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A Toolkit

Pulse Strategies for Measuring and Advancing Belonging for All

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Executive Summary

At many colleges and universities, a significant proportion of students, faculty, and staff—typically ranging from 20% to 40% based on project listening sessions—report not feeling that they belong at their institution. This experience of disconnection is associated with concerning outcomes, including disengagement and increased dropout rates. Systematic differences in feelings of belonging among sociodemographic groups also inspire urgency, as they indicate opportunities to address broader patterns of inequality in higher education.

At the same time, many higher education community members are experiencing survey fatigue. Existing surveys that measure belonging or engagement can come and go with little perceived impact or follow-through. For some, measurement can feel like an act of compliance rather than an act of leadership aimed at meaningful change.

To address these challenges, the American Association of State Colleges and Universities (AASCU) commissioned a toolkit, authored by two experts in the field, and generously funded by the Lumina Foundation, to provide AASCU leaders and community members of regional public universities with practical tools for measuring and improving belonging. The toolkit was inspired by and tested through conversations with six AASCU institutional teams over a one year period to ensure that the tools were appropriate for the challenges and opportunities that AASCU institutions face.

The toolkit answers the following critical questions: What is “belonging” in higher education? Why is fostering belonging important for institutional success? What compelling reasons exist for AASCU institutions to measure belonging? And how can institutional leaders ensure that the process of measuring belonging improves outcomes for students, faculty, and staff?



Credit: Western Carolina University

This toolkit contains strategies and techniques that enable university leadership and staff to answer these questions and take action. With these tools, leadership and staff should be able to:

1. Evaluate whether measuring belonging is an appropriate strategy for their institution
2. If so, develop the right measurement strategy for belonging tailored to their institution's unique context and mission
3. Implement the measurement strategy effectively to maximize the likelihood of achieving desired outcomes
4. Connect results to actions by developing and selecting from a menu of proven initiatives designed to improve belonging
5. Follow up by reinitiating the cycle, fostering a culture of continuous improvement in belonging and attainment

The authors designed this toolkit for a collaborative team approach, with different components tailored to various roles. College and university leaders may find this executive summary and sections describing high-level strategies particularly valuable. Faculty and institutional researchers might benefit from technical details about instrument design, scoring, and reporting. As emphasized throughout, a successful initiative to measure and improve belonging requires the engagement of leaders, faculty, staff, and students alike, each playing a crucial role in the process.

The authors have also designed this toolkit to be valuable across a wide spectrum of institutional contexts and timelines. This includes institutions with extensive existing survey infrastructure seeking to better connect data to action, those with strong initiatives but limited measurement capabilities, and those who are just beginning to explore whether belonging is a concept meaningful or relevant to them. It is designed to meet institutions where they are and guide them toward their goals, regardless of their conceptual or infrastructural starting points.

As a preview of the toolkit, here are five tools that the toolkit offers toward measuring and improving belonging:

TOOL 1

A Definition of Belonging and Its Four Subdomains

The toolkit provides a literature review for belonging. It emphasizes that each institution must develop and socialize its own definition, but it also offers this defensible definition for institutional consideration:

“Belonging is a feeling of acceptance, integration, competence, and safety in a particular institutional community.

The four provisional “subdomains” of belonging follow:

1. Social integration and acceptance: the feeling that peers and colleagues welcome and value you, that you have a place within a social network with meaningful connections
2. Institutional integration and acceptance: the feeling that institutional representatives recognize and appreciate you and your role
3. Competence and knowledge: the feeling that you understand what is necessary to succeed in your role and have the resources and opportunities to succeed
4. Psychological comfort and safety: the feeling that you are safe to express yourself without undue judgment or discrimination



TOOL 2

Strategies for Generating Buy-In

The toolkit offers a comprehensive set of strategies to build support and engagement for belonging initiatives across campus. These strategies can socialize the concept of belonging, embed it into institutional vocabulary, and establish it as a university priority. These include:

- Assessing institutional readiness
- Setting clear goals and managing risks
- Identifying and engaging key partners at all levels
- Mapping current initiatives to belonging frameworks
- Using pre-focus groups for community insights
- Developing effective communications plans

TOOL 3

The 12 Core Items for the AASCU Pulse Survey on Belonging

The toolkit presents criteria for evaluating items that measure belonging among students, faculty, and staff. The toolkit also provides hundreds of items related to belonging from the literature in Appendix E. Based on existing items and these criteria, the authors developed 12 items that can serve as a module for measuring belonging across AASCU institutions. *(Note: "AASCU" is a stand-in placeholder for the name of the college or university administering the survey. See Section 4 for additional details relating to prompts and item scales.)*

1. I feel like I belong at AASCU.
2. My peers welcome and value me at AASCU.
3. I have meaningful social relationships at AASCU.
4. I understand what I need to do to succeed in my role at AASCU.
5. I have the resources and opportunities I need to succeed at AASCU.
6. I receive meaningful recognition for my work at AASCU.
7. I feel that the values of AASCU align with my own.
8. It is easy for me to ask for help at AASCU.
9. I feel comfortable expressing my opinions at AASCU.
10. I would recommend AASCU to someone with interests and goals like mine.
11. Briefly, describe an offering at AASCU that has improved your sense of belonging.
12. Briefly, describe an offering at AASCU that would improve your sense of belonging.

TOOL 4

Strategies for Community Engagement

The toolkit provides a comprehensive framework for translating belonging survey results into meaningful action and sustained community engagement. Key elements include:

- Targeted report briefings for departments
- Community conversations and leadership summits
- Post-survey focus groups for in-depth feedback
- Development of a transparent action plan
- Strategies for connecting initiatives to survey findings
- Methods for ongoing community engagement

TOOL 5

Best Practices for Affirming Belonging

The toolkit presents strategies to advance belonging that are grounded in belonging scholarship and are responsive to publicly available data on belonging from AACSC institutions. Recommended strategies include:

- Commitment to periodic measurement
- Encouraging positive peer and faculty interactions
- Affinity groups and spaces for students, staff, and faculty
- Culturally responsive mentoring and advising programs
- Removing barriers to entry for academic and professional growth opportunities
- Inclusive pedagogy
- Community outreach and civic engagement initiatives
- Constructive dialogue programs



Credit: Western Carolina University



Introduction

In U.S. colleges in 2012, the average student responded they “somewhat agree” that they feel a sense of belonging at their school (Gopalan & Brady, 2020). This lukewarm average can mask 20% to 35% of students in four- and two-year colleges who did not agree that they felt a part of their school. Recent evidence also demonstrates that students’ sense of belonging has worsened through the COVID-19 pandemic (Gopalan et al., 2022; Kelly et al, 2024). These statistics should raise questions among members of regional public institutions: What percent of students, faculty, and staff feel a sense of belonging at my institution? Where are disparities in belonging greatest? And what can an institution do to improve the sense of belonging among its community members?

Some might ask more foundational questions: What is “belonging”? Why would we want our community members to feel that they belong here? What are the benefits of working to improve belonging? And how might measuring belonging help our community improve?

Research has identified sense of belonging as a significant factor in several student outcomes such as retention, self-efficacy, resilience, and engagement (Hausmann et al., 2007). In addition, sense of belonging has been linked to increased civic engagement and involvement in community service work (Encina & Berger, 2021; He, 2019; York & Fernandez, 2018). As universities strive to prepare students to be globally engaged citizens that contribute positively to society, it will be necessary for presidents and their leadership teams to prioritize belonging and understand how their campus culture is or is not fostering a strong sense of belonging. Measurement can be an effective strategy to assess and improve belonging on college campuses.

The 2017 American College Presidents Study found that a majority of college and university presidents reported that it is important or very important to address issues related to campus climate. Results also indicated that data-informed decision making related to student success is a rising priority area for presidents (Gagliardi et al., 2017). In addition, student success metrics often influence various funding sources such as grant awards and private gifts, all of which are funding sources presidents indicated that they would like to increase. Therefore, measuring and enhancing sense of belonging can advance institutional priorities and goals.

This toolkit provides strategies for university leaders to socialize and generate buy-in around belonging being a university priority, design a survey instrument or items that aligns with university goals, market the survey, analyze and report data, and engage the campus community in action planning. The strategies are presented as "pulse strategies" because they emerged from initial conversations that prioritized efficient measurement, which can take the form of a "pulse survey" that is relatively limited in duration, from 3–15 minutes. Such surveys can precede or accompany "deeper dives" in the form of longer surveys, qualitative interviews, and focus groups. To follow a medical metaphor, you typically take a "pulse" before conducting "a full scan." Given the varying needs that emerged throughout the authors' conversations with institutions, however, this toolkit includes not only pulse surveys but also an array of measurement and improvement strategies related to belonging.

The authors are a diversity, equity, inclusion, and belonging strategist and a measurement expert, respectively. The toolkit draws on practitioner experience and expertise, scholarship on belonging, organizational change theories, direct experience with students and staff, and a year of engagement with state colleges and universities. Within that year, the authors conducted listening sessions with representatives from American Association of State Colleges and Universities (AASCU) institutions. Six AASCU institutions served as pilots to apply the strategies outlined in this toolkit and provide feedback and data to inform the final toolkit.

The six pilot institutions were regional public institutions that reflected the diversity of the AASCU community. They ranged in institution size, regional location, demographic makeup, and political landscape. Institutional readiness for measuring belonging differed across institutions. One institution had just completed an annual campus theme dedicated to belonging. Others had used the term but differed in their adoption of belonging as a part of institutional vocabulary. Pilot implementation teams were appointed by university leadership and included faculty, diversity practitioners, institutional research, provosts, and other senior leaders. See Appendix E for the list of pilot institutions and implementation team members.

This toolkit includes composite vignettes from AASCU institutions to illustrate how practitioners can implement and tailor strategies to their institutional needs and culture. There is no one-size-fits-all approach in advancing belonging on university campuses. It requires policies, programs, initiatives, and practices that are responsive to the unique needs of the respective institution and campus community. The toolkit often references "campus" or the "campus community." The definition of these terms should be set forth by each institution. For the purpose of this toolkit, "campus" is inclusive of all physical and virtual spaces that make up an institution. Therefore, institutions that have multiple locations should apply strategies across all sites, and those that host remote programs should consider how to embed belonging throughout remote classroom and meeting spaces. "Campus community" is inclusive of students, staff, and faculty, both those that are on the physical campus and those that engage remotely.

We are grateful to AASCU and the Lumina Foundation for supporting this work. We also acknowledge and appreciate the excellent work of two research assistants, Britney Robinson and Luming Zhang, who took extensive field notes, reviewed literature, collected items, and drafted vignettes. Finally, we are grateful to the implementation team members from the six AASCU institutions who participated in hours upon hours of calls with us to come to shared understanding of what belonging can mean to AASCU institutions, how it can be important, and what we can do to improve it.

Credit: Central Washington University



Credit: Nevada State University



SECTION 1

What Is Belonging?

Definitions and frameworks for belonging are numerous and have their roots in psychological, sociological, and educational bodies of literature. A recent review found 52 separate “sense of belonging measures” in studies from 2000 to 2021 (Dias-Broens et al., 2024). The authors identified common concepts among these measures, including acceptance, connectedness, support, valuation, respect, inclusion, and affiliation.

The proposed definition of belonging below draws from this extensive literature. However, the goal is not to define belonging for institutions in a rigid or prescriptive way. Instead, this section explains how the definition matters for measurement and subsequent action.

When defining a latent construct like belonging, it is important to answer distinct questions:

1. What is the construct?
2. What predicts it?
3. What should cause it to increase?
4. What should increasing it cause?

These distinctions are important in developing a theory of measurement and action. For example, defining belonging as socioeconomic status (SES) risks confusing what a construct is (belonging) with what predicts it (SES). SES is not itself belonging, though it may correlate with and predict it. Similarly, defining belonging as student-faculty connection risks confusing the construct with what might cause it to increase. Defining belonging as retention or persistence risks confusing the construct with what it should cause: Increasing belonging should increase the likelihood of persistence, but persistence is not itself belonging.

What is belonging? This toolkit presents this working definition of belonging in a higher education institution in addition to contrasting it with others:

Belonging is a feeling of acceptance, integration, competence, and safety in a particular institutional community.

Following this definition, there are four "subdomains" of belonging as follows:

1. Social integration and acceptance: the feeling that peers and colleagues welcome and value you, that you have a place within a social network with meaningful connections
2. Institutional integration and acceptance: the feeling that institutional representatives recognize and appreciate you and your role
3. Competence and knowledge: the feeling that you understand what is necessary to succeed in your role and have the resources and opportunities to succeed
4. Psychological comfort and safety: the feeling that you are safe to express yourself without undue judgment or discrimination

Figure 1. Illustrating a definition of belonging and its subdomains





Much of the literature on belonging focuses on student belonging, given that student outcomes are typically the focus of institutional missions. This toolkit expands the application of the above definition of belonging to faculty and staff.

Other attempts at defining belonging present larger theories of action, blurring the lines among distinctions mentioned above: (1) construct, (2) covariate, (3) cause, and (4) effect. Consider three definitions that vary in their complexity, where belonging is:

“The psychological sense that one is a valued member of the college community.

- Hausmann et al., 2007, p. 804

“Students' perceived social support on campus, a feeling or sensation of connectedness, and the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the campus community or others on campus such as faculty, staff, and peers.

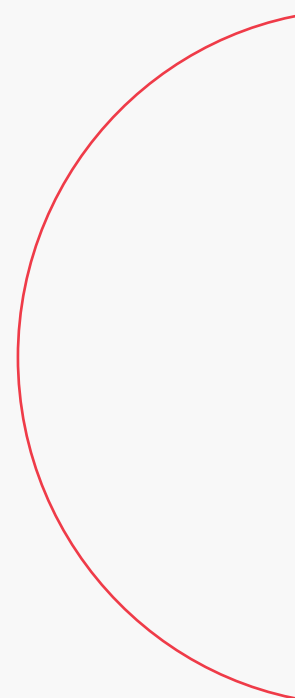
- Strayhorn, 2018, p. 4

“Feeling part of somewhere an individual can be themselves and feel confident in their personal and social identities through secure, meaningful, and harmonious support in cohesion with other diverse group members and creating ethnically heterogeneous communities and learning areas both on and off faculty/campus setting.

- Dost & Mazzoli Smith, 2023, p. 832

Following the four questions above, the first definition by Hausmann et al. (2007) is a statement about what belonging is. The definition aligns with the first two subdomains related to social and institutional integration. The second definition by Strayhorn (2018) also aligns with the first two subdomains. It also begins to theorize what causes belonging, in the sense that it brings in “the experience of mattering.” This suggests that such experiences cause increases in students' perceived social support and feelings of connectedness.

The third definition from Dost and Mazzoli Smith (2023) also mixes in potential causes. To Dost and Mazzoli Smith, belonging is a feeling that someone can be their authentic self. This aligns with the definition of psychological comfort and safety. It is also confidence in personal and social identities. This overlaps with the definition of social integration and acceptance. Their definition then says that this happens “through secure, meaningful, and harmonious support.” If they measure this by asking whether students felt institutional integration, then it would align with the second subdomain presented earlier. However, the definition also suggests that such support is a hypothesized causal factor. Then, they imply that such belonging can create heterogeneous communities and learning areas. This is potentially an “effect” of belonging, as described above.



This discussion is not meant as a critique of these definitions but to show how the framework presented in this toolkit, one that distinguishes constructs from causes, correlates, and effects, can be useful. In addition, it demonstrates how some definitions of belonging are less definitions of constructs than fuller theoretical frameworks that incorporate constructs, causes, correlates, and effects altogether.

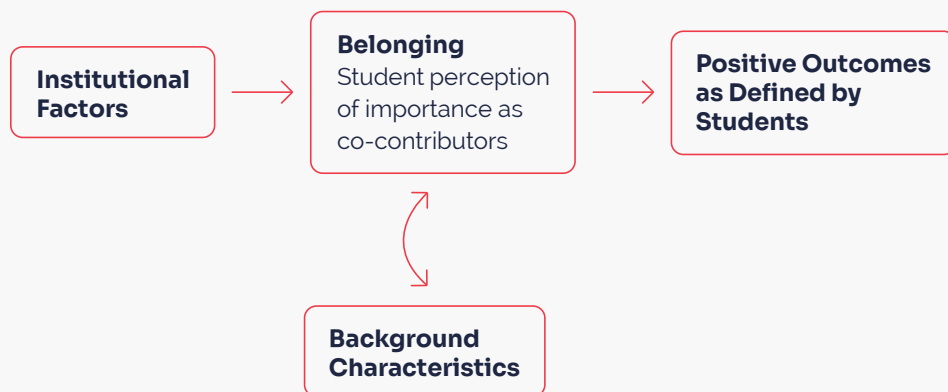
As another example, consider this working definition offered by Bentrin et al. (2022) for college student belonging:

“College students' sense of belonging refers to the myriad ways that students perceive their importance as co-contributors of various campus contexts, a perception that in turn is impacted by background characteristics and institutional factors and results in positive outcomes as defined by students themselves.

- p. 38, *emphasis in original*

From this, one might infer (1) belonging is student perception of their importance as co-contributors of various campus contexts; (2) what predicts it are background characteristics; (3) what causes it to increase are “institutional factors”; and (4) what it causes, in turn, is “positive outcomes as defined by students themselves.”

Figure 2. A concept diagram illustrating contrasting definitions and theories of action (e.g., for Bentrin et al., 2022)



Graphical frameworks can illustrate these definitions and theories of change. Figure 2 diagrams causes, constructs, correlates, and effects following this enumerated reasoning. This aligns roughly with more complex figures from the literature (e.g., Bentrin et al., 2022; Braxton et al., 2013) that show how student entry characteristics and external environment correlate with and cause a sense of belonging, which in turn increases institutional commitment and persistence. Such graphical frameworks can help build consensus and common understanding around definitions and justifications for large-scale survey efforts.

Why is Belonging Important?

Arguments to elevate “belonging” as an institutional priority are, like all strategic arguments, grounded not only in evidence but also in values and goals. The belonging definition presented above is “a feeling of acceptance, integration, competence, and safety in a particular institutional community.” To some, this may be manifestly important and worthy of elevation. To others, it may be important only to the degree that it achieves other ends, such as learning, persistence, degree attainment, and desired labor market outcomes. For those who value such outcomes and may be unfamiliar or skeptical with belonging as a construct worth measuring in itself, correlations between belonging and such downstream outcomes can be helpful to demonstrate its value. Clearly defining “belonging” and its subdomains, as described above, can also help clarify its value in its own right.

Research has found a connection between belonging and five student attributes: student academic engagement and motivation, student retention, increased institutional and social capital among diverse student populations, improved academic outcomes, and enhanced well-being (Allen et al., 2024). All of these are measures that most in higher education would identify as critical to student experience and success. Increasing belonging can also have a positive impact on employee job performance, retention, and general well-being (Emery, 2019; Rodriguez, 2022). Therefore, investing in initiatives that advance a sense of belonging can have a direct impact on institutional outcomes.

Misconceptions related to offices and initiatives that focus on diversity, equity, and inclusion (DEI) are commonplace. To combat these misconceptions, it is important to provide clear definitions about the relationship between belonging and DEI. Arthur Chan (2020) provides a helpful set of succinct initial definitions: “Diversity is a fact. Equity is a choice. Inclusion is an action. Belonging is an outcome.”

Diversity can be defined as existing heterogeneity in a community among members as they identify with or are identified in multiple and intersecting categories. These categories are socially constructed and consequential. They include but are not limited to race, ethnicity, gender, sexual orientation, socioeconomic status, political beliefs, disability, and religiosity. “Diversity is a fact” means that all higher education communities have some degree of heterogeneity in terms of these categories. Educational leaders can prioritize interactions in diverse settings to prepare students for the diverse communities and realities they will enter in civic life. In addition, students that engage more with a diversity of backgrounds and beliefs are more likely to be involved in active and collaborative learning and report greater satisfaction with the college experience (Kuh, 2003).



Credit: California State University, Fresno

Equity can be defined using the “difference principle” from Rawls (1971): Resources should be arranged to have greatest benefit for the least advantaged. “Equity is a choice” means that not all share this principle in all contexts. Others may have different philosophies about how to allocate resources, or their desired allocation may differ in different contexts.

Inclusion is a set of initiatives, institutional structures, and interpersonal interactions that aim to welcome and integrate individuals into a community or institution. “Inclusion is an action” means that community members take action to advance initiatives, create structures, and engage in interactions that are welcoming and integrative.

