

Inclusion and Belonging in Higher Education: A Scoping Study of Contexts, Barriers, and Facilitators

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Abstract

A sense of inclusion and belonging are critical for students' learning and personal development in higher education institutions. Learners who identify as non-majority identities (racial/ethnic minority, LGBTQ+, disability, and first generation) are at greater risk of feeling isolated and unwelcome. Lack of belonging and inclusion among individuals from marginalized identity groups is a contributor to increased stress as a chronic response to racism, stigmatization, discrimination, and exclusion. Conversely, a sense of inclusion and belonging contributes to better academic outcomes and enhanced physical and mental health. A systematic search of the literature initially yielded 2,914 articles with 68 eventually included for full-text analysis. Basic content analysis resulted in multiple categories including institutional context, barriers to inclusion and belonging, and facilitators of inclusion and belonging. The most commonly evoked institutional contexts were faculty and peer interaction; policies, procedures, and infrastructure; and classroom or clinical instruction. Barriers to inclusion and belonging included social exclusion, lack of accessibility, and microaggressions or other instances of discrimination and bias. Facilitators of inclusion and belonging included receptivity, availability of support services, accessible spaces, and inclusive policies and procedures. Lack of discussion regarding specifics of curriculum, instruction, and assessment indicate the need for future research to outline inclusive teaching best practices.

Keywords: inclusion, belonging, higher education, marginalized identities

1. Introduction

Inclusion and belonging are critical for students' learning and continuing development in higher education institutions (Clifton & Taff, 2021; Milem, Chang, & Antonio, 2005; Museus, 2014; Strayhorn, 2019). Students of marginalized and intersecting identities share the challenge of "finding ways to "fit in," to matter, and to belong. Their quest predicts whether they will achieve social, emotional, personal, and academic success. Whether they will persist, dropout, or transfer institutions" (Allen, 2019, p. x). Belonging is a basic human need (Baumeister & Leary, 1995; Maslow, 1962), however, those who identify as non-majority identities (racial/ethnic minority, LGBTQ+, disability, and first generation) are at greater risk of feeling isolated and unwelcome. Strayhorn (2019) notes that such learners' need to belong is "heightened in contexts and settings where individuals are prone to feel alienated, invisible, (pre)judged, stereotyped, or lonely" (p. xiv). Lack of belonging and inclusion among individuals from marginalized identity groups is a contributor to increased stress as a chronic response to racism, stigmatization, discrimination, and exclusion (Cokley et al., 2013; Hunter et al., 2019; Pearlin, 1989). In contrast, a sense of inclusion and belonging contributes to better academic outcomes and enhanced physical and mental health (Baumeister & Leary, 1995). Similarly, Gopalan and Brady (2019) found that belonging predicts better persistence, engagement, and mental health among racial/ethnic minority and first generation students. Perceptions of inclusion and belonging are also strong predictors of self-efficacy, and thus persistence and retention to graduation (Dika & Martin, 2017; O'Keeffe, 2013; Tinto, 2017).

Clearly, inclusion and belonging are significant factors in the academic success and well-being of marginalized students, but what exactly do these two closely related concepts mean? In a most basic sense, inclusion can be defined as the "process of a person or group of people being included within something. They are to be included

within its processes, structures and everyday typical experiences” (Rix, 2015, p.4). Similarly, Ross (2011) perceives inclusion as a “function of how fully involved people are in the structures of their organizations...Inclusion is a function of connection” (p. 38). In higher education settings, specifically, inclusion occurs when people have consistent opportunities for meaningful connections with others and are valued by the larger campus community (Milem, Chang, & Antonio, 2005; Museus, 2014). Belonging involves the need for ongoing acceptance and respect from others in social contexts (Baumeister & Leary, 1995) and depends upon mutually supportive interpersonal relationships as its foundation. Ahn and Davis (2020) identified four domains of students’ sense of belonging among a general university population: (1) academic engagement, (2) social engagement, (3) surroundings, and (4) personal space. Social engagement was noted to be the most salient of these in terms of a fundamental requisite for belonging, a finding supported by other research studies (Baumeister & Leary, 1995; Thomas, 2012). Student perceptions of belonging are associated with higher levels of engagement, which, in turn, correlates to academic success (Kuh et al., 2005). While higher education institutions are typically seen as spaces where teaching and learning occur, Ahn and Davis (2020) note that “students tend to expand the meaning beyond the functional definition, considering university as home, far more than physical buildings or a geographical location. With emotional engagement to the space and imaginative value added, university becomes their temporary home to some students” (pp. 17-18). Additionally, other scholars have posited multi-dimensional frameworks that include both informal and formal structures and consideration of political and identity influences (Antonsich, 2010; Fenster, 2005; Yuval-Davis, 2006). Inclusion and belonging are thus quite similar in construct, however, we maintain that inclusion involves process, space, and structure whereas belonging is more focused on affective dimensions among individuals or groups.

Despite the obvious significance of inclusion and belonging to the health and well-being of marginalized students and campus environments as a whole, numerous challenges exist to build and maintain institutional structures and processes that facilitate a sense of value and acceptance for everyone (Lefever, 2012; Mann, 2010; Morina, 2017). There also is a clear need to better measure and understand inclusion, belonging and related psychological factors that may support college students’ success and well-being (Gopalan & Brady, 2019). A first step towards that greater understanding is to comprehensively explore the existing literature for evidence on inclusion and belonging. The purpose of this scoping study is to search recent international literature to answer the question “what are the contexts, barriers, and facilitators related to inclusion and belonging among students of marginalized identities in higher education institutions?”.

2. Method

We used a scoping review methodology (Arksey & O’Malley, 2005; Levac et al., 2010) to systematically search the literature on inclusion and belonging in higher education. Scoping studies “aim to map rapidly the key concepts underpinning a research area and the main sources and types of evidence available” (Arksey & O’Malley, 2005, p. 19). This scoping study included five steps: (1) identifying the research question; (2) identifying relevant studies; (3) selecting studies that met inclusion criteria; (4) charting the data; and (5) collating, summarizing, and reporting the results.

