NCCSD Research Brief

Campus Climate and Students with Disabilities

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Abstract

This research brief summarizes issues related to campus climate issues and disability, to improve social and educational outcomes for students with disabilities, support faculty and staff with disabilities, and increase understanding of disability among nondisabled members of the campus community. Instead of relying on disability services offices to address all aspects of disability on campuses, this report argues for various constituencies beginning a cultural shift on campuses to create a more positive campus climate for people with disabilities. Definitions of campus climate are provided, with examples of barriers for students with disabilities. Policy and practice recommendations include conducting evaluations of existing disability practices, creating diverse ways for the campus community to get information about disability, and supporting campus-wide engagement with disability. Examples of campuses that have implemented research-based recommendations are provided, as well as considerations for future research. (Contains 3 figures and 1 table.)

Executive Summary

Many campus communities do not address disability as part of diversity and campus climate efforts. Even after addressing physical and structural barriers, the campus environment may be inhospitable for students, faculty, and staff with disabilities due to ableist attitudes about disability, as well as curricular, programmatic, and policy barriers. These barriers may be especially challenging for students with disabilities who identify as members of other marginalized groups, including students of color, LGBTQ students, and students who grew up in poverty. While there is often a tacit expectation that disability services offices will take sole charge for disability-related matters, a positive campus climate for people with disabilities needs to be an institutional responsibility involving multiple departments, offices, and individuals.

While individual efforts to reduce ableism can combine with broader changes related to disability in higher education as a field, this brief focuses on strategies for addressing campus culture and disability at the institutional level within higher education in the United States. Including disability as part of the campus climate can contribute to improved social and educational outcomes for students with disabilities, support faculty and staff with disabilities, and lead to greater understanding and engagement with disability among the campus community.

This brief recommends that institutions improve the campus climate through the following strategies, with input from members of the campus community who have disabilities:

- *Conduct evaluations of existing disability practices*, through campus climate surveys, assessments of disability services and supports, and assessments of campus accessibility.

- *Create diverse ways for the campus community to get information about disability*, by developing faculty and staff training programs, including disability in student orientation programming, and creating multiple centers of disability expertise on campus.

- *Support campus-wide engagement with disability*, creating opportunities for disability community and engagement, including faculty and staff with disabilities in recruitment and retention initiatives, streamlining funding mechanisms for accommodations, and encouraging inclusive pedagogies.

Examples of each approach are provided, with links to more information.

Further research on disability and campus climate is necessary, and higher education researchers are encouraged to move beyond biomedical frameworks of disability, including students, faculty, and staff with disabilities in their research, and aggregating results to better understand these populations while contributing to the development of practice and policy. Administrators, faculty, staff, and students are encouraged to consider disability-related progress as a matter of campus pride. Likewise, problems can be opportunities to learn how ableism manifests

> ## Defining Campus Climate
>
> "...**attitudes, behaviors, and standards** of faculty, staff, administrators and students concerning the level of **respect for individual needs, abilities and potential**"
>
> *(University of California Office of the President, 2014)*

itself within a particular campus culture, providing better understanding of physical, attitudinal, curricular, and programmatic barriers to be addressed. Concrete efforts to minimize or eliminate barriers on individual campuses may contribute to a more inclusive higher education as a whole.

Campus Climate for Students with Disabilities

There is no standardized definition for "campus climate," and identifying one is compounded by usage of overlapping terms in higher education literature. Campus climate may, however, be roughly described as "the current attitudes, behaviors, and standards of faculty, staff, administrators and students concerning the level of respect for individual needs, abilities and potential" (University of California Office of the President, 2014, n.p.). Evans, Broido, Brown, and Wilke (2017) simplified the definition to being a sense of "friendliness" for students (p. 254). Indeed, campus climate affects how it feels for individuals to be on campus and to interact with other campus community members (University of St. Thomas, n.d.). A healthy, positive campus climate in which all members are respected and appreciated for what they contribute is a vital part of a postsecondary institution's pursuit of diversity and inclusion.

An institution's climate is often studied with regard to the treatment and experiences of marginalized or "at-risk" demographic subgroups within the community, and how these combine to form the cumulative campus climate. As one of these traditionally marginalized groups, students with disabilities can experience implicit and explicit prejudice and discrimination based on their disabilities (i.e., ableism). Studies by Susan R. Rankin and Associates (as reported in Evans et al., 2017, pp. 265-268) included research with 51,452 students with and without disabilities. As shown in Figure 1, when asked about campus climate, all students felt more comfortable on campus as a whole, slightly less comfortable in their department, and least comfortable in courses. But students with disabilities felt consistently less comfortable than nondisabled students. Rankin and Associates also reported that 33.7 percent of students with disabilities in their study had experienced "exclusionary, intimidating, offensive, or hostile experiences on campus, compared to only 17.1 percent of nondisabled students (p. 267).

Figure 1. Percent of students with and without disabilities who are comfortable in their classes, departments, and campuses (Rankin and Associates Consulting, as reported by Evans et al., 2017, pp. 265-268).

