

Using Large Survey Data to Understand the Engagement of Students with Disabilities (Practice Brief)

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Abstract

Each year hundreds of institutions will administer national surveys to measure the engagement of their students. However, stakeholders on college campuses, such as educators (faculty, instructors, student affairs educators, and disability services administrators) and institutional research staff who work with this information are often unaware of how these extant data can be used to understand the engagement of college students with disabilities. The purpose of this practice brief is to inform stakeholders how they may consider using data from the National Survey of Student Engagement (NSSE) or the Community College Survey of Student Engagement (CCSSE) by (a) describing the theoretical frameworks undergirding the survey items related to disability, (b) recommending how to analyze the data in anti-deficit ways while considering strategies of disaggregation, and (c) demonstrating how to use the data to understand disability as a construct of diversity, informing practice and policy when supporting these students.

Keywords: students with disabilities, student engagement, survey research

Stakeholders on college campuses, such as educators (faculty, instructors, student affairs educators, and disability services administrators) and institutional research staff who are charged with learning more about the students with disabilities on their campus may find the task daunting. Beyond conversations with their disability services office, it can be unclear where to learn more about this group. Fortunately, campuses may already have survey data measuring the engagement of these students captured by either the National Survey of Student Engagement (NSSE) or the Community College Survey of Student Engagement (CCSSE). The NSSE (2019a) is administered by four-year institutions to first-year and senior students, measuring behaviors related to Engagement Indicators such as Higher-Order Learning, Student-Faculty Interaction, and Supportive Environment. Meanwhile, the CCSSE (2019a) is administered by two-year institutions, measuring behaviors related to Engagement Benchmarks such as Active and Collaborative Learning, Student Effort, and Academic Challenge.

Although administered at different types of institutions, both instruments measure student engagement

(McCormick et al., 2013; McCormick & McClenney, 2012). Kuh (2003) defined student engagement as, “the time and energy students devote to educationally sound activities inside and outside of the classroom, and the policies and practices that institutions use to induce students to take part in these activities” (p. 25). Researchers have used NSSE data to relate student engagement to persistence rates (Nelson Laird et al., 2008), development of future career plans (Gonyea & Kinzie, 2015), and increases in leadership skills and self-confidence (Kezar & Moriarty, 2000). Similarly, CCSSE data has been used to connect student engagement with participation in student success programs and learning communities (Hatch, 2017), increased interactional diversity (Jones, 2016), and academic engagement is linked to increased persistence (Museus et al., 2012; Saenz et al., 2011).

In both surveys, respondents are asked about disability; however, the questions are structured in different ways. On the NSSE (2019b), respondents are asked, “Have you been diagnosed with any disability or impairment?” and may select either: Yes, No, I prefer not to respond. If a student answers in the affirmative, they are provided an additional question,

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“Which of the following has been diagnosed? (Select all that apply.)” and may select any of the following: A sensory impairment (vision or hearing); A mobility impairment; A learning disability (e.g., ADHD, dyslexia); A mental health disorder; and A disability or impairment not listed above. On the CCSSE (2019b), respondents are directed, “This section has three parts. Please answer all three parts, indicating (a) how often you have used the following services during the current academic year, (b) how satisfied you are with the services, and (c) how important the services are to you at this college.” One of the services respondents comment on is Services for Students with Disabilities.

Stakeholders may be unaware of the tradeoffs posed within these questions and unsure how to analyze these data in a way that is supportive of students with disabilities. The purpose of this research brief is to describe some of the assessment and research problems embedded within these fundamentally different survey questions, recommend some practices and solutions to these problems, and provide implications and portability for higher education practice. As a result of this practice brief, readers will be more informed and prepared to work with their extant data to measure the engagement of students with disabilities on their campus.