2.1 Search Strategy and Study Selection

The research question for this scoping study was “what are the contexts, barriers, and facilitators related to inclusion and belonging among students of marginalized identities in higher education institutions?” In addition to finding gaps in the literature, we anticipate using the results of the study to inform initial development of a standardized assessment of learning environments in higher education settings. The study reviewed English-language, peer-reviewed publications in the timeframe of the years 2010 to 2020. A research librarian assisted with developing and running the search strategy. Databases searched included PubMed Central, MEDLINE, CINAHL Complete, PsychINFO, and Web of Science. The search stream was entered as follows for each database: Education" OR "Curriculum" OR "Learning" OR "Teaching" OR "Allied Health Occupations" OR "Program Development" OR "learning environment" OR "inclusive education" OR "inclusive" OR "sense of belonging" OR "belonging" AND "Neurodevelopmental Disorders" OR "Trauma and Stressor Related Disorders" OR "Social Discrimination" OR "Population Groups" OR "Minority Groups" OR "Disabled Persons" OR "Gender Identity" OR "Sexuality" OR "First-generation college students" AND "Universities" OR "Higher education".

2.2 Inclusion and Data Extraction

Once all studies were identified, we applied inclusion criteria as follows: (1) must include at least one of: higher education or university (college or postsecondary were also accepted); (2) must include terms or mention of at least one of: inclusion, inclusive environments, belonging, or student/learner perceptions of

inclusivity/noninclusivity; and (3) must contain explicit reference to at least one of the following identities: minority, disability, gender, sexual orientation, or first generation student. Articles must have met all three inclusion criteria to be included.

The title and abstract for each identified article was independently reviewed by the two authors for inclusion/exclusion with an initial agreement rate of 88% and remaining differences were reconciled through discussion until consensus was reached. The first author then manually reviewed the reference lists of five randomly selected articles with no additional articles identified. Based upon the study research question, the authors jointly developed a data extraction tool to guide analysis. Both authors reviewed full-text versions of articles that met the inclusion criteria using basic qualitative content analysis (Hsieh & Shannon, 2005; Elo & Kyngas, 2008) as guided by the data extraction tool. Data points extracted for analysis included: (1) geographic location of study; (2) institution type; (3) student identity status; (4) institutional context (including curriculum, policies, faculty/peer interactions); (5) challenges to sense of inclusion/belonging; and (6) strategies used to promote inclusion/belonging.

3. Results

The database search yielded 3,116 articles and a total of 202 duplicates were removed. The titles and abstracts of the remaining 2,914 articles were independently screened for inclusion/exclusion by the authors, which resulted in a total of 73 articles included for full-text analysis (Figure 1). Initial review of full-text articles resulted in the removal of five additional articles as they did not involve a focus on students/learners. Both authors completed full-text content analysis of the 68 articles using the data extraction tool (Table 1) as a guide, resulting in six code categories: geographical location, institution type, student identity status, institutional context, challenges to inclusion and belonging, and strategies to promote inclusion and belonging.