Students with Disabilities:
- 67.4% Comfortable in Classes
- 72.6% Comfortable in Their Department
- 75.0% Comfortable on Campus

Nondisabled Students:
- 71.6% Comfortable in Classes
- 82.4% Comfortable in Their Department
- 85.2% Comfortable on Campus
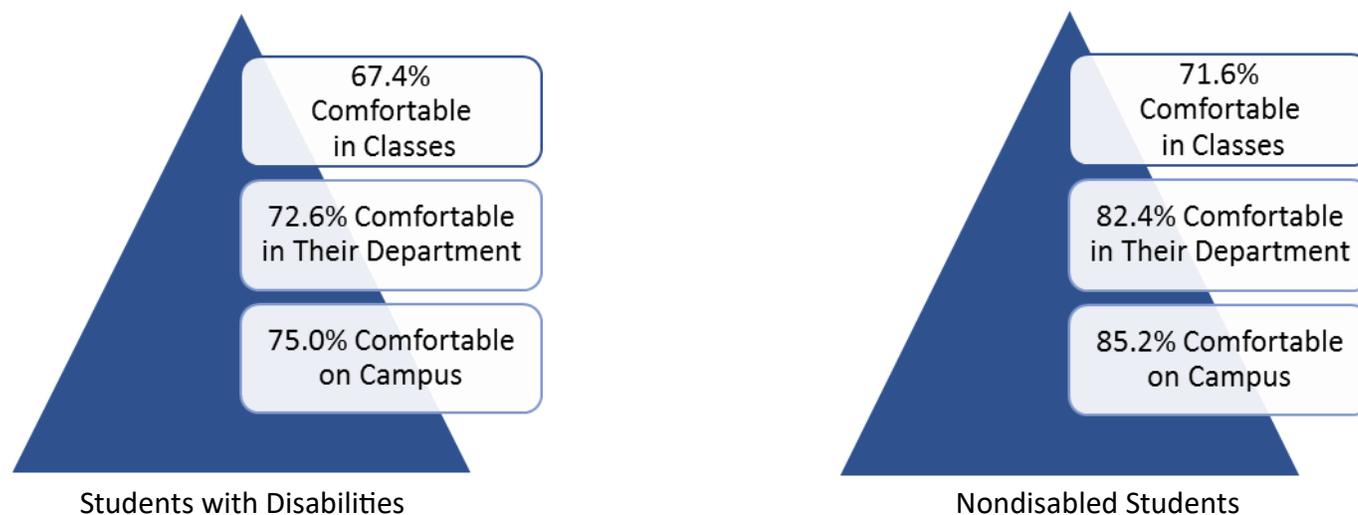
This is consistent with another large-scale study of 13,844 undergraduates by Aquino, Alhaddab, and Kim (2017), which found that 23 percent of students with disabilities had witnessed discrimination and 22 percent had experienced offensive verbal comments. These levels of discrimination and bias were second only to those reported by African American students. Reported rates of all forms of discrimination and bias were the same or higher for disabled students who also identified as Asian, Hispanic, African American, multiracial or homosexual (Aquino et al., 2017).

A healthy campus climate for all students is important for students' educational and developmental outcomes (Pascarella & Terenzini, 2005; Reason & Rankin, 2006; Tinto, 1993). Researchers like Tinto (1993) have examined how students' individual characteristics and background interact with their experiences on campus to affect retention:

> ...[E]xperiences within the institution, primarily those arising out of interactions between the individual and other members of the college, student, staff, and faculty, are centrally related to further continuance in that institution. Interactive experiences which further one's social and intellectual integration are seen to enhance the likelihood that the individual will persist within the institution until degree completion..."
> (p. 116)

For students who feel particularly isolated or oppressed (e.g., students of color), social and academic connections can be an important "point of stability" (p. 125) as students navigate a campus where they are the minority. Tinto notes that these connections are often formed by finding like-minded peers and mentors in student clubs or organizations, cultural centers, or academic programs. Research about retention of college students with disabilities agree students are at-risk but show vastly different completion rates (see discussion in, e.g., Hong, 2015; Hong, Herbert & Petrin, 2011; Stewart, Mallery, & Choi, 2013; Thompson-Ebanks, 2014), and there is very limited research into how Tinto's model of student attrition may apply to college students with disabilities. Preliminary studies suggest Tinto's model applies if ongoing disability-related issues (e.g., requesting services and accommodations, limited access on some campuses) are taken into account (Aquino, Alhaddab, & Kim, 2017; Hong, 2015; Kimball, Friedensen, & Silva, 2017; Shepler & Woosley, 2012; Stewart et al., 2013).

Ideally all students should feel comfortable living and socializing on campus, while pursuing coursework, extracurricular activities, career preparation, and research opportunities on campus. However, students with various backgrounds, ethnicities, and identities experience campus climates in highly individualized ways, and harassment and discrimination experienced based on actual or perceived identities adversely affects their educational outcomes (Cabrera et al., 1999; Rankin & Reason, 2005). As noted above, if college students do not feel welcome or comfortable in certain living, social, and study places on campus, some students may prefer to find spaces on campus that they consider "safe" (i.e., where they are less likely to experience harassment or discrimination because of their identities or backgrounds). For students with disabilities, this may be a place on campus unrelated to disability (e.g., a veterans association, academic department, residence hall, or study group for a course). They may also gravitate to student organizations with a focus on disability or Deaf culture (see examples in Figure 2). In fact, occasional self-imposed segregation with other students who have disabilities may help students deal with everyday ableism and stresses, improving physical and mental well-being (see, e.g., Ashkenazy & Latimer, 2013; Damiani & Harbour, 2016; Price, 2011; Solis, 2009). On the other hand, in a qualitative research study by Hong (2015), a majority of the 16 undergraduate study participants did not want to be identified as disabled or network with other students who had disabilities. Colleges should be prepared for students to vary considerably in their opinions about disability, activities on campus, and how they would like to

Figure 3. Examples of campus organizations for students with disabilities

**EXAMPLES OF
STUDENT ORGANIZATIONS
FOCUSED ON DISABILITY**

- Disability, Deaf culture, or American Sign Language clubs or student organizations

- Disability cultural centers

- Activist groups promoting campus change

- Disability honor societies

- Support groups

- Sports clubs or teams that are inclusive or for disabled athletes

- Lounges for veterans or students with disabilities

- Chapters of national organizations focused on disability and higher education (see www.DREAMCollegeDisability.org for a complete list)

- Peer mentoring

- Disability studies reading groups

integrate or segregate themselves from peers.