Depiction of the Assessment and Research Problems

Within scholarship on this topic, there exist different theoretical frameworks through which to consider disability, such as a medical model grounded in biology and diagnosis, and an interactionist model that relies on the relationship between the individual, their disability, and the environment. Problems arise when the survey instrument used to conduct research on populations with disabilities uses a different framework from how results are reported to stakeholders, posing tradeoffs. On the NSSE survey item, respondents are asked, “Have you been diagnosed with any disability or impairment?” Using Evans et al. (2017) description of disability models, this question is designed in line with the medical model of disability where, “categorization of disability is dependent on medical diagnosis and classification system” (p. 82). In this chapter of the text, the authors describe this model of disability as dominant within higher education; however, the major drawback of this model is the emphasis on biological conditions associated with disabilities and placing responsibility on the individual, without acknowledging the social dynamics associated with this aspect of identity. Therefore, stakeholders should be cautious when presenting

these data; are they maintaining the limitations of the medical model or are they analyzing these findings from a different perspective allowing for more responsibility among stakeholders to improve experiences for these students?

On the CCSSE, respondents are asked about their frequency, satisfaction, and importance of using services for students with disabilities. Since these items ask about three different aspects of this student service, using a single disability model to interpret these survey items is not appropriate. Most likely, researchers will want to assess students who use services for students with disabilities at least one time or more than one time over the current school year. This categorization lends itself to the interactionist model because the item measures students' environments (Evans et al., 2017). In the case of this survey item, the benefit of this model is that it measures student use of a service; however, this item does not measure the other two components of this model (a) the person nor (b) the person's impairment which (as discussed in the next problem) will influence interaction with the environment. In both surveys, presenting data on these students without informing stakeholders of the nature of the survey item (e.g., simply labeling a group “students with disabilities”) presents a problem by not describing the tradeoffs of the models that aligned with the wording of the survey question.

A second research problem is that, in using these frameworks, trying to determine the degree to which the survey subpopulation is representative of your campus population is difficult and most likely impossible to know. A central dynamic of working with students with disabilities is the tension around a student's choice to disclose a disability (Aune, 2000; Brown & Broido, 2015; Cole & Cawthon, 2015; Denhart, 2008; Eccles et al., 2018; Hartman-Hall & Haaga, 2002). Using state longitudinal data, researchers have shown that only 35% of students with disabilities in high school disclose their disability to their disability services office in college (Newman & Madaus, 2015). This finding is particularly important for the CCSSE, based in the interactionist model, because respondents are asked about the frequency, satisfaction, and importance of services for students with disabilities; therefore, it may be the case that there is a large portion of this campus population of students with disabilities who would select “Never” when asked about frequency of use of this office even though they identify as a student with one disability or many disabilities.

When approaching disability through a medical model, it is unclear if students with disabilities are likely to disclose their ability status on a survey,

compared with using a disability services office on campus. On the NSSE, students with disabilities may choose not to disclose by either leaving the question blank, answering in the negative, or selecting, “I prefer not to respond.” In both surveys, there is a problem in reducing these measures to a dichotomy (e.g., students with disabilities compared to students without disabilities) because this strategy does not adequately describe the second group – some of these respondents may have disabilities but have not disclosed on the survey.

Depiction of the Practices and Solutions Related to the Assessment Problems

For stakeholders who wish to examine the differences in engagement between students with disabilities compared with students who answered either survey item in the negative, naming this counterfactual group can be difficult. Although the label “students without disabilities” may be the easiest to grasp, as described in the previous section, this label does not accurately represent this group for either survey. An alternative term may be “general population” implying that students with disabilities may be in this group but are not accounted for. Other alternatives include the terms “students who disclosed disability” (SWDD) and “students who did not disclose disability” (SWODD) (K. Brown, personal communication, May 14, 2019). However, researchers who design studies comparing students with disabilities to the general population run the risk of creating a deficit narrative around these students, in other words establishing a dichotomy where underrepresented students are reported with lower levels of engagement, reinforcing a narrative that these students are less-than their peers (Harper, 2010).