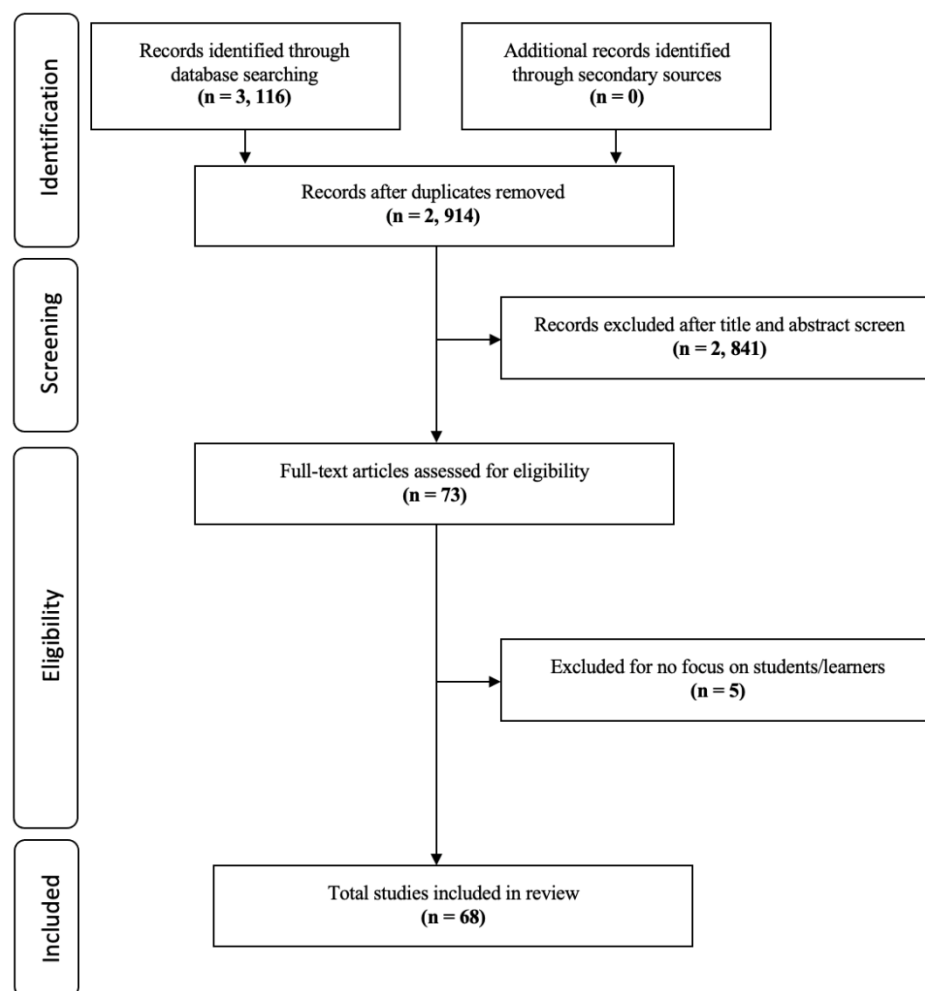


Figure 1. PRISMA Flowchart of Study Selection Process

Table 1. Data Extraction Tool

Item	Categories	Sub-Categories
Demographics	USA	
<i>Where was the study completed?</i>	Other	
Institutional Type	Junior College	
	Undergraduate	
	Graduate	
	Professional Training	
	Trade/Technical College	
	Other	
Identity Status	Minority/Underrepresented Minority	
	Disability	
	Gender	
	Sexual Orientation	
	First Generation	
Context	Instruction (Classroom or Clinical)	
	Curriculum	
	Assessment Methods	
	Policies/Procedures	
	Faculty/Peer Interactions	
	Physical Surroundings/Spaces	
	Financial Considerations	
	Other	
Challenges to Sense of Inclusion/Belonging	Social Exclusion	
	Explicit Bias/Discrimination	
	Microaggressions	
	Stereotype Threat	
	Lack of Representation	
	Accessibility	
	Other	
Strategies Used to Promote Inclusion/Belonging	Orientation Programs	
	Receptivity	
	Faculty Empathy/Compassion	
	Peer/Faculty Mentoring	
	Peer/Faculty Training	
	Academic Support Services	
	Accessible Spaces	
	Cross-Group Socialization	
	Visible Representation	
	Inclusive Policies/Procedures	
	Bias Reporting Mechanisms	
	Scholarship/Financial Support	
	Other	

3.1 Geographic Location

Of the 68 full-text articles coded, 35 were based in the United States, however, fourteen other nations were represented, with South Africa (7), the United Kingdom and Spain (5 each), and Australia (4) being the most common. Brazil, Canada, Croatia, Finland, Iceland, Ghana, Israel, Italy, Malaysia, and Norway were also represented.

3.2 Institution Type

Undergraduate institutions were the most common site of origin (68%). Graduate programs were also present, although much less commonly than undergraduate (7%). 6% of the articles evoked both undergraduate and graduate education programs, but were not specifically identified as such. Thirteen articles (19%) focused on professional training programs, with no junior or technical college representation unless those fell into the

unspecified postsecondary category.

3.3 Student Identity Status

Students with disabilities were the most common identity involved (32%), with underrepresented minorities (26%), and issues surrounding sexual orientation (23%) and gender (13%) next in representation. First generation students were the focus of only four articles (6%).

3.4 Institutional Context

Faculty/peer interaction was the context most commonly evoked (38%), with policies, procedures, and infrastructure (37%) following closely. Classroom or clinical instruction was represented in fifteen articles (22%), although specific strategies were rarely noted. Physical surroundings and spaces were topics in 19% of the articles. Curriculum was only mentioned in four articles (6%), while assessment was represented in two articles (3%). Curriculum and assessment, while mentioned, were only discussed in very general terms.

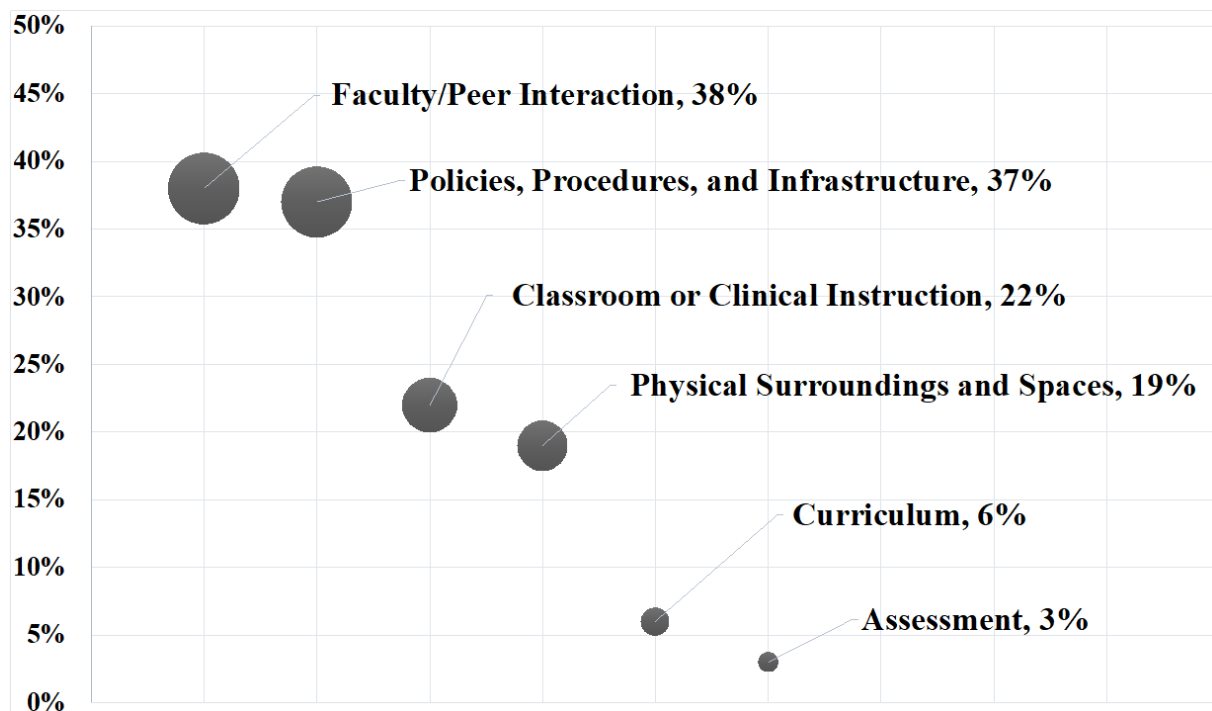


Figure 2. Institutional Context

Note. Bubble plot of institutional contexts represented in scoping study. The size of each bubble correlates with the frequency of articles that discussed each type of institutional context.

3.5 Barriers to Inclusion and Belonging

Social exclusion (40%), accessibility issues (34%), and microaggressions (25%) were the leading challenges to inclusion and belonging, followed by explicit bias/discrimination (21%) and lack of identity-concordant representation (16%). Stereotype threat (12%) was also evoked, as were a variety of other challenges, including lack of supportive policies, procedures, and systems.

