. That students with impairments forfeited accommodations (Moriña, 2017) or disclosed selectively (Connor, 2012; Hadley, 2017) suggests that students not only acted as agents but did so dynamically. Their agency manifested over the duration of their degree pursuit and as they responded to varying situations. When encountering a lecturer who doubted their need for accommodation, students procured evidence or investigated pathways to success that negated their reliance on the lecturer. Students also varied the extent of their personal investment in the degree pursuit (Moriña, 2017), use of prescription medication, living arrangements, and social networks (Connor, 2012). Students demonstrated dynamic agency as needs fluctuated. Students wielded disclosure of their ability status as a means of managing relationships with peers (Connor, 2012; Hadley, 2017).

Some variance in the ways of navigating higher education demonstrated transitional work—a once-and-done adjustment to the demands of a new context. However, transitional work did not account for all the variance among students in Connor’s (2012) study. Two participants described varying their prescription medication use as an ongoing practice and in response to the modulating demands of their degree pursuits. Both participants described strict compliance to a prescribed dosage during times of heightened academic demands. They reported diminished compliance during less demanding intervals. Connor alludes to the varying of behaviors among students with impairments as strategizing.

Moriña’s (2017) participants also strategized in response to obstacles. Moriña clustered participant interview data according to seven tasks or decisions, each demonstrating agency. Tasks or decisions included whether to:

- disclose or pass,
- become aware of one’s own possibilities and personal limitations,
- exert additional effort in order to achieve goals,
- define oneself as a student,
- become resilient, and
- recognize the university as a chance for social inclusion.

The decisions to disclose or pass and to become resilient varied over the duration of the students’ higher education experience, modulating in response to the needs of a particular situation.

Hadley (2017) followed the college and early-career experience of a student with several accommodation needs and, like Connor (2012), noted that the student autonomously modified his behavior situationally. Hadley indicated that modifications such as memorizing class lectures rather than taking notes, planning to complete activity-based rather than writing tasks when collaborating with a group, and planning the amount of writing time to avoid pain associated with his dysgraphia developed into a predictable regimen of modifications.

Research Question

The larger study from which this additional analysis derives (Jones, 2019) explored the phenomenon of personal, professional, and academic changes that graduate, nontraditional students enacted in light of academic disqualification and that led to successful continuance or completion of degree pursuits. This subsequent analysis explored if and how such experiences in overcoming disqualification varied according to the presence of an impairment.

In comparing the needs and challenges of higher education students with impairments against those without impairments, Madriaga et al. (2010) advanced the sophistication of research steeped in a social model of disability framework. Those researchers included students without impairments as a way to elaborate the meaning of experiences among students with impairments. The current inquiry, drawn from a subset of data collected during a larger study on student persistence (Jones, 2019), sought to imitate Madriaga et al.’s exploration of similarities and differences using matched participants. This inquiry compared the attributions that students with and without impairments made for academic disqualifications, as well as strategies they enacted to persevere. Sets of responses from matched participants were extracted from a prior study of nontraditional post-baccalaureate students.

Method

Methodologies Reflecting the Tenet of Agency

The social model of disability stresses the ability of those with impairments to act as their own agents. A research methodology allegiant to the social model validates and empowers the voices of those with impairments. An incongruent methodology facilitates the imposition of the researcher’s values on and inter-
Inclusion criteria for participation included the following: throughout the duration of the study. Participants were recruited after a careful appraisal of universal experiences. The methodology inquires after a single phenomenon of those with impairments rather than the researcher's. Furthermore, phenomenology's emphasis on the development of descriptions (Creswell & Poth, 2018) serves to favor the voices of those with impairments rather than the researcher's. Additionally, each researcher attested to the value of the methodology for preserving participant voices. Connor (2012) stated that personal narratives “foreground individual experiences that are recognized as the source of information” (p. 1008), stressing the value of the participant’s narrative as the primary (as in foregrounded) unit of consideration. Connor also remarked that such an approach leaves the management of the individual’s representation significantly under the individual’s control. Moriña provided a similar rationale: the biographical narrative “methodology is conceived as an ideal tool to give voice to groups of people who are usually silenced, as in the case of students with [impairments]” (p. 217). Connor and Moriña thereby aligned their methodological decisions to the social model framework.

This inquiry employed a phenomenological framework, obligating the researcher to perpetually re-visit participants’ experiences. Re-visiting participant descriptions and setting aside researcher assumptions and values—through the process of bracketing—foregrounds participants’ voices and thereby aligns to a tenet of the social model of disability. Phenomenology recruits individual experience to distill meaning (Creswell & Poth, 2018), a feature which aligns to the emphasis that disability studies places on meaning-making through lived experience with impairments. Furthermore, phenomenology’s emphasis on the development of descriptions (Creswell & Poth, 2018) serves to favor the voices of those with impairments rather than the researcher’s. The methodology inquires after a single phenomenon (in this case change) shared by a group of individuals (i.e., the participants). In endeavoring to procure rich, shared insight into individuals’ experiences, the methodology foregoes generating data of a generalizable kind but aspires to depict universal experiences.

Procedure

A university-based institutional review board approved the recruitment of participants for this study after a careful appraisal of the study’s design and purpose. Participants’ rights were protected throughout the duration of the study. Participants were recruited through a university database after a review of their characteristics. Inclusion criteria for participation included the following:

• appealed academic disqualification in previous year,
• academic disqualification in the context of post-baccalaureate studies,
• nontraditional student,
• returned to program, and
• succeeded in ensuing coursework (defined as no grades lower than C or as completion of academic program).

Twelve participants met all the criteria. Nine participants responded to invitations sent by email and phone (75% response rate) and participated in individual, unstructured interviews with the researcher. In their individual interviews, participants described changes they experienced socially, personally, or professionally in the time leading up to, during, and after their academic disqualification. Follow up questions to the initial prompt intended to elicit deeper reflections or re-visit nuances of the original prompt. Such questions included the following:

• What changes occurred between the time you experienced failures in your degree program and the time your performance improved in the program?
• Are there contrasts in the way you interacted with others or they interacted with you when you experienced failures and when you experienced improvements in your degree program?
• How did you decide on or learn what you needed to do in order to improve your academic performance?

Results from six of those interviews appear in this analysis. Experiences from the excluded participants remain in the discussion of the larger study (Jones, 2019) but do not appear here as the characteristics of those three participants could not be matched within a dyad. Participants selected the location and time for their interview. Of the six included in this analysis, four participants (66%) opted to interview via video conference. One participant interviewed in person. The sixth participant interviewed via email to accommodate his impairments.

Participants

The inquiry employed dissimilarity sampling. Rubin and Rubin (2012) suggested an approach to qualitative inquiry that relied on choosing “cases that differ as much as possible on whatever characteristics you are looking at” (p. 74). Thus, in order to compare responses about the experience of overcom-
ing academic disqualification related to impairments, data sets were selected that differed on the presence of impairment and homogenized on other characteristics within the dyad.

**Sampling.** The larger study from which this analysis stems included graduate, nontraditional students from one private institution of higher education along the United States’ West Coast. Invited students (i) had characteristics that qualified them as nontraditional students (National Center for Education Statistics, 2015), (ii) received and appealed an academic disqualification, and (iii) achieved thereafter (defined as demonstrating clear academic participation resulting in predominantly A to B- grades, few or no C grades, and no failing grades). In some cases, successful continuance culminated in the completion of the degree program.

**Comparing groups.** This inquiry drew from data collected during a larger study of student retention that explored the experiences of higher education students who experienced academic disqualification and who had modified their approaches in order to achieve (Jones, 2019). Nine participants participated in the larger study. Six demonstrated suitable matches, based on personal and demographic characteristics, to a single participant in the complementary group. Two groups resulted: one group of three individuals with impairments and another group of three without impairments. The number of participants represents an apt group for the implementation of a phenomenological study (Creswell & Poth, 2018).

In their interviews, students with impairments demonstrated sufficient and nuanced understanding of the process of applying for, receiving, and continuing to receive accommodations from the university. Participants’ familiarity with the process of securing accommodations served to validate the presence of their impairment. Additionally, the use of the term need for learning accommodation is one that represents the researcher’s understanding (based on students’ disclosures and articulation, and verified through member checking) that the impairment directly interfered with learning.

**Analysis**

Interviews were transcribed and compared against the original recording to ensure accuracy. The researcher enlisted research assistants—student success personnel—to participate in concurrent in vivo and descriptive coding, which served to distill the meaning of participants’ narratives (Creswell, 2014). Phenomenological analysis involves scrutiny of narrow units (i.e., specific expressions) and broader ones (Creswell & Poth, 2018). The analysis of narrow units or specific expressions involves horizontalization, by which all statements describing the experience receive comparable regard. This analysis proceeded with both units simultaneously but separately, followed by cross-analyses between the two units. The analysis culminated in a textural description, which emphasizes what participants experienced. Participants provided member checking via emailed correspondence. Results of the interviews underwent a final stage of analysis, a comparison of experiences within and across matched dyads. Thus, themes and experiences from members of each dyad were compared to the other member of the dyad to explore convergences and divergences. In a second step, such similarities were compared to the convergences and divergences across other dyads.

**Results**

Participants and their characteristics appear in table 1. Note that adjacent rows demonstrate matched dyads. The table represents three participants who have impairments—Anna, Hillary, and Ian. The former two need learning accommodations not related to noticeable physical impairments. Ian’s need for accommodation results from observable physical impairments being that he is both deaf and blind.

It bears mentioning that even attributions those participants made for their academic disqualification demonstrated similarities within dyads. For instance, matched participants Anna and Felicia both cited competing responsibilities as distractors fostering their disqualification. Anna, though, added an accommodation-related topic on top of that attribution. Such an observation supports Connor’s (2012) claim that the higher education experience of those with accommodation needs is not an all-together-different trajectory, but rather one in which the “demands [of being successful in higher education] are magnified” (p. 1006) for students with impairments. Ian and Danny demonstrated shared clashes with cultural barriers enroute to underperformance. The nature of those clashes—the former relating to country differences and the other related to higher education experiences—warrants restraint in the extent to which they are equated and cited to support Connor’s (2012) earlier-referenced claim.