Even when students with disabilities find communities on campus, broader engagement with academic courses, and a variety of other activities on campus are still critical for student retention (see, e.g., Jones, Brown, Keys, & Salzer, 2015; Stewart et al., 2013). Strange (2000) noted that campus climate for students with disabilities may be conceptualized as a variation on Maslow's Hierarchy of Needs (Maslow, 1968), where full participation on campus is contingent on safety, belonging, and engagement, including basic access needs being met. Clearly "psychological climate is a crucial dimension" (Woodford & Kulick, 2015, pp. 13-14) and vital to a healthy and welcoming postsecondary environment, as well (Albanesi & Nusbaum, 2017; Hong, 2015; Rankin & Reason, 2005; Woodford & Kulick, 2015). If access to physical and virtual spaces require cumbersome bureaucratic maneuvers, are afterthoughts, remain inaccessible, or are in a state of disrepair and neglect, that sends a powerful message to the entire campus about disability and disabled members of the campus community (Edyburn, 2011; Pearson & Samura, 2017; Titchkosky, 2011).

Beyond engagement and retention issues for students, campus climate matters for faculty and staff, as well. They also benefit from a healthy campus climate, and can be negatively affected by harassment and discrimination (Fasching-Varner, Albert, Mitchell, & Allen, 2014; Settles, Cortina, Malley, & Stewart, 1996). Experiences of prejudice can lead to faculty and staff with disabilities not feeling welcome and supported personally and professionally, which may be reflected in their attitudes, work with students and colleagues, and physical and mental health (Rankin, 2003; Silverschanz, Cortina, Konik, & Magley, 2007; Waldo, 1999). Perceptions of campus climate may also deter prospective faculty and staff with disabilities, who may be concerned about whether a campus can meet basic disability accommodation needs and potential consequences of disclosing a disability to others (Anicha, Ray, & Bilen-Green, 2017; Fuecker & Harbour, 2011; Smith & Andrews, 2015).

While diversity of faculty and staff can positively

contribute to all students' learning outcomes, retention, and graduation rates (Harper & Hurtado, 2007; Hurtado & Guillermo-Wann, 2013), students with disabilities may especially benefit from having faculty with disabilities or disability studies scholars who can mentor them, encourage student engagement, and help them learn about disability beyond individual experiences (Anicha et al., 2017; Damiani & Harbour, 2016; Evans et al., 2017; Taylor, 2011). Illustrating the importance of broad definitions of diversity and intersecting issues between campus communities, research has shown that when faculty with disabilities are not available, students with disabilities may seek out nondisabled faculty from other underrepresented groups, perceiving them as being more empathetic or understanding (e.g., Damiani & Harbour, 2015). Students of color with disabilities may seek out faculty, mentors, and staff who can understand all facets of their identities and experiences, including how disability and health experiences may be affected by their cultures and communities (e.g., Arbona & Jimenez, 2014; Banks & Hughes, 2013; Caesar-Richardson, 2012; Silver Wolf, Vanzile-Tamsen, Black, Billiot, & Tovar, 2015; Vaccaro, & Mena, 2011). Students are also likely to feel more welcome on campus when faculty demonstrate inclusive teaching practices (e.g., universal design, culturally responsive pedagogy) and include disability in the curriculum, although additional research is needed on these topics (see, e.g., Burgstahler, 2015; Evans et al., 2017; Getzel, 2008; O'Neill & Green, 2017; Price, 2011; Shallish, 2017; Taylor, 2011).

<u>Figure 3</u>. Examples of campus disability services offices making an effort to go beyond compliance.

McGill University

The Office for Students with Disabilities at McGill University did a "Universal Design Audit" to reduce barriers for students that staff may have inadvertently created. This resulted in increased paper-free communications, students assisting with outreach to other students, and promotion of universal design on campus through dedicated staff time, job restructuring, and development of faculty resources. (Beck, Diaz del Castillo, Fovet, Mole, & Noga, 2014)

Florida A&M University

Florida A&M University's Center for Disability Access and Resources (CEDAR) actively advocates for students and encourages students to be their own self-advocates. They collaborate with the campus admissions office to recruit students with disabilities in order to increase campus diversity, offer learning disability assessments for students who need them, and provide campus events to raise disability awareness. (http://www.famu.edu/index.cfm?cedar)

The University of Arkansas at Little Rock

The University of Arkansas at Little Rock drew inspiration from socio-political models of disability from the field of disability studies. They analyzed policies and procedures for disability services, applying the theories to practice in a variety of ways, including changing the office mission statement, re-naming the office as a "Disability Resource Center," and making the campus-wide syllabus statement about accommodations more flexible for students who want to talk with professors (not just professionals) about what they may need. (Thornton & Downs, 2010)

Recommendations from Research

An estimated 11 percent of undergraduates and 5 percent of graduate students have disabilities, and they are entering higher education in greater numbers, with a wider variety of disabilities, ethnicities, and socio-economic backgrounds (National Center for Education Statistics, 2014; Nevill & White, 2011; Newman, Wagner, Cameto, Knokey, & Shaver, 2010; Thompson, 2014; Wagner, Newman, Cameto, Garza, & Levine, 2005). In higher education, legal compliance and disability discrimination are still very much pressing issues (see, e.g., U.S. Office of Civil Rights, 2016). Even when campuses are in compliance with the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act, and other related state or federal legislation, many are still not being equipped to fully meet the needs of students with disabilities (Adreon & Durocher, 2007; Grossman, 2014; Leuchovius, 2004; Thompson, 2014). The legislative call for access and compliance did not simultaneously mandate the creation and maintenance of welcoming and supportive campus climates; nor did it mandate services, programs, pedagogy and supports that promote choice, independence, academic success, and social integration (Aquino, 2016; Shepler & Woosley, 2012; Wilson, Getzel, & Brown, 2000). However, some institutions have started to deliberately move beyond compliance and access (see, e.g., Cory, 2011; Thompson, 2014). As noted by Grossman (2014),

> "Accommodations can be perceived as a burden placed on a college or university by federal law or as a source of innovation in teaching. Students with disabilities can be considered a group that is likely to lower academic standards or a group that is essential to campus diversity, enriching the classroom experience" (p. 18).