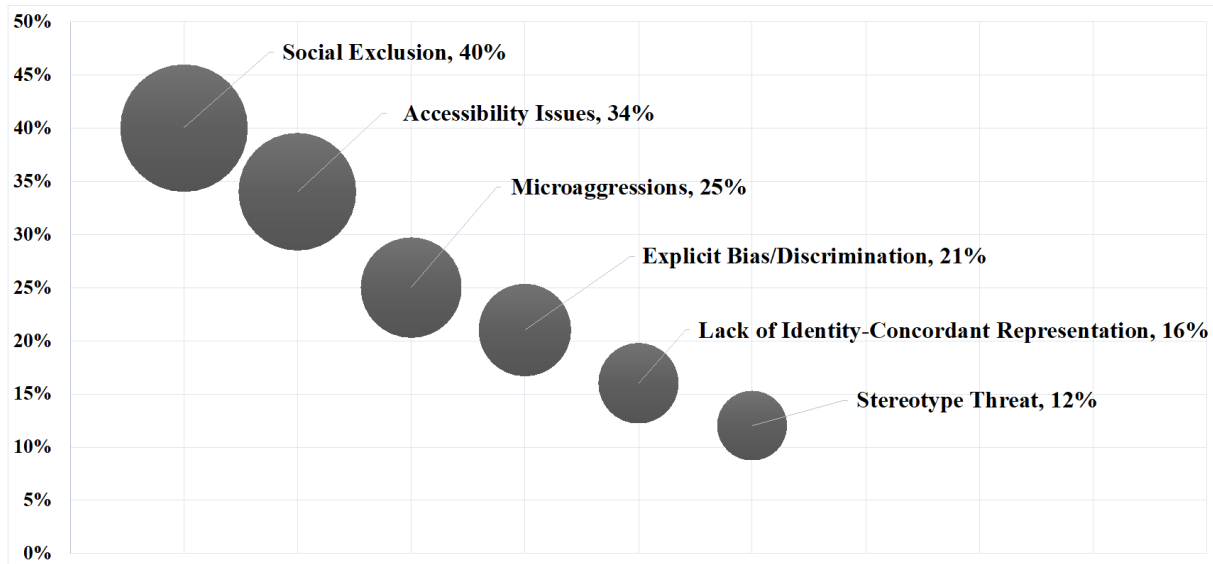


Figure 3. Barriers to Inclusion and Belonging

Note. Bubble plot of barriers to inclusion/belonging identified in scoping study. The size of each bubble correlates with the frequency of articles that discussed each type of barrier.

3.6 Facilitators to Inclusion and Belonging

Receptivity (47%), support services (35%), accessible spaces and attitudes (34%), inclusive policies/procedures (25%), peer/faculty training (24%), peer/faculty mentoring and faculty empathy/compassion (21% each), and visible representation (15%) were the most common facilitators of inclusion and belonging. Scholarships or financial support (13%) and orientation programs (10%) were additional areas of focus. Inclusive teaching practices (5%) and cross-group socialization (5%) were rarely evoked.

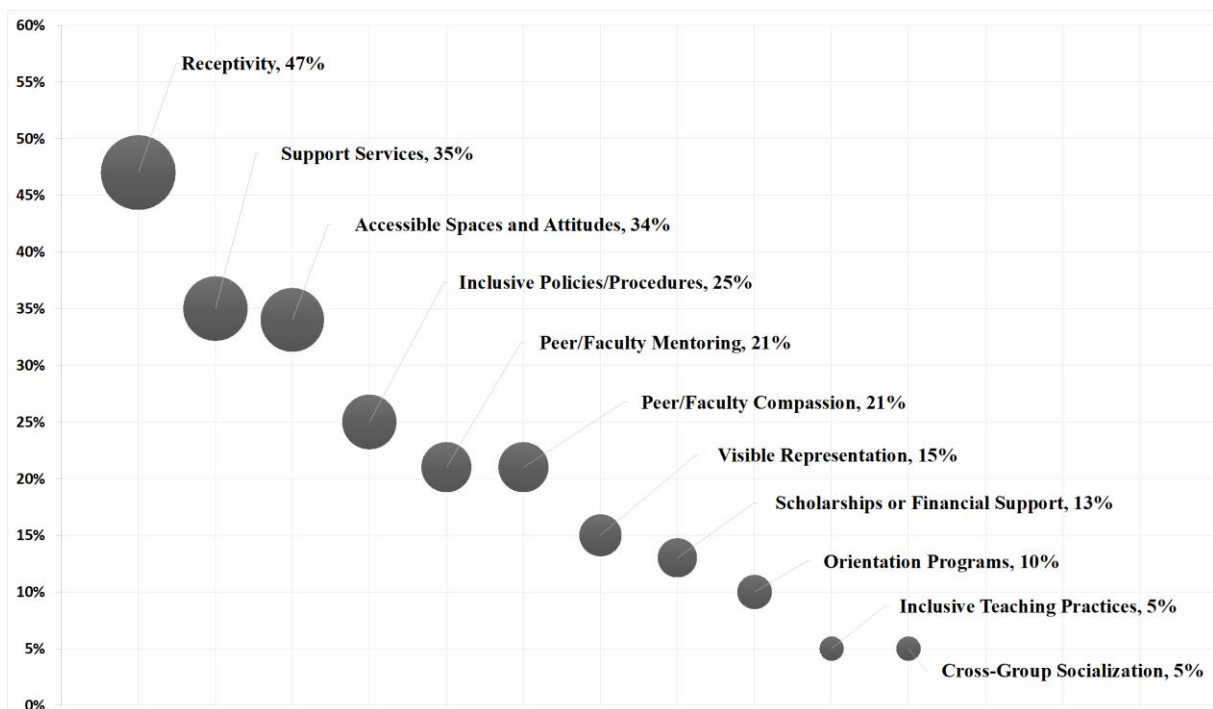


Figure 4. Facilitators to Inclusion and Belonging

Note. Bubble plot of facilitators to inclusion/belonging identified in scoping study. The size of each bubble correlates with the frequency of articles that discussed each type of facilitator.

