Sense of Peer Belonging and Institutional Acceptance in the First Year: The Role of High-Impact Practices

Amy Ribera, Ph.D.
Angie Miller, Ph.D.
Amber D. Dumford, Ph.D.

Indiana University, Bloomington
Center for Postsecondary Research
National Survey of Student Engagement
SENSE OF BELONGING

“In terms of college, sense of belonging refers to students’ perceived social support on campus, a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued, and important to a group (e.g., campus community) or others on campus (e.g., faculty, peers). It’s a cognitive evaluation that typically leads to an affective response or behavior (p. 3).”
SENSE OF BELONGING

• Precursor to student departure (and engagement) (Hurtado & Carter, 1997)

• Historically underrepresented students (e.g., Hausmann et al., 2007; Ostrove & Long, 2007)

• Effective educational practices (e.g., Hoffman et al. 2002; Maestas et al. 2007)

• Institutional types (e.g., Maestas et al., 2007)

• Interactions with diverse others (Strayhorn, 2008)
• Supportive campus environment (e.g., Flowers & Pascarella, 2003)

• Student perceptions and satisfaction (Kuh, 1993)

• Domino effect (Berger & Milem, 1999)
HIGH-IMPACT PRACTICES

National Survey of Student Engagement (NSSE)

- Service-learning
- Learning communities
- Research with faculty
- Senior culminating experience
- Study abroad
- Internship

Kuh (2008) recommends every student should participate in at least two high-impact activities--one in the first year and one later, in the major.
HIGH-IMPACT PRACTICES

Several Common Traits

✓ Demand considerable amount of time and effort
✓ Provide learning opportunities outside of the classroom
✓ Require meaningful interactions with faculty members and students
✓ Provide frequent meaningful feedback
✓ Encourage interactions with diverse others
First-year participation in HIPs influences students' sense of belonging as it relates to:

• Feelings of connection with peers (peer belonging)

• Feelings of acceptance by members of the institution such as faculty, staff, and student affairs professionals (institutional acceptance)
RESEARCH QUESTIONS

1. What are the overall participation rates of HIPs among FY students?

2. Do FY students experience peer belonging and institutional acceptance differently by race or ethnicity, parental education, and gender?

3. Are FY students’ sense of peer belonging and institutional acceptance positively affected by participation in HIPs?
National Survey of Student Engagement (NSSE)

In 2014, more than 473,000 first-year and senior respondents from 713 four-year colleges and universities

Reasons for participation vary:

- National and regional accreditation
- Departmental/program reviews
- Curricular reform (general education)
- Institutional improvement efforts (e.g., retention rates, high-impact practices, FYE programming)
Limited to:

- 44 four-year institutions
- First-year students (n=9,371)
- Experimental item set on topic of campus environment appended to core survey