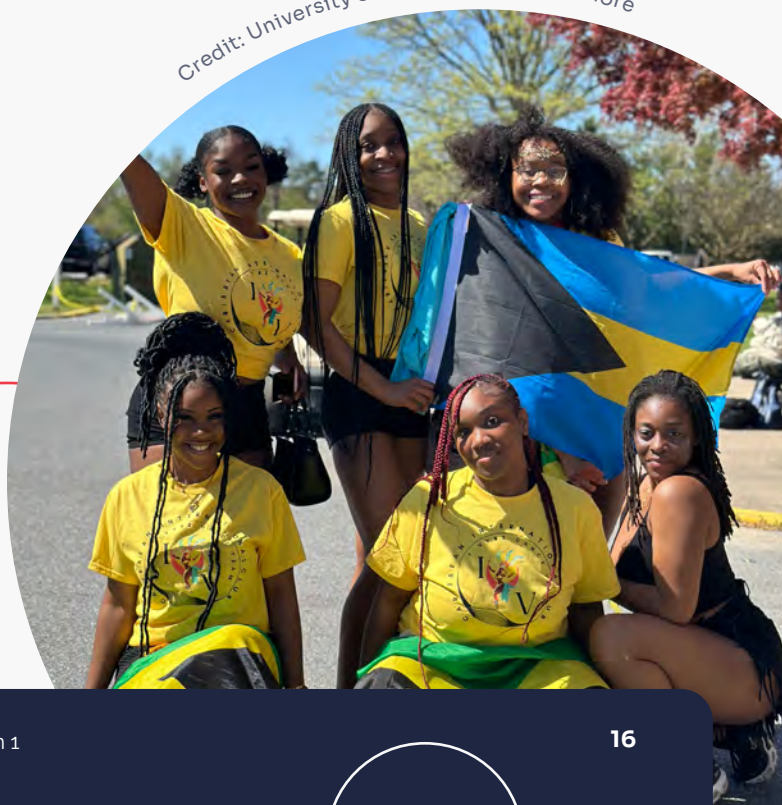
“Belonging is an outcome” in the context of DEI efforts means that the theory of action is not simply to measure belonging but to improve it. This improvement occurs in the context of a diverse community, with the intention to take inclusive action. The principle of equity suggests an emphasis on those who have demonstrated a lower sense of belonging based on data.

It is important to note that research has indicated that historically marginalized groups are more likely to experience barriers to establishing a sense of belonging in higher education. These barriers may take the form of exclusion from groups or activities, decreased opportunity to develop authentic and supportive relationships, lack of accommodations, or increased experiences of bias or discrimination (Allen et al., 2024; Leath et al., 2022; Strayhorn, 2018; Vaccaro et al., 2015; Vaccaro & Newman, 2022). Students with disabilities have reported that negative interactions with instructors relating to the use of accommodations impacts their ability to form meaningful relationships with faculty, which can have a significant impact on their sense of belonging and success (Hong, 2015). Studies that

examine racial climate on campus have found Black and Latinx students experience a sense of exclusion, lack of representation in physical spaces and curriculum, and a lack of cultural competency from faculty and administrators (Hurtado & Ponjuan, 2005; Santa-Ramirez, 2022; Strayhorn, 2018). Lesbian, gay, bisexual, queer, and other sexually minoritized groups have reported experiencing campus as heterosexist and unwelcoming (Evans et al., 2017).

Vaccaro and Newman (2016) asked minoritized students (those that self-identified on the demographic form as belonging to at least one historically underrepresented social identity group by race, sexual orientation, ability, or religion) and privileged students (those that did not list any minoritized identity [i.e., race, sexual orientation, ability, religion] on the demographic form) to define belonging in their own words. They found that minoritized students identified respect as central to their sense of belonging. This theme did not appear in answers from privileged students. This is one example of why strategies to advance belonging should take into consideration the experiences, perspectives, identities, and cultures that make up the university community to ensure strategies are responsive to the unique needs of community members (Parker, 2021).

Credit: University of Maryland Eastern Shore



Credit: Nevada State University



SECTION 2

The Role of Measurement in Improving Higher Education

Just as there are many definitions and frameworks for belonging, there are many definitions and frameworks for measurement and its role in improvement. Based on the presented definition of belonging, how can leaders and practitioners use measurement to understand and improve belonging?

What Is Measurement?

Perspectives on measurement in higher education can be illustrated using two caricatures of leaders launching improvement strategies: the quant(itative) and the qual(itative). The "quant" touts "measurement-driven improvement" by establishing a measurable objective (like belonging, or what belonging might cause, like retention) and orienting effort toward increasing that quantity. The "qual" touts "listening tours" and "socialization" and avoids quantification, wary of the oversimplification and misinterpretation that quantities encourage.

These caricatures represent a false dichotomy. Quantitative and qualitative approaches should be complementary, not opposed. Measurement is a systematic process of collecting data that results in a quantity that supports inferences (Ackerman et al., 2024). More simply, a helpful measurement mantra from Ho (2024) is:

“Measurement must be qualitative, then quantitative, then qualitative again.”

This means that measurement must necessarily begin qualitatively, with the question answered in the previous section, “what is belonging?” This requires listening tours and socialization, as well as synthesis of existing scholarship and theory. Then, measurement must be quantitative, through the development of instruments that enable quantification of levels of belonging. Then, ultimately, measurement must be qualitative again, in the sense that community members must develop a shared understanding of the meaning of quantitative results.

This mantra exposes the limits of a purely quantitative or purely qualitative approach. A purely quantitative approach risks measuring what community members do not value or do not understand. If leaders establish quantitative outcomes as goals, this can lead to cynicism or gaming of the resulting metrics. The resulting “inflation” represents a dangerous illusion of progress.

Similarly, a purely qualitative approach risks ambiguity, obfuscation, and inequity. Without the clarity of measurements that a thoughtful quantitative approach can produce, it can be difficult to communicate and monitor progress. Because quantities are easy to summarize and visualize, they indicate a level of transparency and accountability to community members. And because quantitative data are easy to compare across groups and over time, they enable us to answer questions about whether institutions are making progress toward equal opportunities.

Measurement for Information and Measurement for Influence

In addition to the false dichotomy of a quant versus a qual, there are also dichotomies underlying the goals of a research study. One may wish to measure because “it is important to know.” One may also wish to measure because the process of measurement itself elevates worthy priorities and engages a community. A large-scale survey effort is ideal for institutional leaders and representatives who have both these wishes. Those who have one but not the other may find that alternative approaches may better serve their needs. Deciding why we may wish to measure can help establish the right scope and strategy for a project.

Consider questions related to which student services should be prioritized for which particular sociodemographic subset of students. Is such a question best answered by surveying all students about their sense of belonging? Although such an effort may help, a well-positioned leader or actor could also build evidence that helps answer this question through smaller-scale and lower-cost quantitative or qualitative studies.

For example, a smaller-scale qualitative study could take the form of interviews or focus groups with selected students, alumni, or even those who depart the institution whose departure may be preventable. A smaller-scale quantitative study could use existing quantitative data about student activity on campus and link such data longitudinally to student outcomes. These data may already exist in student

applications, student activity forms, course evaluations, and required end-of-year surveys. Relevant outcomes could include course grades, academic progression, retention, and persistence. If these data already exist, is an additional large-scale survey effort necessary? If the primary goal is to gather information, a large-scale opt-in survey effort may not be the most efficient endeavor given the cost.

Conversely, if the primary goal is to set an institutional agenda, a survey measurement effort need not be the tip of the spear. Strategic planning, as one example, certainly benefits from data analysis and often additional data collection, but a community-wide survey effort is not always necessary.

Why undertake a community-wide survey effort? As mentioned above and elaborated on in subsequent sections, surveys are powerful tools because they both (1) provide information and (2) signal that institutional leaders and representatives are listening and prepared to act in response to the information. Quantitative aspects of surveys also set powerful mechanisms for transparency and accountability. When leaders commit to publishing results over time, they cede trust and power to community members to hold themselves accountable for improvement.

Let's revisit the example above about conducting research that informs prioritizing student services. Imagine that existing data showed that a community organization was particularly effective. Could a leader conceivably allocate funding and support to it on the basis of the research alone? This might be possible. However, community members may not feel that they have had a voice in the decision. Similarly, in strategic planning efforts, a leadership team that sets priorities without demonstrating that they have listened systematically to community members may not be credible. Large-scale survey efforts can be worth the cost when it becomes necessary to both collect information systematically and demonstrate openness to listening and accountability.



Credit: University of Southern Indiana



SECTION 3

Strategies for Generating Buy-In for Measuring and Advancing Belonging

Leadership and community buy-in will be key to the success of a belonging initiative. Below are best practices on how to build sustainable support and engagement across campus. The goal is to socialize the concept of belonging, embed it into institutional vocabulary, establish it as a university priority, and expand knowledge of how it relates to the mission of the institution.

Assess Institutional Readiness

Several factors can impact an institution's readiness to administer a survey on sense of belonging. Current institutional culture, political context, and understanding of belonging impacts how a belonging initiative will be received by campus community members. In assessing institutional readiness, one may determine the campus is not ready to deploy a survey related to belonging. This is not to imply that an institution should not commit to advancing belonging on their campus. As discussed in Section 1, belonging is a "basic motivation, a common human need" (Vaccaro & Newman, 2022). It is connected to various education and employment outcomes such as retention, persistence, engagement, and academic performance (Bentrim et al., 2022; Kennedy, 2021; Rodriguez, 2022; Strayhorn, 2018). Therefore, if an institution determines this is not the appropriate time to embark on a survey effort, there are still steps they can take to prioritize belonging and collect qualitative data on how individuals are experiencing campus climate. As previously mentioned, effective measurement begins with qualitative data. The outcome of this institutional readiness assessment may be to focus on building the infrastructure and institutional knowledge prior to administering a survey.

Below are factors that a president and senior leadership team may consider in assessing institutional readiness:

1. What is your tenure at the institution as the leader of this initiative?
2. Have others been doing the work (some with no compensation/passion projects)? If so, how can you engage them in these efforts?
3. What is the hierarchal culture at the institution? How should this guide your work?
4. What is the current state of diversity, equity, inclusion, and belonging (DEIB) work? Is there an office dedicated to DEIB?
5. How does belonging connect to the mission, vision, and values of the institution?
6. What are the current political and legal considerations related to DEIB?
7. What data currently exists related to belonging? Have questions been included in previous assessments?
8. Do you have a baseline for tracking data on belonging?
9. What resources are available to conduct a belonging survey?
 - a. Are there faculty and administrative personnel with the bandwidth to lead this initiative? This should include institutional research, communications, etc.
 - b. Is there an infrastructure in place to administer a survey, analyze data, and engage community members?
 - c. What financial resources are needed?
 - d. Will the institution use the data?

If it is determined that the institution is not adequately positioned to engage in a survey effort, the leadership team should determine what actions can be taken at this time. Is there available data that can guide action planning? For example, there are questions related to belonging on the National Survey of Student Engagement (NSSE), a widely used survey in higher education to assess the extent to which students engage in educational practices associated with high levels of learning and development. Staff engagement surveys or exit interview data can also be useful. This data can be used to identify areas of opportunity and concern related to student, staff, and faculty sense of belonging. Are there specific identify groups with a lower sense of belonging? Focus groups, community conversations, and town halls are additional strategies to collect data that can guide action planning and the foundation for future survey efforts. These strategies are discussed later in the toolkit.

Begin With the End in Mind

How does your institution define belonging? What do you hope to learn from measuring belonging on your campus? How do you plan to use the data collected? When do you plan to measure belonging? The answers to these questions should guide your goal setting and project planning. This will also help inform how you select survey items and design your instrument. It is important that the survey items align with the institutional definition of belonging and your objective in measuring belonging. If your goals and timeline are not clearly defined, strategies such as pre-focus groups, which use a traditional focus group format but take place prior to starting a survey effort, and allow for you to gain community insight and feedback on how the campus community is defining belonging and what your goals should be (see below pre-focus groups strategy for more information). Appendix A is a guide to aid your team in goal setting. Once you have established your goals and project plan, they should be incorporated into your communications plan. Communicating your goals and projected timeline establishes trust with the community and a culture of transparency.

Identify the Best and Plan for the Worst

Now that you have identified your intended outcome and goal, it is important to also identify the risks. Risks can cause hesitation among leaders and institutions to engage in data collection or data sharing. What if the results are not positive? What if data reveals community members don't have a strong sense of belonging? What if specific groups have a lower sense of belonging? What if the results become a news headline? A best practice in project planning is to identify the worst-case scenario or the risks and develop strategies to mitigate those risks. A project risk is something that can impact the project's success or the institution as a whole (Project Management Institute, 2019). Therefore, the implementation team should take time to ask the question "what could go wrong?" Not only is it therapeutic to create space to verbalize these concerns and hesitations, but it is also strategic. It allows the team to implement strategies and actions that reduce the likelihood of these factors impacting the project, community, and institution.

Identify Key Partners

Sustainable success of an initiative requires buy-in at all levels of the institution. This includes students, staff, faculty, researchers, and leadership. This is especially true for an initiative focused on measuring belonging. There should be both executive leadership support and grassroots support. Kezar and Eckel (2000) identified senior administrative support and collaborative leadership as core change strategies emphasizing the importance of those with positional and non-positional power being involved from conception to implementation of an initiative.

Appendix B provides a tool to identify key partners to advance a belonging initiative. These are individuals or groups on campus that hold the political and social capital to advance university priority areas and elevate the importance of this initiative. They have established trust within the community. It is important to identify partners that sit at each level and corner of the institution. If the institution has more than one campus, ensure that the key partner list has representation from each campus. If there are remote staff, faculty, or students, those perspectives should be included. The key partner list should also reflect the diversity of the campus. Are there affinity-based employee resource groups or student groups to engage?

Key partners can assist with mapping current belonging initiatives and crafting the story of belonging on campus. They can also provide feedback on and participate in the communications strategy. Once key partners are identified, meet with these groups to engage them early in the process.

Mapping Current Initiatives to Belonging

As with most initiatives within higher education, the implementation and communications plan should consider the specific characteristics of the institution. Factors to consider range from the demographic makeup of the institution to how sense of belonging connects to the institutional values, mission, and strategic goals. Mapping out these factors can aid in developing the who, what, when, and where of the communications plan.

Appendix C provides a mapping strategy handout to assist with identifying current institutional programs and initiatives that are connected to sense of belonging. Using the belonging frameworks described in Section 1, the handout can guide the implementation team through identifying programs and initiatives on campus that map to the subdomains of belonging. If there is uncertainty of what programs fall into these categories, think about how key partners can aid in this activity. This information can help build out a communications plan including leadership presentations and talking points on how belonging connects to institutional goals and values. It provides a framework for how to discuss university initiatives and demonstrate how they work together to advance student, staff, and faculty outcomes. For instance, leadership will be interested in how investing in measuring belonging will advance other institutional goals such as student persistence and staff and faculty retention. In addition, this list can support fundraising efforts and underscore what areas the institution may need to invest resources or scale to advance belonging.

Institutional Vignette: Tying Safety to Belonging

University X is concerned about how the university can tie campus safety to belonging in its initiatives for undergraduate students.

Recognizing the need to deepen the insights gathered and to align more closely with belonging criteria/factors, University X works to create a comprehensive safety and well-being program motivated by initiatives like [Culture of Respect](#) that incorporate elements of community building and inclusivity in its strategic support and technical assistance.

This university-led initiative will include monthly or bi-quarterly/bi-semester workshops and training sessions (for students, staff, and faculty alike) on topics such as:

1. Bystander intervention
2. Mental health awareness
3. Consent education
4. Leadership development

Alternatively, these workshops can be incorporated as drop-in workshops in core undergraduate courses like English or other general education courses to account for large populations of students. Additionally, the university will establish designated and scheduled safe spaces on campus where students can gather, seek support, and have open conversations about safety concerns. These safe spaces should be staffed by trained professionals (such as staff from the Ombuds Office, Counseling and Psychological Services, Title IV, or Accessibility Services) who can provide resources and guidance to students in need.

Furthermore, the university will explore actively promoting a culture of respect and accountability among students through campaigns, events, and communications strategies highlighting the importance of safety within its mission. By emphasizing the importance of looking out for one another and fostering a sense of responsibility for one's own safety and the safety of others, the university can create a community where all students feel empowered and supported.

Overall, by integrating safety initiatives with efforts to cultivate a sense of belonging and community, the university can create a more inclusive and supportive campus environment for all students.

Pre-Focus Groups

As previously mentioned, community members at all levels of the institution need to see themselves as key partners in the initiative. A key component of belonging is feeling your voice matters and is valued. Focus groups can be utilized as an ongoing engagement strategy including prior to administering a survey. Focus groups are an opportunity to ask targeted questions to small groups of community members and gather insights, perspectives, and ideas related to a specific topic. Another term for these is listening sessions. They are often used in academic research and market research (Hurst, 2023). Prior to administering a survey, a pre-focus group can help shed light on how the campus currently perceives the concept of belonging or the institutions commitment to advancing belonging, what the campus would like to learn from a belonging assessment, and how to best engage the community long term. This information can help guide the long-term plan that the implementation team will develop. This qualitative data can also generate information that translates to actionable steps for the university. For instance, learning that a specific office or program on campus makes Latinx students feel affirmed and valued on campus could lead to identifying best practices from one office that can be scaled across the institution to help ensure Latinx students have that experience university-wide.

Institutional Vignette: Listening Session Protocol and Survey Fatigue

University X is concerned with student survey fatigue. However, due to a lack of data, it still needs to survey students to better ascertain their needs and to develop a shared definition of belonging.

In order to accomplish this, University X established a listening protocol for focus groups in an effort to obtain qualitative data. The listening protocol for focus groups will include:

1. **Informative inquiry:** A goal of the listening sessions will be to ask information about campuses/satellites/learning modalities to best inform qualitative data analyses.
2. **Smaller, more targeted groups:** Rather than sending out a blanket survey to all students, the university will select smaller, more focused groups of students to participate in focus groups. This will include grouped learners from each campus, online learners and in-person learners, learners by department, and first-generation learners. This allows for more in-depth discussions and reduces the overall number of students experiencing survey fatigue.
3. **Rotating participants:** By rotating students in and out of different focus groups, the university can ensure that a broader range of students are able to provide feedback without overwhelming any one group with too many surveys.
4. **Providing incentives:** Offering incentives, such as gift cards or raffle prizes, can help motivate students to participate in focus groups and provide valuable feedback.
5. **Limiting the frequency of surveys:** Instead of bombarding students with multiple surveys throughout the semester, the university will schedule focus groups at key points in the academic year to gather feedback about students' feelings of belonging on campus.
6. **Utilizing diverse facilitators:** Having facilitators from diverse backgrounds lead focus groups will help create a more inclusive and comfortable environment for students to share their thoughts and experiences.
7. **Using a variety of formats:** In addition to traditional focus group discussions, the university will explore alternative formats such as online forums or virtual focus groups to engage students in different ways and prevent survey fatigue.

Communicating Belonging as a Priority

Communication will be a vital tool in generating buy-in from campus stakeholders. Key partners can help not only socialize the concept of belonging but also energize the campus community to engage with the initiative, share their voice, and invest in the sustainability of increasing a sense of belonging on campus. Organizational change theories recommend four steps to communicate: share a vision, tell a story, make your team the heroes, and chart the path (Ricks, 2020). Institutions can adopt this as a framework to communicate belonging as a priority to campus.



Credit: Nevada State University

Share a vision

Share a list of the benefits of measuring and increasing a sense of belonging on campus. Outline how it connects to retention, student persistence, employee engagement, and low turnover. Ensure university leaders have messaging that can be shared in written and verbal communications. The implementation team should not be the only people talking about belonging.

Tell a story

Convey how sense of belonging connects to current university values and initiatives. Meet with various departments and share the story of how their specific charge relates to sense of belonging and how belonging data can aid in their work. Use graphics to convey the benefits and tell the story of how this will lead to greater student outcomes, sustainable change, and increased engagement.

Make your team the heroes

Meet with your key partners to communicate how they play an important role in advancing belonging on campus. Ask them to be collaborators in socializing the importance of belonging. Share existing data points with them, highlight current initiatives, and identify how they have contributed to a sense of community on campus. Provide them with a communications toolkit they can use in their respective areas of campus. In Section 5, the role of belonging champions in helping market the survey efforts is highlighted.

Chart the path

Develop a long-term engagement plan. When will you administer the belonging survey? How will results be shared with the community? How will you engage community members in the action planning? What will sustainable engagement look like?

Credit: Western Carolina University



SECTION 4

Item and Instrument Design

It is common in the marketing of surveys to hear, “this item/survey is valid and reliable.” Such a claim tends to shut down reasonable questions about edits or alternatives to items¹ and administration conditions. Sometimes, this is efficient. Survey designers have considerable experience and expertise, often more than higher education faculty and staff. Indeed, it is a well-established myth that people, even well-trained experts, can tell an item is “good” simply by looking at it (Braun & Mislevy, 2005).

Nonetheless, higher education decision-makers should treat claims by survey marketers that items are “valid” and thus beyond reproach with skepticism. Unlike some educational and psychological tests whose purposes are primarily to produce quantitative index or scaled scores, higher education leaders often report survey results item by item. For these purposes, the wording of the item must be compelling

1. Survey designers use the term “item” instead of “question” or “statement” because not all elements in a survey are questions or statements.

in order to inspire action and inform decisions. Because “valid and reliable” is too often just a fancy way to say, “this item correlates moderately with other items and outcomes,” this claim should not be a substitute for item development and review.

Following the measurement mantra in Section 2 (“measurement must be qualitative, then quantitative, then qualitative again”), it should be no surprise that the next step is to develop survey items with care and clear criteria. Below is a list of recommended criteria to evaluate items. These correspond to respective categories of validity evidence in the *Standards for Educational and Psychological Testing* (American Educational Research Association et al., 2014).

- 1. **Content Relevance:** Does the text of the item appear relevant to the content or construct?
- 2. **Cognitive Accuracy:** Do readers interpret the item accurately relative to the construct?
- 3. **Efficiency:** Is the item adding sufficient value for the cost of administration?
- 4. **Actionability:** Are the item and its responses actionable as they stand alone?
- 5. **Consistency:** Do item scores correlate with other items measuring the same construct?
- 6. **Prediction:** Do item scores correlate with other relevant outcomes?
- 7. **Consequences:** Does administering this item risk insult, offense, or harm?

Using these criteria, below is an illustration of an item development process for evaluating three items published by the widely used Higher Education Research Institute (HERI) Diverse Learning Environments Survey (Cooperative Institutional Research Program, 2019). These three items comprise a “sense of belonging” subscale. These HERI items were selected purely to model contrast and discussion.