4. Discussion

The scoping study results yielded some significant findings regarding institutional context, and both challenges to and facilitators of inclusion and belonging in higher education settings. Recent scholarship has made clear that significant barriers and challenges continue to adversely impact a sense of belonging for students of marginalized identities. Many of these challenges are rooted in systemic mechanisms and societal attitudes that are beyond the scope of this study, and therefore our discussion will focus mainly on contextual features of institutions and closely related facilitators of inclusion and belonging.

4.1 Barriers to Inclusion and Belonging

In our analysis, social exclusion was the most commonly occurring barrier to marginalized students feeling like they belong in campus communities. Lack of social interaction has significant negative impacts on mental health, engagement, academic success and persistence (Ahn & Davis, 2010; Baumeister & Leary, 1995; Thomas, 2012). Wolff et al. (2017) found that isolation of transgender and gender-nonconforming students was prevalent and therefore many students felt silenced and invisible. Culturally and linguistically diverse students also experience rejection and subsequent isolation in clinical learning situations (Korhonen et al., 2019) and underrepresented minority students reported that they felt (and were treated) like outsiders because they did not conform to the ideal or default physiotherapist identity of white, middle class, and female (Hammond et al., 2019).

Lack of accessibility for students with disabilities was also frequently evoked in the analyzed literature, typically associated with inaccessible buildings, websites, learning management systems, and virtual resources, lack of lifts and other adaptive and supportive equipment, and the absence of interpreters or signage in braille (Morina, et al., 2016; van Jaarsveldt & Ndeya-Ndereya, 2015). For many students with disabilities, accessibility goes beyond built structures and includes a broader conception of a variety of environments, including social and attitudinal aspects, outdoor spaces, transportation, and communication (Bencicni & Arengi, 2018; Mulrooney & Kelly, 2020).

Microaggressions, explicit bias and discrimination were noted in nearly half of the analyzed articles as significant challenges to student's sense of inclusion and belonging. Microaggressions alone accounted for a quarter of the identified barriers to inclusion and belonging and are indicative of "racially ethnically hostile educational contexts" (Keels et al., 2017, p.1337). Sue et al. (2007) define microaggressions as "brief and commonplace verbal, behavioral, and environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults to the target person or group" (p. 272). Microaggressions manifest in multiple ways, yet in many articles, the specific nature was not discussed. When discussed in more detail, common microaggressions included Black medical residents being mistaken for custodial staff (Thackwell et al., 2016), supervisors asking dyslexic radiology students "how are you going to do radiography because it is all about left and right" (Murphy, 2011, p.136), and peers admonishing Asian students for being too quiet or passive (Kim et al., 2019). Similarly to microaggressions, instances of explicit bias and discrimination were common barriers to inclusion and belonging. Examples specifically noted in the literature analyzed ranged from "shifting goalposts and contradictory standards" (Thackwell et al., 2016, p. 3) of performance for minority medical residents to sexual assault of sexual- and gender-minority students (Coulter & Rankin, 2020). When considered as a group of constructs, microaggressions and other actions of explicit bias and discrimination not only detract from mental health and academic success, they also trigger a phenomenon termed 'belonging uncertainty' (Walton & Cohen, 2007). Belonging uncertainty involves questioning social contexts and associated interpersonal connections which often leads individuals from underrepresented identity groups to surmise that "people like me do not belong here" (Walton & Cohen, 2007, p.83).

4.2 Institutional Context and Facilitators of Inclusion and Belonging

The social and supportive aspects of peer and faculty interaction were the most commonly evoked contextual features, followed closely by policies, procedures, and infrastructure. The fundamental importance of social interaction for both learning and belonging is well-documented and echoes what researchers note about the role of social engagement within inclusive campus settings (Ahn & Davis, 2010; Baumeister & Leary, 1995; Thomas, 2012). While traditional views of socialization indicate that initial receptivity to novel or diverse individuals can be minimal, scholars suggest ongoing receptivity is crucial to the long-term development and success of organizations and communities (Moreland & Levine, 2006). Supportive social relationships with faculty, staff, and other students are key to feelings of belonging (Vaccaro et al., 2015), and particularly important for underrepresented minorities (Hausmann et al., 2007). The availability of mentors, both peer and faculty (particularly) was also frequently noted as valuable contributors to the social aspect of inclusive learning spaces (Braun et al., 2018; Dennehy & Dasgupta, 2017; Kelley & Westling, 2013). Boyer (1990) suggests promoting

learning communities, which can be housed inside classrooms and organized around course topics or based upon institutional core values and enacted through student involvement in group campus activities. The importance of socialization goes beyond learning-related classroom interactions, out-of-class experiences such as service projects, leadership opportunities, and topic or identity-specific affinity group activities can connect students in forging multiple identities that bolster feelings of belonging (Cooper, 2009).

Also critical to a sense of belonging are supplementary infrastructure, accessible and inviting spaces, inclusive policies and procedures, and student support services which collectively form the foundation upon which socialization occurs. Universities and colleges are focused on education and research, but are also places for community-building (Mulrooney & Kelly, 2020). The structural arrangement of universities impacts student learning and socialization and the “nature of the physical space on campus is not neutral, but can affect the extent to which students can form attachments with each other and academic staff” (Mulrooney & Kelly, 2020, p. 1). Inclusive design principles influence more than simply accessibility and include functional use, signage, lighting, and use of color as elements enhancing inclusion and belonging (Commission for Architecture and the Built Environment, 2008). It is not only the built environment; informal and outdoor campus spaces also facilitate development of social communities (Mulrooney & Kelly, 2020).

Inclusive policies and procedures as well as related support services are additional elements of campus infrastructure that play a key role in facilitating academic success and belonging of students. Inclusive policies promoting belonging include university core values that support diversity, public written statements that include a range of identities, holistic admissions procedures, allowances for preferred names, faculty and peer training programs (e.g. implicit bias, Safe Zone, allyship), and instructional accommodation processes (Baumann et al., 2019; Braun et al., 2018; Garvey & Rankin, 2015; Goldberg et al., 2019; Jacobson et al., 2016). Student support services also facilitate a sense of inclusion and belonging through recognizing and minimizing some of the challenges marginalized students face when attending college in majority-dominated institutions (Gusa, 2010). Prominent support services evoked were tutoring, peer ‘academic families’, transition-to-college programs, counseling, learning resources, and educational coaches (Fletcher et al., 2015; Folk et al., 2012; Kelley & Westling, 2013; van Jaarsveldt & Ndeya-Ndereya, 2015).