Other shared attributions for disqualifications included mastering online learning requirements and delays in securing assistance. Participants from both groups also discussed similar strategies for overcoming disqualification, such as capitalizing on relationships and learning to manage time. Only two participants, both with accommodation needs,
explored ability, coinciding with their fear of stigma and wish for autonomy. Additionally, only two participants with accommodation needs described medication regimens for regulating their academic performance.

**Shared Themes**

**Online learning.** All participants except Danny incurred academic disqualification in part through online learning. Within the two female dyads, difficulty engaging with online learning characterized only those without impairments. Felicia described difficulty devoting herself to large chunks of time to complete online coursework because her home setting lent too many distractions: “I have a very hard time with online courses. I need a little bit of—I don’t know—that physical space that I have to be somewhere.” Giselle described online courses as poorly managed. She experienced difficulty identifying requirements and reaching instructors to gain their assistance: “He just wasn’t present….I’m working full-time, have my personal life, and on top of my personal life that includes going to school, and that person’s not there to make sure or answer questions.” Anna and Hillary made no reference to online learning in explaining their academic disqualification or enacting changes.

**Delays in securing assistance.** Members of both female dyads postponed seeking assistance to regulate their academic performance. Anna and Felicia, for example, approached their respective advisors only after a failing grade in their coursework appeared imminent and irreparable. Anna, for example, stated,

> I didn’t turn in my paperwork until I started getting Cs [an insufficient grade in that particular program]…Once I was academically disqualified, then I made an appointment with [the program director] and I went to talk to him.

Members of the other female dyad, Hillary and Giselle, described attempts to navigate their respective timelines. Hillary explained this as her process of figuring things out, saying, “I learn by trial and error.” Giselle’s frustration with her failing grade, on the other hand, prompted her to seek perspective in order to avoid a repeated occurrence.

**Relationships.** Nearly all participants indicated that relationships served as a source of support in overcoming academic disqualification. Hillary demonstrated an exception to this observation as she felt alienated from her peers (“I feel out of place”) and deferred meaningful engagement with her advisor. For Anna and Felicia, relationships consisted of family—spouses and parents—who provided emotional support to continue in light of the academic disqualification. Anna iterated that she found her husband as a prominent source of support, stating, “My husband has been so supportive. He’s the next after God. My husband was so supportive.” Anna’s spouse provided insight about resources to accommodate her learning need. Felicia described her husband as “my number one fan.” Both Anna and Felicia identified a change in their relationship with the program advisor as an important tactic to overcoming disqualification. Anna’s change in relationship with the program advisor accelerated her pursuit of accommodations. Felicia’s relationship contributed accountability, which coalesced into an alternate pace for accomplishing her courses.

Ian and Danny identified peers in the classroom or in other local universities as supports for managing and clarifying requirements. Ian realized the function of social connections in bolstering his academic performance, stating that others “actually helped me…The social impact is always important in learning.” Danny alluded to his peers’ impact on his performance, stating that “They were definitely my resource” in clarifying expectations and meeting deadlines. Danny’s change in reliance on his peers stemmed in part from his dissatisfaction with the quality of interactions with instructors and advisors.

**Time.** Participants in this study conceded the import of time but interpreted that commodity differently. Anna and Felicia shared a need for a revised timeline. However, the theme pertained to assignments for Anna but the entire program in Felicia’s case. Anna expressed the need to complete her degree program promptly in order to join the workforce and contribute to her family’s financial need. She eventually sought accommodations to ensure she had more time to complete assignments. Felicia, on the other hand, realized that she could not perform sufficiently unless she proceeded at a slower pace through the program, taking fewer courses over a longer period. Felicia also suggested that starting sooner on projects would mitigate the weight of the program. She suggested that, if she could speak to an earlier self, “I would even give myself that advice: start early.” It bears mentioning that Felicia held an internship related to her degree pursuit and contributed to her family’s financial standing while pursuing her degree. Anna did not work while pursuing her degree but devoted herself entirely to her studies.

Similarly, Hillary and Giselle conceived of time management differently. Hillary eventually sought and secured accommodations to allow her more time to complete assignments. Giselle, conversely,
managed time by seeking temporary hiatus from the program through interspersed, semester-long leaves. Unlike Felicia, who sought to establish an alternative pace to her program, Giselle returned from her leaves each time and resumed a typical course load.

Danny and Ian interacted with time in ways that diverged widely from each other. Ian suggested that more diligent time management might have staved off his experience with academic disqualification. “Set aside more time,” he advised. Danny, who felt undermined by several instructors, considered a transfer to another institution. However, he and his spouse agreed that doing so would delay his time to completion. In light of a potential delay, Danny decided to focus on minimizing his conflicts with instructors—accepting grades he believed under-represented his work—in order to achieve his degree as quickly as possible: “I didn’t really have time to go through to another year-and-a-half-long program. . . . [T]he best option would be, ‘Put your head down, stick your nose somewhere, and deal with it.’”

Unique Themes

Exploring ability. All three individuals with impairments attributed their academic disqualification partly to their own delay in disclosing their ability status and/or securing accommodations. None of the matched participants (i.e., those without impairments) described an intentional delay but rather an evolving sense of self-understanding that delayed help seeking. For example, when Felicia realized that she could not keep pace with the program pace she negotiated an alternate timeline with her program director. Similarly, Giselle realized a more effective learning approach. Danny, too, learned to rely on his peers rather than instructors for information about expectations.

Stigma and fear. Two of the three individuals with impairments—Anna and Hillary—detailed turmoil as they decided to seek accommodations. For example, Anna described a fear of stigma despite lacking previous experience and despite her husband’s assurance. But Anna also described an interest in her own autonomy as a foundation for normalcy.

I wanted to feel like I am like everybody else. So, I guess kind of just embarrassed that I had that and turning in the paperwork would be like, “Yeah, I can’t do it by myself,” even though it’s just silly to think that. But that’s kind of how I felt. I was like, “I could do this on my own and then, if need be, I will take my Adderall.”

Hillary conveyed feelings of guilt about requesting accommodations. She stated, “I’ll feel bad to even ask for that extra help because I feel like maybe I’m taking advantage of it…I feel like I’m a bother…I don’t want to take advantage of the program.” She iterated that the accommodations sufficiently helped her achieve and she provided no indication that she had misused the accommodation. But, despite noting the substantial improvement in her academic performance, her reluctance persisted: “I just feel like I’m taking advantage of it sometimes even if I know I need the help.”

Wish for autonomy. The above statement demonstrates Anna’s plan for responding to difficulties (“if need be”) which evinces her hope for autonomy conveyed in the statement, “I wanted to feel like I am like everybody else.” Hillary echoed the wish for autonomy in terms comparable to Anna’s, saying, “I want to do something on my own.”

Medication. References to medication use to improve functioning arose solely from interviews with students who secured accommodations but had no observable impairments. Anna postponed using Adderall. Hillary used medication to regulate her sleeping, which improved her academic performance.

Table 2 summarizes the comparisons and differences elicited through coding of interview transcripts.

Discussion

These findings elaborate previous research first by extending the exploration of concerns for students with impairments into a graduate context and, secondly, by doing so in a way that appreciates comparative experiences (those with and without impairments) within a novel setting (graduate education). Furthermore, these results highlight the phenomenon of change within a graduate, nontraditional student sample.

The findings substantiate an application of the social model of disability to graduate education in that students, regardless of ability status, repurposed features of their educational context in order to overcome potential exclusion. Nontraditional graduate students achieved success in graduate contexts by changing the nature of their interaction within that context. Such modifications responded to barriers that characterized the graduate context. Agency and attributions sourced in the students’ context accentuate the suitability of the social model.

Implications

Anna and Hillary—whose impairments did not relate obviously to physical differences—rarely enacted esoteric changes in comparison to their peers. Such an observation lends support to Connor’s (2012) claim that the need for accommodations does
not necessitate a segregated pathway through higher education, only a more complex one. Then, instead of distinct pathways, perhaps one more accessible pathway portends greater success for graduate, nontraditional students.

Participants with accommodation needs not tied to observable impairments differed in their experience from the participant with physical impairments. This distinction challenges Connor’s (2012) and Moriña’s (2017) conclusions about the inability to generalize findings related to students with impairments. Both researchers suggested that individual differences in relating to ability status yielded different adaptations. The findings from this analysis disagree somewhat: two students with accommodation needs not associated with obvious impairments shared themes such as the need for more time on assignments, delayed assistance seeking, fear of stigma, and desire for autonomy. Most importantly, these findings demonstrate the recklessness of adopting either conclusion (i.e., to generalize or to not generalize) based solely on interviews with a small group of participants.

Other similarities cross ability status (presence or lack of impairments) as implied by each participant’s involvement in this study: they each succeeded in earlier (i.e., baccalaureate) experiences before encountering academic disqualification, responded to the disqualification by appealing the university’s decision, succeeded in their appeals, and continued or completed their respective programs. Regardless of their ability status, participants overcame academic disqualifications. In order to overcome their obstacles, students adapted to their context, thus demonstrating agency.

The participants with learning needs without physical impairments each had an additional thematic obstacle and recourse to support them in their degree pursuits. Anna and Hilary both described fears about being identified as disabled. Their fear impeded help seeking. They each described their use of prescription medication, which impacted their academic performance, a realization that may elicit protests that they held an unfair advantage over their peers rather than a realization that they faced greater barriers to functioning (Claiborne et al., 2011). However, the sum result of their medication usage and accommodation and other personal changes only served to reduce obstacles and put them on par with their classmates.