Some campuses are actively incorporating disability studies and universal design theories into disability services (see Figure 3 for three examples from the U.S. and Canada). Many colleges and universities are also creating opportunities for students with intellectual and developmental disabilities to participate in postsecondary education, challenging dated definitions of what it means to be an intellectual and forcing campus to expand definitions of diversity (Grigal & Hart, 2010; Harbour, 2015; Thompson, 2014).

Historically, U.S. campuses are decentralized, making campus-wide efforts difficult (Angeli, 2009; Huger, 2011; Thompson, 2014). However, institutions' disability services offices cannot be expected to take sole responsibility for welcoming students with disabilities. Collaboration among an institution's departments and offices needs to happen to provide students with greater chances for academic and social integration, in turn positively contributing to all students' education and personal development (Dietrich, 2014; Duffy, 1999; Huger, 2011; Korbel, Lucia, Wezel, & Anderson, 2011; Silver Wolf et al., 2015). In a longitudinal study of disability support services, Christ (2007) found that collaboration emerged as a major issue, with all research sites participating in collaborative efforts that crossed campus hierarchies. As one participant noted, "collaborative efforts help to develop a sense of institutional commitment" to students with disabilities and their campus integration (Christ, 2007, p. 235). It is even possible that as campus climates become increasingly inclusive and flexible in addressing students' needs, barriers will be reduced naturally and the need for individualized accommodations may even decrease (Huger, 2011).

Unfortunately, higher education staff who need to be involved in facilitating access and equity on campus for students with disabilities (e.g., faculty, financial aid officers, residence hall staff) may be uninformed about ways to understand, act toward, and work with disabled students without stereotyping, stigmatizing, or alienating them (Angeli, 2009; Hong, 2015; Hurtado, Carter, & Kardia, 1998; Thompson, 2014). Even campus experts on race, gender, LGBTQ students, and other diversity issues may still be unfamiliar with disability beyond medical definitions and legal obligations (Higbee & Mitchell, 2009; Shallish, 2017). This is unfortunate, since diversity efforts may be

enhanced by an approach that includes disability. For example, Miller, Wynn, and Webb (2017) describe how efforts to create more gender-neutral physically accessible bathrooms can benefit students with disabilities, LGBTQ students, and students who identify with both groups.

There are also discrepancies in how students with and without disabilities may perceive the need for training, based on their perceptions about campus climate and disability. Nondisabled students with a disabled relative or friend may be more receptive to peers with disabilities and their struggles on campus, but in general, nondisabled students are likely to believe that the campus climate for disability is more positive than students with disabilities, even when acknowledging the presence of stigmatization, stereotyping, and unkind words (Arnold, 1994; Beck et al., 2015; Nevill & White, 2011). This is a phenomenon that existed when the ADA was passed in 1990, and even then it was found to have significant implications: nondisabled college students had false beliefs about disabled students already being socially integrated, exacerbating the potential for disabled students to feel socially alienated, which in turn affected the motivation for students with disabilities to persist with their studies and graduate (Ryan, 1994; Wiseman, Emry, & Morgan, 1988).

Faculty may also not fully understand how students with disabilities are experiencing academic courses. Schools are legally required to make sure faculty and staff understand that students with disabilities may need accommodations and how to provide them, but this does not seem to be happening effectively at all schools. Literature reviews of relevant research indicate that faculty knowledge about services and accommodations tends to be insufficient, faculty tend to learn about disability from off-campus resources, and faculty attitudes toward students with disabilities and accommodations pose significant barriers for students, particularly for students with "invisible" disabilities like ADHD, learning disabilities, and psychosocial disabilities (Baker, Boland, & Nowik, 2012; Hong, 2015; Sniatecki, Perry, & Snell, 2015; Vogel, Holt, Sligar, & Leake, 2008). Faculty may perceive inclusive pedagogical strategies and accommodations as a burden, a threat to academic freedom (see, e.g., American Association of University Professors, 2014), or as a dreaded problem that students should work to overcome (see, e.g., Hong, 2015; Wood, Meyer, & Bose, 2017). Faculty may also struggle with disability in other roles with students, including advising and mentoring (Hong, 2015).

The lack or absence of training and education about disability and students with disabilities must be examined at the campus level, since institutional actions may affect the nature and internalization of these efforts among campus students, faculty, and staff. Yet institutional disability policies simultaneously need to account for the reality that students with disabilities are not an identical and homogenous group that can be understood in a singular way. Just like their peers without disabilities, disabled students will each have different backgrounds and needs, and they will adjust to the various demands of college life differently (Hadley, 2011; Murray, Lombardi, & Kosty, 2014). Students with disabilities or chronic illnesses may not even want to identify as disabled or request disability accommodations (Gruttadaro & Crudo, 2012; Newman et al., 2011), and many deaf American Sign Language users prefer to identify with Deaf (with a capital "D") culture instead of using the term "disabled" (Bauman & Murray, 2014; Padden & Humphries, 1988).

To reach students with disabilities and better understand their needs, campus policies and services rely on students' self-identification and self-advocacy. Students must self-identify to disability services offices and advocate for their own needs in order to receive access and supports. Unfortunately some students are unable to self-advocate or are uncomfortable doing so for fear of stigmatization (Gruttadaro & Crudo, 2012; Hart, Grigal, & Weir, 2010; Hong, 2015). Students with disabilities are frequently caught in a Catch-22. Disclosure of a disability means students may have to cope with potential stigma and discrimination. The stigma and any other disability-related problems may go unrecognized simply because students are not talking about them, or because

accommodations and services are being provided (i.e., campuses are in compliance with minimal legal requirements). Choosing to not self-identify is understandable, but it limits a student's access to services, as well as preventing students' understanding of the stigma keeping them quiet, potentially exacerbating feelings of social invisibility, isolation, and a negative campus climate (Aquino, 2016; Hong, 2015; Jung, 2002).