Strikingly, the literature lacks focus on what actually happens inside didactic classrooms and clinical teaching spaces. Topics generally focused on instruction were certainly found in our analysis, however, the vast majority of articles did not mention specific instructional strategies, delivery mechanisms, or educational practices directly contributing to students feeling included in the teaching-learning dynamic. When evoked, instruction as a supportive element was typically limited to broad discussions of inclusive teaching practices (Dewsbury, 2017), universally designed instruction (Bencini et al., 2018; Couillard & Higbee, 2018), the possible benefits of active learning contexts (Ballen et al., 2017; Cooper & Brownell, 2016), and, in one article, culturally sustaining pedagogy (Cole, 2017). Curriculum and assessment were rarely present (Fowler et al., 2018; Garvey & Rankin, 2015), yet are frequently spaces where microaggressions, bias, stereotype threat, and lack of representation can adversely (but often subtly) impact learning, self-efficacy, and well-being. The three types of curriculum (formal, informal, and hidden) each offer potential facilitators and barriers to inclusion and belonging. Likewise, assessment methods can be biased (standardized tests, clinical competence assessments, etc.) against certain identities and affirm unhealthy stereotypes.

5. Conclusion

This scoping study highlighted the barriers and facilitators of student inclusion and belonging in higher education institutions, with socially-mediated engagement the foremost factor in the literature analyzed. Events in the social milieu which support a sense of belonging include receptivity of classmates, faculty, and staff; academic support services such as counseling, tutoring, and advising; faculty and peer mentoring; inclusive policies and procedures which promote access, socialization, and communication; and acts of care and compassion by faculty and staff. The study also revealed a surprising gap in the lack of attention to challenges or supports in the actual teaching-learning process, most conspicuously, specific instructional strategies, the various types of curricula, and assessment practices. Future research is needed to explore how the teaching-learning space can be leveraged to more directly support inclusion and belonging, specifically for underrepresented minority students and other marginalized identities, as these factors have the potential to greatly influence students’ health, development, and well-being. Progressive and critical pedagogies hold promise here to engage in critical dialogue and perspective-taking, nurture accountable learning communities, encourage teachers to take risks that buck the existing social order of higher education, reframe grading practices, and infuse curricula with culturally accurate information and core concepts which disproportionately impact marginalized identities (e.g. power, privilege, oppression) (Gay, 2018; Giroux, 1997; hooks, 1994). Corresponding methods to evaluate

instruction, curriculum, and assessment must also be addressed. Developing standardized measurement tools, faculty training modules, and scorecards for departments and classrooms to analyze their current pedagogies, practices, and traditions are all critical to facilitating inclusion and belonging in higher education institutions.

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References

- Ahn, M. Y., & Davis, H. H. (2020). Four domains of students' sense of belonging to University. *Studies in Higher Education, 45*(3), 622-634. <https://doi.org/10.1080/03075079.2018.1564902>
- Allen, W. R. (2019). Foreword. In T. L. Strayhorn (Ed.), *College students' sense of belonging: A key to educational success for all students* (2nd ed.). Routledge.
- Antonsich, M. (2010). Searching for belonging: An analytical framework. *Geography Compass, 4*(6), 644-659. <https://doi.org/10.1111/j.1749-8198.2009.00317.x>
- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology, 8*, 19-32. <https://doi.org/10.1080/1364557032000119616>
- Ballen, C. J., Wieman, C., Salehi, S., Searle, J. B., & Zamudio, K. R. (2017). Enhancing diversity in undergraduate science: Self-efficacy drives performance gains with active learning. *CBE-Life Sciences Education, 16*(4), ar56. <https://doi.org/10.1187/cbe.16-12-0344>
- Bauman, S. S. M., Acker-Hocevar, M., Talbot, D. L., Visaya, A., Valencia, M., & Ambriz, J. (2019). Exploring and promoting the college attendance and success of racial/ethnic minority students. *Journal of Multicultural Counseling and Development, 47*(1), 37-48. <https://doi.org/10.1002/jmcd.12119>
- Baumeister, R. F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529. <https://doi.org/10.1037/0033-2909.117.3.497>
- Bencini, G. M., Garofolo, I., & Arengi, A. (2018). *Implementing universal design and the ICF in higher education: Towards a model that achieves quality higher education for all*. In Transforming our World Through Design, Diversity and Education. IOS Press. pp. 464-472.
- Boyer, E. L. (1990). *Campus life: In search of community*. The Carnegie Foundation.
- Braun, D. C., Clark, M. D., Marchut, A. E., Solomon, C. M., Majocho, M., Davenport, Z., ... Gormally, C. (2018). Welcoming deaf students into STEM: Recommendations for university science education. *CBE-Life Sciences Education, 17*(3), 1-8. <https://doi.org/10.1187/cbe.17-05-0081>
- Clifton, M., & Taff, S. D. (2021). The FOCUS Model—Facilitating Occupational Performance on Campus: Uplifting Underrepresented Students. *Journal of Occupational Therapy Education, 5*(3). Retrieved from <https://encompass.eku.edu/jote/vol5/iss3/14>
- Cokley, K., McClain, S., Enciso, A., & Martinez, M. (2013). An examination of the impact of minority status stress and impostor feelings on the mental health of diverse ethnic minority college students. *Journal of Multicultural Counseling and Development, 41*, 82-95. <https://doi.org/10.1002/j.2161-1912.2013.00029.x>
- Cole, C. E. (2017). Culturally sustaining pedagogy in higher education: Teaching so that Black lives matter. *Equality, Diversity and Inclusion, 36*(8), 736-750. <https://doi.org/10.1108/EDI-01-2017-0005>
- Commission for the Built Environment. (2008). *Inclusion by design. Equality, diversity and the built environment*. Retrieved from <https://webarchive.nationalarchives.gov.uk/20110118100037>
- Cooper, R. (2009). Constructing belonging in a diverse campus community. *Journal of College & Career, 10*(3), 1-10. <https://doi.org/10.2202/1940-1639.1085>
- Cooper, K. M., & Brownell, S. E. (2016). Coming out in class: Challenges and benefits of active learning in a biology classroom for LGBTQIA students. *CBE-Life Sciences Education, 15*(3), ar37. <https://doi.org/10.1187/cbe.16-01-0074>
- Couillard, E., & Higbee, J. L. (2018). Expanding the scope of Universal Design: Implications for gender identity and sexual orientation. *Education Sciences, 8*(3), 147. <https://doi.org/10.3390/educsci8030147>
- Coulter, R. W., & Rankin, S. R. (2017). College sexual assault and campus climate for sexual-and