The finding regarding medication use to stabilize academic performance elaborates on previous findings—notably Connor’s (2012)—by distinguishing that practice as the sole purview of students with impairments not associated with physical differences. However, exploring the topic only among graduate, nontraditional students attending a university with a religious affiliation yielded a sample that likely under-represented abuse of prescription medication, or at least a sample more committed to hiding the fact that they abuse.

**Practice and Policy**

The findings of this analysis support Madriaga et al.’s (2017) conclusion that higher education students with impairments share more struggles with students without impairments than otherwise. The findings distilled from this analysis expand on Madriaga et al.’s work—not only reflecting the varied context (graduate education in this study as opposed to undergraduate education in Madriaga et al.’s), but also by demonstrating that attributions for disqualification and overcoming disqualification appear in the experiences of either group. However, two of the three students with impairments (specifically those with accommodation needs without noticeable impairments) also grappled with a fear of stigma, wished for autonomy, and used prescribed medication strategically.

This analysis is insufficient in offering accommodations based solely on the presence of a formal or recognized ability label. Determining accommodation needs require deeper consideration than the employment of a disabled/non-disabled label in light of the observation that need relies on competing demands and agency within a particular context. Participants in this study demonstrated comparable struggles with time, delays in help-seeking, and challenges in online learning. They reported earlier success in higher education, demonstrated resilience and commitment to success, and described relationships as a source of strength. Moreover, these students demonstrated agency and motivation to achieve. They lacked only in regard to the success that such agency and motivation warranted.

Such commonalities point to a three-fold strategy, including (i) bolstering the effective agency of students (Ben-Naim et al., 2017; Connor, 2012; Garrison-Wade, 2012), (ii) supporting faculty to fully implement accessible curricula and practices (Claiborne et al., 2011; Moriña, 2017; Vickerman & Blundell, 2010), and (iii) structuring university resources to be more succinct and tractable by students (Claiborne et al., 2011; Garrison-Wade, 2012; Hadley, 2017; Moriña, 2017; Vickerman & Blundell, 2010). Efforts to bolster the agency of students might serve best if those efforts emphasize the commonality of struggles among higher education students and elucidate how to navigate those situations rather than segregating stu-
dents into certain groups and suggesting that different students are served through different departments.

Moreover, implementing an accessible curriculum (e.g., Universal Design for Learning or UDL) aims to reach each occupant of a classroom. An accessible curriculum fails if it is wielded only for students who build up the nerve to request it. Knoll (2009) argued that neither accommodations nor UDL alone establishes accessibility. Only the collusion of both serve as they foster openness and interdependency. Efforts to foster access must also contend stigma associated with impairments and learning needs by unmasking myths of independence. Finally, embedding resources to accommodate students within contexts closer to the classroom (e.g., program advisors, program directors, course instructors) may reduce the distance between students who need and the accommodations they seek.

These findings raise a concern for needs-related research in higher education. Reticence to seek accommodations suggests that attempts to identify a population as non-disabled are doomed to include those who have an impairment but have refrained from disclosing. These findings imply the need for care when determining ability status among higher education students. Vickerman and Blundell (2010) found that 25% of respondents in their study who claimed an impairment had not disclosed that fact on their college application because they feared being barred from admission. Also, because post-secondary education operates on a non-compulsory basis, a broad view of failure and withdrawal—one that includes non-attendance or withdrawal—might reflect graduate, nontraditional students’ strategies for dealing with barriers.

**Future Research**

The themes distilled herein from interviews with graduate nontraditional students with impairments and those without impairments require broader measurement through quantitative means in order to clarify the extent of their generalizability. Quantitative measurement would aid in elaborating the applicability of the information presented here. Quantification risks undermining individual voices—a risk that threatens the tenets of the social model framework. Care in using multiple approaches will prevent the omission of voices of those with impairments in representing themselves. One recourse that appreciates the tenets of the social model framework may involve recruitment from a quantitative study for participation in qualitative study that accentuates voices (e.g., Vickerman & Blundell, 2010).

Future research might gauge the degree to which successful implementation of a fully accessible curriculum minimizes failure among those with and without impairments. The higher education community would benefit from the results of shifting the provision of an accommodation such as time from an esoteric to a universal offering. Such a shift would reflect an integration of the social model of disability and allow for further exploration of that framework’s tenets among graduate students.

**References**


**About the Author**

David Jones received his B.S. degree in psychology from the University of Michigan and two M.S. degrees from California State University. He works toward completion of his Ph.D. at Fielding Graduate University. He works in the School of Education at Fresno Pacific University where his responsibilities include systematically supporting student success and analyzing student outcomes. His research interests include development within systems, student persistence, the application of psychological principles to the work of teaching, disability studies, graduate writing, feminist disability theory, and nontraditional student success. He can be reached by email at: David.Jones@fresno.edu.
Table 1

*Participant Characteristics*

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Race-Ethnicity</th>
<th>Marital Status</th>
<th>Year of Birth</th>
<th>Program Status</th>
<th>Attributions for Academic Disqualification</th>
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<tbody>
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<td>Anna</td>
<td>White</td>
<td>M</td>
<td>1989</td>
<td>Completed</td>
<td>Difficulty juggling work and coursework; unwillingness to receive accommodations</td>
</tr>
<tr>
<td>Felicia</td>
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<td>M</td>
<td>1989</td>
<td>Completed</td>
<td>Difficulty juggling work and family demands</td>
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<tr>
<td>Hillary</td>
<td>Hispanic</td>
<td>Sep</td>
<td>1982</td>
<td>Active in Program</td>
<td>Strained mental health, medical/health issues; family emergency</td>
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<tr>
<td>Giselle</td>
<td>Hispanic, White</td>
<td>M</td>
<td>1982</td>
<td>Active in Program</td>
<td>Family emergency</td>
</tr>
<tr>
<td>Ian</td>
<td>White</td>
<td>S</td>
<td>1988</td>
<td>Completed</td>
<td>Refused accommodations to complete work; complications adjusting to new country</td>
</tr>
<tr>
<td>Danny</td>
<td>White</td>
<td>M</td>
<td>1993</td>
<td>Completed</td>
<td>Difficulty acclimating to pedagogical styles; difficulty accessing advisor</td>
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</table>

Table 2

*Thematic Comparison by Dyad*

<table>
<thead>
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<th>Dyad 2</th>
<th>Dyad 3</th>
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<td></td>
<td>Anna</td>
<td>Felicia</td>
<td>Hillary</td>
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<td>Relationships</td>
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<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Time</td>
<td>●</td>
<td>●</td>
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<td>Online Coursework</td>
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<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Delays in Securing Assistance</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Exploring Ability</td>
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</tr>
<tr>
<td>Stigma &amp; Fear</td>
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<td></td>
<td>●</td>
</tr>
<tr>
<td>Wish for Autonomy</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Medication</td>
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<td></td>
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Using Simulated Meetings to Practice Advocating for Disability-Related Accommodations
(Practice Brief)

Justin E. Freedman¹
Casey L. Woodfield¹
Benjamin H. Dotger²

Abstract

Research suggests that students’ encounters with professors can be a barrier to students fully accessing disability-related accommodations. This paper describes the use of a clinical simulation as a practice to understand and support how students engage with professors in discussions about disability-related accommodations. The authors detail the use of a simulated meeting with 28 students across two universities, during which they engaged in discussion about accommodations with trained actor-portrayed professors. These simulations were video-recorded and followed by group and individual reflective discussions, which provide students opportunities to review and reflect on their meeting. The authors report the design and implementation of this practice, observations about relational dynamics, and students’ evaluations of the authenticity and benefits of the simulation as a learning activity. This simulation approach is recommended as a unique opportunity for practice and reflection that can support students and faculty to work towards meaningful access to accommodations in postsecondary education.

Keywords: accommodations, situated practice, simulated meeting, self-advocacy, professors

While postsecondary institutions set processes for accessing disability-related accommodations that can vary, students are generally expected to disclose a disability identity in multiple ways. First, they must register as a student with a disability at their postsecondary school. This involves providing documentation of the disability and working with staff in the postsecondary school’s disability services office to determine accommodations (Keenan et al., 2019). Students are then expected to communicate their eligibility for disability-related accommodations to individual professors for the courses in which they enroll. Students typically provide professors, either through face-to-face encounters or email, with a letter from the disability services office that outlines their accommodations (Cole & Cawthon, 2015).

The use of accommodations in postsecondary education has been associated with increased grade point averages (Kim & Lee, 2016), and higher rates of graduation (Salzer et al., 2008). Yet, Newman and Madaus (2015) found that only 35% of students who received K-12 special education services self-identified as having a disability once enrolled in postsecondary education. Previous research suggested that encounters with professors, or even the thought of discussing accommodations with them, is a barrier to students accessing accommodations. Cole and Cawthon (2015) found that students’ initial impressions of professors influenced if and how they disclosed their disability identity in a given course. Lyman and colleagues (2016) found that negative interactions with faculty members, and the desire not to be treated differently than others, contributed to students not seeking to use accommodations. This research suggested a concerning trend – that the expectation that students communicate with professors about accommodations contributes to the large numbers of students who do not disclose their disability in postsecondary settings.

Description of the Problem

Postsecondary schools continue to rely on a retrofitting approach to meeting the needs of students with disabilities by implementing accommodations on an individual basis in the form of services and academic adjustments to existing classroom structures (Dol-
While some postsecondary institutions have begun to embrace universal design approaches, such as flexible policies and proactive supports to replace the need for many (but not all) accommodations, students continue to shoulder the burden of advocacy. Recognizing the reality of this current context, it is important for students to be prepared to discuss their needs and accommodations once enrolled in postsecondary education.