Campuses that wish to improve the campus climate therefore face several dilemmas. Knowledgeable professionals are often available in disability services offices to help, but there is a need to spread accountability and disability expertise across campus. Campuses need to educate students, faculty, and staff about disability, but there may be a lack of interest due to false perceptions about disability and the campus climate. Campus trainings and policies must be designed to educate about disability and the needs of students with disabilities, but the experience of disability is highly individualized and subjective, and students with disabilities may not be willing to self-identify and talk about their concerns.

What is Universal Design?

For campuses, "universal design" is an approach that can be applied to architecture, technology, products, pedagogy, and services. The basic premise of universal design is considering the needs of a diverse "universe" of users, including people with disabilities, when something is being created. This can mean adding features during the design stage, making something more flexible in its use, or creating an array of choices (like allowing people to get to another floor by stairs, a ramp, or an elevator). Universal design is easier and more cost-effective than modifying something later, and it often leads to greater accessibility for all users (e.g., people with strollers, rolling carts, or bikes may appreciate ramps as much as wheelchair users). For campus buildings and renovations, this means considering physical accessibility during planning stages. For pedagogy, UD involves considering diverse learners when planning courses and curricula, maintaining academic rigor while also building in flexibility for students' learning and assessment. For more information about universal design, campus administrators, faculty, and student leaders can get started with these resources:

Readings:

- Burgstahler, S. E., & Cory, R. C. (2008). *Universal design in higher education: From principles to practice.* Cambridge, MA: Harvard Education Press.

- McGuire, J. M. (2014). Universally accessible instruction: Oxymoron or opportunity? *Journal of Postsecondary Education and Disability*, *27*(4), 387-398.

- Meyer, A., Rose, D. H., & Gordon, D. (2014). *Universal design for learning:Theory and practice*. Waltham, MA: CAST Professional Publishing. [Available online at www.cast.org.]

Websites:
- "Universal Design Resources" at the National Center for College Students with Disabilities Clearinghouse and Resource Library
http://www.nccsdclearinghouse.org/ud.html

- "Applications of Universal Design" from DO-IT at the University of Washington:
http://www.washington.edu/doit/resources/popular-resource-collections/applications-universal-design

- Center for Universal Design website at North Carolina State University https://www.ncsu.edu/ncsu/design/cud/

Strategies to Improve the Campus Climate

Current literature in the field suggests several ways to address these dilemmas to improve the campus climate for students with disabilities. This is an emerging field of study, so other approaches are likely to evolve over time. These are also recommendations focused on disability, but many people with disabilities have other identities, as well, so it is possible that some strategies to improve the campus climate for other populations may also be effective for disability. This section explains recommendations from research, with practical strategies and examples to put these into practice. Table 2 has examples of campuses that have implemented projects or activities designed to improve the campus climate for students with disabilities, with links to learn more about their efforts.

It is worth noting that a famous phrase in the disability rights movement applies to all of these strategies: "Nothing About Us Without Us." Just as it would be ludicrous to work on African American issues without African Americans, or concerns of women without women, it is important for campuses to move forward on campus climate initiatives with involvement of students, faculty, and staff with disabilities.

Conduct evaluations of existing disability practices

- *Use campus climate surveys.* Some campus climate surveys examining diversity have touched on issues affecting students, faculty, and staff with disabilities, but they have placed more focus on race, ethnicity, and gender. Campus climate assessments can examine campus constituencies' attitudes toward and perceptions of students with disabilities and use this information to inform practices in providing accommodations to students (Eilola, Fishman, & Greenburg, 2011; Stodden, Brown, & Roberts, 2011). Regular and repeated usage of climate surveys can gauge the climate for disability and understand shifts in campus climate, providing a point from which institutional leaders and disability services offices can evaluate their responses to previously raised concerns (Eilola et al., 2011; Passman, 2012; Vogel et al., 2008). Measured success in meeting the needs of students with disabilities can also become a point of pride for a campus (Passman, 2012).

  Assess disability services and supports. Campuses can conduct internal or external evaluations of disability services and related policies (e.g., for service animals, medical leaves, course substitution, financial aid accommodations, withdrawals) to determine whether they are in compliance (or going beyond compliance) with federal law and existing standards for services, including standards from AHEAD and the Council for the Advancement of Standards (e.g., Hong, 2015; Thompson-Ebanks, 2014). Evaluations can also determine existing needs, whether budgets are adequate (see discussion below), areas for training and professional development of staff, levels of collaboration and engagement on campus, and whether students with different types of disabilities are consistently satisfied with services (Hong, 2015; Lombardi & Lalor, 2017; Martinez, 2013; Passman, 2012; Walker, 2010; Washington, 2016). Such evaluations may assist disability services providers in exploring innovative ways to provide services (see, e.g., Christ, 2007). Assessments may also be helpful for risk management, as administrators will already be aware of major issues and be able to share progress in addressing them (Lundquist & Shackelford, 2011; Passman, 2012). Existing grievances and complaints can be opportunities to review existing practices; even if a campus is in compliance with legal requirements, it may be helpful to consider implementing policies, procedures, or guidelines that address broader

issues and concerns raised in complaints (Passman, 2012). In addition to services, campuses can also assess whether supports (or access to supports) are in place for students with disabilities to have tutoring, technology, career counseling, mentoring, financial aid counseling, and other services that may contribute to their retention and effective use of disability accommodations during college and the transition to employment (Getzel, 2008; Thompson-Ebanks, 2014).