<table>
<thead>
<tr>
<th></th>
<th>Valid %</th>
<th>Valid n</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-generation</td>
<td>40%</td>
<td>7,305</td>
</tr>
<tr>
<td>Traditionally-aged</td>
<td>94%</td>
<td>7,282</td>
</tr>
<tr>
<td>(23 or younger)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>63%</td>
<td>5,866</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian, Asian American</td>
<td>2%</td>
<td>150</td>
</tr>
<tr>
<td>Black, African American</td>
<td>15%</td>
<td>1,246</td>
</tr>
<tr>
<td>Latino, Hispanic</td>
<td>8%</td>
<td>640</td>
</tr>
<tr>
<td>White</td>
<td>61%</td>
<td>5,090</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Valid %</th>
<th>Valid n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>45%</td>
<td>4,241</td>
</tr>
<tr>
<td>Minority-serving</td>
<td>9%</td>
<td>804</td>
</tr>
<tr>
<td><strong>Selectivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highly</td>
<td>13%</td>
<td>1,180</td>
</tr>
<tr>
<td>Moderately</td>
<td>56%</td>
<td>5,224</td>
</tr>
<tr>
<td>Liberally</td>
<td>32%</td>
<td>2,967</td>
</tr>
<tr>
<td><strong>Carnegie type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research/Doc</td>
<td>38%</td>
<td>3,591</td>
</tr>
<tr>
<td>Master’s</td>
<td>17%</td>
<td>1,576</td>
</tr>
<tr>
<td>Bac. colleges</td>
<td>41%</td>
<td>3,812</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>392</td>
</tr>
</tbody>
</table>
How much do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>You fit in with the other students at your institution</td>
<td>Strongly Agree, Somewhat Agree, Somewhat disagree, Strongly disagree, Not applicable</td>
</tr>
<tr>
<td>It is difficult to make friends at this institution</td>
<td></td>
</tr>
<tr>
<td>No one would notice if you missed class</td>
<td></td>
</tr>
<tr>
<td>It is easy to get involved with student clubs and organizations at this institution</td>
<td></td>
</tr>
<tr>
<td>Your faculty got to know you and your background</td>
<td></td>
</tr>
<tr>
<td>This institution treats students like individual people instead of just numbers</td>
<td></td>
</tr>
<tr>
<td>You have very few friends or acquaintances at this institution</td>
<td></td>
</tr>
<tr>
<td>There are other students at this institution who share your views and beliefs</td>
<td></td>
</tr>
</tbody>
</table>
## EXPERIMENTAL ITEMS

<table>
<thead>
<tr>
<th>Peer Belonging</th>
<th>Factor loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>You fit in with the other students at your institution</td>
<td>.76</td>
</tr>
<tr>
<td>It is difficult to make friends at this institution (reverse coded)</td>
<td>.80</td>
</tr>
<tr>
<td>You have very few friends or acquaintances at this institution (reverse coded)</td>
<td>.80</td>
</tr>
<tr>
<td>There are other students at this institution who share your views and beliefs</td>
<td>.58</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Institutional Acceptance</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>No one would noticed if you missed class (reverse coded)</td>
<td>.72</td>
</tr>
<tr>
<td>It is easy to get involved with student clubs and organizations at this institution</td>
<td>.51</td>
</tr>
<tr>
<td>Your faculty got to know you and your background</td>
<td>.58</td>
</tr>
<tr>
<td>This institution treats students like individual people instead of just numbers</td>
<td>.83</td>
</tr>
</tbody>
</table>
METHODS

• Exploratory and Confirmatory Factor Analysis
  – Peer Belonging ($\alpha=.722$)
  – Institutional Acceptance ($\alpha=.667$)

• Frequencies
  – High-impact practice items, by sub-groups

• Two OLS regression models
OLS Dependent Variables

• Dependent variables
  – Peer Belonging
  – Institutional Acceptance

• Standardized prior to entering the model

• Coefficients interpreted as effect sizes
## OLS Independent Variables

### S1. Student demographics
- First-generation
- Age
- Gender
- Race/Ethnicity

### S1. College experiences
- Enrollment status
- Took all courses online
- Majored in STEM
- College grades
- Living situation
- Greek Life

### S1. Institutional context
- Control
- Minority-serving institution
- Selectivity
- Carnegie type

### S2. High-impact practices*
- Service-learning
- Learning communities
- Research with faculty
- Student leadership

*Entered individually
High-impact practices

- Service-learning
- Learning communities
- Research with faculty
- Senior culminating experience
- Study abroad
- Internship

AND Student leadership

# of courses included community-based project (service learning):
- None
- Some
- Most
- All

Response Categories:
- Have not decided
- Do not plan to do
- Plan to do
- Done or in progress
## Q1 RESULTS: Participation

### Level of Participation by First-Year Students

<table>
<thead>
<tr>
<th>Activity</th>
<th>Valid N</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service learning (HIP)</td>
<td>3,779</td>
<td>48.8</td>
</tr>
<tr>
<td>Learning community (HIP)</td>
<td>1,259</td>
<td>16.2</td>
</tr>
<tr>
<td>Campus leadership role</td>
<td>1,042</td>
<td>13.3</td>
</tr>
<tr>
<td>Research with faculty (HIP)</td>
<td>511</td>
<td>6.6</td>
</tr>
</tbody>
</table>
Q2 Results: Peer Belonging