This paper describes a practice aimed at supporting students to engage with professors in discussions about disability-related accommodations. A clinical simulation is a form of practice-based learning that has been adapted from medical education to provide a low-risk opportunity for students to engage in, and reflect upon, a critical dialogue. Simulations involve placing individuals in a realistic context to meet face-to-face with a standardized individual (SI) – an actor who has been trained to portray a character, such as a teacher, parent, or professor (Dotger, 2015).

**Participant Demographics and Institutional Partners/Resources**

The simulated meeting protocol was designed in partnership with university staff members and students at a medium-sized private university in the northeastern United States (Figure 1). Five staff members within the Disability Services Office, including four counselors who work with hundreds of students, were interviewed and asked to describe the typical accommodations process. Staff members were also invited to describe previous interactions with faculty members, including language faculty members have used when discussing the accommodations. Staff responses were used to develop an initial protocol (i.e., script) to guide the actor-portrayed professor through a meeting with a student to discuss disability-related accommodations.

Four university students with disabilities subsequently participated in a focus group to evaluate this protocol draft. In this session, students described commonalities in demeanors and actions of professors based on prior experiences in meetings about their accommodations. Students also critiqued scripted statements that the actor-portrayed professor might express in the simulation. Focus group data contributed to further protocol revisions, to yield a simulation script and training for actors that were more authentic than the original draft and rooted in the lived experiences of students. To date, two groups have participated in simulated meetings to discuss accommodations utilizing this protocol. The first group comprised 15 students from the same medium-sized private university that was the site of the simulation protocol design. The second group included 13 students from a medium-sized public university in the Northeastern United States. Table 1 describes self-identified demographics for the 28 students.

**Description of Practice**

In line with the use of clinical simulations in medical and teacher education (Dotger, 2015), this practice involves training actors to portray a standardized individual (SI). Using the collaboratively developed protocol described above, the authors trained local area actors to play the part of the character—Professor Williams—in a consistent manner. Across both sites, the two-hour training was delivered by researchers, and included the following elements:

1. Background about accommodations processes at the university.
2. Introduction to characteristics of Professor Williams: a supportive, experienced faculty member who is generally concerned about students’ success, and sometimes makes suggestions about how students might utilize their accommodations.
3. Protocol review, including each scripted verbal cue that SIs are asked to memorize and be prepared to deliver in response to students’ references to various accommodations.
4. Practice with “what if” scenarios and discussion to reach agreement on a set of consistent responses to potential questions and concerns that students might raise.

The use of SIs, rather than actual educators (e.g., professors), was intentional. SIs are carefully trained to consistently enact a set of verbalizations and non-verbal mannerisms that allow each student to navigate essentially the same questions, concerns, and dispositions. The researchers’ goal was for all students to engage with the same faculty perspective, decisions, and questions, and to reflect upon this shared experience individually and as a group. Trained actors are accustomed to learning and presenting a given persona deliberately, holding constant their own contexts, perspectives, and opinions. Working on multiple simulations with a medical university’s simulation center at one of the two sites for this study, the research team learned that using actual educators can put the standardization and consistency of the experience at risk, as they communicate their own personal perspective, instead of relying on scripted verbalizations and mannerisms of the character. The
same could reasonably be expected if actual professors were used as professors in simulated discussions about accommodations.

Participating students receive comparatively limited information in preparation for the simulated meeting. One week in advance, students receive a one-page description of the simulated meeting context. This document introduces the scenario: it is early in the semester and they are visiting Professor Williams’ office to provide their letter of accommodations. To enhance authenticity, the document names an actual university course and a list of assignments in the syllabus which could potentially influence the relevance of certain accommodations. On the day of the scheduled meeting, participants are reminded that this is designed to be a simulated experience, that the individual with whom they are meeting is a trained actor, not an actual professor, and that the meeting will be video recorded. The implementation of the simulation protocol and follow-up discussions adheres to the following format: (1) students enter individual rooms to meet with the SI, Professor Williams; (2) immediately after their conversations conclude, students participate in a small-group discussion facilitated by one of the researchers in which they describe initial reactions to the experience; and (3) in the week following, students are invited back for individual interviews to watch and reflect upon the video of their simulated meeting.

These practices were conducted at two universities with different contexts and students, summarized in Table 2. In the first study, use of existing simulation facilities and actors familiar with the process made the logistics of the practice nearly seamless. In the second study, simulation was embedded into an annual three-day transition program for incoming freshmen. This allowed for comparatively more time with student participants. However, actors were recruited via a theater department alumni network and departmental electronic mailing list; none of them had previous experience conducting a simulated meeting.

**Evaluation of Observed Outcomes**

Twenty-eight students from two universities participated in the simulated meeting, followed immediately by a small group discussion. Sixteen of these students returned to individually watch and discuss the video of their simulated meeting with one of the researchers. Videos of the meetings, paired with students’ reflections, provided a unique opportunity to observe the dynamics between a student and professor as they discussed accommodations, and insight into the benefits and limitations of the simulation as a learning activity.

**The Unintended Consequences of a Professor’s Statements**

Watching and discussing the video of the simulated meeting was an opportunity for students to reflect on how they interpreted specific questions and statements that Professor Williams expressed. For example, Scott shared frustration that Professor Williams offered specific suggestions about using accommodations, such as the proposal that he take exams in class rather than at the Disability Services Office. He explained, “I feel like he could have said it better, in a more supportive way [such as] ‘at the end of the day, do whatever you need.’”

Other participants provided further examples of how Professor Williams’ comments conveyed negative meanings, even if unintended. Brian described feeling that Professor Williams was insinuating that he would miss key information, and receive a lower grade, if he completed exams at the Disability Services Office. Arlene reflected that Professor Williams’ statement that she didn’t think Arlene “will have any problems” in class may have been intended to alleviate worry. However, Arlene noted that coming from a Professor, this statement carried an authoritative connotation, as if she “shouldn’t have a problem in this class.” Arlene explained that this “unintended consequence” made her question whether she would feel comfortable raising concerns in the future. Such responses demonstrate that while the character and script for Professor Williams was intended to be supportive of accommodations, students experienced and interpreted some statements as oppositional, negatively connotative, or as having notable ramifications.

**(Un)realistic Aspects of the Simulation**

Several students expressed that the ways they described themselves and their accommodations were representative of what they actually say to their professors, even if some initially felt nervous. Karen explained that she “had no problems being myself . . . the way I was describing items on my letter and just interacting with her conversationally was just really close to how I do.” Others described feeling that the specific concerns that Professor Williams raised about an accommodation were realistic. Some students shared that Professor Williams’ suggestion to complete exams in class, as opposed to at the Disability Services Office, was one that they had previously encountered, or considered. Other students felt that Professor Williams talked more than a typical professor. For example, Arlene shared that, “It’s the longest conversation I’ve ever had with a professor about my accommodations. I feel like it’s usually shorter.” Elissa reflected that, “He was chattier than a normal
Professor.” Other students indicated that the simulation was not totally authentic because they typically talked to professors about accommodations after class, as opposed to visiting their office.

Students’ Perceived Benefits of the Experience

Several students spoke about the insights they gained and benefits of the simulated meeting experience. Allison, a first semester freshman, explained how she planned to change her approach to discussing accommodations with professors:

After having this simulation, I think that I would be more, not firm, but leaving it less up in the air regarding taking it [the exam] in a separate testing space or also with receiving the PowerPoint notes the day after instead of the day before. And I also think I would definitely like to look at my own accommodations more so I would feel more comfortable talking about it and be able to answer her questions in a more detailed and efficient manner.

Students spoke most often about the benefits of being able to watch the video of how they engaged with Professor Williams in the simulation. Mark explained that he was able to observe “from a different perspective” how he discussed his disabilities. Karen shared that watching the video allowed her to recognize how she tends to “over explain” when she feels nervous and defensive:

I knew I tend to ramble and explain and over explain and get on the defense, but it showed me how much more than I even knew I did… I’m so wrapped up in the emotion during the actual thing, that I’m not even able to take a step back and realize that I’m doing it…you are definitely able to see it, watching it over.

Reviewing their videos allowed students a unique opportunity to examine how they communicate when discussing accommodations, including their tone, emotions, and body language.

Implications and Portability

The use of a simulated meeting with a standardized professor provided a low-risk opportunity for students to practice advocating for their needs and disability-related accommodations. The students who participated in the simulation were representative of many of the disability categories of students at post-secondary institutions in the United States (Evans et al., 2017). However, the sample lacked racial diversity, which limits an understanding of how intersecting identities may influence dynamics between students and faculty members. The researchers plan to recruit more racially diverse students, including by collaborating with two-year colleges to conduct the simulations.

The reflective elements of the experience, especially watching a video of their simulation, offered students space and time to reflect on how they articulate their needs, convey knowledge of resources, and advocate for their rights to use accommodations. Participation in and reflection on a simulated encounter with a professor could help students to become more aware of how they talk about their disability and accommodations, and consider changes to their approach in the future. The simulation context could also be adapted from a student-professor meeting to a conversation between a student and disability services staff member in which the student’s needs, preferences, previous experiences, and documentation of disability are discussed.

Simulations could be used to support efforts to train faculty to meet the needs of students with disabilities. For example, the authors plan to conduct a future simulation that flips the context by constructing opportunities for professors to practice engaging in a meeting to discuss accommodations with a student. Another possible application is the use of excerpted transcripts of simulations as part of a faculty training about disability-related accommodations. Faculty could examine transcripts alongside participants’ reflections from the post-simulation interviews to gain insight into how students might react to a professor’s comments and questions. This practice might allow faculty members to reconsider how they express suggestions so as to avoid the aforementioned unintended consequences of students feeling pressured or coerced.

The situated practice of simulations is intended to support students to build confidence, experience, and preparedness in advocating for their needs and preferences. Yet, the need for such practice is indicative of circumstances that position students to negotiate for the use of accommodations with professors. Were it commonplace for professors to use accessible practices and flexible policies that anticipate diverse characteristics of students, the necessity of the practice described in this paper would not be so urgent. The researchers draw attention to this tension in present and future iterations of this practice by asking students to describe their ideal classroom: a space where
they feel comfortable to learn, engage, and participate actively. Attending to students’ responses can provide added insight into the ways that practices might shift based on the priorities and experiences of a range of bodies/minds.