Please indicate the extent to which you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Agree	Strongly Agree
I feel a sense of belonging to this campus	☐	☐	☐	☐
I feel that I am a member of this college	☐	☐	☐	☐
If asked, I would recommend this college to others	☐	☐	☐	☐

Note that when presenting items, it is important to include as much of the context of the item as you can, including the prompt (“Please indicate ...”), the stem (e.g., “I feel a sense ...”), and the response options (“Strongly Disagree, ...”). It is difficult to evaluate an item fully without this context. Cognitive confusion can arise when prompts, stems, and response options are misaligned. When presenting items to faculty, staff, and students, both in the pilot stage and in the reporting stage, it is recommended to replicate as much of the authentic experience of engaging with the survey items as is practical.

Position and Purpose

When engaging in item development, it helps to establish general principles and positions for the ensuing discussion. Following the measurement mantra from Section 2, item development is both qualitative and quantitative, far from a simple task of selecting the items with the highest correlations with outcomes. Three general principles help structure conversations: (1) Begin with the end in mind; (2) no item is perfect; (3) be constructive.

The first principle, "begin with the end in mind," helps focus evaluators on the purpose of the survey itself. What is the research question or what is the goal? It is generally helpful to create a mock-up of the final report or the final slide deck that you would present to faculty, staff, or leadership. What question does the item or scale answer? Which comparisons would be most salient? Section 6, "Analysis and Reporting," can be useful here. Rather than considering item and scale development in a linear process that comes before analysis and reporting, the ideal processes would be cyclical or helical: (1) Ask good research questions. (2) Imagine a report that answers them. (3) Pilot items that provide data for the report. (4) Analyze the results to see whether they can answer the questions. Then, potentially, (5) revise the questions, report, items, and analysis in an iterative, expanding process.

The second and third principles ("no item is perfect" and "be constructive") remind evaluators that, when you ask smart people to be critical, they will be critical. Unmoderated, the process can become unconstructive, endangering buy-in and increasing cynicism. As a general principle, all items can be misinterpreted or interpreted in varied ways. It is a matter of expert judgment and consensus whether this is a sufficient risk to edit or remove an item. The risk must be balanced with the value an item contributes for the hopefully substantial percentage of time that respondents interpret it correctly. The question is, how can a participatory process improve the item to best balance trade-offs among criteria? Reminding evaluators that, for every criticism, they should endeavor to provide a constructive alternative, can help make item and scale development more positive and effective.

LET'S DEFINE THE SEVEN-ITEM CRITERIA AND ILLUSTRATE THEIR APPLICATION TO "I FEEL A SENSE OF BELONGING TO THIS CAMPUS."

01. Content Relevance

At face value, the first item appears directly content-relevant with respect to the construct of belonging. Although this item does not ask explicitly about the four subdomains of belonging (social integration and acceptance, institutional integration and acceptance, competence and knowledge, and psychological comfort and safety), these simple, overarching items that explicitly state the name of the construct are usually an obvious anchor to include when the name of the construct is familiar. However, there may be ambiguities that arise in the use of "sense of," "belonging to," and "this campus." Consider this item compared to this one (where AASCU is standing in for the name of an institution): "I feel like I belong at AASCU." These ambiguities and alternatives are discussed next.

02. Cognitive Accuracy

There are at least three possible ambiguities in the wording of the item to evaluate in cognitive testing with candidate respondents. First, what is the difference between "I feel a sense of belonging" and "I feel like I belong"? A "sense of belonging" is more abstract and conceptual, potentially broader but also potentially more ambiguous, increasing measurement imprecision. "I feel like I belong" is in contrast more direct. It might lead to more polarized but interpretable responses.

Second, what is the difference between "belonging to" this campus and "belonging at" this campus? "Belonging to" this campus can create more of a sense of formal membership and integration, perhaps even a sense that the campus is in a position of entitlement or ownership. "Belonging at" this campus suggests that the campus is the location in which one feels belonging but not necessarily to the campus as an entity, as much as social or institutional structures therein.

Third, respondents could interpret "this campus" to be the grounds of an institution, a particular academic unit or division of an institution, or the institution itself. It is generally preferable to be specific about which "campus" is most relevant rather than allowing ambiguity in interpretation. In some circumstances, it may be useful to pilot test or test outright whether there are differences in levels of belonging at an institution overall or at a particular school, college, department, or division of a school.

03. Efficiency

This is typically evaluated by considering the cost of each item in terms of cognitive complexity, overall survey burden, and redundancy with other items. Even considering the cognitive complexity and ambiguity described under the second criterion, this is a fairly inexpensive item from a cognitive perspective. It might be redundant with the next item, but it is also more overtly related to the concept of belonging.

04. Actionability

At institutions where there is a socialized definition of and commitment to belonging, this should be an actionable item to the extent that it is directly referencing belonging.

05. Consistency

Consistency is a quantitative concept related to the correlation between the item scores and the scores of items. The more correlated the item is with other items on a scale from 0 to 1, the more "consistent" it is. This is "good" in the sense that items that correlate more with other items provide more information about what they measure in common.

Formal metrics for consistency can have intimidating names like "item-test correlations," "eigenvector values," or "factor loadings." All of these metrics represent some form of relationship between the item score and the overall score, usually on a 0 to 1 scale. Revisiting the 3-item scale from HERI introduced earlier in this section, for example, HERI reports a "factor loading" of 0.91 for the first of these items (Cooperative Institutional Research Program, 2019). This typically means that the item has a correlation of 0.91 with a theoretical average of all possible items that measure the same construct, where 1 would be the theoretical maximum value.

With this perspective, one can see why consistency is one criterion, not the sole criterion. If the purpose is to report the item on its own and interpret it on its own, then its correlation with other items is interesting but not confirmatory of its value.

Items that are consistent also contribute to the so-called "reliability" of the overall score. Whereas consistency is a property of an item, reliability is a property of an overall score. One popular reliability metric known as "Cronbach's alpha" is also on a 0 to 1 metric and represents the correlation between overall scores and scores of a hypothetical alternative score comprised of similar items. For example, HERI reports a Cronbach's alpha of 0.86 for the three-item belonging scale (Cooperative Institutional Research Program, 2019). This means that the average score of these three items should have a correlation of 0.86 with an average score of another three similar items.

Understanding what reliability is demonstrates why it should not be the sole criterion for selecting a scale. Scales with high reliability are usually (a) lengthy, (b) have highly correlated items, or (c) some combination of both. These high reliabilities suggest that alternative items would result in highly similar scores. This is reassuring from the perspective of generalizability, but it is no substitute for content relevance, cognitive accuracy, and the other criteria above.



Credit: University of Maryland Eastern Shore

06. Prediction

Prediction, like consistency, is a quantitative metric describing the relationship between an item and another outcome of interest. Although, like consistency, it can be expressed on a 0 to 1 scale representing a correlation, it differs by describing the relationship between an item score and another variable, a variable that the item itself does not measure. If consistency is a part-whole correlation, prediction is a part-outcome correlation.

Prediction is often a key metric for constituents for whom the construct is not yet socialized, valued, or understood. For example, if a higher education leader is unconvinced that belonging is important, they might become convinced that it is useful if it correlates with variables that are more relevant to them, like the intention to drop out or quit, or future retention or persistence. In these cases, constructs like belonging become positioned and valued as “early warning indicators.”

Elevating a construct by emphasizing its predictive utility is generally short-lived. Many variables and advanced statistical models can predict downstream outcomes effectively, and many of these do not require costly survey measurement and socialization. This strategy “subjugates” a construct to its downstream outcomes (e.g., belonging is subjugated to persistence). Although prediction is one criterion of many, the purpose of measurement is to value a construct for the meaning, insights, and actions it inspires, not simply what it predicts.

07. Consequences

All surveys are interventions that have the potential to cause discomfort or offense. Some items may be offensive as written by using outdated descriptors. Other items become offensive or intrusive when survey writers do not properly frame or justify their use. One of the reasons it is recommended to present each item in its full context, including not only the prompt, but ideally the survey introduction, is because appropriate framing is necessary to minimize consequences.

This item has a very low risk of consequences, even absent any framing. However, even questions like “Do you have close friends at this institution?” and “What is your GPA?” can provoke a sense of insecurity. A clear sense of the purpose of the survey as well as confidentiality guidelines and care in wording are essential, especially for charged or triggering questions (like “Have you ever experienced discrimination or harassment?”) that ask a respondent to remember and cognitively engage with such a negative experience.

NOW, LET'S APPLY THE CRITERIA TO "I FEEL THAT I AM A MEMBER OF THIS COLLEGE"

Here, let's briefly apply selected criteria to the next two items in turn, highlighting contrasts where appropriate. One could consider the "I feel that I am a member of this college" as another "belonging" question. It seems to align with institutional integration and acceptance, asking about a college in seeming contrast to "this campus" compared to the prior question. From a cognitive perspective, however, it may be ambiguous and seem like a technicality: Does this simply mean that I am enrolled in this college, and therefore I am a "member?"

Thus, evaluating this item in terms of "efficiency" raises questions: What value does it add over and above the first item? One could argue that this item could be used to differentiate whether one feels a sense of belonging at the campus compared to the college. However, if that research question were the primary goal, one could simply design an item to answer such a question, like "I feel that I belong at my college more than my university overall." This could potentially be more actionable to deans versus presidents if appropriately socialized. Typically, unless for a very long survey, or unless this research question about belonging at different levels of the institution were a high priority, it is not recommended to use this item.

NOW, LET'S APPLY THE SEVEN CRITERIA TO "IF ASKED, I WOULD RECOMMEND THIS COLLEGE TO OTHERS."

This item is similar to the so-called "Net Promoter Score," a measure of customer valuation and satisfaction that has gained substantial favor as an outcome for businesses and brands. It is not a measure of belonging but could be considered an outcome: If we increase belonging, we increase the degree to which a community member would recommend our institution to others.

From the perspective of cognitive accuracy, the generality of "others" could create some ambiguity. A student might not recommend a college to an adult who already had a college degree, and a faculty or staff member might not recommend their position to someone in another profession. Hypotheticals like "if" are also useful to avoid, as conditional statements increase cognitive burden. An alternative to this item might be, "I would recommend this college to someone like me," or "... someone with interests and goals like mine."

Institutional Vignette: Enhancing the Graduation Clearance Survey With Belonging Criteria

At University X, the Graduation Clearance Survey historically served to gather quantitative data on students' post graduation plans, their academic experiences, and overall satisfaction. Recognizing the need to deepen the insights gathered and to align more closely with belonging, leadership from University X utilized the principles outlined in the toolkit to review the clearance survey questions and better align them with institutional goals and action plans.

The Graduation Clearance Survey should boast fine-tuned questions that can effectively capture data the university can use for various purposes including advancing belonging and the diverse student experiences at one's institution. With these updates the data can then serve to lend itself to:

1. Admissions marketing initiatives
2. Grant applications
3. Statistical data regarding students' financial aid use, working while attending school, and cocurricular activity participation
4. Philanthropic initiatives

Institutional Vignette (Continued)

Richer data that results from targeted questions that are juxtaposed with the toolkit's criteria can greatly inform future strategic initiatives. In understanding the drawbacks of survey fatigue, it is important to utilize questions that clearly indicate or inform how well the institution could forecast key student outcomes like retention, graduation rates, introduction to the workforce after graduation, and acceptance to a graduate school program.

In a consultative exercise, leaders from University X applied the above toolkit survey item criteria to the Graduation Clearance Survey and refined a number of items to capture a more nuanced view of how different aspects of campus life contribute to students' sense of belonging within the university community. Below is an example of how improvements can be achieved through minimal yet strategic modifications to the existing questions. To highlight alignment with the belonging definition, we have mapped responses to the subdomains of belonging.

What did you enjoy most as a student at XXX? Select all that applies.

- Academic rigor and learning opportunities
 - Competence and knowledge
- Campus events and social activities
 - Social integration and acceptance
- Making new friends and building connections
 - Social integration and acceptance
- Involvement in clubs and student organizations
 - Social integration and acceptance
- Internships and career development opportunities
 - Competence and knowledge
- Supportive professors and faculty
 - Institutional integration and acceptance
- Diverse campus culture and experiences
 - Institutional integration and acceptance
 - Psychological comfort and safety
- Campus facilities (library, gym, student center, etc.)
- Other: _____

It is important to note that while these responses are mapped to toolkit belonging subdomains, they may not be replacements for a formal belonging survey effort.

Demographic questions can also be an efficient way to ascertain what the diverse needs of the student population are. Asking a "check all that apply" demographic question can provide rich information about the specific student population that is completing the survey. This data can be juxtaposed against questions that ascertain sense of belonging. The juxtaposition itself can guide targeted improvements that will assist in fostering community at an institutional level. There will be certain nuanced descriptions in the demographics that are unique to each institution. For example, how does your institution define "underrepresented minority"?

Student demographics examples:

- Underrepresented minority (insert however the institution defines Underrepresented Minority/Underrepresented Group)
- Qualifies for Pell Grant/qualifies for work-study/qualifies for Electronic Benefits Transfer (EBT)
- International students
- LGBTQ+
- Works part/full time
- Supports dependents
- Disabled/qualifies for campus accommodations (insert whichever institutional office that handles this)
- Nontraditional learning path/outside of the typical college age (18–22)
- First-generation students
- Commuter students
- Transfer students
- Out-of-state students
- Undocumented students
- Woman identifying/non-binary/other
- Formerly incarcerated/system-impacted
- English as a Second Language students
- Veteran students
- Foster youth/students
- Homeless/housing insecure
- Online students
- None apply

Recommended Survey Items

To develop a set of recommended pulse survey items, the research team compiled a database of survey items from the belonging literature. The team evaluated these items using the above criteria and guided by the working definition of belonging presented in Section 1. Following this exercise, the team discussed the items with the six pilot institutions. This resulted in 12 core pulse survey items for measuring belonging.

12 Core Items for the AASCU Pulse Survey on Belonging

Please indicate your degree of disagreement or agreement with the following statements. *(Note: "AASCU" is a stand-in placeholder for the name of the college or university administering the survey. A description of the subdomain or purpose of the item is in parentheses.)*

Response Options (7): Strongly disagree; Disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Agree; Strongly agree

1. I feel like I belong at AASCU. (Global Item)
2. My peers welcome and value me at AASCU. (Social integration and acceptance)
3. I have meaningful social relationships at AASCU. (Social integration and acceptance)
4. I understand what I need to do to succeed in my role at AASCU. (Competence and knowledge)
5. I have the resources and opportunities I need to succeed at AASCU. (Competence and knowledge)
6. I receive meaningful recognition for my work at AASCU. (Institutional integration and acceptance)
7. I feel that the values of AASCU align with my own. (Institutional integration and acceptance.)
8. It is easy for me to ask for help at AASCU. (Psychological comfort and safety)
9. I feel comfortable expressing my opinions at AASCU. (Psychological comfort and safety)
10. I would recommend AASCU to someone with interests and goals like mine. (Outcome item)
11. Briefly, describe an offering at AASCU that has improved your sense of belonging.
(Qualitative item: Positive experience)
12. Briefly, describe an offering at AASCU that would improve your sense of belonging.
(Qualitative item: Improvement opportunity)

The full database of items is available in Appendix E. No survey is one size fits all. Therefore, the full database of survey items and the criteria are provided in an effort to support university leaders in designing an instrument that is responsive to its university goals, institutional definition of belonging, and priorities related to belonging.



SECTION 5

Strategies for Survey Marketing

After selecting survey items and designing the instrument, it will be important to strategically engage community members in the importance of using their voice. Even the most well-designed instrument cannot generate great data without sufficient community engagement. The communications strategy can directly impact the response rate, action planning, and post-survey engagement. The good news is by employing pre-focus groups, key partners, and leadership messages around belonging, survey marketing has already started. Below are strategies to build on that momentum and inform the community about the instrument and how to share their voice.

Call to Action Marketing Campaign

A marketing campaign is used to promote a specific product. A call to action is a marketing strategy to get people to do an action. When measuring belonging, the goal is to promote a specific survey and for community members to complete a specific action (i.e., complete the survey). Therefore, developing a campaign that leverages these communications strategies can yield higher engagement. It should be short and easy to remember. Examples have included #ISpeak; Your Voice Matters; Your Voice, Your UW; Share Your Voice, Shape Your School; and Be Heard. The campaign also helps ensure consistent messaging and language is being used to discuss the survey.

How Was Previous Data Used

Individuals like to know their voice is valued and sharing their feedback has led to change. A key part of your communications plan should be outlining what actions were taken as a result of previous assessments. What programs or initiatives were created? What policies changed or launched? What new practices were implemented? This will motivate community members to engage with the survey. Slide decks and talking points that are shared with belonging champions should include this information. Tailor the list of actions to the target audiences. For instance, faculty and staff may be particularly interested in initiatives related to recognition, work-life balance, or dependent care. Students may be interested in efforts to invest in student engagement, community building, wellness programs, or affinity spaces. The goal is to make the information salient to the audience.

Belonging Champions

Belonging champions can help promote survey efforts, share the vision and goal, and aid in future action planning. It is important that the champions are from different departments, colleges, and campus locations across the institution. This group should be representative of staff at all levels of the institution, student leaders, faculty, postdoctoral researchers, various disciplines, etc. Recruit champions that may not be the traditional go-to person for these types of initiatives. The goal is to establish a shared responsibility and help each person understand how belonging connects to their work at the institution. Convene this group to review marketing materials and brainstorm additional communications strategies.

Champions can also help by:

- Presenting a slide on measuring belonging to groups they have established relationships with. For instance, a faculty champion might present at an upcoming faculty meeting or share with their classes when the survey will launch.
- Leveraging their role at the university to increase awareness. For example, a champion in information technology can help leverage existing web platforms to embed notifications about the survey.
- Emailing peers, colleagues, and their institutional partners to share information on the upcoming survey.
- Compiling a list of events that will take place on campus while the survey is open to ensure those events can be leveraged for marketing.
- Providing feedback on culturally relevant marketing materials.
- Developing a list of frequently asked questions to add to the website.

Reminders

Survey reminders can be an effective strategy to increase response rate. The reminder should only be sent to those that haven't completed the survey. It is recommended to send two email reminders, if possible, but if it is not, the institution should send at least one reminder (Umbach, 2004). This is also where belonging champions can be helpful. In the communications schedule, identify specific dates champions should send out reminders to their community. The reminder can include some of the action steps their respective area took as a result of previous survey efforts or how the data will be helpful to their departmental action planning.

Dining Halls and Community Spaces

Dining halls are a great place for advertising because they are frequented by community members, and they can be a source for community building. The areas can be maximized for promotion by placing tent cards on tables with QR codes, setting up tables to answer questions and hand out swag, and using digital displays in the space. Leverage spaces that are seen as communal and welcoming. This may include multicultural centers, student centers, dormitories, student affairs offices, counseling centers, or libraries.

Strategic Timing

When the survey launches can affect response rate and can impact sense of belonging. For instance, administering the survey close to other assessments can contribute to survey fatigue. Administering a survey during extremely busy points of the semester could communicate a disregard for an individual's bandwidth and well-being. Launching the survey on a day of religious observance can leave people of a religious group feeling not seen or considered. When selecting a time frame, consider the following factors:

- Academic calendar
- Cultural and religious holidays
- Your institutional survey schedule

Survey Salience

Survey response rates increase when the topic of the survey is salient to respondents (Porter, 2004). This is why socializing and generating buy-in is essential prior to survey administration. It increases the likelihood that people are familiar with the concept of belonging and how it relates to their experiences on campus. At the marketing and survey administration stage, it is important that leadership messages and marketing incorporate how collecting this information is salient for everyone on campus. Share how this data will help improve initiatives related to campus safety, psychological well-being, faculty-student engagement, culturally responsive practices, etc.

Launch Event

A launch event not only increases awareness of the survey and belonging initiative, but it also provides an opportunity for others to get involved. The event should include information about how to complete the survey, FAQs, and how to engage in the action planning. It should also invite community members to become belonging champions and help increase awareness about the survey. This is a great time to provide free swag that includes survey branding such as stickers, t-shirts, or water bottles.

Leverage Existing Web Platforms

What are the platforms or software that community members frequently access on your campus? How can you leverage these for reminders? Existing platforms can include a university intranet, human resources platform, or a learning management system. Pop-up notifications in these systems can invite community members to complete the survey.

Leverage Campus Events

What events are happening on campus while the survey is open? These are great opportunities to embed marketing materials, display QR codes that allow community members to scan and complete the survey in real time, or hand out stickers that use the survey branding.

SECTION 6

Analysis and Reporting

Prior sections discussed how good design and socialization processes are not linear but cyclical or helical. Item and scale development anticipates analysis and reporting. And analysis and reporting should follow predictably, not disjointedly, from item and scale development.

Many academic disciplines now encourage and recommend that scholars follow preestablished "pre-analysis plans" where research questions, hypotheses, analytic code, tables, and figures are all anticipated and even publicly released before data collection. This encourages disciplined pre-specification of research questions, potential findings, and potential actions based on such findings.

Then, when the data arrives, analysts simply follow the pre-analysis plan. Such a process helps ensure that scholars are not "fishing for significance" in a way that can lead to biased conclusions and generalizations. This does not preclude additional analyses and explorations beyond the pre-analysis plan. However, such additional analyses are clearly marked as post hoc explorations that are supplemental to the initial intended research questions. This again encourages leaders to "begin with the end in mind" and imagine the tables and figures that will inform their ultimate decisions.