- gender-minority undergraduate students. *Journal of Interpersonal Violence*, 35(5-6), 1351-1466.
<https://doi.org/10.1177/0886260517696870>
- Dennehy, T. C., & Dasgupta, N. (2017). Female peer mentors early in college increase women's positive academic experiences and retention in engineering. *Proceedings of the National Academy of Sciences*, 114(23), 5964-5969. <https://doi.org/10.1073/pnas.1613117114>
- Dewsbury, B. M. (2017). On faculty development of STEM inclusive teaching practices. *FEMS Microbiology Letters*, 364(18), 1-6. <https://doi.org/10.1093/femsle/fnx179>
- Dika, S. L., & Martin, J. P. (2017). Bridge to persistence: Interactions with educators as social capital for Latina/o engineering majors. *Journal of Hispanic Higher Education*, 17(3), 202-215.
<https://doi.org/10.1177/1538192717720264>
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62, 107-115. <https://doi.org/10.1111/j.1365-2648.2007.04569.x>
- Fenster, T. (2005). The right to the gendered city: Different formations of belonging in everyday life. *Journal of Gender Studies*, 14(3), 217-231. <https://doi.org/10.1080/09589230500264109>
- Fletcher, J., Bernard, C., Fairtlough, A., & Ahmet, A. (2015). Beyond equal access to equal outcomes: The role of the institutional culture in promoting full participation, positive inter-group interaction and timely progression for minority social work students. *British Journal of Social Work*, 45(1), 120-137.
<https://doi.org/10.1093/bjsw/bct081>
- Folk, E. D., Yamamoto, K. K., & Stodden, R. A. (2012). Implementing inclusion and collaborative teaming in a model program of postsecondary education for young adults with intellectual disabilities. *Journal of Policy and Practice in Intellectual Disabilities*, 9(4), 257-269. <https://doi.org/10.1111/jppi.12007>
- Fowler, A. C., Ewens, B., Vafeas, C., Delves, L., Hayward, C., Nannup, N., & Baum, G. (2018). Closing the gap: A whole of school approach to aboriginal and Torres Strait islander inclusivity in higher education. *Nurse Education in Practice*, 30, 86-90. <https://doi.org/10.1016/j.nepr.2018.04.001>
- Garvey, J., & Rankin, S. (2015). The influence of campus experiences on the level of outness among trans-spectrum and queer-spectrum students. *Journal of Homosexuality*, 62, 374-93.
<https://doi.org/10.1080/00918369.2014.977113>
- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice*. Teacher's College Press.
- Giroux, H. A. (1997). *Pedagogy and the politics of hope: Theory, culture, and schooling*. Routledge.
- Goldberg, A. E., Beemyn, G., & Smith, J. Z. (2019). What is needed, what is valued: Trans students' perspectives on trans-inclusive policies and practices in higher education. *Journal of Educational and Psychological Consultation*, 29(1), 27-67. <https://doi.org/10.1080/10474412.2018.1480376>
- Gopalan, M., & Brady, S.T. (2019). College students' sense of belonging: A national perspective. *Educational Researcher*, 49(2), 134-137. <https://doi.org/10.3102/0013189X19897622>
- Gusa, D. L. (2010). White institutional presence: The impact of Whiteness on campus climate. *Harvard Educational Review*, 80(4), 464-490. <https://doi.org/10.17763/haer.80.4.p5j483825u110002>
- Hammond, J. A., Williams, A., Walker, S., & Norris, M. (2019). Working hard to belong: A qualitative study exploring students from black, Asian and minority ethnic backgrounds experiences of pre-registration physiotherapy education. *BMC Medical Education*, 19(1), 1-11. <https://doi.org/10.1186/s12909-019-1821-6>
- Hausmann, L. R. M., Schofield, J. W., & Woods, R. L. (2007). Sense of belonging as a predictor of intentions to persist among African American and White first-year college students. *Research in Higher Education*, 48, 803-839. <https://doi.org/10.1186/s12909-019-1821-6>
- hooks, b. (1994). *Teaching to transgress: Education as the practice of freedom*. Routledge.
<https://doi.org/10.3366/para.1994.17.3.270>
- Hsieh, H.-F., & Shannon, S. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277-1288. <https://doi.org/10.1177/1049732305276687>
- Hunter, C. D., Case, A. D., & Harvey, I. S. (2019). Black college students' sense of belonging and racial identity. *International Journal of Inclusive Education*, 23(9), 950-966.
<https://doi.org/10.1080/13603116.2019.1602363>
- Jacobson, A. N., Matson, K. L., Mathews, J. L., Parkhill, A. L., & Scartabello, T. A. (2017). Lesbian, gay,