Simulations require an investment of resources, such as hiring and training actors, access to office space, and recording equipment. While a partnership with a medical university’s existing simulation center would be ideal (e.g., initial simulation), simulations can be implemented using available university space, common recording technologies (e.g., tablets) and recruitment of local actors (e.g., second simulation). Protocols (i.e., actor scripts) should be developed in partnership with students with disabilities who experience navigating life with a disability and receiving accommodations. Simulation design should also balance authenticity and practicality in making decisions such as whether to conduct a meeting during office-hours, or an impromptu conversation at the end of a class session. While no simulated environment is completely authentic, the use of the simulation in this research appears to offer a beneficial opportunity for students to practice and reflect, as well as to provide insight into the context in which students advocate for accommodations.

References


About the Authors

Justin E. Freedman earned his Ph.D. in Special Education and Disability Studies from Syracuse University. He is a former Special Education teacher and received Special Education services in New Jersey public schools as a child identified with a learning disability and ADHD. He is currently an Assistant Professor in the Department of Interdisciplinary and Inclusive Education at Rowan University. He uses theoretical frameworks from the field of Disability Studies to research disability in postsecondary education, Universal Design for Learning and Attention Deficit Hyperactivity Disorder (ADHD). He can be reached by e-mail at: freedmanj@rowan.edu.

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Benjamin Dotger received his Ph.D. in Curriculum & Instruction from North Carolina State University. His public school experience includes service as a high school English teacher in North Carolina. He is currently Professor and Chair of the Department of Teaching & Leadership in the School of Education at Syracuse University. His research interests center on the design and study of clinical simulations in teacher and school leader preparation. He can be reached by email at: bdotger@syr.edu.
Table 1

Simulation Participants' Demographic Information

<table>
<thead>
<tr>
<th>Name</th>
<th>Gender</th>
<th>Race</th>
<th>Year</th>
<th>Self-Reported Disability Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allison</td>
<td>Female</td>
<td>White</td>
<td>Freshman</td>
<td>Testing anxiety; ADHD</td>
</tr>
<tr>
<td>Arlene</td>
<td>Female</td>
<td>White</td>
<td>Graduate</td>
<td>Physical health</td>
</tr>
<tr>
<td>Brian</td>
<td>Male</td>
<td>White</td>
<td>Freshman</td>
<td>Physical health</td>
</tr>
<tr>
<td>Caroline</td>
<td>Female</td>
<td>White</td>
<td>Freshman</td>
<td>Slow processing, learning disability</td>
</tr>
<tr>
<td>Chris</td>
<td>Male</td>
<td>White</td>
<td>Senior</td>
<td>ADHD</td>
</tr>
<tr>
<td>Elissa</td>
<td>Female</td>
<td>White</td>
<td>Junior</td>
<td>ADHD; Mild dyslexia</td>
</tr>
<tr>
<td>Jared</td>
<td>Male</td>
<td>White</td>
<td>Freshman</td>
<td>ADHD</td>
</tr>
<tr>
<td>Karen</td>
<td>Female</td>
<td>White</td>
<td>Senior</td>
<td>Generalized anxiety; Obsessive Compulsive Disorder; ADHD combined type</td>
</tr>
<tr>
<td>Kimberly</td>
<td>Female</td>
<td>White</td>
<td>Sophomore</td>
<td>Hearing impaired</td>
</tr>
<tr>
<td>Marissa</td>
<td>Female</td>
<td>White</td>
<td>Sophomore</td>
<td>Learning disability</td>
</tr>
<tr>
<td>Mark</td>
<td>Male</td>
<td>Hispanic</td>
<td>Freshman</td>
<td>Learning disability, dyslexia, auditory processing</td>
</tr>
<tr>
<td>Nick</td>
<td>Male</td>
<td>White</td>
<td>Freshman</td>
<td>ADHD</td>
</tr>
<tr>
<td>Nora</td>
<td>Female</td>
<td>White</td>
<td>Freshman</td>
<td>Testing anxiety</td>
</tr>
<tr>
<td>Sam</td>
<td>Male</td>
<td>Asian</td>
<td>Senior</td>
<td>Mental health</td>
</tr>
<tr>
<td>Scott</td>
<td>Male</td>
<td>White</td>
<td>Junior</td>
<td>ADHD</td>
</tr>
</tbody>
</table>

Second Implementation of Simulation

<table>
<thead>
<tr>
<th>Name</th>
<th>Gender</th>
<th>Race</th>
<th>Year</th>
<th>Self-Reported Disability Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron</td>
<td>Male</td>
<td>White</td>
<td>Freshman</td>
<td>Auditory Processing Disorder</td>
</tr>
<tr>
<td>Adrian</td>
<td>Cisgender Male</td>
<td>White</td>
<td>Sophomore</td>
<td>Autism, ADD</td>
</tr>
<tr>
<td>Chris</td>
<td>Male</td>
<td>Caucasian</td>
<td>Freshman</td>
<td>Spinal Cord Injury C6C7</td>
</tr>
<tr>
<td>Derrick</td>
<td>Male, question-ing my gender</td>
<td>White</td>
<td>Freshman</td>
<td>Asperger, ADHD (I think)</td>
</tr>
<tr>
<td>Chad</td>
<td>Male</td>
<td>White</td>
<td>Fall Freshman</td>
<td>Depression, anxiety, Asperger syndrome bipolar, dark thoughts, possible eating disorder</td>
</tr>
<tr>
<td>Danielle</td>
<td>Female</td>
<td>Caucasian/ White</td>
<td>First year, Grad</td>
<td>Dyslexia, processing delay, learning disability</td>
</tr>
<tr>
<td>Jacey</td>
<td>Female</td>
<td>White</td>
<td>Freshman</td>
<td>ADD</td>
</tr>
<tr>
<td>Joanna</td>
<td>Female</td>
<td>White</td>
<td>Freshman</td>
<td>Anxiety, Autism</td>
</tr>
<tr>
<td>Gerry</td>
<td>Gender fluid</td>
<td>Caucasian</td>
<td>Senior</td>
<td>Asperger syndrome, Anxiety, ADHD, Depression</td>
</tr>
<tr>
<td>Layla</td>
<td>Female</td>
<td>White</td>
<td>Junior</td>
<td>Spinal muscular atrophy type II</td>
</tr>
<tr>
<td>Marcus</td>
<td>Male</td>
<td>White</td>
<td>Junior</td>
<td>Cerebral Palsy, Anxiety, depression, OCD, epilepsy</td>
</tr>
<tr>
<td>Neil</td>
<td>Male</td>
<td>Caucasian</td>
<td>Junior-Senior</td>
<td>Autism, Anxiety, Depression, ODD</td>
</tr>
<tr>
<td>Victor</td>
<td>Male</td>
<td>White</td>
<td>Freshman</td>
<td>Asperger’s, ADHD</td>
</tr>
</tbody>
</table>
Table 2

Simulation (SIM) Contexts

<table>
<thead>
<tr>
<th>Simulation</th>
<th>Number of Participants</th>
<th>Protocol</th>
<th>Description of SIM Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Simulation</td>
<td>15</td>
<td>Professor Alicia/Alan Williams</td>
<td>Participants were recruited individually via an email sent on the electronic mailing list of students registered with the Disability Services Office</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Meetings conducted in simulation rooms at nearby medical university's simulation center</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Actors recruited from pool of simulation center’s standardized patients, meaning they had knowledge of simulation process</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Four actors: two White males, one African American female, one White female</td>
</tr>
<tr>
<td>Second Implementation</td>
<td>13</td>
<td>Professor Alicia/Alan Williams</td>
<td>Embedded as an activity in a transition program for incoming first-year students and upper-level mentors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(revised)</td>
<td>Faculty offices were reserved on campus; portable cameras staged in each office</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Actors were recruited via theater department alumni network and departmental electronic mailing list</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Three actors: one White male, one African American female, one White female</td>
</tr>
</tbody>
</table>
Figure 1

Process of Designing a Simulated Meeting Protocol

1. Semi-structured interviews with staff from the Disability Services Office
2. Analysis of interview data in relation to existing research
3. Draft of simulation introduction for students
4. Draft of professor (actor) protocol
5. Focus group with students with disabilities
6. Analysis of focus group data in relation to interview data and existing research
7. Revision of introduction for students
8. Revision of professor (actor) protocol
Gaining Independence: Cooking Classes Tailored for College Students with Autism (Practice Brief)

Libby Gustin¹
Holden E. Funk²
Wendy Reiboldt²
Emily Parker¹
Nicole Smith³
Rachel Blaine²

Abstract

Self-care skills, especially food preparation skills, are essential for independence as young adults with autism spectrum disorder (ASD) transition to adulthood. This practice brief reviews the impact of a six-week course designed to teach cooking skills to college students with ASD. The goal was to increase confidence in cooking and frequency of cooking to enhance skills for independence and dietary habits. Designed and taught by a registered dietitian nutritionist, the course utilized nutritious, sensory-friendly recipes along with visual recipe guides to promote skill building. Pre-and post-tests were administered during the first and final sessions of the course to assess self-reported changes in methods of cooking, frequency of self-prepared meals, and meal preparation confidence. Data were collected over a two-year period. Results from pre-and post-tests questionnaires showed significant increases in cooking frequency and confidence in cooking ability compared with baseline.

Keywords: autism spectrum disorder, cooking course, independence, transition to adulthood

The number of children diagnosed with autism spectrum disorder (ASD) has more than doubled over the past 15 years (Centers for Disease Control and Prevention, 2015). This upward trend magnifies the need for continued research and improved educational interventions across all areas of functioning for those affected by ASD. Thus far, ASD research, treatment, and government aid has had a pediatric focus, while research pertaining to adults and seniors living with the disorder is lacking (Goldschmidt & Hee-Jung, 2015).