Of course, following the cyclical or helical metaphor, every end is then a new beginning. Once an institution takes actions to improve belonging, the “plan, do, study, act” cycle begins anew.

The following subsections review principles that improve interpretability and support evidence-based decision-making.

Response Counts Are a Finding

Following on principles from previous sections, socialization and marketing serve multiple purposes, including improving understanding of constructs, aligning toward shared goals, increasing engagement, and increasing the likelihood of action that leads to improvement.

These efforts should also increase the number of responses. When engaged actively and effectively, respondents should understand the purpose of the survey. They should believe that their responses and subsequent engagement will inform decisions and improve outcomes for themselves and the institution.

Response counts are therefore themselves a finding. They are an outcome and a goal. For this reason, reports should lead with them, to demonstrate the buy-in that the survey effort yielded. Reports should include response counts both overall and for all prioritized subpopulations for whom there are sufficient and publicly available data to establish the denominator (the potential population eligible to respond).

In addition to response counts, reports should include response rates for respondents in all categories where there is already public count data published. Response rates are the simple number of respondents divided by the number of respondents who had the opportunity to respond. Sometimes, the latter number is not known or is not public.

The response count is also, of course, a necessary statistic for contextualizing survey results. The most common practice in higher education surveys is to report statistics for respondents. Although many statistical approaches exist to estimate the results that might have been, had everyone eligible to respond actually responded, these estimates

can be imprecise and may rest on inaccurate assumptions about the relationship between those who responded and those who did not. Although institutional research organizations and external firms have many special studies they may conduct to see if the nonresponse bias might be substantial, discussion here is restricted to analysis and reporting for respondents.

When response rates are known and low (say, lower than 15% to 25%), survey leaders can face claims that their results are not valid or generalizable. These are important criticisms to field with care and openness. As noted above, it is not common practice to generalize results to those who did not respond. Instead, it is important to restrict inferences to those who did respond, and they do have a right to have their responses considered.

This argument that validity remains even when response rates are low is most compelling when sample sizes are large. In these cases, there may be precise estimates of the population that respondents represent, even if institutions cannot generalize to nonrespondents. Unfortunately, if responders are few and response rates are low, this suggests an unsuccessful survey engagement effort, and qualitative investigations would have likely been richer and more efficient as a potential precursor to a larger scale survey effort.

Credit: University of Southern Indiana



Stacked Bar Chart and Alternatives

The most common data representation for higher education survey items is the table and its graphical manifestation, the stacked bar chart. Tables typically report the number and percentage of respondents to each response option. The stacked bar chart orders these in horizontal or vertical bars with different colors corresponding to each response, with the bars summing to 100%. Stacked bar charts are preferable to "pie charts," because they preserve the order of the item responses and provide a common vertical distance to compare percentages. However, they remain generally unengaging and difficult to parse.

As an example, consider these data from the appendix of Gopalan and Brady (2020), which shows responses to the item "I feel like I am a part of [SCHOOL]" from the Beginning Postsecondary Students Longitudinal Survey (National Center for Education Statistics, 2019). This national survey represents the population of first-year students in the academic year ending in 2012 and the same students again in the academic year ending in 2014. A standard table and stacked bar chart for these data follow.

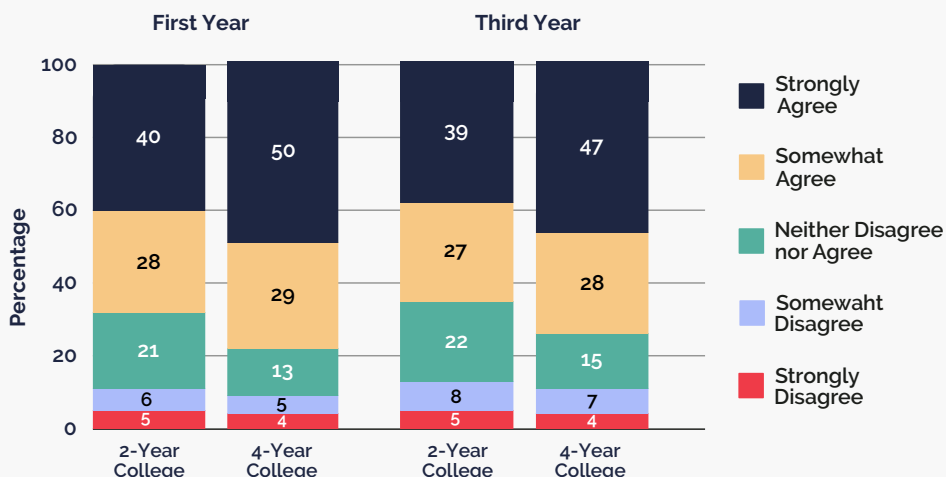
Percentage of Students' Sense of Belonging by Year & Institution Type

	FIRST-YEAR STUDENTS		THIRD-YEAR STUDENTS	
Response	Four-Year College	Two-Year College	Four-Year College	Two-Year College
Strongly Disagree	3.65	4.97	4.08	4.87
Somewhat Disagree	4.95	5.95	6.56	7.78
Neither Disagree nor Agree	12.67	21.41	14.51	21.69
Somewhat Agree	29.15	28.01	27.70	26.64
Strongly Agree	49.59	39.65	47.15	39.03

(Note) Item stem: "I feel like I am a part of [SCHOOL]"

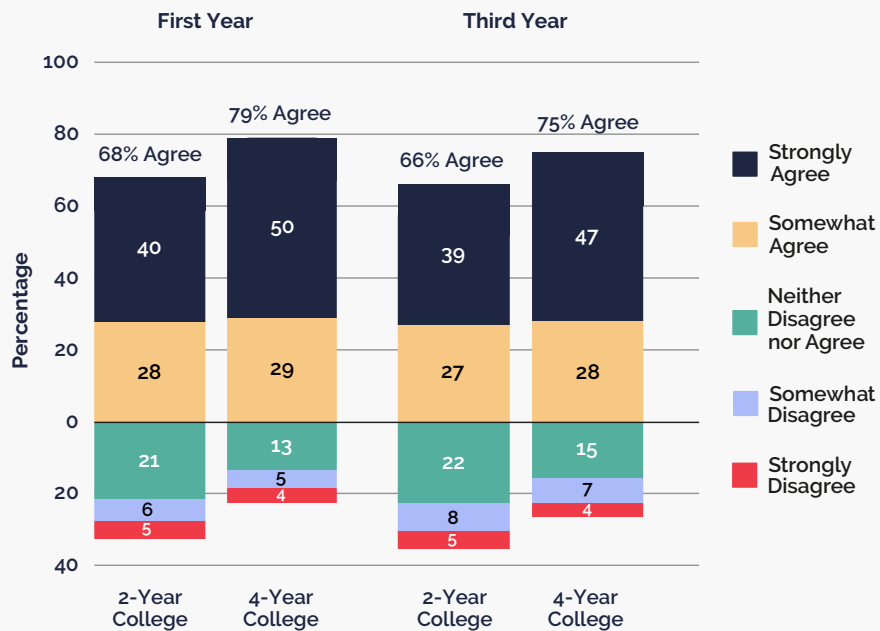
Sense of Belonging by Institution Type & Year

ITEM: "I FEEL LIKE I AM A PART OF [SCHOOL]"



Sense of Belonging by Institution Type & Year

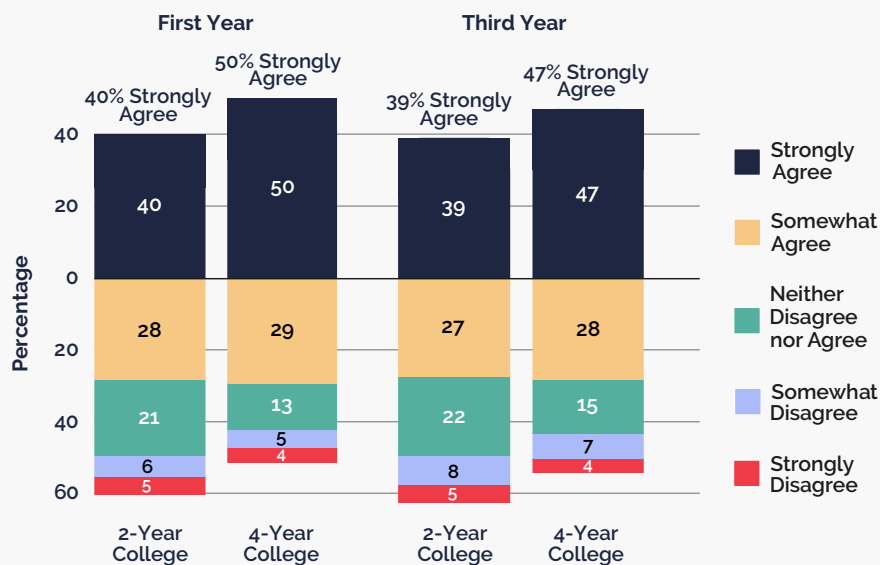
ITEM: "I FEEL LIKE I AM A PART OF [SCHOOL]"



A common improvement of the stacked bar chart uses the same representation but centers some boundary between responses as a baseline to report a "percent above cut." In the five-point scale above, the cut would be between "neither disagree nor disagree" and "somewhat agree," and the resulting height of the bar would represent the percentage of respondents who agree or strongly agree. The height of this bar is then easily compared to the heights of other bars to enable comparisons of agreement rates.

Sense of Belonging by Institution Type & Year

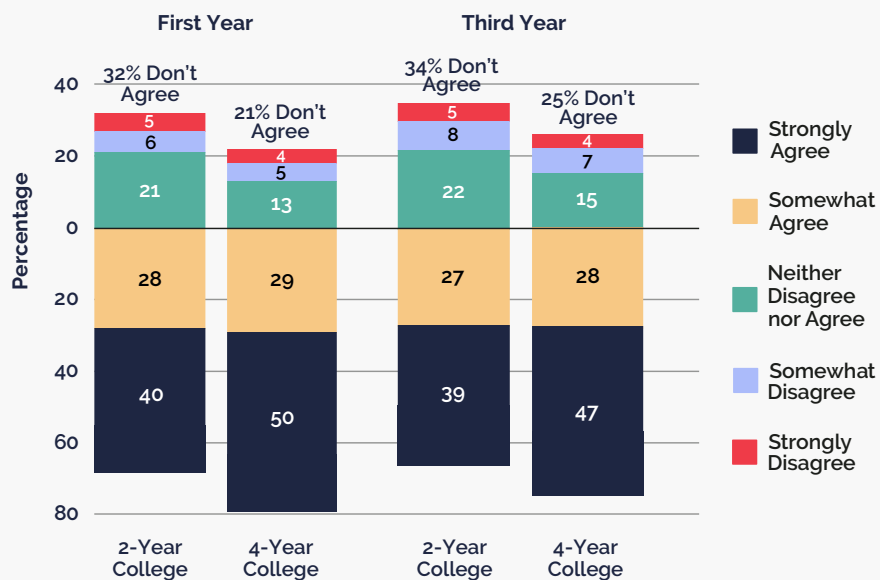
ITEM: "I FEEL LIKE I AM A PART OF [SCHOOL]"



The choice of the boundary is judgmental and should be transparent and defensible. Although the data show that 79% of students at four-year colleges somewhat agree or strongly agree, an institution may choose to have a higher standard for belonging than "somewhat agree." If an institution held itself to "strongly agree" as a standard, the following figure would be more accurate. This is a judgmental decision that should be discussed and decided before data collection in a pre-analysis plan.

Sense of Belonging by Institution Type & Year

ITEM: "I FEEL LIKE I AM A PART OF [SCHOOL]"



Similarly, survey leaders may wish to highlight those who do not belong, to focus attention on reducing this percentage over time. This results in a figure with a different reference as follows. These examples serve to demonstrate how the same data can answer different research questions under different framings and can create different senses of urgency or commitment. Commitment to specific reporting frames before data collection helps avoid accusations that leaders are biasing or "spinning" results.

The Five Comparands

Quantitative results are difficult to interpret without reference points. Consider a case where, similar to the prior data example, 79% of responding community members somewhat or strongly agree with the statement "I feel like I belong." What questions would you expect community members to ask in response to such a quantitative finding? The most common question is, "compared to what?" Although the findings can and should be evaluated in absolute terms, presenters of data should incorporate into their design process and pre-analysis plans a list of priority comparands that can help establish norms and useful goals.

As part of these plans, for each of these comparands, designers should consider whether there will be sufficient data to enable precise comparisons, whether there will be sensitivity to reporting such comparisons, and whether such comparisons will be public, internal, or excluded.

Five common comparands are (1) institutional roles, (2) sociodemographic categories, (3) internal units, (4) peer institutions, and (5) time.

Institutional Roles

A common breakdown for data reporting is that of institutional role. At a high level, this could be a distinction between faculty, staff, and students. Within each of these categories, there could be additional distinctions. For faculty, a common distinction is between tenure-track and non-tenure-track faculty who may have different primary responsibilities. For staff, there can be distinctions at various levels among those supporting academics (such as academic advisers and research staff), operations (such as facilities and maintenance personnel), and administration (such as administrative assistants and financial officers). Disparities in results by institutional role can raise attention to structural inequities and inspire policies that address these.

Internal Units

Comparisons within institutions include those among departments, schools, or offices. This can reveal differences in student, faculty, and staff experiences and support insights and learning relating to leadership, initiatives, community, and climate. However, comparisons across internal units can also be fraught. If leaders, constituents, and community members feel that they are on the defensive if their scores are relatively low, or that they are “off the hook” if their scores are relatively high, then these comparisons can be counterproductive. As part of socialization and buy-in, survey designers must plan for such comparisons with care. Ideally, all leaders and constituents can look at their results as a baseline for future progress and commit to productive change on the basis of their results. Sometimes, leaders and community members feel safer comparing their results to unnamed comparisons within the institution. Under such a design, they will know their relative standing compared to others, but they will also feel safe knowing that others do not know their particular relative standing. Sometimes, such comparisons are internal or excluded.

Peer Institutions

Comparing results to those of peer colleges and universities can help leaders set realistic goals. Many survey organizations that serve multiple higher education institutions can use their results to develop norms representing the average of the clients they serve, or an estimate of a national average, or an estimate of a peer average, depending on the desired reference point. When institutions develop their own surveys, and items are not identical in wording or administration conditions, comparisons to peer institutions require approximation to similar items from published results. Ideally, comparing results to peers enables community members to realize common challenges and share successful strategies. These external benchmarks can also build a case for needed resources or policy changes by demonstrating what similar peers have achieved.

Time

One of the strongest recommendations is for comparisons over time. This enables users to monitor trends, measure progress, and assess the impact of policies and initiatives. Such an effort also requires commitment to maintaining at least some common items in common administration conditions over time. It is thus challenging, because every survey effort requires such a substantial mobilization of buy-in and engagement. On the other hand, framing the initial ask as one for a commitment to ongoing and repeated measurement over time can yield dividends by avoiding the need to resocialize the effort in subsequent years. By tracking data over time, institutions can best understand their developmental trajectory, make evidence-based decisions, and adjust strategies accordingly. This temporal perspective is crucial for continuous improvement, ensuring that changes lead to desired outcomes. Many survey efforts have recommended periodicity in the range of two- to four-year intervals. The lighter and more “pulse-like” the survey effort, the more frequent measurement can be without imposing a psychological or logistical burden.

Sociodemographic Categories

Among students, categories for disaggregating results may include gender, race, ethnicity, sexual orientation, disability status, and age. Designers can collect or may already have additional data on religiosity, political affiliation, citizenship, family status, housing status, and parental education levels (e.g., first-generation status), as suits their research question. Depending on the primary research questions, there is often a risk that numbers of respondents in particular sociodemographic subgroups may be too low to report without risking anonymity. In these cases, and when measurement of such groups is a high priority, there can be additional efforts to engage these populations to ensure sufficient numbers of responses. There can also be complementary qualitative investigations whether or not survey response numbers are sufficient for reporting. Disparities in results by sociodemographic categories can motivate a range of responses, including formation of new offices, policies, or initiatives that provide support or awareness of issues for members of particular sociodemographic groups.

Institutional Vignette: Leveraging Transparent Data Sharing and Engagement to Enhance Campus Belonging

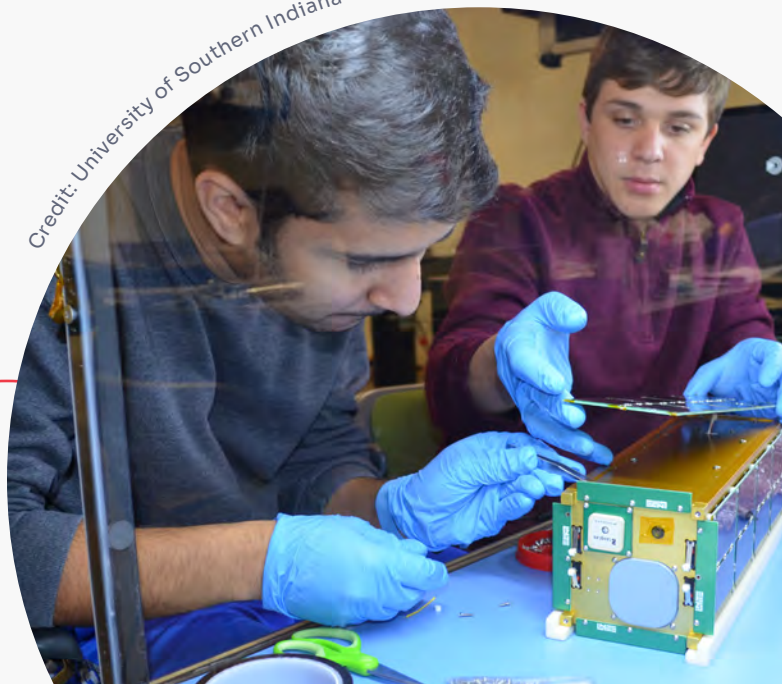
University X has received requests from community members for greater transparency because they don't know how data from past surveys have been used. After consultation discussions, University X took a bold step to enhance transparency by sharing engagement survey data with all faculty and staff. This institution's Office of Institutional Effectiveness designed a comprehensive dashboard based on a recent 60-item engagement survey, allowing faculty and staff to explore responses by demographics. The survey covered themes including job satisfaction, collaboration, and confidence in leadership, with the dashboard available to all employees via the campus portal. This level of transparency aimed to foster trust and invite feedback.

In an internal meeting, a member of the Institutional Effectiveness team shared insights on the overall development of the dashboard, noting that the survey results touched on multiple aspects of belonging, even though only one question directly addressed it. For internal analysis, the team experimented with mapping various survey questions to subdomains of belonging, illustrating the potential for identifying actionable insights across job satisfaction, collaboration, and similar themes.

To encourage meaningful engagement, the institution assigned its leadership a "homework" task to review the dashboard and identify three low-ranking themes to improve. Leaders were asked to develop initiatives addressing these areas, which would later be shared with the whole campus to maintain transparency. Concurrently, the institution plans to offer open sessions to help faculty and staff interpret and navigate the dashboard, ensuring that each group understands how to use the data to drive improvements in belonging within their specific roles.

The institution also hopes to engage faculty and staff in focus groups to validate leadership's selected initiatives and collect additional ideas directly from the community. This approach ensures a balance of top-down and bottom-up feedback, creating an inclusive process that reflects diverse perspectives. For other institutions, this case illustrates a model of transparency and structured engagement in addressing belonging, emphasizing both the power of data access and the need for collaborative strategy development.

Credit: University of Southern Indiana



Credit: Western Carolina University



SECTION 7

Action Planning and Community

The strategies outlined below aim to engage leadership and the broader campus community in understanding the survey results, identifying individual and institutional action steps, and establishing long-term engagement in innovative ideas that increase belonging.

Disseminating Information— Report Briefings

Building a strong sense of belonging on campus requires a shared responsibility. Every member of the campus community has a role in creating a welcoming and inclusive campus, especially those in administrative and faculty roles. To aid in action planning at each level of the institution, it is recommended to provide departments with report briefings that outline data that is especially relevant to the work they are charged with. Making the survey content relevant to those who will be tasked with taking action empowers them to build it into their work (Brown, 2022). For instance, the team that oversees first-year orientation can receive a briefing that outlines the results for first-year students. The data could provide useful information for them to consider as they design future programs. Student affairs teams should receive a briefing that not only outlines student-specific data from the survey but also is paired with retention and persistence data to understand how sense of belonging could be impacting student outcomes. This approach also sends a message of transparency and accountability. Facilitated strategic planning sessions should be paired with the report briefings. These are an opportunity for departments to engage in constructive dialogue about the results, ask questions, and understand how the data relates to their work. If specific groups have a lower sense of belonging, the department can discuss what may contribute to this or how they can leverage qualitative methods to further understand the experiences of that particular group.

Gathering Feedback From Focus Groups

As mentioned in Section 3, focus groups can be a useful research tool to gather qualitative data. After the results of the belonging survey are available, they can be used to better understand how the campus community is responding to the results, what action steps they would like to see taken, and how they want to engage in the implementation.