For practitioners performing assessment or research studying the engagement of students with disabilities, a solution to this issue is to write research questions that are not deficit-oriented; consideration of the crafting of a research question in this way is a key principle in the type of methodology called critical quantitative research (Stage, 2007). In his research on students of color in STEM majors, Harper (2010) recommended writing research questions that highlight the pathways to success for marginalized students, also known as anti-deficit questions. In their chapter on adopting this methodology when studying students with disabilities, Vaccaro et al. (2015) recommended, “we invite scholars to employ a critical disability lens as they generate research questions and hypotheses that include students with disabilities in meaningful and nondeficit ways” (p. 27). In achiev-

ing this goal, stakeholders can examine students with disabilities data alone, rather than comparing this group to the general population. For some campuses with small enrollments or low survey response rates, the sample size will restrict the scope of statistical analysis. For other campuses with a sizable subpopulation, several descriptive even relational statistics studies may be possible.

First, it may be the case that stakeholders want to understand the relationship between educational outcomes for students with disabilities and participating in a specific program. For example, some practitioners working with NSSE data may want to consider the differences in levels of engagement between students with disabilities who do and do not participate in High-Impact Practices (HIPs), such as service-learning or undergraduate research. A research question guiding this study could be, “for students with disabilities, is there a mean difference in Engagement Indicator scores between those who participate in HIPs and those who do not?” Second, it may be the case that stakeholders want to understand the variability in engagement by demography for students with disabilities. For example, some stakeholders working with CCSSE data may want to measure the difference in engagement between first-generation students who frequently use services for students with disabilities and non-first-generation students who frequently use services for students with disabilities. The research question guiding this study would be, “is there a mean difference in Engagement Benchmark scores between first-generation students who frequently use services for students with disabilities and non-first-generation students who frequently use these services?”

Broadly, studies like these could be informative to campus educators who often lump students with disabilities into one homogeneous group, crafting broad policies, instead of understanding that there is quite a bit of variation between these students (Peña et al., 2016). In fact, this group is quite heterogeneous and often requires individualized attention among educators (Deacon et al., 2017). One of the benefits of the NSSE item is the follow-up question in which respondents who answered in the affirmative are asked to select all that apply among five different options for disabilities. Although this item has its limitations (e.g., one option is “A sensory impairment [vision or hearing]” however, the deaf and blind communities are distinct from each other), this follow up item does allow the researcher to learn more about the engagement of students with diverse, and multiple, disabilities. Each of these proposed studies would require research questions in which the researcher disaggre-

gates the responses of students with disabilities, instead of comparing this group to their counterfactual – running the risk of a deficit narrative.

Implications and Portability for Higher Education Practice

After reviewing the analysis suggestions above, my hope is that readers of this brief will be empowered to make the case on their own campuses that students with disabilities are not a homogenous group and this aspect of identity should be assessed in similar ways to other aspects of diversity. By using the two surveys to understand the engagement of this group, faculty, instructors, student affairs educators, and disability services administrators will be able to identify the ways engagement among students with disabilities leads to increases in desired outcomes (e.g., satisfaction, GPA, or retention), truly realizing the goals of an anti-deficit framework.

Recently, a research team I lead earned the NAC-ADA—A Global Community for Academic Advising Research Grant and we have been analyzing the Academic Advising Topical Module data from the 2015 and 2016 administration of the NSSE. In this survey item set, which is available for NSSE institutions to administer, students are asked nine questions about the behaviors of their academic advisors and this study posed a couple of interesting challenges that may help guide practitioners in using data like these. First, in our study, we compared the mean differences of these survey items between students with disabilities and the general population. Although this may have posed a risk of reinforcing a deficit narrative, we were intentional to examine the survey items themselves, with the stem question, “during the current school year, to what extent have your academic advisors done the following?” Since this question asked about behavior of academic advisors instead of students, our conclusion was there was no risk of a deficit narrative when comparing these two groups and, in fact, we discovered a consistent trend of students with disabilities reporting significantly lower scores among these measures compared to the general population.

Second, this example highlights the need for researchers to emphasize practical significance over statistical significance. Each of these items were on a four-point scale and the mean differences were only different by a tenth of a point or so; which led our team to consider, “if these values were presented to campus stakeholders would the differences be large enough to direct policy?” In this descriptive analysis, the effect size was trivial in magnitude; therefore,

readers should be cautious to lend our findings within the sample to broad understandings of academic advising. However, we argued in the manuscript that since the trend of students with disabilities being underserved compared to their peers was consistent among all measures, the results were worthy of dissemination and consideration.