When considering the nutritional needs of people with ASD and the skills required for independence as adults, there are currently unmet opportunities for education and intervention. In order to assist in the transition to adulthood, necessary skills, such as safe food handling and storage, cooking, and grocery shopping, must also be taught. Given the current burden of chronic disease among all adult Americans (i.e., diabetes, heart disease, cancer), educational materials should also be encouraging a healthful varied diet that includes plant-based and heart-healthy foods (Carlson & Frazão, 2014).

Literature Review

Several factors must be considered when developing an educational curriculum for college students with ASD, especially in a course focused on food preparation. These factors include learning preferences, motor skill deficits, strong foods preferences, rigidity, difficulty with change, food neophobia (refusal to try unfamiliar food), and nutritional appropriateness of foods. It is important to address these concerns to reduce the student’s anxiety and extreme feelings of discomfort (Huemer, 2015).

First, students with ASD tend to be visual learners (Huemer, 2015; Shepley et al., 2019). A study analyzing the use of video prompting in the efficacy of teaching cooking skills to students with ASD showed
a clear increase in the percentage of cooking steps (in a recipe) completed independently when the video-prompting was utilized (Johnson et al., 2013). In the event that video prompting is not an available resource, picture-based systems have been shown to be effective in cueing multi-step tasks for students with ASD (Mechling et al., 2009). When presented with visual stimuli in a learning setting, one study showed that participants paid more attention, showed more interest, and displayed more on-task behaviors than when presented with printed text with no pictures (Banire et al., 2015).

When handling and preparing food, gross motor delays and poor fine motor skills among people with ASD must also be considered (Jasmin et al., 2009). One study examining motor skill scores of children with ASD demonstrated that 63% of subjects displayed a significant gross motor delay, and 53% had a significant fine motor delay. These findings are noteworthy due to their implications for effectively mastering cooking skills, which include both gross (i.e., navigating the kitchen) and fine (i.e., grasping food, knife handling, etc.) motor skills. Thus, an instructor must be cognizant of potential challenges and either modify the recipes or take extra time to ensure all students are comfortable with their mastery of basic skills before moving onto more advanced skills.

Atypical sensory functioning among people with ASD can lead to sensory processing differences that can present as extreme food selectivity and provide unique challenges that must be addressed to implement effective interventions (Luisier et al., 2015; Tavassoli & Baron-Cohen, 2012). Since many senses are involved in eating (i.e., taste, smell, sight, texture) it is understandable many people with ASD have very specific, narrow food preferences and extreme food selectivity (as few as 5-20 foods) as described in the literature (Cermak et al., 2010; Chistol et al., 2018; Luisier et al., 2015; Tavassoli & Baron-Cohen, 2012). A study on food selectivity in adolescents and young adults found those with ASD were more likely to be classified as food neophobic (afraid of eating new/unfamiliar foods) in comparison to typically developing peers (Kuschner et al., 2015).

Thus, sensory processing issues must be considered when choosing the learning environment and the types of foods to prepare. Minimizing sensory distractions (i.e., loud noises, flickering lights, synthetic odors) within the learning environment can help set the student up for success (Huemer, 2015). Additionally, selecting foods that are more “mainstream” and well accepted (e.g., avoiding mushy foods with low visual appeal) is likely to increase potential food acceptance. Young adults with ASD were more likely to report disliking such textured foods as applesauce, cottage cheese, or chunky peanut butter and less likely to enjoy strong tastes, such as spices in foods or strong mints (Kuschner et al., 2015). Having a variety of acceptable food options is important because children with ASD are more food neophobic, which may lead to long-term health issues (Wallace et al., 2018).

### Depiction of Problem

Based on the above literature review that identifies a connection between ASD traits and feeding behavior that impacts health and daily living skills, it is important to provide interventions that address these concerns. A hands-on cooking course can enhance the food experience for people with ASD, while simultaneously building independence skills. Temple Grandin (2013) wrote, "The other day I met a mother who said her grown-up daughter had never gone grocery shopping...How will she be prepared to live on her own, if she can't go to the store?" (p. 190). In fact, the cooking course described in this brief was created in response to a college student with ASD who experienced the death of his single–mother/caretaker and was left unequipped to shop, prepare, and cook for himself. Such encounters depict a deficit in independence-training provided to young adults with ASD, which can have a negative impact on growth and development past adolescence. Teaching topics that increase independence such as grocery shopping and food preparation can help address the aforementioned encounters.

Learning, however, by its nature, requires the student to experience change and move away from what they already know. Therefore, making class time predictable by using a visual schedule of the topics to be covered, including the number of tasks to be completed, and time frames required to complete them can also help increase the student's comfort level and reduce anxiety (Huemer, 2015).

When teaching cooking courses to students with ASD, it is important to ensure that the foods chosen are nutrient-dense, include a variety of fresh fruits and vegetables, have attractive odor and visual appeal. Current research supports the use of nutrition interventions for people with ASD that address nutritional and biochemical irregularities affecting health outcomes (Wallace et al., 2018). Thus, since many people with ASD are often on specialized diets (e.g., gluten-free options); recipes selected for a cooking course must consider the preferences (diet needs and food neophobia) of the students.

Despite the potential challenges that may exist in effectively administering a cooking intervention
among young adults with ASD, there is evidence that exposure to new skills and foods can result in positive outcomes. A study by Silbaugh and Swinnea (2018) found that behavioral interventions can have positive effects on feeding challenges among children with ASD and food selectivity, primarily related to increased exposure. Among neurotypical college students, cooking demonstrations have been shown to improve confidence in cooking as well as fruit and vegetable consumption (Brown & Herman, 2005; Levy & Auld, 2004). This practice brief describes the impact of a six-week cooking course on college students with ASD. The goal is to increase confidence in and frequency of cooking to enhance dietary habits and skills for independence.

**Participant Demographics and Institutional Partners/Resources**

Participants in the study were students enrolled at a large urban state school in southern California who were members of the Learning Independence for Empowerment (LIFE) Project group provided on campus through the campus office serving students with disabilities. The LIFE Project is a comprehensive program serving nearly 200 undergraduate students with ASD that facilitates opportunities for independent living skills through a variety of interactive lessons (LIFE Project, 2019). Through weekly meetings and workshops, LIFE Project provides students with essential tools needed to interact with peers, family, and friends as well as promoting independence and autonomy. Weekly meetings foster social skills, team building exercises, interactive games, and more. Workshop topics encompass a more comprehensive focus on such topics as navigating campus, money management skills, dating, handling frustration, anger and anxiety, job skills, independent living skills, and many more. The cooking course was an option under the independent living skills workshops.

The cooking course instructor went to a LIFE Project meeting to introduce herself and invite participation. Then the LIFE Project director and staff encouraged students most likely to enjoy and succeed in the class to sign up. The Department of Family Consumer Sciences donated use of the kitchen space, the Access Center (AC) payed a small stipend to the instructor and student aides were available to assist whenever the students requested help or required more or continuous assistance.

To impart healthy food habits and improve the nutritional status of course participants, the curriculum for the cooking course was developed by one of the authors who holds a Master of Science degree in Nutrition and is a RDNs. The recipes included nutrient-dense foods to promote a varied, balanced diet reflecting a variety of textures, flavors, and colors. The recipes were also designed to teach as many basic cooking techniques as possible while being careful not to overwhelm the participants (e.g., knife skills, baking, cooking on a stove top, using a blender). In addition, all recipes used could easily be modified to be gluten or dairy free if needed.

The curriculum included a detailed recipe book that was developed in accordance with the learning

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**Description of Practice**

The current study assessed the impact of a cooking course, specifically methods of cooking, frequency of self-prepared meals, and confidence in ability to prepare meals independently among young adult college students with ASD. The course consisted of six cooking modules, which are outlined in Table 1, *The LIFE Project Cooking Course Curriculum*. The course was offered on Fridays from 2-4 p.m. in a multi-station kitchen laboratory located on the university campus. The stations allowed students to work independently as if in their own kitchen while the instructor and student aides were available to assist whenever the students requested help or required more or continuous assistance.

During the two sessions, 69% (11/16) of students completed both the pre- and post tests and were present for the entirety of the course. Eighty-two percent of students were male (n = 9), and 18% of the sample group was female (n = 2). Ages ranged from 19-26, with a mean age of 21. All students were enrolled as undergraduate students at the university, part of the LIFE Project program, registered with the AC and voluntarily enrolled in the cooking course.
needs of students with ASD. The recipe materials incorporated visual reference/photos for each step, numbered tasks, and specified time frames for the steps. Each student received this recipe book on the first day of the course. The first week covered basic cooking skills and food safety, while the second, third, and fifth week focused on preparing specific dishes. During the fourth week, students learned how to make dessert and shop for food.

**Evaluation of Outcomes**

To measure the impact of the cooking class, a pre-and-post-intervention questionnaire for the cooking skills program was administered (adapted from Barton et al., 2011). A baseline of cooking levels/skills was obtained at the beginning of the course to assess whether or not the students took on more challenging cooking methods after completing the course. Frequency of cooking measured how often, during a normal week, participants cooked a main meal from basic ingredients. Making spaghetti and meatballs from raw ground beef and raw noodles was provided as an example to clarify the meaning of basic ingredients. The confidence scale measured students’ confidence in cooking and tasting new foods. Each variable used a scale to capture the unique characteristics of that variable, which is shown in Table 2, Variable Scales.