Focus Group Tips:

- Focus groups should be done with each stakeholder group (students, staff, faculty, researchers).
- Limit focus groups to no more than eight people if you are bringing people together that don't have an established rapport or relationship.
- Where possible, utilize existing group meetings such as faculty meetings, team meetings, student organization meetings, departmental town halls, and committee meetings.
- Partner with affinity groups on campus to provide space for discussion of experiences and ideas that are specific to certain groups.
- Provide multiple avenues for engagement (in-person meetings, virtual meetings, anonymous feedback forms, etc.). The goal is to reduce barriers to engagement.
- Have an established focus group protocol that outlines how to facilitate each discussion.
- Share a summary of the survey results with attendees prior to the focus group session.
- Share a list of on-campus resources following the focus group such as support offices, policies, community building programs, and counseling services.
- Facilitators should not be the direct supervisor of participants.
- Focus group reports should be anonymized and include themes that arose across focus groups.

Suggested Questions:

- Does this data reflect your experience as a student, staff, or faculty member? Why or why not?
- What stands out the most from the results?
- Are there examples of actions or initiatives that have contributed to you having a sense of belonging on campus? If so, what are they?
- Are there examples of actions or initiatives that have contributed to you having a lower sense of belonging on campus? If so, what are they?
- What actions should your department or the university take in response to the survey results?
- What would progress look like?

Community Conversations

Following the release of the results to the community, individuals may be looking for ways to reflect, provide feedback, and engage in dialogue around the results. Hosting a series of community conversations provides an opportunity for anyone interested to learn more about the results, ask questions, and brainstorm changes they would like to see implemented at the institution. Community conversations can break down academic silos and provide a way to leverage the diversity of the campus community to generate innovative ideas to advance belonging. To engage students, it is recommended to partner with student leaders and groups to host some of these community conversations. The student government association can aid in convening a representative group of students and facilitate constructive dialogue around student questions and ideas related to belonging.

Develop and Refine the Action Plan

One way to communicate to the community that their voice matters is to translate the results of the survey into an action plan. The plan should indicate a shared responsibility in advancing belonging on campus. The focus groups and report briefings are methods to gather community input on what action the institution should take. Each recommended action step should identify a project lead on campus. The lead can be a department, team, or individual whose charge is closely aligned with the recommended action. Action steps should also indicate a projected timeline. A common criticism in academia of surveys and reports is they don't lead to action and instead the report collects dust on a shelf. Publishing an action plan demonstrates a commitment to transparency and accountability, in addition to providing a road map for the university to follow even as there is turnover within administration.

Leadership Summit

In alignment with "begin with the end in mind," institutions should proactively schedule a leadership summit to organize a time for leaders to digest the results, review talking points and messaging, and strategize actions. This establishes a culture of accountability, shared responsibility, and leadership from the top on action planning.

Ongoing Community Engagement

A strong communications plan is a central theme of this toolkit. It should outline how you will keep the community abreast of progress and ways to engage with belonging efforts. The list below outlines some best practices for continuous engagement. A university does not have to utilize all of these practices but there should be a strategy for ongoing engagement.

- Publish an annual report on how the university is prioritizing sense of belonging
- Conduct an annual university-wide belonging forum
- Add belonging to departmental annual reports for each department to share how they are responding to survey data and prioritizing sense of belonging
- If a program or initiative is developed as a result of survey data, the program assessment plan should include assessing its impact on sense of belonging
- Communicate about belonging at as many events and programs as possible, including those that are not DEIB focused, including orientation programs, convocations, all-staff meetings, graduation, etc.
- Provide open office hours to discuss belonging on campus
- Hold a seminar or colloquium series on sense of belonging
- Create a website that tracks implementation progress

Connecting the Dots

As an action plan is developed, it is important to communicate how the outlined action steps relate to the survey data. These points should be reiterated to community members over time. Change can take time especially in university settings. So, by the time you get around to implementing some of the action steps, people may not remember the survey results. Some people may not have been at the university when the survey was administered. Therefore, they don't know that a policy change or program being implemented was a result of community feedback and voice. Communications plans for each action step should include connecting the dots to ensure community members know their voice was heard and it led to change. Figure 3 below provides an example of what this may look like in a presentation.



Credit: Nevada State University

Figure 3. Strategic Planning: Connect the Dots

Finding	Strategic Goal	Action Steps
A lack of trust in how senior leadership and faculty will address harassment, discrimination, and other offensive behaviors.	Demonstrate an institutional commitment to DEIB through equitable and inclusive policies, practices, and an infrastructure that supports these initiatives.	1. Establish DEIB as a strategic fundraising priority. 2. Establish structures to effectively communicate policies related to harassment and discrimination. 3. Develop and implement Community Standards/Code of Conduct that outlines behavior consistent with university values.

After mapping each action to survey findings, share these as talking points for leadership. This should be built into multiple communications channels such as leadership messages, marketing campaigns, and on-boarding presentations. If an initiative grew out of survey results, that connection should not be disregarded. This strategy not only increases sense of belonging because people know their voices matter and the university cares about their well-being and growth, but it also can lead to an increase in response rate for future survey efforts. People are more likely to complete a survey if they believe their feedback will be taken seriously (Porter, 2004).

SECTION 8

Best Practices for Affirming Belonging

There are several high-impact practices to affirm and advance belonging on university campuses. Strategies presented below were selected to be responsive to the needs and concerns shared by the pilot institutions and based on publicly available belonging data from AASCU institutions. Although only a few strategies are provided, it is important to remember that advancing belonging cannot be accomplished through one or two strategies alone. As with measuring belonging, fostering a strong sense of belonging across students, staff, and faculty requires a holistic approach that is evident throughout the student, staff, faculty experience (Allen et al., 2024). This includes examining how belonging efforts are present in policies and practices, staff and faculty onboarding, student orientation, pedagogy, living and learning spaces, manager training, and the overall work and learning environment.

Commitment to Periodic Measurement

Measuring belonging in itself can signal care and concern for community members. However, surveying the community once is not enough. There must be follow-through and action based on the results and a commitment to continuous assessment (Porter, 2004). In addition, students will turnover every one to five years depending on degree program. Therefore, it is important to establish a cadence of how often you will assess belonging. This does not always have to come in the form of a formal survey. This can include qualitative data collection as well as through focus groups and town halls. Institutions should look at all of their survey efforts and determine if it is possible to embed a belonging question into those instruments. For instance, does it align with institutional goals to add a belonging question to exit surveys, course evaluations, or graduation surveys? This is a method to establish continuous measurement without contributing to survey fatigue. For formal belonging survey efforts, institutions should consider administering every two years.

Encouraging Positive Peer and Faculty Interactions

Research has found that positive peer and faculty interactions can increase sense of belonging, especially for first-year students as they transition to college life (Allen et al., 2024; Hausmann et al., 2007; Malm et al., 2020; Polmear et al., 2024). Interactions with faculty can provide access to knowledge on how to navigate the university, how to access research opportunities, and what resources are available to support academic and professional development (Malm et al., 2020). This aligns with the belonging subdomain “competency and knowledge” presented in Section 1. Student-faculty interactions and peer interactions can also have positive impacts on academic belonging, which is defined as acceptance, fit, and inclusion in an academic discipline (Simmons et al., 2019).

For staff and faculty, it is equally as important to have interactions and collaborations with others because this contributes to one feeling they are part of something whether that be a group, the organizational strategy and mission, or meaningful relationships (Boden et al., 2024; Filstad et al., 2019). Even in remote or hybrid workspaces, it is important for organizations to develop mechanisms for staff to engage with each other. The physical workspace itself does not necessarily have a huge impact on sense of belonging, but culture and climate are important factors (Dalessandro & Lovell, 2024).

Institutional Vignette: Connecting With Online Learners

University X is concerned that a large population of students is being alienated because they are online learners. For online learners, engagement is stagnant and difficult to come by. These learner profiles include mostly nontraditional college students with jobs, children, and family responsibilities. It is important for University X to ensure these learners feel empowered and included because they, too, belong at University X.

Here are some tools that University X will use to support the inclusion of online learners in the campus climate:

- 1. Provide orientation and onboarding support:** In-person multiday orientation sessions and onboarding support for online learners can help them navigate the available campus resources, help with academic and educational planning (which includes enrolling in their courses), and assist them with their overall transition to college. At New Student Orientation, incoming students can be advised by peer counselors who are current undergraduates who understand the undergraduate experience or by counselors on staff. Online learners should also receive the opportunity to connect with a variety of campus partners who are eager to be a part of their journey, participate in organized community building to create meaningful connections with other new online students, and learn more about what it means to be a true [insert college mascot here].

Institutional Vignette: (Continued)

This session can be communicated in the application process so that applicants understand and can prepare for this immersive experience. This will help the students transition to feeling like members of the campus community and give them a chance to meet face to face with other students and faculty that they will spend their time online with. Given that these are nontraditional students who would not be living on campus, the campus could arrange a hotel block that provides discounted rates for the students to pay at their own expense.

- 2. Develop a sense of community:** Online learning communities are a great way for students to connect with each other, share resources, and engage in discussions related to their coursework. This can be done through required small group sessions that are integrated into courses. Students meet with their small groups weekly to discuss course material/respond to a course prompt while getting to know each other and building community.

If this is strategized sufficiently, then each small group/cohort in each course is either randomized or hand selected to determine the greatest variety—thus allowing students to build bonds with multiple diverse student groups.

- 3. Solicit feedback and implement changes:** Feedback from online learners about their experiences with belonging and engagement strategies can be used to make improvements and adjustments to the online learning programs. In an effort to solicit feedback from the online learners, University X can establish a Student Advisory Board for the online program only. These student thought leaders will be the voice of their cohort and can readily engage with and curate social activities like zoom happy hours, movie screenings, and speaker series for their classmates to engage with. Utilizing a Student Advisory Board provides student input and perspective, continuous qualitative feedback to the faculty or staff member overseeing the board, and increased engagement. It also provides students with an opportunity to build leadership skills.
- 4. Provide opportunities for social connection:** Strategies listed above are also designed to increase peer and faculty interactions. A Student Advisory Board can help organize virtual events, webinars, and networking opportunities for online learners to connect with each other, share experiences, and build relationships outside of the classroom.
- 5. Create an online student-dedicated newsletter:** Establishing a scheduled newsletter that goes out every week or month can help keep the online learners aware of campus happenings. The opportunities mentioned in the newsletter should be tailored to experiences that online learners can participate in should they choose. It should include events, opportunities, and resources that are applicable to the online learners. This can go a long way toward making these learners feel like true students of this campus. The newsletter can be crafted by a current undergraduate student worker. However, the newsletter should be sent to the online learners from a trusted source. This will help guarantee email open rates and actual engagement with the newsletter.

Affinity Groups and Spaces

Affinity groups and spaces can serve as affirming environments for marginalized groups. Micere Keels (2020) refers to these as a form of identity conscious supports that "consider how social group memberships differentiate students' pre-college and college-going experiences, and then provide supports accordingly" (p. 11). These spaces provide opportunities for community and developing a greater sense of connection with the university. They can also counterbalance the lack of representation in other spaces, sense of isolation, and experiences of bias and discrimination marginalized identities may experience (Evans et al., 2017). These spaces are also important for faculty and staff. They often take the form of employee resource groups (ERGs), which are composed of employees with shared interest or identity and are managed by members of the group (Rodriguez, 2022). ERGs serve various purposes of building community, supporting recruitment efforts of the organization, networking, professional development, or external community outreach (Welbourne et al. 2017).

Although affinity-based spaces can be sources of affirming belonging, they can also be places individuals may experience a form of exclusion or bias if they are not approached with an understanding of intersectionality. No group is a monolith and therefore, diversity within an affinity space should be celebrated.

Institutional Vignette: Black Student Success Initiative

University X wants to increase the success of certain underrepresented student groups in an effort to promote the goals of the state university's graduation initiative by establishing student success initiatives.

Integrating belonging criteria into the program is essential to its success to address the needs of underrepresented student groups and achieve institutional goals:

1. Increasing retention and graduation rates
2. Eliminating equity gaps in degree completion
3. Improving student success through strategic thinking that employs a holistic approach to underrepresented student success

With these in mind, University X is creating a comprehensive and inclusive approach that would cater to the diverse needs of their Black student population (for example). By prioritizing the principles of belonging in program development, University X is able to create a more relevant and effective initiative that truly resonates with their Black student population. A commitment to fostering a sense of belonging will only further enhance the success and well-being of students at University X because each goal will be led by an appointed strategy team.

Here are actions that will be taken:

- Increasing retention and graduation rates
 - Create an on-campus strategy team.
 - Establish a university-wide, inclusive enrollment management process that increases access and opportunities for historically marginalized groups through planning and implementation across admissions, enrollment, advising, student affairs, and academic affairs.
 - Examine top enrolled programs and top degree-earning programs disaggregated by race and gender. Leverage findings to address the trajectory of program enrollment and degrees earned to discern both facilitative factors, barriers, and differential points of impact to persistence, retention, and graduation rates.

Institutional Vignette: (Continued)

- Strategy team conducts an extensive and systematic review of student support policies, processes, and operations to ensure equity in responding to student needs—considering how those needs may vary for certain student populations and how those needs may change over time. Were the policies written 10 years ago and have they been reviewed since then?
- Implement new data collection methods to assess the impact of student support services.
- Eliminating equity gaps in degree completion
 - Create an on-campus strategy team.
 - Provide culturally relevant professional development for advisers.
 - Leverage findings from campus climate surveys.
 - Strategy team leads a systematic scan of data to ensure nuanced understanding of how African American students are advancing toward degree completion.
 - Strategy team supports each school/college and unit/division on campus in facilitating data discussions on how Black students are faring for purposes of guiding service usage, enhancement, systems improvement, and student success.
 - Enhance student participation in, and experience of, high-impact practices including study abroad, internships, and research activities.
 - Enhance student experiences in classroom environments by encouraging culturally relevant pedagogy.
- Improving student success through strategic thinking that employs a holistic approach to underrepresented student success
 - Create an on-campus strategy team.
 - Revamp the orientation program to ensure that all incoming African American students feel a sense of belonging from the moment they stepped foot on campus. Instead of the traditional one-size-fits-all approach, incorporate elements of the belonging definition into the orientation process.
 - Carefully craft a series of welcome sessions that not only provide practical information about campus resources and support services but also emphasize the importance of creating a welcoming and inclusive community for African American students. Through interactive activities and group discussions, explore the concept of belonging and its role in fostering academic success and personal growth.
 - Strengthen collaborations across high-touch services and activities in programs designed to address student success. By collaborating high-touch services with campus cultural centers, organize events and programming that celebrate the rich cultural heritage of Black students. From African dance workshops to spoken word poetry nights, these opportunities can not only provide a platform for self-expression, but also reinforce a sense of pride and belonging within the community.
 - Engage all student organizations that provide social and/or academic support for African American students to play a key role in creating a community of mutual support in conjunction with the university's efforts.
 - Work closely with the counseling center, student groups, and/or divisional units to develop a mentorship program tailored to the needs of African American students. By pairing incoming freshmen with upperclassmen who shared similar backgrounds and experiences, University X will be able to create a supportive network that offers academic guidance, emotional support, and sense of belonging.

This initiative is strategic and targeted because it implements a holistic approach that is intertwined in many facets of the campus and not disaggregated and siloed from one another. Siloed efforts can often exacerbate an institution's problem. The goal is for retention rates to improve, student engagement to soar, and a palpable sense of camaraderie and support to permeate throughout University X's campus.

Culturally Responsive Mentoring and Advising Programs

Identity neutral programs ignore the experiences and backgrounds of specific social groups and may uphold the hidden curriculum of university life (Keels, 2020). The hidden curriculum is the unspoken norms and values that students are expected to follow but are not usually talked about in the formal curriculum (Jackson, 1968). For instance, an identity neutral career advising program may not include resources or knowledge that account for the varying socioeconomic statuses, religious backgrounds, or cultures of students. This could include how to respond if an interview is scheduled on a religious holiday, where to obtain funding for interview travel, or information on clothing closets to access interview attire. Culturally responsive advising calls for the consideration of a student's culture and background and results in intentional efforts to ensure that all students, especially those from historically marginalized groups, feel welcome, are supported, and have the resources to navigate the institution and thrive (Bowes, 2017). Similarly, culturally responsive mentoring is designed to address obstacles often encountered by marginalized groups such as stereotype threat, imposter syndrome, microaggressions, and social isolation (Teodorescu et al., 2024).

Counseling and mental health service providers should also be aware of the experiences marginalized groups may encounter on campus and utilize culturally competent practices (Evans et al., 2017). Counseling centers should also offer affinity-based support groups.

Removing Barriers to Entry for Professional Growth

Common barriers to leadership development or professional development opportunities include time constraints, financial concerns, access to mentoring, bias in the selection process, structural barriers in the program, and lack of career advising (Dominguez & Diez, 2022). These barriers can be experienced across stakeholder groups (students, staff, faculty, and researchers). Developing formalized mentorship and career planning programs can remove some of the barriers to entry. For instance, faculty of color have reported difficulty in finding mentors and career guidance when there is not institutional support (Davis et al., 2022). A formal program often includes training for mentors and mentees, a matching component, and recommended topics or a curriculum. Faculty have reported that their sense of belonging is connected to tangible institutional support such as mentorship and having opportunities to contribute meaningfully to the institution (Boden et al., 2024). Mentoring can help newer faculty learn strategies in navigating university politics and the tenure process.

How the programs are structured also matters. Professional development programs or mentoring programs that require a fee present a financial barrier. In addition, nonpaid student research or internship positions can be difficult for first-generation or low-income students to take advantage of. Often students may need paid income to cover education and living expenses and, therefore, must pass on valuable opportunities that are more aligned with their academic and professional goals. Programs should be structured in a way to remove these barriers and account for the experiences of all community members.

Programs should be intentional about marketing to groups that are historically underrepresented in certain fields. For example, STEM leadership or internship programs should make a concerted effort to reach out to women-identifying students, racially minoritized groups, and individuals with disabilities. This can help counter the effect of the above-mentioned barriers. It can also counter internal barriers such as internalizing biases and stereotypes related to one's identity (Dominguez & Diez, 2022). In addition, past experiences of discrimination can influence someone to not pursue future opportunities.

Inclusive Pedagogy

A major part of inclusive pedagogy is first adopting the mindset that diversity in the classroom is a benefit to leverage and not a challenge to overcome (Bolitzer, et al., 2016; Carballo & Cotan, 2024). Practices such as collaborative assignments (Rockinson-Szapkiw et al., 2014), peer mentoring (Muldoon & Macdonald, 2009), and relational pedagogical approaches (Graham, 2022) can foster a sense of belonging in the classroom. Carballo et al. (2021) found three key elements that faculty included in their teaching to ensure participation of all students. The first was planning for the teaching process and contacting students prior to starting the course.

When contacting the students, they shared information such as course calendar, materials, methodology, and evaluation practices. They also took this as an opportunity to get to know their students and used that information to further adapt and plan for the course. The second element was efficient teaching methods and strategies for everyone. Methods included group work, participatory and interactive teaching strategies, and reflective assignments rather than traditional lecture style. The third element was continuous communication with students with disabilities to understand what they needed and how the faculty member could improve.



Credit: California State University, Fresno

Community Outreach and Civic Engagement Initiatives

Civic engagement activities can serve several purposes such as awareness of societal issues and how they impact communities, as well as creating opportunities for community building among students. Universities are an ideal place for understanding and investigating one's civic responsibility, and community outreach activities present a chance to pair this reflection with action (Moots & Patterson, 2024). Civic engagement can take many forms such as service-learning opportunities, moral education, and democratic education (Jacoby & Associates, 2009). It creates a sense of being a part of a larger society and establishes a sense of responsibility to uphold your part as a member of that community. Service learning embedded into courses promotes both social and academic integration and fosters a sense of belonging (He, 2019; York & Fernandez, 2018), in addition to a sense of charitable responsibility (Mayhew & Engberg, 2011).

Constructive Dialogue Programs

Programs that promote intergroup dialogue and engagement across cultures, values, and identities can build acceptance of multiple viewpoints and a shared understanding (Zúñiga, et al., 2007). These programs should include skill building in listening, critiquing perspectives and not attacking people, identifying shared values, respectful disagreement, and acknowledgement of changed minds (Maine & Vrikki, 2021). The goal is to develop understanding rather than consensus or a winner. The dialogue should provide opportunities to explore identity, social systems, power dynamics, and current events (Zúñiga et al., 2007). Institutions should invest in training staff in intergroup dialogue facilitation to ensure programs are structured in an effective way that fosters psychological safety and constructive, meaningful conversation and connection.

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Appendix A – SMARTIE Goal-Setting Worksheet

This worksheet is to aid in establishing goals for measuring and advancing belonging. Prior to jumping into a survey effort or implementing programs or policies, it is important to establish what your goals are. Remember, you should “begin with the end in mind.” These goals will guide how you approach measuring belonging, what questions you will ask in a survey, and how you will use the data. The SMARTIE goals framework takes SMART goals a step further by ensuring the goals are inclusive and equitable (Bibbs, 2021).

How do you define belonging?

It is important to ground the discussion in a shared vocabulary. Share with the group the institutional definition for belonging. If the institution does not currently have a definition, use the working definition presented in Section 1 of this toolkit to guide your work. It is also recommended to engage your team, other leaders, and community members in understanding how they currently define belonging as this can help establish an institutional definition.

Definition:

Reflection Questions

The following reflection questions can be used to guide goal setting and project planning.

1. What do you hope to learn by measuring sense of belonging on campus?
2. How will you use the data collected to advance belonging on campus?
3. What would success look like to advance belonging on campus?

Setting SMARTIE Goals

SMARTIE goals are specific, measurable, attainable, relevant, time-bound, inclusive, and equitable.