- *Assess campus accessibility.* Many campuses have an ADA coordinator, working group, or other designated staff to ensure compliance with state and federal laws regarding physical accessibility. It can be helpful for campuses to develop policies requiring regular reviews of plans for new construction and remediation of existing structures (Burgstahler, 2015; Goldstein, 2015), ideally involving feedback from potential users with a variety of disabilities (Hong, 2015; Simonson, Glick, & Nobe, 2013). "Access" should also focus on the digital environment, investigating whether information, online materials, course management systems, and distance learning courses are accessible, if IT staff require training or support, and whether existing technology on campus might be used in innovative ways to improve campus accessibility (Christ, 2007; Dietrich, 2014; Getzel, 2008; Grabinger, 2010; Mune & Agee, 2016; Seale, 2014; Stewart et al., 2013; Wisdom et al., 2006). Campuses can also work with human resources to consider access needs raised by faculty and staff with disabilities. Even when barriers affect them or their work, faculty and staff with disabilities often have difficulty initiating conversations about their disabilities and requesting disability accommodations (American Association of University Professors, 2012; Fuecker & Harbour, 2011; Price, Salzer, O'Shea, & Kerschbaum, 2017). Faculty and staff may also offer a radically different perspective, since spaces designed for maximum student access may still be inaccessible for disabled employees (e.g., accessible classrooms may have inaccessible podiums and controls for instructors) (Damiani & Harbour, 2015; Goldstein, 2015).

Create diverse ways for the campus community to get information about disability

- *Develop faculty and staff training programs.* Previous research indicates that training, education, and professional development programs can make a significant difference in faculty and staff members' knowledge about disability, inclusive pedagogy, and attitudes toward students with disabilities (Hong, 2015; Junco & Salter, 2004; Vogel et al., 2008). Research by Passman (2012) of upper-level community college administrators suggested that even informal training about disability led to improved efforts to address the needs of disabled students. Implementing faculty and staff training should not be done arbitrarily, however, and careful consideration is needed when assessing attitudes and knowledge about disability, since little research exists on this topic (Lombardi & Lalor, 2017). For example, while simulations are often popular in trainings, they are generaly not successful in teaching positive attitudes about disability (Burgstahler & Doe, 2004; Nario-Redmond, Gospodinov, & Cobb, 2017). Hong (2015) also recommends focusing on pragmatic skills and knowledge rather than attitudinal change, since the priority for a campus should be ensuring accommodations for students, regardless of faculty feelings about the matter. For instructional staff, faculty development centers can be an important partner in implementing any training (Yager, 2008), and an online training program can be a reasonable and cost-effective tool (Junco & Salter, 2004; Lombardi & Lalor, 2017). A resource -conscious institution might consider having faculty, staff, and administrative leaders work on crafting faculty and staff professional development activities in response to a campus climate evaluation (Vogel et al., 2008). Speakers and events may supplement training, creating further engagement with different perspectives on disability (see below).

- *Include disability in student orientation programming.* Greater incorporation of information about disability awareness into new student orientations, handbooks, and programming may increase the likelihood of nondisabled students recognizing, accepting, and welcoming peers with disabilities (DelRey, 2014; Hart et al., 2010; Kelley & Joseph, 2012; Thompson, 2014). A message to students about disability and campus diversity can be incorporated into programming and first-year students' academic curricula (Aquino, 2016; Bryen & Keefer, 2011). Research suggests that the involvement of nondisabled students as peer mentors and participants in programs may reduce stigma and lead to greater willingness among nondisabled students to coexist with disabled peers in academic and social apacities (DelRey, 2014; Hart et al., 2010; Zager & Alpern, 2010). Disability awareness and attitudes toward students with disabilities may also be enhanced if students are involved alongside faculty, staff, and administrative leaders (Eilola et al., 2011).

- *Create multiple centers of disability expertise on campus.* Beyond health services, counseling, and disability services, campuses can identify other sources of information about disability, including student affairs (Grossman, 2014; Vaccaro & Kimball, 2017; Vance, Lipsitz, & Parks, 2014) and disability studies (see, e.g., Johnston et al., 2008; Price, 2011; Taylor, 2011). Scholars and experts on disability may be in virtually any department on campus, since disability issues cut across all aspects of society. Encouraging collaboration and campus-level engagement will help campuses develop multiple centers of expertise, foster disability as part of campus diversity, and provide perspectives of disability as more than a medical condition (Johnstone et al., 2008; Kimball, et al., 2017; Shallish, 2017; Taylor, 2011; Vaccaro & Kimball, 2017). It will also create a network of people able to offer advice and consultation to administrators, who do not usually have any background or training in disability (see, e.g., Passman, 2012).

Support campus-wide engagement with disability

- *Create opportunities for disability community and engagement.* Campuses can encourage and support development of student organizations related to disability and Deaf culture on campus, as ways to build community, encourage campus engagement and foster dialogue about disability (Agarwal, Calvo, & Kumar, 2014; Cory, White, & Stuckey, 2010; Fox, 2010; Jones, et al., 2015). Students of color and LGBTQ students with disabilities may especially need opportunities to connect their cultural and disability knowledge, while learning about all facets of their identities (see, e.g., Agarwal et al., 2014; Arbona & Jimenez, 2014; Banks, 2013; Henry, Fuerth, & Figliozzi, 2010). Student organizations and disability-related events can also promote greater campus climate change by encouraging members of campus to engage in activism and advocacy around disability (see, e.g., Cory et al., 2010; Fox, 2010).

- *Include faculty and staff with disabilities in recruitment and retention initiatives.* While many campuses are actively seeking "diverse" faculty and staff, the definitions of diversity for recruitment and retention efforts do not always include disability. Faculty and staff may need ongoing support or guidance with disclosure and accommodations of physical, mental, or emotional disabilities (American Association of University Professors, 2012; Price et al., 2017; Smith & Andrews, 2015). Human resources and disability services can also work with deans and department heads to ensure that hiring practices, insurance, and workers' compensation claims are inclusive, efficient, and non-discriminatory (e.g., Baley & Dell, 2004; Fuecker & Harbour, 2011), including reviews of job advertisements to be sure they are not requiring skills that eliminate disabled applicants (Perry, 2016) and considerations for tenure

(Smith & Andrews, 2015). Employees with disabilities must also be able to communicate with administrators about problems and suggestions, without fear of retaliation (Price et al., 2017; Shigaki, Anderson, Howald, Henson, & Gregg, 2012).