Two years of data were combined for a total of 11 students. The data were entered into SPSS statistical analysis program and used a significance level of $p \leq 0.01$. The results showed strong evidence of improvement in the frequency of meals prepared by students before and after participation in the LIFE Project cooking course (significant at $p=0.005$). Students on average increased the number of times per week that they cooked meals for themselves after completing the course. The most promising finding was a significant increase in the frequency of meals prepared from basic ingredients, by about one meal per week. Since preparing meals requires independence, the intervention might also have increased some students’ level of independence. This indicates that the intervention may have translated into behavior change in weekly habits over a very short time period. Table 3, *Paired Samples t-Test for Participants*, shows the significant improvement in frequency of meals prepared from the pre-test to the post-test.

The type of cooking methods used by students before and after participation in the LIFE Project cooking course show a 21% advancement in cooking methods used by the participants after the completion of the course. The results indicate a shift from convenience ready prepared meals to putting meals together from ready-made ingredients. Table 3, *Paired Samples t-Test for Participants*, shows the participants’ change in cooking methods used. Anecdotally, students enjoyed cooking, as observed during the preparation of dishes even when they did not necessarily like to eat dishes such as chicken salad, yogurt parfaits, and salads. Teaching students with ASD cooking skills requires very patient teachers because the students get anxious easily and can be very particular about following directions exactly as written. For example, during module 2, teaching scrambled eggs took well over an hour. To ease the students’ anxiety and encourage teacher’s patience it is recommended to have adequate time to prepare recipes so no one feels rushed.

Students’ confidence in their ability to prepare meals before and after participation in the LIFE Project cooking course showed a significant increase after completing the course, from an average confidence score of 11 to 16 (significant at $p=0.004$). Table 3, *Paired Samples t-Test for Participants*, shows the participants increase of confidence in cooking ability. It is interesting to note that within the confidence scale questions, confidence in cooking from basic ingredients showed the largest increase (75%), and tasting foods not eaten before exhibited the second largest increase (34%). An important behavioral observation learned during the first year is changing the visual perception of the same ingredients can have an effective impact on students with ASD’s acceptance of new food. For example, none of the students would touch the rainbow salad, however replacing the recipe with tacos or build-your-own nachos using a lot of the same foods as the salad lead to acceptance of the food. Acceptable food presentation during the intervention led to an increase in tasting new foods, helped reduce food neophobia, and enhanced acceptance for some of the students.

Building confidence in the kitchen can create a more positive cooking experience and encourages new cooks to continue developing their culinary skills. The increased confidence in tasting foods impacts longer term dietary diversity, which is important for health and for socializing (e.g., eating out or at a party). These findings align with studies that increased neurotypical participant confidence in cooking abilities after completing a hands-on cooking lesson (Levy & Auld, 2004).

**Implications and Portability**

The cooking class increased student’s exposure to a variety of food recipes and cooking styles, which
they otherwise may not have been willing to explore themselves. Although the sample size for this study was small (n=11), the class significantly increased the number of times per week the students cooked for themselves, increased students’ confidence in their cooking ability, tasting new foods, and slightly increased students’ meal preparation method. Perhaps most importantly, this intervention was successful in creating confidence in a population that often demonstrates hesitancy in the adopting new skills or interests. Since cooking skills continue to evolve with more practice over time, it is especially important that the students left with the confidence and encouragement to continue building upon what they learned. Teaching cooking skills is an intervention worth replicating because it honors the autonomy of adults with ASD while promoting self-efficacy, health, and well-being. Findings also indicated potential areas of improvement for the course, such as enhanced opportunities for follow-up skills and more repetition in foods used.

Preparing meals at home increases independence and allows food to be prepared to meet specific sensory needs (e.g., tender, crisp broccoli versus mushy broccoli). Furthermore, independence in the kitchen allows for more control over the nutritional quality of meals, as a home cook can moderate the amount of added salt and sugar, use of nutritious ingredients, and better control portion sizes. Given the financial considerations of independent living with a disability, being able to cook from basic ingredients is essential to keeping on a fixed budget, as compared with dining out or buying pre-prepared/highly processed foods (Murray et al., 2017; Robson et al., 2016).

When considering ways to improve upon the existing curriculum, one welcome addition would be some form of reinforcement to encourage the participants to continue exploring new foods and cooking skills after the conclusion of the course. Some examples of follow-up activities could be sequential courses to build upon skills or a video series or blog for the students to follow. Another area of improvement would be to add a component to the survey about specific food choices and dietary changes to help inform recipe development. Finally, although many students were eager to try new dishes, some foods (i.e., salad, chicken, yogurt for parfaits) were avoided by many students who were eager to prepare, but not taste them. Having opportunities to taste test (e.g., yogurt brand tasting test), repeating an ingredient in multiple dishes, or simply handling or smelling certain foods could be a way to increase acceptance.

Preparing food can be a positive social experience (i.e., cooking meals for others, helping in the kitchen during holiday meal preparations), which can enhance the lives of the adult with ASD and their family or friends. Students also had an opportunity to attempt new skills alongside their peers, which provided opportunities for positive social experiences both while cooking and during “meals” when the final products were enjoyed together. Anecdotally, students in the course reported a great deal of satisfaction in socially cooking and trying new foods with their peers, as well as positive affirmation from parents about their newly adopted skills. Social communication deficits and the presence of restricted/repetitive behaviors (i.e., food neophobia) has been linked with feeding-related problems (Wallace et al., 2018). Therefore, social support and modeling to try new foods may be an important contributor to expanding the dietary diversity of those with ASD.

This study identifies opportunities for further investigation. Although, confidence in cooking from basic ingredients showed the greatest increase (75%), the frequency of cooking from basic ingredients only showed a slight change. Given that cooking from basic ingredients requires the use of both gross and fine motor skills, six weeks may not be enough time for many of the students to acquire the needed skills or generalize them in their daily lives. Therefore, extending the length of the course or adding sequential courses might further enhance the impact of change on weekly cooking habits. For example, adding a final course in which the students selected their own food dish might give them the confidence to cook more often at home. Also, incorporating a longitudinal component in future studies could provide insightful observations through interviews with aides and/or participants as well as potentially inform long-term mastery.

Challenges proposed by the course include the number of student aides or instructors needed to monitor the students, financial funding, and the space limitations of the facility, which allowed only a small number of students to enroll in each course. As a result of the increased confidence in the short-term course, the sequential courses could be a video series since it supports the visual learning style of ASD students and provides an opportunity for repetition.

Learning how to prepare food safely is critical to attaining independence in adulthood, as well as increase opportunities to make healthier food choices that align with individual specific diet needs. Given the results of our short-term cooking course, interventions tailored for students with ASD can have a positive impact on cooking skills and confidence, which in turn could impact nutritional choices and ability to live independently. One cost-effective way
to sustain newly learned skills would be to create an on-going video series as support beyond the basic six-week cooking class. As the population of children on the spectrum enters into adulthood, opportunities for positive food experiences, such as exposure to a wider variety of nutritious foods through a multi-level cooking course, are promising practices that can lead to long-term health and well-being.

References


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Libby Gustin received her B.A. degree in Hospitality Management from University of Alabama, her MBA and Ph.D. from Virginia Polytechnic University. Her experience includes working in the food service industry as a cook, catering and management. She is currently a professor in the Department of Family Consumer Science in the area of Hospitality Management. Her research interests include sustainability in the food industry with a specific focus on food security. She can be reached by email at: libby.gustin@csulb.edu.

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Rachel Blaine received her B.S. degree in Clinical Nutrition from UC Davis, a Master of Public Health from UCLA and a Doctor of Science in Public Health Nutrition from the Harvard TH Chan School of Public Health. She is currently an Assistant Professor of Nutrition at California State University, Long Beach. Her research interests include best practices in nutrition and healthy lifestyle habits for autism spectrum disorder, child feeding, and obesity prevention interventions in community and clinical settings. She can be reached by email at: rachel.blaine@csulb.edu.

**Acknowledgement**

Thank you to the CSULB Office which serves disabled students. The office provided funding and staff support for cooking workshops.
Table 1

*The LIFE Project Cooking Class Curriculum*

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Topic</th>
</tr>
</thead>
</table>
| 1     | Home Food Safety  
Food Safety, Sanitation, and Knife Skills  
Dress Code for the LIFE Project Cooking Classes |
| 2     | Scrambled Eggs  
Old Fashioned Oatmeal |
| 3     | Fruit Smoothie  
Rainbow Salad (replaced after 1st year with tacos or nachos) |
| 4     | Chocolate Dipped Strawberries  
Grocery Shopping |
| 5     | Baked Potatoes  
Crunchy Chicken Fingers  
Sautéed Zucchini |
| 6     | Banana Bread with Orange Zest |

Table 2

*Variable Scales*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Scale</th>
</tr>
</thead>
</table>
| Cooking Method                                                           | 1. Convenience, ready-made meals  
2. Put together ready-made ingredients to make complete meals  
3. Prepare dishes from basic ingredients  
4. Other  
5. Do not cook at all |
| Frequency of Self-Prepared Meals                                         | 1. Never  
2. Less than once a week  
3. Once a week  
4. 2-3 times  
5. 4-6 times  
6. Daily |
| Confidence in cooking from basic ingredients, following simple recipe, tasting new food, preparing/cooking new foods | Not at all confident  
1  
2  
3  
4  
5  
6  
7 Extremely confident |
Table 3

*Paired Samples t-Test for Participants*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>n</th>
<th>SD</th>
<th>t</th>
<th>sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of Meals Prepared</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-test</td>
<td>2.00</td>
<td>11</td>
<td>1.83</td>
<td>-3.627</td>
<td>0.005</td>
</tr>
<tr>
<td>Post-test</td>
<td>2.91</td>
<td>11</td>
<td>0.944</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooking Methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pre-test</td>
<td>1.64</td>
<td>11</td>
<td>0.809</td>
<td>-1.614</td>
<td>0.138</td>
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<tr>
<td>Post-test</td>
<td>2.09</td>
<td>11</td>
<td>0.944</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence in Cooking Ability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-test</td>
<td>11.36</td>
<td>11</td>
<td>3.776</td>
<td>-3.650</td>
<td>0.004</td>
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<tr>
<td>Post-test</td>
<td>16.18</td>
<td>11</td>
<td>3.281</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Significant at \( p \leq 0.01 \).
JPED Author Guidelines

Purpose

The purpose of the Journal of Postsecondary Education and Disability (JPED) is to publish research and contemporary best practices related to college students with disabilities, college and university disability services offices, disability educators, and disability studies. Each article includes practical implications for disability services educators in colleges and universities. The JPED is peer-reviewed and uses a masked-in-both-directions review process. The sponsoring organization for the JPED is the Association on Higher Education and Disability (AHEAD, www.ahead.org), the primary source of disability-related expertise on accessibility, legislation, rights, and any other disability-related information as it pertains to higher education.