- Specific – Goals that state precisely what you are going to do, for whom, by whom, and when
- Measurable – Goals that can be tracked and have tangible evidence or milestones that indicate they have been accomplished
- Attainable – Goals that are achievable and challenge the institution to grow and advance
- Relevant – Goals that connect with the overall mission and vision of the university and a culture of belonging
- Time-bound – Goals that have an established timeline toward completion
- Inclusive – Goals that bring historically excluded individuals and groups into processes, activities, decisions, and policy making in a way that shares power
- Equitable – Goals that address systemic injustice or inequity

Examples of SMARTIE Goals

1. Launch a university-wide belonging survey in fall 2025
2. Establish a baseline for measuring sense of belonging for staff and faculty to identify institutional priority areas to advance belonging
3. Create a grant program that encourages community members to develop innovative ideas to increase sense of belonging in response to belonging survey data



Credit: University of Maryland Eastern Shore

As you identify goals, use the below guide to establish your project plan.

Goal:	
Specific: Who will work on this? What steps need to be taken?	
Measurable: How will you know this is complete? What are possible milestones?	
Attainable: Is this achievable? How does it challenge the institution?	
Relevant: How does it connect to the institutional mission and priorities?	
Time-Bound: What is your expected timeline?	
Inclusive: How will this include all groups, especially those that have been historically marginalized?	
Equitable: How will this address inequities or injustices?	
Potential Obstacles or Risks	
Strategies to Mitigate Those Risks	
Additional Questions or Action Steps to Advance This Goal	

This worksheet can also be used to establish goals during the action planning stage. Below is a guide to aid in strategic planning to respond to belonging data.

Goal:	
What finding led to this goal?	
Specific: Who will work on this? What steps need to be taken?	
Measurable: How will you know this is complete? What are possible milestones?	
Attainable: Is this achievable? How does it challenge the institution?	
Relevant: How does it connect to the institutional mission and priorities? How does it connect to student, staff, or faculty outcomes?	
Time-Bound: What is your expected timeline?	
Inclusive: How will this include all groups, especially those that have	
Equitable: How will this address inequities or injustices?	
Potential Obstacles or Risks	
Strategies to Mitigate Those Risks	
Additional Questions or Action Steps to Advance This Goal	

Appendix B: Identifying Key Partners

It is recommended that each member of the project team complete this list on their own and then review responses as a group. This approach is to reduce the probability of bias or groupthink impacting how one might respond. It can also result in a more comprehensive list of partners you can tap into. If completed in a team meeting, each member should write their responses on sticky notes and place them on the board at the end to review all responses at one time. If completed asynchronously, each member should submit their list to a designated person and have that individual present the collective list at the next meeting for discussion.

Governing Bodies (i.e., Faculty Senate, Trustees, Academic Council, etc.)	Administrative Leaders	Faculty Members
Administrative Groups	Student Leaders	Alumni (this could include specific people or alumni groups)
External Stakeholders (i.e., government officials, local community members, etc.)	Student Organizations	Other

Appendix C: Mapping Belonging Initiatives

Working Definition: Belonging is a feeling of acceptance, integration, competence, and safety in a particular institutional community.

Subdomains include:

1. **Social Integration and Acceptance:** the feeling that peers and colleagues welcome and value you, that you have a place within a social network with meaningful connections
2. **Institutional Integration and Acceptance:** the feeling that institutional representatives recognize and appreciate you and your role
3. **Competence and Knowledge:** the feeling that you understand what is necessary to succeed in your role and have the resources and opportunities to succeed
4. **Psychological Comfort and Safety:** the feeling that you are safe to express yourself without undue judgment or discrimination

Social Integration and Acceptance

Initiatives that can contribute to social integration and acceptance are those that communicate one is valued and embraced on campus. They make people feel they are a part of a community and are not alone. Initiatives also provide access to building community and making meaningful connections with others on campus.

List below initiatives at your institution that can be mapped to social integration and acceptance.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Institutional Integration and Acceptance

Initiatives that can contribute to institutional integration and acceptance are those that communicate being seen and that communicate that your contribution to the institution and its mission are appreciated.

List below initiatives at your institution that can be mapped to institutional integration and acceptance.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Competence and Knowledge

Initiatives that can contribute to competence and knowledge are those that build confidence in how to thrive in the university environment. These initiatives may uncover the hidden curriculum of academia, provide resources to succeed, and reduce barriers to goal attainment.

List below initiatives at your institution that can be mapped to competence and knowledge.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Psychological Comfort and Safety

Initiatives that can contribute to psychological comfort and safety are those that communicate safety to be one's full self. They create safe and brave spaces for expression and dialogue and recognize the importance of overall well-being. Initiatives also communicate the institution's stance on bias, hate, and discrimination.

List below initiatives at your institution that can be mapped to psychological comfort and safety.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Appendix D:

Pilot Institutions and Teams

Central Washington University (CWU)

Beginning in 1891 as a teachers' college, CWU has continued its commitment to scholarship, public service, and student success. Each year, students graduate from CWU as well-educated citizens ready to move the world forward. The main campus is located in historic Ellensburg, Washington, and there are six satellite locations across the state. With 60 countries represented, CWU enrollment is over 8,500.

Implementation Team: Associate Dean of Graduate Studies; Associate Dean of the College of the Sciences; Executive Director of Federal Grants and College Assist Migrant Program; Executive Director of Institutional Effectiveness, Research, and Planning; Associate Professor of Psychology; Associate Professor, Sports and Movement Studies; Lecturer, Library; Associate Vice President of Equity and Belonging; Counseling Psychologist.

California State University, Fresno (Fresno State)

California State University, Fresno has roots dating back to 1911, when the doors of the Fresno State Normal School opened to 150 hopeful students. Today, the student population is about 24,000 and the university has garnered national attention for its rise in prestigious college rankings. With majors in 74 bachelor's, 49 postbaccalaureate, and three doctoral subject areas, California State University, Fresno has come a long way from its modest beginning. To date, more than 240,000 alumni have migrated to every state in the nation and across the globe.

Implementation Team: Provost, Associate Dean of Arts and Humanities, Vice Provost, Diversity Officer, Directors of Cultural Centers, Associate Vice President of Institutional Effectiveness.

University of Southern Indiana (USI)

Founded in 1965, USI enrolls nearly 9,500 dual credit, undergraduate, and graduate students in more than 130 areas of study. A public higher education institution, located on a beautiful 1,400-acre campus in Evansville, Indiana, USI offers programs through the College of Liberal Arts; Romain College of Business; Kinney College of Nursing and Health Professions; Pott College of Science, Engineering, and Education; and School of Graduate Studies.

Implementation Team: Vice Presidents of Student Affairs, Director of Disability Resources, Chief Data Officers, Assistant Dean of Students, Assistant Provost for Academic Affairs, Executive Director of Human Resources, Vice President for Strategic Enrollment, Writer for News and Information Services, and Faculty.

Western Carolina University (WCU)

WCU is a public university in Cullowhee, North Carolina, offering more than 115 undergraduate and 40 graduate programs. WCU's student body is composed of more than 11,000 students including more than 9,000 undergraduate students. WCU also operates an instructional site at Biltmore Park Towne Square in Asheville, where the university offers degree programs in nursing and engineering as well as graduate programs in accounting, business administration, entrepreneurship, and education.

Implementation Team: Vice Provost for Academic Affairs; Associate Dean/Associate Professor; Director of Student Success; Associate Professor, School of Health Sciences; Director of Counseling & Psychological Services; Executive Assistant to the Vice Provost.

University of Maryland Eastern Shore (UMES)

UMES was founded in 1886 by Methodist Episcopal Church elders as a private school on 16 acres in Princess Anne. Today, the university balances its heritage as a historically Black, public research institution that has grown into a 1,100-acre campus with a mission to serve a diverse student body representing nearly three dozen nations. UMES offers undergraduate degrees in 38 disciplines and another 16 distinctive graduate programs with an enrollment of nearly 3,000. The university provides today's college student ample opportunity to develop into a well-rounded individual capable of assuming leadership in society.

Implementation Team: Associate Vice President: Student Records & University Registrar, Executive Administrative Assistant, Vice President for Enrollment Management and Student Experience, Associate Vice President and Dean of Students, Associate Vice President of Recruitment and Student Success and Student Experience, Assistant Vice President of Admissions & Recruitment

Nevada State University (NSU)

Founded in September of 2002, accredited NSU is Nevada's first state college. At NSU, excellence fosters opportunity. Nestled at the foot of Mount Scorpion in Henderson, the 511-acre campus is rapidly developing to meet the growing student population and dynamic programs. Campus buildings house energy-efficient, 40-student or smaller classrooms, and the open community spaces forward sustainable principles with solar panels, xeriscaping, and an organic teaching garden that also serves the campus cafe. Student enrollment is over 7,000.

Implementation Team: Associate Vice Provost for Institutional Effectiveness, Vice Provost for Student Academic Success, Research Analysts, Coordinator for Student and Faculty Engagement, Assistant Professor, Student Life Coordinator, Executive Assistant.

Credit: University of Maryland Eastern Shore



APPENDIX E: SURVEY ITEM DATABASE

Psychological Sense of School Membership Scale | Goodenow (1993) | Used By: North Carolina Greensboro

	Not at all True				Completely True
1. I feel like part of my school.	1	2	3	4	5
2. People at my school notice when I am good at something.	1	2	3	4	5
3. It is hard for people like me to be accepted at my school.	1	2	3	4	5
4. Other students in my school take my opinions seriously.	1	2	3	4	5
5. Most teachers at my school are interested in me.	1	2	3	4	5
6. Sometimes I feel as if I don't belong in my school.	1	2	3	4	5
7. There is at least one teacher or adult I can talk to in my school if I have a problem.	1	2	3	4	5
8. People at my school are friendly to me.	1	2	3	4	5
9. Teachers here are not interested in people like me.	1	2	3	4	5
10. I am included in lots of activities at my school.	1	2	3	4	5
11. I am treated with as much respect as other students in my school.	1	2	3	4	5
12. I feel very different from most other students at my school.	1	2	3	4	5
13. I can really be myself at my school.	1	2	3	4	5
14. Teachers at my school respect me.	1	2	3	4	5
15. People at my school know that I can do good work.	1	2	3	4	5
16. I wish I were in a different school.	1	2	3	4	5
17. I feel proud to belong to my school.	1	2	3	4	5
18. Other students at my school like me the way that I am.	1	2	3	4	5

Sense of Belonging Instrument 57 | Hoffman et al (2002–2003)

Perceived Peer Support – 8 items	Completely Untrue	Mostly Untrue	Equally True & Untrue	Mostly True	Completely True
1. I have met with classmates outside of class to study for an exam.	1	2	3	4	5
2. If I miss class, I know students who I could get notes from.	1	2	3	4	5
3. I discuss events which happened outside of class with my classmates.	1	2	3	4	5
4. I have discussed personal matters with students who I met in class.	1	2	3	4	5
5. I could contact another student from class if I had a question.	1	2	3	4	5
6. Other students are helpful in reminding me when assignments are due or when tests are approaching.	1	2	3	4	5
7. I have developed personal relationships with other students in class.	1	2	3	4	5
8. I invite people I know from class to do things socially.	1	2	3	4	5
Perceived Classroom Comfort – 4 items	Completely Untrue	Mostly Untrue	Equally True & Untrue	Mostly True	Completely True
9. I feel comfortable contributing to class discussions.	1	2	3	4	5
10. I feel comfortable asking a question in class.	1	2	3	4	5
11. I feel comfortable volunteering ideas or opinions in class.	1	2	3	4	5
12. Speaking in class is easy because I feel comfortable.	1	2	3	4	5
Perceived Isolation – 4 items	Completely Untrue	Mostly Untrue	Equally True & Untrue	Mostly True	Completely True
13. It is difficult to meet other students in class.	1	2	3	4	5
14. No one in my classes knows anything personal about me.	1	2	3	4	5
15. I rarely talk to other students in my class.	1	2	3	4	5
16. I know very few people in my class.	1	2	3	4	5

Perceived Faculty Support - 10 items	Completely Untrue	Mostly Untrue	Equally True & Untrue	Mostly True	Completely True
17. I feel comfortable talking about a problem with faculty.	1	2	3	4	5
18. I feel comfortable asking a teacher for help if I do not understand course-related material.	1	2	3	4	5
19. I feel that a faculty member would be sensitive to my difficulties if I shared them.	1	2	3	4	5
20. I feel comfortable socializing with a faculty member outside of class.	1	2	3	4	5
21. I feel that a faculty member would be sympathetic if I was upset.	1	2	3	4	5
22. I feel that a faculty member would take the time to talk to me if I needed help.	1	2	3	4	5
23. If I had a reason, I would feel comfortable seeking help from a faculty member outside of class time (office hours etc.).	1	2	3	4	5
24. I feel comfortable seeking help from a teacher before or after class.	1	2	3	4	5
25. I feel that a faculty member really tried to understand my problem when I talked about it.	1	2	3	4	5
26. I feel comfortable asking a teacher for help with a personal problem.	1	2	3	4	5

University Belonging Questionnaire | Slaten et al. (2018)

University Affiliation	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I take pride in wearing my university's colors.	1	2	3	4
2. I tend to associate myself with my school.	1	2	3	4
3. One of the things I like to tell people is about my college.	1	2	3	4
4. I feel a sense of pride when I meet someone from my university off campus.	1	2	3	4
5. I would be proud to support my university in any way I can in the future.	1	2	3	4
6. I have university-branded material that others can see (pens, notebooks, bumper sticker, etc.).	1	2	3	4

University Affiliation (cont.)	Strongly Disagree	Disagree	Agree	Strongly Agree
7. I am proud to be a student at my university.	1	2	3	4
8. I attend university sporting events to support my university.	1	2	3	4
9. I feel "at home" on campus.	1	2	3	4
10. I feel like I belong to my university when I represent my school off campus.	1	2	3	4
11. I have found it easy to establish relationships at my university.	1	2	3	4
12. I feel similar to other people in my major.	1	2	3	4

University Support and Acceptance	Strongly Disagree	Disagree	Agree	Strongly Agree
13. My university provides opportunities to engage in meaningful activities.	1	2	3	4
14. I believe there are supportive resources available to me on campus.	1	2	3	4
15. My university environment provides me an opportunity to grow.	1	2	3	4
16. My university provides opportunities to have diverse experiences.	1	2	3	4
17. My cultural customs are accepted at my university.	1	2	3	4
18. The university I attend values individual differences.	1	2	3	4
19. I believe I have enough academic support to get me through college.	1	2	3	4
20. I am satisfied with the academic opportunities at my university.	1	2	3	4

Faculty and Staff Relations	Strongly Disagree	Disagree	Agree	Strongly Agree
21. I believe that a faculty/staff member at my university cares about me.	1	2	3	4
22. I feel connected to a faculty/staff member at my university.	1	2	3	4
23. I feel that a faculty/staff member has appreciated me.	1	2	3	4
24. I feel that a faculty member has valued my contributions in class.	1	2	3	4

College Student Experiences Questionnaire | Pace & Kuh (1998)

Relationships with Other Students	1 = Competitive, Uninvolved, Sense of Alienation				7 = Friendly, Supportive, Sense of Belonging		
1. Relationships with other students.	1	2	3	4	5	6	7

Sense of Belonging Instrument | B. Al-Sheeb, A.M. Hamouda, & G.M. Abdella (2018)

Sense of Belonging	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I feel part of college campus life.	1	2	3	4	5
2. I feel responsible for my own education and learning.	1	2	3	4	5
3. I feel capable to continue my academic studies.	1	2	3	4	5

Sense of Belonging Instrument | Jackson et al (2020)

Sense of Belonging	Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree
1. I feel valued as an individual at this school; I feel I belong at this school.	1	2	3	4	5
2. I have considered leaving this school because I felt isolated or unwelcomed.	1	2	3	4	5
3. This university is a place where I am able to perform up to my full potential.	1	2	3	4	5
4. I have found one or more communities or groups where I feel I belong at the school.	1	2	3	4	5

Sense of Belonging Survey | Kalendar et al (2019)

Sense of Belonging in Physics Classrooms	Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree
1. Sometimes I worry that I do not belong in this physics class (R).	1	2	3	4	5
2. Learning physics will help me get a job that I want.	1	2	3	4	5
3. I feel like I can be myself in this class.	1	2	3	4	5

Engagement Evaluation Questionnaire | Korhonen

Sense of Belonging	Strongly Disagree	Disagree	Kinda Disagree	Neither Agree/Disagree	Kinda Agree	Agree	Strongly Agree
1. I feel like I belong to the university.	1	2	3	4	5	6	7
2. I feel alienated from the university.	1	2	3	4	5	6	7

Sense of Belonging Instrument | Hagerty & Patusky

Psychological State	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I often wonder if there is any place on earth where I really fit in.	1	2	3	4
2. I am just not sure if I fit in with my friends.	1	2	3	4
3. I would describe myself as a misfit in most social situations.	1	2	3	4
4. I generally feel that people accept me.	1	2	3	4
5. I feel like a piece of a jig-saw puzzle that doesn't fit into the puzzle.	1	2	3	4
6. I would like to make a difference to people/things around me, but I don't feel that what I have to offer is valued.	1	2	3	4
7. I feel like an outsider in most situations.	1	2	3	4
8. I am troubled by feeling like I have no place in this world.	1	2	3	4
9. I could disappear for days and it wouldn't matter to my family.	1	2	3	4
10. In general, I don't feel a part of the mainstream of society.	1	2	3	4
11. I feel like I observe life rather than participate in it.	1	2	3	4
12. If I died tomorrow, very few people would come to my funeral.	1	2	3	4
13. I feel like a square peg trying to fit into a round hole.	1	2	3	4

Psychological State (cont.)	Strongly Disagree	Disagree	Agree	Strongly Agree
14. I don't feel that there is any place where I really fit in this world.	1	2	3	4
15. I am uncomfortable that my background and experiences are so different from those who are usually around me.	1	2	3	4
16. I could not see or call my friends for days and it wouldn't matter to them.	1	2	3	4
17. I feel left out of things.	1	2	3	4
18. I am not valued by or important to my friends.	1	2	3	4

Antecedents	Strongly Disagree	Disagree	Agree	Strongly Agree
1. It is important to me that I am valued or accepted by others.	1	2	3	4
2. In the past, I have felt valued and important to others.	1	2	3	4
3. It is important to me that I fit somewhere in this world.	1	2	3	4
4. I have qualities that can be important to others.	1	2	3	4
5. I am working on fitting in better with those around me.	1	2	3	4
6. I want to be a part of things going on around me.	1	2	3	4
7. It is important to me that my thoughts and opinions are valued.	1	2	3	4
8. Generally, other people recognize my strengths and good points.	1	2	3	4
9. I can make myself fit in anywhere.	1	2	3	4

General Belongingness Scale | Malone, Pillow, and Osman

Acceptance/Inclusion	Strongly Disagree	Disagree	Disagree a Little	Neither Agree/Disagree	Agree a Little	Agree	Strongly Agree
1. When I am with other people, I feel included.	1	2	3	4	5	6	7
2. I have close bonds with family and friends.	1	2	3	4	5	6	7
3. I feel accepted by others.	1	2	3	4	5	6	7
4. I have a sense of belonging.	1	2	3	4	5	6	7
5. I have a place at the table with others.	1	2	3	4	5	6	7
6. I feel connected with others.	1	2	3	4	5	6	7
Rejection/Exclusion	Strongly Disagree	Disagree	Disagree a Little	Neither Agree/Disagree	Agree a Little	Agree	Strongly Agree
1. I feel like an outsider.	1	2	3	4	5	6	7
2. I feel as if people do not care about me.	1	2	3	4	5	6	7
3. Because I do not belong, I feel distant during the holiday season.	1	2	3	4	5	6	7
4. I feel isolated from the rest of the world.	1	2	3	4	5	6	7
5. When I am with other people, I feel like a stranger.	1	2	3	4	5	6	7
6. Friends and family do not involve me in their plans.	1	2	3	4	5	6	7

Sense of Social and Academic Fit | Walton & Cohen

Social and Academic Fit	Strongly Disagree	Disagree	Disagree a Little	Neutral	Agree a Little	Agree	Strongly Agree
1. People at [school name] accept me.	1	2	3	4	5	6	7
2. I feel like an outsider at [school name].	1	2	3	4	5	6	7

Social and Academic Fit (cont.)	Strongly Disagree	Disagree	Disagree a Little	Neutral	Agree a Little	Agree	Strongly Agree
3. People at [school name] accept me.	1	2	3	4	5	6	7
4. I feel like an outsider at [school name].	1	2	3	4	5	6	7
5. Other people understand more than I do about what is going on at [school name].	1	2	3	4	5	6	7
6. I think in the same way as do people who do well at [school name].	1	2	3	4	5	6	7
7. It is a mystery to me how [school name] works.	1	2	3	4	5	6	7
8. I feel alienated from [school name].	1	2	3	4	5	6	7
9. I fit in well at [school name].	1	2	3	4	5	6	7
10. I am similar to the kind of people who succeed at [school name].	1	2	3	4	5	6	7
11. I know what kind of people [school name] professors are.	1	2	3	4	5	6	7
10. I get along well with people at [school name].	1	2	3	4	5	6	7
11. I belong at [school name].	1	2	3	4	5	6	7
12. I know how to do well at [school name].	1	2	3	4	5	6	7
13. I do not know what I would need to do to make a [school name] professor like me.	1	2	3	4	5	6	7
14. I feel comfortable at [school name].	1	2	3	4	5	6	7
15. People at [school name] like me.	1	2	3	4	5	6	7
16. If I wanted to, I could potentially do very well at [school name].	1	2	3	4	5	6	7
17. People at [school name] are a lot like me.	1	2	3	4	5	6	7