S1. Student demographics
- First-generation
- Traditionally-aged
- Women
- Asian, Asian American
- Black, African American
- Latino or Hispanic
- Other race/ethnicity
- White (ref group)

S1. Institutional context
- Private
- Minority-serving institution
- Selectivity

S1. College experiences
- Full-time
- Took all courses online
- Majored in STEM
- Mostly As (ref group)
- Mostly Bs
- Mostly Cs
- Living situation
- Greek member
- Carn-Research/DRU
- Carn-Masters
- Carn-Other
- Carn-Bac (ref group)
<table>
<thead>
<tr>
<th>S1. Student demographics</th>
<th>S1. College experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First-generation (-)</strong></td>
<td>Full-time</td>
</tr>
<tr>
<td>Traditionally-aged</td>
<td>Took all courses online</td>
</tr>
<tr>
<td>Women</td>
<td>Majored in STEM</td>
</tr>
<tr>
<td>White (ref group)</td>
<td>Mostly As (ref group)</td>
</tr>
<tr>
<td><strong>Asian, Asian American (-)</strong></td>
<td><strong>Mostly Bs (-)</strong></td>
</tr>
<tr>
<td><strong>Black, African American (-)</strong></td>
<td><strong>Mostly Cs (--)</strong></td>
</tr>
<tr>
<td>Latino or Hispanic (-)</td>
<td>Living situation</td>
</tr>
<tr>
<td><strong>Other race/ethnicity (-)</strong></td>
<td>Greek member</td>
</tr>
<tr>
<td><strong>S1. Institutional context</strong></td>
<td><strong>Carn-Research/DRU</strong></td>
</tr>
<tr>
<td>Private</td>
<td><strong>Carn-Masters</strong></td>
</tr>
<tr>
<td>Minority-serving institution</td>
<td><strong>Carn-Other</strong></td>
</tr>
<tr>
<td>Selectivity</td>
<td><strong>Carn-Bac (ref group)</strong></td>
</tr>
</tbody>
</table>
**Q2 Results: Peer Belonging**

**S1. Student demographics**
- First-generation (-)
- Traditionally-aged
- Women
- White (ref group)
- Asian, Asian American (-)
- Black, African American (-)
- Latino or Hispanic (-)
- Other race/ethnicity (-)

**S1. Institutional context**
- Private
- Minority-serving institution (-)
- Selectivity (-)

**S1. College experiences**
- Full-time
- Took all courses online
- Majored in STEM
- Mostly As (ref group)
- Mostly Bs (-)
- Mostly Cs (--)
Q2 Results: Peer Belonging

**S1. Student demographics**
- First-generation (-)
- Traditionally-aged
- Women
- White (ref group)
- Asian, Asian American (-)
- Black, African American (-)
- Latino or Hispanic (-)
- Other race/ethnicity (-)

**S1. Institutional context**
- Private (+)
- Minority-serving institution (-)
- Selectivity (-)

**S1. College experiences**
- Full-time
- Took all courses online
- Majored in STEM
- Mostly As (ref group)
- Mostly Bs (-)
- Mostly Cs (-)
- Living situation (+)
- Greek member (+)

- Carn-Research/DRU
- Carn-Masters (-)
- Carn-Other
- Carn-Bac (ref group)
Q2 Results: Peer Belonging

**S1. Student demographics**
- First-generation (-)
- Traditionally-aged
- Women
- White (ref group)
- Asian, Asian American (-)
- Black, African American (-)
- Latino or Hispanic (-)
- Other race/ethnicity (-)

**S1. College experiences**
- Full-time
- Took all courses online
- Majored in STEM
- Mostly As (ref group)
- Mostly Bs (-)
- Mostly Cs (-)
- Living situation (+)
- Greek member (+)

**S1. Institutional context**
- Private (+)
- