Where and with whom does a brief social-belonging intervention promote progress in college?

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1. Who conducted this research?

This research was led by the College Transition Collaborative, a research-practitioner partnership that conducts research and develops and evaluates practices designed to support belonging, growth, and equity in post-secondary contexts. The CTC was founded and led by four PIs, Christine Logel (Waterloo), Mary Murphy (Indiana), Greg Walton (Stanford), and David Yeager (UT-Austin). Recently the CTC has transitioned to become the Equity Accelerator, led by Mary Murphy.

2. What colleges and universities partnered in this research?

22 highly diverse 4-year colleges and universities in the United States:

- Albion College
- Allegheny College
- Bowling Green State University
- California State University, Dominguez Hills
- California State University, Northridge
- The College of Wooster
- Cornell University
- Dartmouth College
- DePauw University
- Hope College
- Indiana State University
- Indiana University
- Kalamazoo College
- Lewis & Clark College
- Ohio Wesleyan University
- Southern Oregon University
- University of California, Santa Cruz
- University of Central Arkansas
- University of Oregon
- University of Pittsburgh
- Wabash College
- Yale University

3. What are the highlights of this research?

This was a massive team-science collaboration to evaluate a brief, online exercise called the social-belonging intervention. We used an experimental design to learn whether, where, and with whom this intervention could improve progress on the path toward college graduation:

- 37 authors
- Nearly 27,000 students
- 22 colleges and universities
- Results generalize to 749 4-year colleges and universities in the United States, which annually welcome more than 1,000,000 students annually
- If all schools in the generalizability sample implemented the online belonging intervention in the transition to college, the results imply that each year 12,136 more students would complete the first year of college full-time enrolled. Benefits would be concentrated among lower-performing groups, reducing inequality.

4. What is the social-belonging intervention?

The social-belonging intervention is a brief (10-30 minute) reading-and-writing activity designed to address worries students have about belonging in the transition to college. It features three elements: (a) results of a survey of older students, showing that everyday worries about belonging—such as feeling homesick, having a hard time finding a lab partner, or difficulty interacting with professors—are normal in the transition to college and can improve with time; (b) carefully curated stories from older students describing these worries and how they

improved for them; and (c) an opportunity to reflect on these stories in writing to help future students as they come to college, including how belonging concerns are normal and typically improve with time ("saying-is-believing" exercises).

For more on the social-belonging intervention, see here: http://gregorywalton-stanford.weebly.com/uploads/4/9/4/4/49448111/waltonbrady2020socialbelonging.pdf

5. What did we know that led to this study?
First, research finds that students from backgrounds that have historically been excluded in education or posed as undeserving of educational opportunities, such as students in the first generation in their family to go to college and racial-ethnic minoritized students, often report lower levels of belonging than other students, or greater doubts about belonging (aka "belonging uncertainty").

Second, research had shown that the social-belonging intervention *can* improve student success (e.g., grades, persistence), including over months and years, especially for first-generation college students and racial-ethnic minoritized students, who face the most pervasive threats to belonging in college.

Third, research had shown that it is possible to deliver belonging interventions through low-cost, scaleable online modules in the transition to college, and that this could reduce institutional inequalities. However, this past work was only done on a case-by-case (institution-by-institution) basis.

6. What did we not know before this study?
We did not know whether the benefits of this intervention would generalize to a broader sample of colleges and universities. We also did not systematically know where and with whom the intervention would be most effective and where and with whom it would not be effective.

7. How and when was the social-belonging intervention delivered?
The social-belonging intervention was delivered through an online module in the summer before students began college. Colleges and universities embedded this module in their pre-matriculation processes for incoming students among other forms and requirements (e.g., pay fees, provide insurance information, write an introductory letter to an advisor).

8. What design did the study use?
This study used a between-subjects experimental design. Within each institution, individual students were randomized to the belonging intervention or to an active control condition.

9. What was the primary outcome?
The primary outcome was the percentage of students who completed the first-year full-time enrolled. This is a key step on the way towards college graduation.

10. What are "local-identity groups" and why are they important?

Past research has focused on canonical group identities, like "first-generation college students" or "African American students." It treats these groups as static, as if they are the same across contexts. But we know that group identities are not fixed in meaning but constructed in context. Being, say, a first-generation Latina student is not the same thing in all contexts.

To understand how students' identity-group experiences vary, we define "local-identity groups." These are students of a given race-ethnicity, with a given first-generation status, at a given institution, in a given cohort.

11. What do you mean by "vulnerability" and "belonging affordances"?
We assessed two qualities of local-identity groups that we thought might matter for the effectiveness of the belonging intervention.

For the first quality, we wanted to know which local-identity groups would be ones in which students would be provoked to wonder, "Do people like me belong in college?" To assess this, we examined the rate of achievement of students in each local-identity group at each college in recent cohorts. If students like you (your race-ethnicity, your first-generation status, at your college) have not completed the first-year at your college full-time at high rates, then you might wonder whether people like you can belong there. This is a *vulnerability* to worries about belonging.

For the second quality, we wanted to know which local-identity groups had opportunities to belong. To assess this, we examined the mean level of belonging reported by students in the control condition only in the spring term in each local-identity group at each college. Do students like you achieve at least a moderate level of belonging by the spring of the first year of college, absent treatment? This is the degree to which the college *affords belonging* to students with a given identity group.

We theorized that we would see the largest benefits of the intervention among students in local-identity groups who are vulnerable to worries about belonging but have opportunities to belong. Only then is the belonging message locally "true" or legitimate, and therefore one that students can sustain and use to build their belonging on campus.