Belonging Uncertainty	Strongly Disagree	Disagree	Disagree a Little	Neutral	Agree a Little	Agree	Strongly Agree
1. Sometimes I feel that I belong at [college name], and sometimes I feel that I don't belong.	1	2	3	4	5	6	7
2. When something bad happens, I feel that maybe I don't belong at [college name].	1	2	3	4	5	6	7
3. When something good happens, I feel that I really belong at [college name].	1	2	3	4	5	6	7

Prospective Belonging Uncertainty	Not at All True	Slightly True	Somewhat True	Very True	Completely True
1. Sometimes I worry that I will not belong in college.	1	2	3	4	5
2. I am anxious that I will fit in at college.	1	2	3	4	5
3. I feel confident that I will belong in college (reverse-coded).	1	2	3	4	5
4. When I face difficulties in high school, I wonder if I will really fit in when I get to college.	1	2	3	4	5

HEDS

Satisfaction with the Following at [Institution Name]	Very Satisfied	Generally Satisfied	Neither Satisfied/Dissatisfied	Generally Dissatisfied	Very Dissatisfied
1. The extent to which you experience a sense of belonging or community at [Institution Name].	1	2	3	4	5
2. The extent to which you feel all community members experience a sense of belonging or community at [Institution Name].	1	2	3	4	5

NSSE

Sense of Belonging Items	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I feel comfortable being myself at this institution.	1	2	3	4
2. I feel valued by this institution.	1	2	3	4
3. I feel like part of the community at this institution.	1	2	3	4

Sense of Belonging Items	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I feel a sense of belonging to this campus.	1	2	3	4

Departmental Sense of Belonging and Involvement | Knekta, Chatzikyriakidou, & McCartney (2020)

Sense of Belonging Items	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. People in the _____ department notice when I'm good at something.	1	2	3	4	5	6
2. Faculty and staff in the _____ department value my opinions.	1	2	3	4	5	6
3. Other students in the _____ department take my opinions seriously.	1	2	3	4	5	6
4. Most faculty and staff in the _____ department are interested in me.	1	2	3	4	5	6
5. There is at least one instructor or other faculty or staff in the _____ department I can talk to if I have a problem.	1	2	3	4	5	6
6. People in the _____ department are friendly to me.	1	2	3	4	5	6
7. Students in the _____ department help each other to succeed.	1	2	3	4	5	6
8. I am treated with as much respect as other students.	1	2	3	4	5	6
9. I have a good relationship with other students in the _____ department.	1	2	3	4	5	6
10. I can really be myself in the _____ department.	1	2	3	4	5	6
11. The faculty and staff in the _____ department respect me.	1	2	3	4	5	6
12. People in the _____ department know I can do good work.	1	2	3	4	5	6
13. The instructors in the _____ department give me compliments when I do something good.	1	2	3	4	5	6
14. I feel proud of belonging to the _____ department.	1	2	3	4	5	6
15. Other students in the _____ department like me the way I am.	1	2	3	4	5	6
16. Faculty and staff in the _____ department really want me to succeed.	1	2	3	4	5	6

General Belongingness	Almost Always	Sometimes	Never
1. I feel accepted by others.	1	2	3
2. I have a sense of belonging.	1	2	3
3. I feel I am respected by others in my age group.	1	2	3
4. I feel connected with others.	1	2	3
5. I have close bonds with family and friends.	1	2	3
6. I feel like an outsider.	1	2	3
7. I feel as if people do not care about me.	1	2	3
8. Because I do not belong, I feel distant during group gatherings.	1	2	3

School Belongingness	Almost Always	Sometimes	Never
1. How well do you feel connected to the students in your school?	1	2	3
2. How well do you feel connected to the teachers in your school?	1	2	3
3. How welcoming do you feel about your school as a whole?	1	2	3
4. Do students feel themselves valued at school?	1	2	3
5. How much respect do students at your school show you?	1	2	3
6. How happy are you when you are at your school?	1	2	3
7. How "at home" do you feel when you are at your school?	1	2	3
8. Overall, how much do you feel you belong at your school?	1	2	3

Sense of Community Index | Krafona

General Belongingness

	True	False
1. I think my university is a good place for me to live.	True	False
2. People in this university do not share the same values.	True	False
3. My colleagues and I want the same things from the university.	True	False
4. I can recognize most of the people who live in my university.	True	False
5. I feel at home in this university.	True	False
6. Very few of my colleagues know me.	True	False
7. I care about what my colleagues think of my actions.	True	False
8. I have no influence over what this university is like.	True	False
9. If there is a problem in this university people who live here can get it solved.	True	False
10. It is very important to me to live in this particular university.	True	False
11. People in this university generally don't get along with each other.	True	False
12. I expect to live in this university for a long time.	True	False

Sense of Belonging Scale | Anderson-Butcher & Conroy

Commitment

	NO!	No	Yes	YES!
1. I wish I were not a part of the program.	1	2	3	4
2. I am committed to the program.	1	2	3	4

Connectedness	NO!	No	Yes	YES!
1. I don't have many friends at the program.	1	2	3	4
2. The leaders at the program make me feel wanted and accepted.	1	2	3	4
3. I am disliked by kids at the program.	1	2	3	4
4. I am part of the program.	1	2	3	4
5. I am accepted at the program.	1	2	3	4
Engagement	NO!	No	Yes	YES!
1. I feel comfortable at the program.	1	2	3	4
2. I feel like I am an important member of the program.	1	2	3	4
3. I am supported at the program.	1	2	3	4

Perceived Cohesion Scale (Sense of Belonging Dimension Only) | Bollen & Hoyle

Sense of Belonging

1. I feel a sense of belonging to _____.
2. I feel that I am a member of the community _____.
3. I see myself as part of the community _____.

Adapted University Attachment Scale | France et al (2010) | Used By: James Madison University

Attachment to the University

1. How often do you acknowledge the fact that you are a member of JMU?	Never	Rarely	About Half the Time	Most of the Time	Always
2. How accurate would it be to describe you as a typical JMU student?	Not at all Accurate	Slightly	Moderately	Very	Extremely Accurate

Attachment to the University (cont.)

3. How important is belonging to JMU to you?	Not at all Important	Slightly	Moderately	Very	Extremely Important
4. How good would you feel if you were described as a typical JMU student?	Not at all Good	Slightly	Moderately	Very	Extremely Good
5. When you first meet people, how likely are you to mention JMU?	Not at all	Slightly	Moderately	Very	Extremely Likely
6. How attached do you feel to JMU?	Not at all	Slightly	Moderately	Very	Extremely

Attachment to the Members of the University

1. How close do you feel to other members of the JMU community?	Not at all Close	Slightly	Moderately	Very	Extremely Close
2. To what extent have members of JMU influenced your thoughts and behaviors?	Not at all	Slightly	Moderately	Very	Extremely
3. How many of your close friends come from JMU?	None	Few	About Half	Most	All

Belonging Survey (in General Chemistry Classroom) | Fink et al (2020)

Perceived Belonging	Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1. I feel like I fit.	1	2	3	4	5	6
Students' Social Relationships and their Overall Feeling of Fit in the Target Course	Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1. I feel comfortable with my peers and classmates.	1	2	3	4	5	6
2. I feel comfortable with my instructors.	1	2	3	4	5	6
3. Setting aside my performance, I feel like I belong.	1	2	3	4	5	6
Belonging Uncertainty	Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1. I feel uncertain about my belonging.	1	2	3	4	5	6
2. If I don't perform, I feel like maybe I don't belong.	1	2	3	4	5	6

Program for International Student Assessment: Student Common Part Questionnaire | OECD

Sense of Belonging	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I feel like an outsider (or left out of things) at school.	1	2	3	4
2. I make friends easily at school.	1	2	3	4
3. I feel like I belong at school.	1	2	3	4
4. I feel awkward and out of place in my school.	1	2	3	4
5. Other students seem to like me.	1	2	3	4
6. I feel lonely at school.	1	2	3	4

Student Sense of Connectedness Scale | Brew et al

Belonging/Acceptance with Peers	Strongly Disagree	Disagree	Agree	Strongly Agree
1. At school, I feel comfortable sharing thoughts, opinions, and feelings with peers.	1	2	3	4
2. I feel like a real part of the school.	1	2	3	4
3. I can be myself at this school.	1	2	3	4
4. I feel welcome to participate in extra curricular school activities.	1	2	3	4
5. People at this school notice when I am good at something.	1	2	3	4
6. At this school, I experience a sense of belonging.	1	2	3	4
Relatedness of Self with School	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I make it a priority to contribute to my school and a positive positive way.	1	2	3	4
2. My school is preparing me well for the world of work.	1	2	3	4

Relatedness of Self with School (cont.)	Strongly Disagree	Disagree	Agree	Strongly Agree
3. At this school, I experience a sense of belonging.	1	2	3	4
4. I care about my school.	1	2	3	4
5. School offers learning opportunities that interest me.	1	2	3	4
6. What I learn in school is relevant to my future.	1	2	3	4
7. It is important to participate in extracurricular school.	1	2	3	4
8. I can succeed in this school.	1	2	3	4

Sense of Belonging and Perceived Faculty Support Index | Crowe (2021)

Sense of Belonging & Perceived Faculty Support	Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree
1. I feel like if I were struggling in one or more of my courses, I would feel comfortable talking with at least one faculty member on how to get back on track.	1	2	3	4	5
2. I feel like I could talk to at least one faculty member in my major about problems that I may have that are non-academic in nature.	1	2	3	4	5
3. I feel like fellow majors and myself are a tight-knit group.	1	2	3	4	5
4. I associate with other majors outside of class-time.	1	2	3	4	5
5. Some of my best friends have the same major as me.	1	2	3	4	5
6. Faculty want students to succeed.	1	2	3	4	5
7. Most faculty in my major know me by name.	1	2	3	4	5
8. I generally feel comfortable expressing my ideas in class.	1	2	3	4	5
9. Faculty in my major treat students the same regardless of a student's sex.	1	2	3	4	5
10. Faculty in my major treat students the same regardless of a student's race or ethnicity.	1	2	3	4	5

Peer Belonging and Institutional Acceptance | Dumford et al

Institutional Acceptance	Strongly Disagree	Disagree	Agree	Strongly Agree
1. No one would notice if you missed class.	1	2	3	4
2. It is easy to get involved with student clubs, and organizations at this institution.	1	2	3	4
3. Your faculty got to know you and your background.	1	2	3	4
4. This institution treats students like individual people instead of just numbers.	1	2	3	4
Peer Belonging	Strongly Disagree	Disagree	Agree	Strongly Agree
1. You fit in with the other students at your institution.	1	2	3	4
2. It is difficult to make friends at this institution.	1	2	3	4
3. You have very few friends or acquaintances at this institution.	1	2	3	4
4. There are other students at this institution who share your views and beliefs.	1	2	3	4

Daily Sense of Belonging | Gillen- O'Neel

Sense of Belonging

1. I fit in at my college/university.	I do NOT Fit in	2	3	4	5	6	I Definitely Fit in
2. I am welcome at my college/university.	NOT Welcomed	2	3	4	5	6	Very Welcomed
3. I felt like a real part of my school today.	Not at All	2	3	4	5	6	Extremely

1-Item Sense of Belonging | Glencross et al

Sense of Belonging

1. I have a sense of belonging at [name of university].	Strongly Disagree	2	3	4	Strongly Agree
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University Environment Scale | Gloria & Robinson-Kurpius

	Not at All						Very True
1. Class sizes are so large that I feel like a number.	1	2	3	4	5	6	7
2. The library staff is willing to help me find materials/books.	1	2	3	4	5	6	7
3. University staff have been warm and friendly.	1	2	3	4	5	6	7
4. I do not feel valued as a student on campus.	1	2	3	4	5	6	7
5. Faculty have not been available to discuss my academic concerns.	1	2	3	4	5	6	7
6. Financial Aid has been willing to help me with financial aid concerns.	1	2	3	4	5	6	7
7. The university encourage/sponsors, ethnic groups on campus.	1	2	3	4	5	6	7
8. There are tutoring services available for me on campus.	1	2	3	4	5	6	7
9. The university seems to value minority students.	1	2	3	4	5	6	7
10. Faculty have been available for help outside of class.	1	2	3	4	5	6	7
11. The university seems like a cold, uncaring place to me.	1	2	3	4	5	6	7
12. Faculty have been available to help me make choices.	1	2	3	4	5	6	7
13. I feel as if no one cares about me personally on this campus.	1	2	3	4	5	6	7
14. I feel comfortable in the university environment.	1	2	3	4	5	6	7

When I am in a Math Setting	Strongly Disagree					Strongly Agree
1. I feel that I belong to the math community.	1	2	3	4	5	6
2. I consider myself a member of the math world.	1	2	3	4	5	6
3. I feel like I am part of the math community.	1	2	3	4	5	6
4. I feel a connection with the math community.	1	2	3	4	5	6
5. I feel like an outsider.	1	2	3	4	5	6
6. I feel accepted.	1	2	3	4	5	6
7. I feel respected.	1	2	3	4	5	6
8. I feel disregarded.	1	2	3	4	5	6
9. I feel valued.	1	2	3	4	5	6
10. I feel neglected.	1	2	3	4	5	6
11. I feel appreciated.	1	2	3	4	5	6
12. I feel excluded.	1	2	3	4	5	6
13. I feel like I fit in.	1	2	3	4	5	6
14. I feel insignificant.	1	2	3	4	5	6
15. I feel at ease.	1	2	3	4	5	6
16. I feel anxious.	1	2	3	4	5	6
17. I feel comfortable.	1	2	3	4	5	6
18. I feel tense.	1	2	3	4	5	6

When I am in a Math Setting (cont.)	Strongly Disagree					Strongly Agree
19. I feel nervous.	1	2	3	4	5	6
20. I feel content.	1	2	3	4	5	6
21. I feel calm.	1	2	3	4	5	6
22. I feel inadequate.	1	2	3	4	5	6
23. I wish I could fade into the background and not be noticed.	1	2	3	4	5	6
24. I try to say as little as possible.	1	2	3	4	5	6
25. I enjoy being an active participant.	1	2	3	4	5	6
26. I wish I were invisible.	1	2	3	4	5	6
27. I trust the testing materials to be unbiased.	1	2	3	4	5	6
28. I have trust that I do not have to constantly prove myself.	1	2	3	4	5	6
29. I trust my instructors to be committed to helping me learn.	1	2	3	4	5	6
30. Even when I do poorly, I trust my instructors to have faith in my potential.	1	2	3	4	5	6

Student Engagement Scale/Campus Engagement | Gunuc & Kuzu

Sense of Belonging - Psychological Engagement-II

1. I feel myself as a part of the campus.
2. Campus is an entertaining place.
3. I enjoy the activities carried out on campus.
4. I feel happy on campus.
5. I like spending time on campus.

Sense of Belonging - Psychological Engagement-II (cont.)

1. I have close friends on campus.
2. I feel secure on campus.
3. My friends on campus are always near me when I need them.
4. I like communicating with other students on campus.
5. Campus staff help me when I need them.

Affective Survey | Hall et al

Time Management, Focus, & Study Environment	Disagree	Somewhat Disagree	Not Sure	Somewhat Agree	Agree
1. I understand the lecture material in the courses for my major.	1	2	3	4	5
2. I take excellent notes.	1	2	3	4	5
3. I complete the assigned readings for all my courses before class.	1	2	3	4	5
4. I do not procrastinate when it comes to school work.	1	2	3	4	5
5. I am confident in my ability to write papers/lab reports.	1	2	3	4	5
6. I know how to study for courses in my major.	1	2	3	4	5
7. I attend all my classes regularly.	1	2	3	4	5
8. I can easily focus on what I need to do academically.	1	2	3	4	5
9. I am definitely in the major.	1	2	3	4	5
10. I do not need extra help in courses for my major.	1	2	3	4	5
11. When I am struggling in a class, I visit my professor during office hours.	1	2	3	4	5
12. When I am struggling in a class, I visit learning comments and/or the writing center for tutoring.	1	2	3	4	5
13. I have a dedicated study space without distractions.	1	2	3	4	5
14. I have an appropriate balance between academics and social and extracurricular activities.	1	2	3	4	5

Student Engagement and Sense of Belonging	Disagree	Somewhat Disagree	Not Sure	Somewhat Agree	Agree
1. I easily meet people and make friends on my own.	1	2	3	4	5
2. I have friends in my major.	1	2	3	4	5
3. I feel connected to the campus community.	1	2	3	4	5
4. I have a group of people I can depend upon on campus.	1	2	3	4	5
5. I belong at Saint John's University.	1	2	3	4	5

Healthy Minds Survey | Jackson et al

Sense of Belonging	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1. I feel valued as an individual at this school.	1	2	3	4	5	6
2. I feel I belong at this school.	1	2	3	4	5	6
3. I have considered leaving this school because I felt isolated or unwelcomed.	1	2	3	4	5	6
4. This university is a place where I am able to perform up to my full potential.	1	2	3	4	5	6
5. I have found one or more communities or groups where I feel I belong at the school.	1	2	3	4	5	6

Physics Motivational Survey | Kalendar et al

Physics Sense of Belonging	Not at all True	A Little True	Somewhat True	Mostly True	Completely True
1. I feel like an outsider in this class.	1	2	3	4	5
2. I feel comfortable in this class.	1	2	3	4	5
3. I feel like I can be myself in this class.	1	2	3	4	5
4. Sometimes I worry that I do not belong in this physics class.	1	2	3	4	5
5. When I get a poor grade on a physics assignment or exam, I feel that maybe I don't belong in a physics class.	1	2	3	4	5

Value of Physics	Strongly Disagree	Disagree	Agree	Strongly Agree
1. Learning physics will help me in courses in my major.	1	2	3	4
2. Learning physics will help me achieve admission into graduate school and/or medical school.	1	2	3	4
3. Learning physics will help me get a job that I want.	1	2	3	4
4. Learning physics will help me succeed in my future career.	1	2	3	4
5. I see myself as a physics person.	1	2	3	4
6. My family sees me as a physics person.	1	2	3	4
7. My friends see me as a physics person.	1	2	3	4
8. My physics instructor and/or TA sees me as a physics person.	1	2	3	4
Interest In Physics	NO!	No	Yes	YES!
1. I want to know everything I can about physics.	1	2	3	4
2. I am curious about recent discoveries in physics.	1	2	3	4
3. I want to know about the current research that physicists are doing.	1	2	3	4
4. I am able to help my classmates with physics in the laboratory or in recitation.	1	2	3	4
5. I understand concepts I have studied in physics.	1	2	3	4
6. If I wanted to, I could be good at physics research.	1	2	3	4
7. If I study, I will do well on a physics test.	1	2	3	4
8. If I encounter a setback in a physics exam, I can overcome it.	1	2	3	4

Physics Identity

1. In general, I find physics.	Very Boring	Boring	Interesting	Very Interesting
2. I wonder about how physics works.	Never	Once a Month	Once a Week	Everyday

The Belonging to the University Scale | Karaman et al

Belonging Identification	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I can Easily state all kinds of thoughts at the university.	1	2	3	4	5
2. I express myself easily at the university.	1	2	3	4	5
3. My thoughts are valued in the university.	1	2	3	4	5
4. My problems at the university are solved by the authorities.	1	2	3	4	5
Belonging Motivation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5. I feel that I am hindered at the university.	1	2	3	4	5
6. I don't think they understand me at the university.	1	2	3	4	5
7. I am anxious when it is time to go to the university.	1	2	3	4	5
8. I regret that I chose this university.	1	2	3	4	5
9. This university is unfair.	1	2	3	4	5
Belonging Expectation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Free time passes well at the university.	1	2	3	4	5
2. Social activities at the university meet my expectations.	1	2	3	4	5

Belonging Expectation (cont.)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3. I can fulfill various wishes at the university.	1	2	3	4	5
4. I am proud to be a student of this university.	1	2	3	4	5
5. I feel I am valuable at the university.	1	2	3	4	5

Engagement Evaluation Questionnaire | Korhonen et al

Meaning of Studies	Strongly Disagree						Strongly Agree
1. My current studies support my self-development.	1	2	3	4	5	6	7
2. I am enthusiastic about my university studies.	1	2	3	4	5	6	7

Participation	Strongly Disagree						Strongly Agree
1. I don't really know the other students in my subject.	1	2	3	4	5	6	7
2. I maintain contacts with other students at university.	1	2	3	4	5	6	7

Social Practices	Strongly Disagree						Strongly Agree
1. My studies encompass a lot of work in small groups under the supervision of teachers.	1	2	3	4	5	6	7
2. I feel that my studies are a pretty solitary enterprise.	1	2	3	4	5	6	7

Academic Skills	Strongly Disagree						Strongly Agree
1. I make clear timetables for my studies.	1	2	3	4	5	6	7
2. I regularly do something to advance my studies, even though studying may sometimes feel boring, stressful or difficult.	1	2	3	4	5	6	7

Learning Identity	Strongly Disagree						Strongly Agree
1. I fit in well as a university student.	1	2	3	4	5	6	7
2. I have personally found an appropriate way to study and learn at university.	1	2	3	4	5	6	7

Sense of Belonging	Strongly Disagree						Strongly Agree
1. I feel like I belong to the university.	1	2	3	4	5	6	7
2. I feel alienated from the university.	1	2	3	4	5	6	7

Social Connectedness and Social Assurance Scales | Lee & Robbins

Social Assurance

1. I feel more comfortable when someone is constantly with me.
2. I'm doing things together with other people.
3. Working side-by-side with others is more comfortable than working alone.
4. My life is incomplete without a buddy beside me.
5. It's hard for me to use my skills and pets without someone beside me.
6. I stick my friends like glue.
7. I join groups more for the friendship than the activity itself.
8. I wish to find someone who can be with me all the time.