Manuscript Topics and Types

Published manuscripts will advance JPED’s purpose as detailed above (i.e., research, best practices, implications for disability services educators).

Research Articles

Manuscripts demonstrate scholarly excellence using one of the types of articles and papers as described in the Publication Manual of the American Psychological Association (7th edition, American Psychological Association [APA], 2020) sections 1.1-1.8 and 1.10.

Practice Briefs

Manuscripts describe innovative programs, services, or contemporary best practices that support college students with disabilities or disability services, and are organized using the following first-heading levels (APA 2.27):

- Summary of Relevant Literature: provide a succinct summary of the most relevant and contemporary literature that provides context for what is already known about the practice/program.
- Depiction of the Problem: provide a statement of the problem being addressed.
- Description of Practice: briefly describe the intended outcome for the innovative practice/program and how it has been implemented to date. Tables and figures may enhance specific details.
- Participant Demographics and/or Institutional Partners/Resources: provide a demographic description of participants and/or the offices/agencies that were collaborative partners (if relevant).
- Evaluation of Observed Outcomes: summarize formative and/or summative data used to evaluate the efficacy of your practice/program; support claims with evaluation data.
- Implications and Portability: discuss what has been learned and how this practice/program could be enhanced. Be honest about any challenges encountered. What could be done differently next time to achieve better outcomes? Provide a clear description of how and why other disability service educators should consider adapting your practice/program.

Book Reviews

Prior to preparing a book review, contact the JPED’s Executive Editor (jped@ahead.org) to discuss the book you are considering reviewing. Book reviews provide:

- An overview of the book, identifying the book’s stated purpose, the author’s and his/her viewpoint, and a general summary of the content.
- An evaluation of the book’s content, elaborating on the author’s objectives and how well those objectives were achieved, the organization and presentation of the book, and the strengths and weaknesses of the book along with the criteria you used for making that assessment. Recommendations should specify to whom you would recommend the book, why, and how you would suggest the book be used, and address its potential contribution to the field.

Manuscript Preparation

All manuscripts must be prepared according to the standards of the APA publication manual (7th edition). Authors submitting manuscripts to the JPED will be well-served to thoroughly understand Section 12 of the APA manual where the publication process is described as preparing for publication, understanding the editorial publication process, manuscript preparation, copyright and permission guidelines, and during and after publication.

When submitting a manuscript to the JPED, follow these specific guidelines:

- Submit one complete Word document (.doc
or .docx) that contains all manuscript components (i.e., title page, abstract, body, references, tables/figures).

- Provide a separate cover letter (APA 12.11) asking that the manuscript be considered for publication and stating that it has not been published, or is not being reviewed for publication, elsewhere.

- Manuscripts should have one-inch margins in 12-point Times New Roman font. Double space the abstract, body, and references; single space the title page and tables/figures. The length (of all manuscript components) for:
  ○ Research articles is between 25-35 pages.
  ○ Practice briefs is a maximum of 16 pages.
  ○ Book reviews is 800-1,200 words.

- The title (APA 2.4) should not exceed 12 words.

- Place the abstract (maximum 250 words, APA 2.9) on page two (following the title page). Include three to five keywords (APA 2.10) below the abstract.

- Use APA Section 1, Scholarly Writing and Publishing Principles, related to types of articles and papers; ethical, legal, and professional standards in publishing; ensuring the accuracy of scientific findings; protecting the rights and welfare of research participants and subjects; and protecting intellectual property rights.

- Use APA Section 2, Paper Elements and Format, to align paper elements, format, and organization. Indent paragraphs (APA 2.24), and adhere to heading levels (APA 2.27) to organize the manuscript.

- Content and method are important. Use APA Section 3, Journal Article Reporting Standards, related to overview of reporting standards; common reporting standards across research designs; and reporting standards for quantitative, qualitative, and mixed methods research.

- Writing is important, carefully clean the manuscript; it is not the editor’s role to clean your manuscript so that it can be reviewed. Use APA Section 4, Writing Style and Grammar, related to continuity and flow, conciseness and clarity, verbs, pronouns, and sentence construction. Use APA Section 6, Mechanics of Style, related to punctuation, spelling, capitalization, italics, abbreviations, numbers, statistical and mathematical copy, presentation of equations, and lists. Refer to APA 6.32-6.39 to properly report numbers expressed as numerals or in words.

- Use APA Section 5, Bias-Free Language and Guidelines, related to general guidelines for reducing bias, and reducing bias by topic. Authors should use APA 5.4 to make an informed decision related to person-first or identify-first language. The JPED prefers person-first language unless the author can make the case for a preference of identity-first language.

- Use APA Section 8, Works Credited in Text, related to general guidelines for citation, works requiring special approaches to citation, in-text citations, and paraphrases and quotations. All citations must be referenced, and all references must be cited; avoid undercitation and overcitation (APA 8.1). Double-space and block quotations of 40 words or more (APA 8.27).

- Use a reference list (APA 2.12) not a bibliography; it follows the manuscript. Follow APA examples in sections 9-11; carefully clean references. It is not the editor’s role to clean your references.

- Tables and/or figures, following references, are in black and white only, and must conform to APA standards in APA Section 7. Follow examples related to table lines. Align numbers in tables to the single digit or the decimal. If tables and/or figures are submitted in image format (JPEG, PDF, etc.), an editable format must also be submitted along with a text description of the information depicted in the table/figure. This will be provided as alternate format in the electronic version of the JPED, making tables/figures accessible for screen readers.

- Do not include footnotes, instead, incorporate footnote narratives into the manuscript.

- Because of the importance of articles including practical implications for disability services educators in colleges and universities, authors will be well-served to include in the discussion a multiple paragraph subsection where practical implications for disability services educators are discussed.

- Before submission, ensure that the manuscript is ready by using strategies, examples, and checklists provided by APA:
  ○ Sample papers (pages 50-67).
  ○ Strategies to improve your writing (APA 4.25-4.30).
  ○ Tables checklist (APA 7.20).
  ○ Figure checklist (APA 7.35).
  ○ In-text citation styles (Table 8.1).
  ○ Examples of direct quotations in the text (Table 8.2).
  ○ Reference examples (section 10 and 11).
  ○ Manuscript preparation (APA 12.9-12.13).
Manuscript Submission

Before you decide to submit your manuscript, authors are encouraged to read past articles in the JPED (available at https://www.ahead.org/professional-resources/publications/jped) to better understand the types of submissions we print. A manuscript must be submitted electronically as an attachment via email to jped@ahead.org, and must include the following:

- Subject line: JPED manuscript submission.
- Include in the body of the email a statement that you are submitting a manuscript for consideration for the JPED. Include the title of the manuscript and the full contact information for the corresponding author (APA 2.7).
- Attach to the email your complete manuscript, prepared as directed above, and a cover letter as outlined above.
- You will receive an email reply from Richard Allegra (Managing Editor of JPED) to confirm receipt of your submission within seven business days.
- Manuscript submissions by AHEAD members are especially welcome.

Upon Acceptance for Publication

For manuscripts that are accepted for publication, Valerie Spears (JPED Editorial Assistant) will contact the corresponding author to request:

- A 40-50 word bibliographic description for each author, and a signed copyright transfer form (Valerie will send templates for both).
- The JPED reserves the right to edit all material for space and style. Authors will be notified of changes.

Special Issues

The JPED occasionally publishes special issues which feature a series of articles on a particular topic. The JPED welcomes ideas for special topic issues related to the field of postsecondary education and disability or disability studies. The issue can be formatted as a collection of articles related to a particular topic or as a central position paper followed by a series of commentaries (a modified point/counter point). Authors who wish to discuss a special issue should contact the JPED Executive Editor at jped@ahead.org.

The topic and proposed authors need to be described. If the issue has the potential to be valuable to the readership of the JPED, the Executive Editor may provide suggestions for modification to content or format. If an agreement can be reached, the Executive Editor will share an agreement form to be completed and returned by the Special Issue Editor. The Special Issue Editor will inform authors of due dates and coordinate all communications with the contributing authors. The Special Issue Editor and the Executive Editor will be responsible for final editing decisions about accepted manuscripts.

Publication Information

JPED is published four times a year in multiple accessible formats (e.g., printed, DAISY, MP3, Text only, PDF), and each issue is distributed to nearly 4,000 individuals. All back issues are archived and accessible to all at ahead.org/publications/jped. These author guidelines are published at https://www.ahead.org/professional-resources/publications/jped/jped-author-guidelines.

JPED’s acceptance rate is moderately selective, ranging between 20-25% during the past calendar year. JPED is indexed in EBSCO, ERIC and Emerging Sources Citation Index; we anticipate in winter 2020 that the JPED will be indexed in Clarivate Analytics’ Social Sciences Citation Index, so that the Journal Citation Reports’ (JCR) impact factor can be reported.

Editorial and Review Teams

The editorial team is composed of Valerie Spears, Richard Allegra, and Roger Wessel. The review boards are comprised of more than 70 international disability scholars and disability services educators on college students with disabilities, disability services, disability studies, and research methodologies.

Reference