12. What are the major conclusions of this research?
First, the results show that the social-belonging intervention generalizes its benefits to 749 4-year colleges and universities in the United States, which annually welcome more than 1,000,000 students annually. If all schools in the generalizability sample implemented the online belonging intervention in the transition to college, we estimate that 12,136 more students would complete the first year of college full-time enrolled each year, with benefits concentrated among lower-performing groups, thus reducing inequality.

Second, these benefits are not invariant. The belonging intervention only helped students when the college context afforded students' identity group opportunities to belong.

Third, among students in identity groups afforded opportunities to belong, we observed the largest effects among students in identity groups with lower levels of historic performance, theorized to be more vulnerable to belonging worries.

13. What are the implications of this research?
First, it is essential that colleges and universities simultaneously (1) convey that belonging concerns are common in the transition to college for students from all backgrounds and improve with time and (2) act to ensure that this message is legitimate and reflected in opportunities to belong of all groups.

Second, in developing and validating the local-identity group methodology, the study shows how quantitative social scientists can study the *variation* in identity-group experiences across contexts. We've always known it's false to assume that a given identity group has the same meaning or the same opportunities in different contexts. For example, no group is defined as "disadvantaged" or as "vulnerable."

14. Is the belonging exercise freely available?
Yes. The belonging module is freely available to all colleges and universities in the United States and Canada https://perts.net/orientation/cb.

15. How can colleges convey that belonging concerns are common in the transition to college for students from all backgrounds and improve with time?
It is important to complement brief online modules with broader efforts to create a culture on campus that normalizes challenges and worries about belonging in the transition to college and emphasizes opportunities for growth. This may include welcome addresses, residential programming, pedagogy, and other mutually reinforcing institutional communications and conversations.

For more information about some of these practices developed by the Equity Accelerator (formerly College Transition Collaborative), please see here: https://collegetransitioncollaborative.org/social-belonging-practices/. The Equity Accelerator (https://accelerateequity.org/) works with colleges and universities to harness social and behavioral science to create more equitable learning and working environments.

16. How can colleges learn about the belonging affordances experienced by different identity groups on campus?
Ask them! In the study, we surveyed students in the spring term of the first year. We asked four questions
- "I feel like I belong at [school name]"
- "I fit in well at [school name]"
- "I feel comfortable at [school name]"
- "When you think about [school name], how often, if ever, do you wonder: 'Maybe I don't belong here?'" (reverse-scored)

The first three questions were assessed on a 6-point scale (*1=strongly disagree*, *6=strongly agree*); the fourth on a 5-point scale (*1=never*, *5=always*). We combined these questions in analyses and looked at the average level of belonging experienced by each local-identity group in the spring term. If you do this and learn that some identity groups on campus experience lower levels of belonging than others, it's worth working to understand why this is and what you can do to support greater belonging affordances. For instance, you can follow-up with open-ended questions, focus groups, and interviews with students to learn deeply about their experiences and how you can create the best institution possible for all students you serve.

Belonging affordances can also be assessed in the context of specific college courses using a tool called Ascend, see https://www.perts.net/orientation/ascend. Ascend uses a 5-10 minute survey to measure a variety of belonging-relevant constructs, and automatically disaggregates results by race, gender, and basic needs insecurity so that gaps in belonging affordances can be identified and addressed. Ascend is free to individual college instructors. Institutional licenses are also available for colleges that want implementation support. Ascend utilizes measures developed by the Equity Accelerator (https://accelerateequity.org/) for the Student Experience Project (see answer #17 below to learn more about the Student Experience Project).

17. How can colleges expand belonging affordances?
There are many steps post-secondary institutions can take to expand belonging affordances. These include: (a) increasing their efforts to ensure an adequate representation of both students and faculty from diverse groups on campus; (b) supporting ethnic-themed clubs, events, activities, and coursework that support an understanding of and pride in group identities; (c) supporting pedagogy that emphasizes growth rather than identifying the ostensibly smart people; (d) creating residential and classroom communities that offer opportunities for positive intra- and intergroup interactions among peers, including by establishing and communicating norms that encourage supportive relationships and discourage bias; and (e) expanding opportunities for all students to develop strong mentor relationships with faculty members and others on campus.

For examples of belonging-specific practices, please see these developed and tested by the Equity Accelerator for the Student Experience Project: https://collegetransitioncollaborative.org/social-belonging-practices/. The Student Experience Project is an ongoing collaborative focused on developing and scaling up to the use of evidence-based strategies that improve belonging affordances, as well as other social psychological factors that influence student success and equity. The Student Experience Project's resource hub (https://studentexperienceproject.org/resources) and classroom practices library (https://collegetransitioncollaborative.org/sep-practices-library/) describes many of these strategies and offers tools, protocols, and concrete examples of them in action. The vast majority of these resources are free. If you are interested in working with us to implement or test these practices, please contact Equity Accelerator: https://accelerateequity.org/contact.

18. What are the next steps for research?

These findings point to a new generation of work to understand belonging affordances: What is needed to make belonging possible, for whom, and where? This may include the structured opportunities students have to interact with and build relationships with each other and with faculty (e.g., in residential life, first-year classes, student groups) as well as the social and academic culture on campus, including the degree to which instructors express their beliefs and engage in practices that affirm students' unique identities and strengths and promote a growth-mindset, among other factors. Some of these practices have been tested in the Student Experience Project and those practices can be found in the classroom practices library: https://collegetransitioncollaborative.org/sep-practices-library/.

19. Who funded this research?
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