- *Streamline funding mechanisms for accommodations.* Some campuses fund academic services and accommodations for students with disabilities, but decentralize other forms of funding related to disability (Duffy, 2004). When this occurs, it means accommodations for disabled staff and faculty must come out of departmental budgets, and accommodations for an event must be paid by the group that is hosting it. This creates an environment where people with disabilities may be perceived as expensive and burdensome, and it makes budgetary data collection more difficult (Evans, et al., 2017; Fuecker & Harbour, 2011). In addition, federal, state, and campus funding may fluctuate, and while disability services providers are still required to meet legal obligations, changes in the availability of resources is likely to affect the quality of services, innovations in service provision, the ability to meet the needs of students with complex disabilities, and use of outsourcing (Christ, 2007; Martinez, 2013; Price, 2014; VanBergeijk & Cavanagh, 2012; Walker, 2010). Similarly, a fixed or decentralized budget for disability services will not match the realities of accommodating student needs, which may radically change each year (e.g., in one year there may be no requests for sign language interpreters, and the next year there may be requests from four students) (Gomez, 2014). Decentralized, shrinking, or fixed budgets may not only affect an institution's ability to stay in legal compliance, but on a day-to-day basis, people with disabilities may be reluctant to attend events or participate in activities if they are worried about the cost. Creating solutions to deal with these issues are also highly dependent on the skills and knowledge of disability services providers, who may or may not be equipped to handle them (Christ, 2007). Since the campus as a whole is responsible for access and services, centralizing costs or subsidizing accommodations for events, faculty, and staff supports other efforts to improve campus climate and create greater inclusion.

- *Encourage inclusive pedagogies.* Inclusive pedagogy for students with disabilities may be accomplished in three ways described in multicultural teaching models (see, e.g., Marchesani & Adams, 1992; Sciame-Giesecke, Roden, & Parkison, 2009): by learning about disability (as described above); by adopting teaching strategies that consider needs of diverse learners, including students with disabilities; and by including disability in course content. Universal design is one pedagogical approach that specifically considers the needs of learners with disabilities, but many other inclusive teaching and learning strategies (e.g., culturally responsive teaching, backward design, feminist pedagogy) can be easily modified to consider the needs of students with disabilities or combine with universal design (Higbee & Barajas, 2007; Knoll, 2009; Orr & Hammig, 2009; Pliner & Johnson, 2004; Yuknis & Bernstein, 2017). Inclusive pedagogical strategies can also make online or distance learning courses more accessible (see, e.g., Stewart et al., 2013). As an alternative to these pedagogical approaches, professors may also use disability studies to think critically about ableism in their courses (Browning, 2014; Fox, 2010). Infusion of disability and disability studies into course content can occur in a number of ways, including using disability in case studies and projects, creating assignments that ask students to utilize online disability resources, by recognizing people with disabilities who have contributed to fields of study, and critiquing how disability and illness may be portrayed in existing course content and materials (Campbell, 2009; Fox, 2010; Hewitt, 2006; Paetzold, 2010; Richards, 2009; Treby, Hewitt, & Shah, 2006).

Table 1. Examples of North American campuses that have implemented research-based recommendations for

Recommended Practice	Campus	Example	Resources to Learn More
Conduct evaluations of existing disability practices	Columbia University	The biannual campus climate survey includes questions about students' disabilities and mental health, aggregating results to determine needs of specific populations.	http://columbiaspectator.com/news/2016/03/01/2015-quality-life-survey-scrutinizes-experiences-students-disabilities-and/
	Portland Community College	The Disability Services office did a comprehensive review of services to identify areas of improvement, strengths, and to compare their work to national program standards.	https://www.pcc.edu/resources/academic/program-review/documents/PCCDisabilityServicesProgramReview2015.pdf
	Vanderbilt University	Professors, students, the Equal Opportunity, Affirmative Action, and Disability Services worked together in a Map-a-Thon to map out accessibility of campus.	http://www.nashvillescene.com/news/article/13063793/vanderbilt-activists-try-to-create-a-more-accessible-campus-for-the-disabled-by-mapping-it-from-their-perspective
	Stanford University	The Stanford Online Accessibility Program (SOAP) helps instructors assess online courses and web-based materials for accessibility, and developed an "Online Accessibility Policy" for campus.	https://soap.stanford.edu/
Create diverse ways for the campus community to get information about disability	County College of Morris	During their orientation, new adjunct instructors learn about the ADA and providing accommodations. The Center for Teaching Excellence provides additional training opportunities for all adjuncts.	https://www.cupahr.org/diversity/files/Adjuncts%20Often%20Lack%20Training%20in%20How%20to%20Handle%20Disabilities%20in%20Classroom.pdf
	University of Pennsylvania	Faculty take I CARE training to help students with mental illnesses, becoming Wellness Ambassadors who educate other faculty in their schools; the training is supplemented by campus events and workshops.	http://www.thedp.com/article/2016/03/faculty-wellness-ambassador-program