Social Connectedness

1. I feel disconnected from the world around me.
2. Even around people, I know, I don't feel that I really belong.
3. I feel so distant from people.
4. I have no sense of togetherness with my peers.

Social Connectedness (cont.)

5. I don't feel related to anyone.
6. I catch myself losing all sense of society.
7. Even among my friends, there is no sense of brother/sisterhood.
8. I don't feel I participate with anyone or any group.

Collegiate Psychological Sense of Community Scale | Lounsbury & De Neu

Psychological Sense of Community	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I really feel like I belong here.	1	2	3	4	5
2. There is a sociable atmosphere on campus.	1	2	3	4	5
3. I wish I had gone to another college instead of this one. (R)	1	2	3	4	5
4. Students feel they can get help if they are in trouble.	1	2	3	4	5
5. I would recommend this college to students in my high school.	1	2	3	4	5
6. My parents like this college.	1	2	3	4	5
7. There is a strong feeling of togetherness on campus.	1	2	3	4	5
8. I someday plan to give alumni contributions to this college.	1	2	3	4	5
9. I really enjoy going to school here.	1	2	3	4	5
10. Students here really care about what happens to this college.	1	2	3	4	5
11. I feel very attached to this college.	1	2	3	4	5
12. Campus life is very stimulating.	1	2	3	4	5
13. If I am/were going to college next year, I would go here.	1	2	3	4	5
14. There is a real sense of community here.	1	2	3	4	5

Formal Teacher Interaction	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Teachers approach me to enquire about my study progress.	1	2	3	4	5
2. Teachers are available for their students.	1	2	3	4	5
3. Teachers know my qualities.	1	2	3	4	5
4. Teachers have time to answer questions.	1	2	3	4	5
5. Teachers don't realize when you have a question (reverse scored).	1	2	3	4	5
6. My contacts with teachers have a positive influence on my academic performance.	1	2	3	4	5
7. I learn a lot from the teachers at this institution.	1	2	3	4	5
8. Teachers are not interested in my personal situation (reverse scored).	1	2	3	4	5
9. Teachers tell me about themselves.	1	2	3	4	5
10. Teachers say hello when we meet on campus.	1	2	3	4	5
11. Teachers don't know much about my personal situation (reverse scored).	1	2	3	4	5
12. Teachers know my name.	1	2	3	4	5
13. Teachers never ask me how things are going at home (reverse scored).	1	2	3	4	5
14. I talk about my personal situation with teachers.	1	2	3	4	5
15. I have good personal contacts with at least one teacher.	1	2	3	4	5
Formal Peer Interaction	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Fellow students invite me to work together on school tasks.	1	2	3	4	5
2. It is difficult to find a group of students to collaborate with (reverse scored).	1	2	3	4	5
3. In this program, students work on their own.	1	2	3	4	5
4. Peer students approach me to discuss study tasks.	1	2	3	4	5

Formal Peer Interaction (cont.)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5. Peer students do not appreciate my feedback (reverse scored).	1	2	3	4	5
6. Peer students listen to my remarks.	1	2	3	4	5
7. I collaborate well with fellow students.	1	2	3	4	5
8. My interpersonal relationships with fellow students have a positive influence on my study performance.	1	2	3	4	5

Informal Peer Interaction	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I hardly know anyone here (reverse scored).	1	2	3	4	5
2. Fellow students are interested in me.	1	2	3	4	5
3. Fellow students often ask me to spend time with them.	1	2	3	4	5
4. Peer students are involved with me.	1	2	3	4	5
5. I have close interpersonal relationships with fellow students.	1	2	3	4	5

Sense of Belonging	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I feel at home at this university.	1	2	3	4	5
2. I enjoy the atmosphere of this university.	1	2	3	4	5

Integration and Sense of Belonging | Scrivener

Integration and Sense of Belonging	Strongly Disagree	Disagree	Agree	Strongly Agree
1. College is an unfriendly place.	1	2	3	4
2. I do not feel that I fit in or belong in college.	1	2	3	4
3. The instructors and staff understand who I am and where I am coming from.	1	2	3	4

Integration and Sense of Belonging (cont.)	Strongly Disagree	Disagree	Agree	Strongly Agree
4. It is difficult to make good friends with other students.	1	2	3	4
5. The other students do not understand who I am and where I am coming from.	1	2	3	4
6. College has the feeling of a community, where many people share the same goals and interests.	1	2	3	4
7. Many people at college know me by name.	1	2	3	4
8. I do not feel I am part of college life.	1	2	3	4
9. I feel that I matter to the college instructors, staff, and other students.	1	2	3	4

General Chemistry Belonging | Davis

Acceptance

1. I feel accepted.
2. I feel respected.
3. I feel valued.
4. I feel appreciated.
5. I feel disregarded.
6. I feel neglected.
7. I feel excluded.
8. I feel insignificant.

Membership

1. I feel that I belong to the Chem 105 community.
2. I feel that I am a member of the Chem 105 community.
3. I feel like I am a part of the Chem 105 community.
4. I feel a connection with the Chem 105 community.

School Belonging and Socioemotional Flourishing | Parr et al

School Belonging	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1. I feel isolated from campus life.	1	2	3	4	5	6
2. Other people understand more than I do about what is going on at my school.	1	2	3	4	5	6
3. I fit in well at my school.	1	2	3	4	5	6
4. I see myself as as a part of the campus community.	1	2	3	4	5	6

Academic and Social Integration/ Persistence/Voluntary Dropout Decisions Scale | Pascarella & Terenzini

Scale I: Peer-Group Interactions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Since coming to this university I have developed close personal relationships with other students.	1	2	3	4	5
2. The student friendships I have developed at this university have been personally satisfying.	1	2	3	4	5
3. My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.	1	2	3	4	5
4. My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas.	1	2	3	4	5
5. It has been difficult for me to meet and make friends with other students.	1	2	3	4	5
6. Few of the students I know would be willing to listen to me and help me if I had a personal problem.	1	2	3	4	5
7. Most students at this university have values and attitudes different from my own.	1	2	3	4	5

Scale II: Interactions with Faculty	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.	1	2	3	4	5
2. My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.	1	2	3	4	5
3. My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations.	1	2	3	4	5
4. Since coming to this university I have developed a close, personal relationship with at least one faculty member.	1	2	3	4	5
5. I am satisfied with the opportunities to meet and interact informally with faculty members.	1	2	3	4	5
Scale III: Faculty Concern for Student Development and Teaching	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Few of the faculty members I have had contact with are generally interested in students.	1	2	3	4	5
2. Few of the faculty members I have had contact with are generally outstanding or superior teachers.	1	2	3	4	5
3. Few of the faculty members I have had contact with are willing to spend time out- side of class to discuss issues of interest and importance to students.	1	2	3	4	5
4. Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas.	1	2	3	4	5
5. Most faculty members I have had contact with are genuinely interested in teaching.	1	2	3	4	5
Scale IV: Academic and Intellectual Development	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I am satisfied with the extent of my intellectual development since enrolling in this university.	1	2	3	4	5
2. My academic experience has had a positive influence on my intellectual growth and interest in ideas.	1	2	3	4	5
3. I am satisfied with my academic experience at this university.	1	2	3	4	5
4. Few of my courses this year have been intellectually stimulating.	1	2	3	4	5
5. My interest in ideas and intellectual matters has increased since coming to this university.	1	2	3	4	5
6. I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university.	1	2	3	4	5
7. I have performed academically as well as I anticipated I would.	1	2	3	4	5

Scale V: Institutional and Goal Commitments	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. It is important for me to graduate from college.	1	2	3	4	5
2. I am confident that I made the right decision in choosing to attend this university.	1	2	3	4	5
3. It is likely that I will register at this university next fall.	1	2	3	4	5
4. It is not important to me to graduate from this university.	1	2	3	4	5
5. I have no idea at all what I want to major in.	1	2	3	4	5
6. Getting good grades is not important to me.	1	2	3	4	5

Student Satisfaction Inventory | RNL

An Expectation About Your Experiences with this Program

1 = Not Important at All — — — — — 7 = Very Important
1 = Not Satisfied at All — — — — — 7 = Very Satisfied

1. Most students feel a sense of belonging here.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
2. The campus staff are caring and helpful.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
3. Faculty care about me as an individual.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
4. Admissions staff are knowledgeable.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
5. Financial aid counselors are helpful.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
6. My academic advisor is approachable.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
7. The campus is safe and secure for all students.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
8. The content of the courses within my major is valuable.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7

**An Expectation About Your Experiences
with this Program (cont.)**

1 = Not Important at All — — — — — — — — — 7 = Very Important
1 = Not Satisfied at All — — — — — — — — — 7 = Very Satisfied

9. A variety of intramural activities are offered.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
10. Administrators are approachable to students.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
11. Billing policies are reasonable.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
12. Financial aid awards are announced to students in time to be helpful in college planning.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
13. Library staff are helpful and approachable.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
14. My academic advisor is concerned about my success as an individual.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
15. The staff in the health services area are competent.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
16. The instruction in my major field is excellent.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
17. Adequate financial aid is available for most students.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
18. Library resources and services are adequate.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
19. My academic advisor helps me set goals to work toward.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
20. The business office is open during hours which are convenient for most students.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
21. The amount of student parking space on campus is adequate.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
22. Counseling staff care about students as individuals.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7

**An Expectation About Your Experiences
with this Program (cont.)**

1 = Not Important at All — — — — — — — — — 7 = Very Important
1 = Not Satisfied at All — — — — — — — — — 7 = Very Satisfied

23. Living conditions in the residence halls are comfortable (adequate space, lighting, heat, air etc.).	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
24. The intercollegiate athletic programs contribute to a strong sense of school spirit.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
25. Faculty are fair and unbiased in their treatment of individual students.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
26. Computers and/or Wi-Fi are adequate and accessible.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
27. The personnel involved in registration are helpful.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
28. Parking lots are well-lighted and secure.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
29. It is an enjoyable experience to be a student on this campus.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
30. Residence hall staff are concerned about me as an individual.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
31. Males and females have equal opportunities to participate in intercollegiate athletics.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
32. Tutoring services are readily available.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
33. My academic advisor is knowledgeable about requirements in my major.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
34. I am able to register for classes I need with few conflicts.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
35. The assessment and course placement procedures are reasonable.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
36. Security staff respond quickly in emergencies.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7

**An Expectation About Your Experiences
with this Program (cont.)**

1 = Not Important at All — — — — — — — — — 7 = Very Important
1 = Not Satisfied at All — — — — — — — — — 7 = Very Satisfied

37. I feel a sense of pride about my campus.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
38. There is an adequate selection of food available in the cafeteria.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
39. I am able to experience intellectual growth here.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
40. Residence hall regulations are reasonable.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
41. There is a commitment to academic excellence on this campus.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
42. There are a sufficient number of weekend activities for students.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
43. Admissions counselors respond to prospective students' unique needs and requests.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
44. Academic support services adequately meet the needs of students.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
45. Students are made to feel welcome on this campus.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
46. I can easily get involved in campus organizations.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
47. Faculty provide timely feedback about student progress in a course.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
48. Admissions counselors accurately portray the campus in their recruiting practices.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
49. There are adequate services to help me decide upon a career.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
50. Class change (drop/add) policies are reasonable.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7

An Expectation About Your Experiences with this Program (cont.)

1 = Not Important at All — — — — — — — — — 7 = Very Important
1 = Not Satisfied at All — — — — — — — — — 7 = Very Satisfied

51. This institution has a good reputation within the community.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
52. The student center is a comfortable place for students to spend their leisure time.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
53. Faculty take into consideration student differences as they teach a course.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
54. Bookstore staff are helpful.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
55. Major requirements are clear and reasonable.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
56. The student handbook provides helpful information about campus life.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
57. I seldom get the "run-around" when seeking information on this campus.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
58. The quality of instruction I receive in most of my classes is excellent.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
59. This institution shows concern for students as individuals.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
60. I generally know what's happening on campus.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
61. Adjunct faculty are competent as classroom instructors.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
62. There is a strong commitment to racial harmony on this campus.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
63. Student disciplinary procedures are fair.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
64. New student orientation services help students adjust to college.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7

An Expectation About Your Experiences with this Program (cont.)

1 = Not Important at All — — — — — 7 = Very Important

1 = Not Satisfied at All — — — — — 7 = Very Satisfied

65. Faculty are usually available after class and during office hours.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
66. Tuition paid is a worthwhile investment.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
67. Freedom of expression is protected on campus.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
68. Nearly all of the faculty are knowledgeable in their field.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
69. There is a good variety of courses provided on this campus.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
70. Graduate teaching assistants are competent as classroom instructors.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
71. Channels for expressing student complaints are readily available.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
72. On the whole, the campus is well-maintained.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7
73. Student activities fees are put to good use.	1	2	3	4	5	6	7
	1	2	3	4	5	6	7

Survey Diversity and Inclusion (Student) | Chair: Gloria Wekker | Used By: University of Amsterdam

Theme 1. Belonging and Inclusion	(Almost) Never	Sometimes	Frequently	(Almost) Always	No Answer
1. When I am among students, I feel that I belong.	1	2	3	4	5
2. I feel uncomfortable with the dominant behavioural norms (InclS_2).	1	2	3	4	5
3. I am discriminated against by fellow students (InclS_3).	1	2	3	4	5
4. I am discriminated against by teachers (InclS_4).	1	2	3	4	5

Theme 1. Belonging and Inclusion (cont.)	(Almost) Never	Sometimes	Frequently	(Almost) Always	No Answer
5. I feel insecure about my skills as a student (InclS_5).	1	2	3	4	5
6. I can be myself without negative consequences (InclS_6).	1	2	3	4	5
7. I enjoy going to class (InclS_7).	1	2	3	4	5
8. The teacher knows my name (InclS_8).	1	2	3	4	5
9. I attend the drinks receptions and other social activities that are organized (InclS_9).	1	2	3	4	5
10. I observe practices that I find discriminatory or exclusionary toward myself or others. (InclS_10).	1	2	3	4	5
11. My contributions during tutorial groups (seminars/ werkgroepen) are taken seriously by my fellow students (InclS_11).	1	2	3	4	5
12. My contributions during tutorial groups (seminars/ werkgroepen) are taken seriously by the teacher (InclS_12).	1	2	3	4	5
13. I feel safe to express divergent opinions in class-situations (InclS_13).	1	2	3	4	5
14. I feel appreciated by teachers (InclS_14).	1	2	3	4	5
15. When I need help during a course, I approach the teacher directly (InclS_15).	1	2	3	4	5
16. Expressing any criticism I may have of how things are done at UvA, will disadvantage me (InclS_16).	1	2	3	4	5
17. It is useless to express any criticism I may have of how things are done at UvA, as nothing will change (InclS_17).	1	2	3	4	5
18. I feel that 'divergent' culture-related norms and values - such as wearing a headscarf - are disapproved of (InclS_18).	1	2	3	4	5

Institutional Acceptance

1. No one would notice if you missed class.
2. It is easy to get involved with student clubs, and organizations at this institution.
3. Your faculty got to know you and your background.
4. This institution treats students like individual people instead of just numbers.
5. Quality of interactions with faculty.

Peer Belonging

1. You fit in with the other students at your institution.
2. It is difficult to make friends at this institution.
3. You have very few friends or acquaintances at this institution.
4. There are other students at this institution who share your views and beliefs.
5. Qualities of interactions with students.

Sense of Belonging Instrument | Sax et al

Instructor Inclusivity and Support

1. Introductory course faculty are inclusive and supportive of women.
2. Introductory course faculty are responsive to questions in class.
3. Introductory course faculty are interested in helping me when I come to them with questions.
4. Introductory course faculty are inclusive and supportive of students of color.
5. Introductory course faculty are responsive to email communication.

Use of Relevant and Meaningful Content

1. How frequently does the instructor(s) for this introductory course use the following: Use of examples involving women.
2. How frequently does the instructor(s) for this introductory course use the following: Use of examples involving people of color.
3. How frequently does the instructor(s) for this introductory course use the following: Use of real world problems involving relevant social issues.

Peer Support

1. To what extent is each of the following kinds of support available to you from other computing students if you need it: Someone to hang out with.
2. To what extent is each of the following kinds of support available to you from other computing students if you need it: Someone to confide in or talk to about your problems.
3. To what extent is each of the following kinds of support available to you from other computing students if you need it: Someone to get class assignments for you if you were sick.
4. To what extent is each of the following kinds of support available to you from other computing students if you need it: Someone to help you understand difficult homework problems.

Department Support

1. The department cares about its students.
2. The environment in the computing department inspires me to do the best job that I can.
3. I feel a sense of community in the computing department.
4. The department is not very supportive of its students (reverse-coded).

Outcome

1. I feel like I belong in computing.
2. I feel welcomed in the computing community.
3. I feel like an outsider in the field of computing (reverse-coded).

Frequency of Instructor Communication	Never				More Than Three Times Per Week
1. On average, how frequently do you communicate with introductory course faculty for this course in the following way: In class.	1	2	3	4	5
2. On average, how frequently do you communicate with introductory course faculty for this course in the following way: At office hours.	1	2	3	4	5
3. On average, how frequently do you communicate with introductory course faculty for this course in the following way: By email.	1	2	3	4	5
4. On average, how frequently do you communicate with introductory course faculty for this course in the following way: By phone call.	1	2	3	4	5
5. On average, how frequently do you communicate with introductory course faculty for this course in the following way: By text messages.	1	2	3	4	5
6. On average, how frequently do you communicate with introductory course faculty for this course in the following way: Via course website (e.g., Blackboard).	1	2	3	4	5
7. On average, how frequently do you communicate with introductory course faculty for this course in the following way: In informal meetings (e.g., coffee with a professor).	1	2	3	4	5

Collaborative Pedagogies	Never				More Than Three Times Per Week
1. How frequently does the instructor(s) for this introductory course use the following: Paired programming.	1	2	3	4	5
2. How frequently does the instructor(s) for this introductory course use the following: Group work.	1	2	3	4	5
3. How frequently does the instructor(s) for this introductory course use the following: Peer instruction.	1	2	3	4	5

HowULearn Questionnaire | Myyry et al. | Used By: University of Helsinki (Finland)

Sense of Belonging	Fully Disagree				Fully Agree
1. I consider myself a member of a community.	1	2	3	4	5
2. I trust that teachers on the course have faith in my abilities.	1	2	3	4	5

Interest and Relevance of Studies	Fully Disagree				Fully Agree
1. I find most of what I learned in courses really interesting.	1	2	3	4	5
2. 'Students support each other and try to give help when it is needed'; and 'constructive feedback from teachers.	1	2	3	4	5
3. The feedback given on my course exercises helps me to clarify things I hadn't fully understood.	1	2	3	4	5

Student Survey | Ingram (2012)

General Belonging	Strongly Disagree				Strongly Agree
1. I see myself as a part of the college community.	1	2	3	4	5
2. I feel that I am a member of the college community.	1	2	3	4	5
3. I feel I belong at this college.	1	2	3	4	5

Social Belonging	Strongly Disagree				Strongly Agree
1. It has been easy for me to make friends at [college].	1	2	3	4	5
2. Other students here like me the way I am I can really be myself at this college.	1	2	3	4	5
3. Students at this college are friendly with me.	1	2	3	4	5
4. Other students in this college seem interested in my opinions, ideas, and questions related to coursework.	1	2	3	4	5
5. I could call another student from class if I had a question about an assignment.	1	2	3	4	5
6. Students here treat me with respect I would find it easy to join study groups with other students if I wanted to.	1	2	3	4	5

Academic Belonging	Strongly Disagree				Strongly Agree
1. I feel comfortable asking a question in class.	1	2	3	4	5
2. I feel comfortable contributing to class discussions.	1	2	3	4	5
3. The professors here respect me.	1	2	3	4	5

Academic Belonging (cont.)	Strongly Disagree				Strongly Agree
4. When I interact with professors at this college, I feel they care about how I'm doing.	1	2	3	4	5
5. I would feel comfortable asking a professor for help if I did not understand course-related material.	1	2	3	4	5
6. Professors make me question whether I should be here.	1	2	3	4	5
7. I prefer to study on my own.	1	2	3	4	5

Perceived Institutional Support	Strongly Disagree				Strongly Agree
1. Ease of finding women's resource center support services.	1	2	3	4	5
2. Ease of finding counseling support services.	1	2	3	4	5
3. Ease of finding career planning support services.	1	2	3	4	5
4. Ease of finding tutoring support services.	1	2	3	4	5
5. Ease of finding health and wellness support services.	1	2	3	4	5

Feeling of Integration and Sense of Belonging | Scrivener

Feeling of Integration and Sense of Belonging	Strongly Disagree	Disagree	Agree	Strongly Agree
1. College is an unfriendly place.	1	2	3	4
2. I do not feel that I fit in or belong in college.	1	2	3	4
3. The instructors and staff understand who I am and where I am coming from.	1	2	3	4
4. It is difficult to make good friends with other students.	1	2	3	4
5. The other students do not understand who I am and where I am coming from.	1	2	3	4
6. College has the feeling of a community, where many people share the same goals and interests.	1	2	3	4
7. Many people at college know me by name.	1	2	3	4
8. I do not feel I am part of college life.	1	2	3	4
9. I feel that I matter to the college instructors, staff, and other students.	1	2	3	4

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