- bisexual, and transgender inclusion: Survey of campus climate in colleges and schools of pharmacy. *Currents in Pharmacy Teaching and Learning*, 9(1), 60-65. <http://dx.doi.org/10.1016/j.cptl.2016.08.038>
- Kelley, K. R., & Westling, D. L. (2013). A focus on natural supports in postsecondary education for students with intellectual disabilities at Western Carolina University. *Journal of Vocational Rehabilitation*, 38, 67-76. <https://doi.org/10.3233/JVR-120621>
- Kim, S. H., Canfield, J., Desrosiers, P., Harley, D., & Hunn, V. (2019). Embracing inclusive excellence: Asian and Asian American college students. *Journal of Human Behavior in the Social Environment*, 29(8), 1015-1025. <https://doi.org/10.1080/10911359.2019.1647907>
- Korhonen, H., Tuomikoski, A.-M., Oikarainen, A., Kääriäinen, M., Elo, S., Kyngäs, H., Liikanen, E., & Mikkonen, K. 2019. Culturally and linguistically diverse healthcare students' experiences of the clinical learning environment and mentoring: A qualitative study. *Nurse Education in Practice*, 41, 102637. <https://doi.org/10.1016/j.nepr.2019.102637>
- Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2005). *Assessing conditions to enhance educational effectiveness*. Jossey-Bass.
- Lefever, R. (2012). Exploring student understandings of belonging on campus. *Journal of Applied Research in Higher Education*, 4(2), 126-141. <https://doi.org/10.1108/17581181211273075>
- Levac, D., Colquhoun, H., & O'Brien, K.K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, 5(1), 69. <https://doi.org/10.1186/1748-5908-5-69>
- Mann, S. (2010) Alternative perspectives on the student experience: Alienation and engagement. *Studies in Higher Education*, 26(1), 7-19. <https://doi.org/10.1080/0307570020030689>
- Maslow, A. (1962). *Toward a psychology of being*. von Nostrand Reinhold. <https://doi.org/10.1037/10793-000>
- Milem, J. F., Chang, M. J., & Antonio, A. L. (2005). *Making diversity work on campus: A research-based perspective*. American Association of Colleges and Universities.
- Moreland, R. L., & Levine, J. L. (2006). Socialization in organizations and work groups. In J. M. Levine & R. L. Moreland (Eds.), *Small groups* (pp. 469-499). Psychology Press.
- Morina, A., Lopez-Gavira, R., & Molina, V. M. (2016). What if we could imagine an ideal university? Narratives by Students with Disabilities. *International Journal of Disability, Development and Education*, 64(4), 353-367. <https://doi.org/10.1080/1034912X.2016.1228856>
- Moriña, A. (2017). Inclusive education in higher education: Challenges and opportunities. *European Journal of Special Needs Education*, 32(1), 3-17. <https://doi.org/10.1080/08856257.2016.1254964>
- Mulrooney, H. M., & Kelly, A. F. (2020). The university campus and a sense of belonging: What do students think? *New Directions in the Teaching of Physical Sciences*, 15(1), 1-12. <https://doi.org/10.29311/ndtps.v0i15.3590>
- Murphy, F. (2011). On being dyslexic: Student radiographers' perspectives. *Radiography*, 17, 132-138. <https://doi.org/10.1016/j.radi.2010.08.005>
- Museus, S. D. (2014). The culturally engaging campus environments (CECE) model: A new theory of success among racially diverse college student populations. In M. B. Paulsen (Ed.), *Higher education: Handbook of theory and research* (pp. 189-227). Springer. https://doi.org/10.1007/978-94-017-8005-6_5
- O'Keeffe, P. (2013). A sense of belonging: Improving student retention. *College Student Journal*, 47(4), 605-613. Retrieved from <https://www.ingentaconnect.com/content/prin/csj/2013/00000047/00000004/art00005>
- Pearlin, L. I. (1989). The sociological study of stress. *Journal of Health and Social Behavior*, 30(3), 241-256. <https://doi.org/10.2307/2136956>
- Rix, J. (2015). *Must inclusion be special? Rethinking educational support within a community of provision*. Routledge. <https://doi.org/10.4324/9781315713748>
- Ross, H. J. (2011). *Re-inventing diversity: Transforming organizational community to strengthen people, purpose, and performance*. Rowman & Littlefield Publishers, Inc.
- Strayhorn, T. L. (2019). *College students' sense of belonging: A key to educational success for all students* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315297293>
- Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L., & Esquilin, M.

- (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist*, 62(4), 271-286. <https://doi.org/10.1037/0003-066X.62.4.271>
- Thackwell, N., Swartz, L., Dlamini, S., Phahladira, L., Muloiwa, R., & Chiliza, B. (2016). Race trouble: Experiences of Black medical specialist trainees in South Africa. *BMC International Health and Human Rights*, 16(31). <https://doi.org/10.1186/s12914-016-0108-9>
- Theobald, E. J., Hill, M. J., Tran, E., Agrawal, S., Arroyo, E. N., Behling, S., ... Freeman, S. (2020). Active learning narrows achievement gaps for underrepresented students in undergraduate science, technology, engineering, and math. *Proceedings of the National Academy of Sciences*, 117(12), 6476-6483. <https://doi.org/10.1073/pnas.1916903117>
- Thomas, L. (2012). *Building student engagement and belonging in higher education at a time of change*. Paul Hamlyn Foundation.
- Tinto, V. (2017). Reflections on student persistence. *Student Success*, 8(2), 1-8. <https://doi.org/10.5204/ssj.v8i2.376>
- Vaccaro, A., Daly-Cano, M., & Newman, B. M. (2015). A sense of belonging among college students with disabilities: An emergent theoretical model. *Journal of College Student Development*, 56(7), 670-686. <https://doi.org/10.1353/csd.2015.0072>
- van Jaarsveldt, D. E., & Ndeya-Ndereya, C. N. (2015). 'It's not my problem': Exploring lecturers' distancing behaviour towards students with disabilities. *Disability & Society*, 30(2), 199-212. <https://doi.org/10.1080/09687599.2014.994701>
- Walton, G. M., & Cohen, G. L. (2007). A question of belonging: Race, social fit, and achievement. *Journal of Personality and Social Psychology*, 92, 82-96. <https://doi.org/10.1037/0022-3514.92.1.82>
- Wolff, J. R., Kay, T. L., Himes, H. L., & Alquijay, J. (2017). Transgender and gender-nonconforming student experiences in Christian higher education: A qualitative exploration. *Christian Higher Education*, 16(5), 319-338. <https://doi.org/10.1080/15363759.2017.1310065>
- Yuval-Davis, N. (2006). Belonging and the politics of belonging. *Patterns of Prejudice*, 40(3), 197-214. <https://doi.org/10.1080/00313220600769331>

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