Recommended Practice	Campus	Example	Resources to Learn More
Create diverse ways for the campus community to get information about disability (continued)	Oberlin College	Upperclass Student Accessibility Advocates provide peer mentoring about academics, involvement, campus, and services to new undergraduates with a disability.	https://new.oberlin.edu/office/disability-services/student-accessibility-advocates/
	Syracuse University	An "Accessible Syracuse" online portal connects users to a variety of disability-related resources across campus, including academic departments, research centers, disability services, the disability cultural center, an InclusiveU program for students with intellectual disabilities, and a disability law clinic.	https://www.syracuse.edu/life/accessibility-diversity/accessible-syracuse/
Support campus-wide engagement with disability	University of South Florida	Deaf, hard-of-hearing, and hearing students using American Sign Language can participate in an ASL living learning community that raises understanding about ASL and connects students with Deaf and ASL resources on and off campus.	http://www.usf.edu/student-affairs/housing/residential-learning/llc-interest/american-sign-language.aspx
	Sinte Gleska University	Before students even arrive, they are encouraged to read the student handbook, which explicitly connects Lakota values and the campus' guiding principle of *Wolakota* to students' physical and mental health needs, student services, and a comprehensive approach to retention of all students.	http://www.sintegleska.edu/student-handbook.html
	Temple University	The Faculty Senate's Committee on Faculty Disabilities Concerns works on issues of importance to faculty with disabilities, and raises awareness of their needs.	http://temple-news.com/lifestyle/professor-starts-committee-faculty-disabilities/

Recommended Practice	Campus	Example	Resources to Learn More
Support campus-wide engagement with disability (continued)	The University of Minnesota	The university centralizes services and the budget for accommodations, so all accommodation requests go to the Disability Resource Center (DRC). Students with disabilities can be involved in any group on campus, without organizations and departments bearing extra costs for being inclusive in meetings or events.	https://diversity.umn.edu/disability/home Fuecker & Harbour, 2011
	Towson University	A UDL Professional Development Network builds learning communities where faculty can exchange ideas and practices for using UDL, and faculty can apply for funding to receive additional training and re-design a course using UDL.	https://www.towson.edu/provost/ academicinnovation/support/documents/ ch_jn_aacu2016_access.pdf https://www.towson.edu/provost/ academicinnovation/support/documents/ oai_universal_design_for_learning_call_for_participation_2017.pdf

Conclusions and Recommendations for Research

College students with disabilities often find their campuses to be unwelcoming or uncomfortable places, at times experiencing outright hostility or discrimination that can be detrimental for students' learning, engagement, and retention. Students may benefit from having faculty and staff with disabilities on campus, but they may also be affected by campus climate, stigma, and difficulties managing disclosure or receiving disability accommodations. A campus that is welcoming for people with disabilities may also be positive for nondisabled members of the campus community, as they learn about disability and benefit from improved physical, attitudinal, technological, and pedagogical accessibility and inclusion.

While this research brief provided strategies from existing literature for improving the campus climate, little is known about which interventions actually work, or how to do outreach to students, faculty, and staff with disabilities, who are often reluctant to self-identify. Legal considerations around privacy and medical records (i.e., FERPA and HIPAA) may further complicate efforts to support people with disabilities and understand disability on campuses.

Intentionally or not, there is also a tendency for research on people with disabilities to use a biomedical conception of disability, implicitly suggesting that disability is abnormal and that normalization is desirable without giving much consideration to "non-normal" forms of sociality (Milton, 2014). Likewise, definitions of disability can be inconsistent, making it difficult to compare or validate findings across studies (Avellone & Scott, 2017). The fact that research may perpetuate the stereotyping and stigmatization of people with disabilities can alienate potential study participants, particularly self-advocates, creating a very real distrust of researchers and their intentions (particularly when the researchers or scientists do not have disabilities themselves) (Bagatell, 2010). This makes it

more difficult for researchers to have samples that are sufficiently large and fairly representative of the relevant populations or subpopulations. In the higher education context, this builds upon the difficulty that already exists in identifying students with disabilities.

Higher education researchers are encouraged to find strategies for including people with disabilities in their work on campus climate, retention, and campus diversity. Accessibility in research methods and recruitment of students, faculty, and staff with disabilities can be good first steps. Disability can also be defined as a demographic group for research participants, with aggregated findings to explore how people with disabilities experience campus life, and whether inclusion and retention strategies are effective with this population. Further research about disability in higher education may not only contribute to the development of policy and practice, but also influence the ways higher education administrators and student affairs staff members are trained, since most programs do not include coursework on this topic (Shallish, 2017). Expanded definitions of higher education diversity and inclusion may also lead to enhanced collaboration and understanding of students' intersectional identities, since researchers of disability are often excluded from conferences and large-scale studies exploring these topics.

Researchers who are focused on disability at the postsecondary level may further support this work by considering ways to expand their work into investigations at the campus level, or even into multi-site research studies. While disability and higher education is still an emerging field, as authors of this research brief, we especially noted the need for intervention studies, large-scale research, and longitudinal studies. Avellone and Scott (2017) have documented multiple national and federal databases with information about college students with disabilities, but these are currently underutilized and inadequate for longitudinal studies of retention. Furthermore, we also noted the dearth of literature on the economics of disability in higher education, including funding mechanisms, the impact of state and federal budget funding (or cuts) on disability services, budgeting and service provision at resource-poor schools, funding for student versus employee services, and resource allocation across campus for disability-related needs. Lastly, a nascent body of research suggest students' experiences with disability services is highly variable, mediated by administrative skills and knowledge of individual disability services providers (see, e.g., Christ, 2007; Hong, 2015). This is a matter of national concern, since it implies little consistency or standardization in disability services, which is unsurprising given the autonomy of campuses and the lack of degree, certification, and training programs for postsecondary disability services professionals. Additional research can direct campus, state and federal policy on all of these issues.

With increasing diversity of disabled students and faculty and the ongoing evolution of disability-related caselaw and legislation, colleges and universities in the U.S. may be justifiably focused on compliance and disability services. This research brief urges institutions of higher education to look at disability as a campus-wide diversity and retention issue. Evaluations of disability practices, education, and ongoing engagement with disability issues can foster an improved campus climate, which can then become a matter of campus pride. As individual colleges and universities find ways to positively change their campus climates, they may also contribute to a more inclusive higher education as a whole.

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