Third, in our process of publishing this manuscript, one reviewer observed that, although respondents of the NSSE were answering in the affirmative that they had been diagnosed with a disability, it may be the case for some students that their disability was invisible (e.g., students with learning disabilities) and unless they disclosed to their disability services office or the advisor, then the disability may go unnoticed and educators may not know how to adjust their practices to support this group. This observation presents an interesting dynamic to consider within survey measurement of disability for both practitioners and researchers alike –visibility of disability may influence engagement. Understanding the ways this dynamic of disability is related to desired outcomes is currently understudied.

In conclusion, student engagement survey data may be a valuable resource for stakeholders to learn about the lived experiences of students with disabilities on their campuses. Stakeholders may want to use these data to measure if students with disabilities consistently report being underserved (as our research team has done above) or to understand the differences in engagement related to program participation or demography within this population. However, these data are not without their tradeoffs when considering theoretical framework and issues related to disclosure. What is needed is further research to understand the degree to which these issues of stigma may relate to students with disabilities choosing to disclose when completing a survey. This concern presents a legitimate threat to the utility of these data; however, limitations like this are common within secondary data analysis so stakeholders need to be appropriately intentional in presenting the tradeoffs of their findings.

References

- Aune, B. (2000). Career and academic advising. *New Directions for Student Services*, 2000(91), 55-67.
- Brown, K., & Broido, E. M. (2015). Engaging students with disabilities. In S. J. Quaye & S. R. Harper (Eds.), *Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations* (pp. 187-207). Routledge.
- Cole, E. V., & Cawthon, S. W. (2015). Self-disclosure decisions of university students with learning disabilities. *Journal of Postsecondary Education and Disability*, 28(2), 163-179.
- Community College Survey of Student Engagement. (2019a). *About the survey*. Retrieved from <https://www.ccsse.org/aboutsurvey/aboutsurvey.cfm>
- Community College Survey of Student Engagement. (2019b). *CCSSE's survey instrument*. Retrieved from https://www.ccsse.org/aboutsurvey/docs/CCSSE_2017_sample.pdf
- Deacon, S., Tucker, R., Bergey, B., Laroche, A., & Parrila, R. (2017). Personalized outreach to university students with a history of reading difficulties: Early screening and outreach to support academically at-risk students. *Journal of College Student Development*, 58(3), 432-450.
- Denhart, H. (2008). Deconstructing barriers perceptions of students labeled with learning disabilities in higher education. *Journal of Learning Disabilities*, 41(6), 483-497.
- Eccles, S., Hutchings, M., Hunt, C., & Heaslip, V. (2018). Risk and stigma: Students' perceptions and disclosure of "disability" in higher education. *Widening Participation & Lifelong Learning*, 20(4), 191-208.
- Evans, N. J., Broido, E. M., Brown, K. R., & Wilke, A. K. (2017). *Disability in higher education: A social justice approach*. Jossey-Bass.
- Gonyea, R. M., & Kinzie, J. (2015). *Independent colleges and student engagement: Descriptive analysis by institutional type*. Council of Independent Colleges. <https://files.eric.ed.gov/fulltext/ED569195.pdf>
- Harper, S. R. (2010). An anti-deficit achievement framework for research on students of color in STEM. *New Directions for Institutional Research*, 2010(148), 63-74.
- Hartman-Hall, H. M., & Haaga, D. A. F. (2002). College students' willingness to seek help for their learning disabilities. *Learning Disability Quarterly*, 25(4), 263-274.
- Hatch, D. (2017). The structure of student engagement in community college student success programs: A quantitative activity systems analysis. *AERA Open* 3(4), 1-14.
- Jones, W. (2016). Factors correlated with the interactional diversity of community college students. *Journal of Diversity in Higher Education* 9(1), 81-94.
- Kezar, A., & Moriarty, D. (2000). Expanding our understanding of student leadership development: A study exploring gender and ethnic identity. *Journal of College Student Development*, 41(1), 55-69.
- Kuh, G. D. (2003, March). What we're learning about student engagement from NSSE: Benchmarks for effective educational practices. *Change: The Magazine of Higher Learning*, 35(2), 24-32.
- McCormick, A. C., Kinzie, J., & Gonyea, R. M. (2013). Student engagement: Bridging research and practice to improve the quality of undergraduate education. In M. B. Paulsen (Ed.), *Higher education: Handbook of theory and research* (pp. 47-92). Springer.
- McCormick, A. C., & McClenney, K. (2012). Will these trees ever bear fruit?: A response to the special issue on student engagement. *The Review of Higher Education*, 35(2), 307-333.
- Museus, S. D., Jayakumar, U. M., & Robinson, T. (2012). Modeling racial differences in the effects of racial representation on 2-year college student success. *Journal of College Student Retention: Research, Theory & Practice*, 13(4), 549-572.
- National Survey of Student Engagement. (2019a). *About NSSE*. Retrieved from <http://nsse.indiana.edu/html/about.cfm>
- National Survey of Student Engagement. (2019b). *Survey instrument*. Retrieved from http://nsse.indiana.edu/html/survey_instruments.cfm
- Nelson Laird, T. F., Chen, D., & Kuh, G. D. (2008). Classroom practices at institutions with higher-than-expected persistence rates: What student engagement data tell us. *New Directions for Teaching and Learning*, 2008(115), 85-99.
- Newman, L. A., & Madaus, J. W. (2015). Reported accommodations and supports provided to secondary and postsecondary students with disabilities: National perspective. *Career Development and Transition for Exceptional Individuals*, 38(3), 173-181.

- Peña, E. V., Stapleton, L. D., & Schaffer, L. M. (2016). Critical perspectives on disability identity. *New Directions for Student Services*, 2016(154), 85-96.
- Saenz, V.B., Hatch, D., Bukoski, B.E., Kim, S., Lee, K., & Valdez, P. (2011). Community college student engagement patterns: A typology revealed through exploratory cluster analysis. *Community College Review*, 39(3), 235-267.
- Stage, F. K. (2007). Answering critical questions using quantitative data. *New Directions for Institutional Research*, 2007(133), 5-16.
- Vaccaro, A., Kimball, E. W., Wells, R. S., & Ostiguy, B. J. (2015). Researching students with disabilities: The importance of critical perspectives. *New Directions for Institutional Research*, 2014(163), 25-41.

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Acknowledgement

This research was supported in part by a grant from NACADA—A Global Community for Academic Advising.

Figure 1

The National Survey of Student Engagement Disability Items

Have you been diagnosed with any disability or impairment?

Yes

No

I prefer not to respond

Which of the following has been diagnosed? (Select all that apply.)

A sensory impairment (vision or hearing)

A mobility impairment

A learning disability (e.g., ADHD, dyslexia)

A mental health disorder

A disability or impairment not listed above

Note. Adapted from 2019 *National Survey of Student Engagement*, by The Trustees of Indiana University, 2019 (http://nsse.indiana.edu/pdf/survey_instruments/2019/NSSE19_Screenshot_US_English.pdf).

Figure 2

The Community College Survey of Student Engagement Disability Items

12. This section has three parts. Please answer all three parts, indicating (1) how often you have used the following services during the current academic year, (2) how satisfied you are with the services, and (3) how important the services are to you at this college. (Please respond to each item)

	(1) Frequency of Use				(2) Satisfaction				(3) Importance		
	5 or more times	2-4 times	1 time	Never	Very	Some-what	Not at all	N.A.	Very	Some-what	Not at all
a. Academic advising/planning	<input type="radio"/>										
b. Career counseling	<input type="radio"/>										
c. Job placement assistance	<input type="radio"/>										
d. Peer or other tutoring	<input type="radio"/>										
e. Skill labs (writing, math, etc.)	<input type="radio"/>										
f. Child care	<input type="radio"/>										
g. Financial aid advising	<input type="radio"/>										
h. Computer lab	<input type="radio"/>										
i. Student organizations	<input type="radio"/>										
j. Transfer advising/planning	<input type="radio"/>										
k. Library resources and services	<input type="radio"/>										
l. Services for students with disabilities	<input type="radio"/>										
m. Services for active military and veterans	<input type="radio"/>										

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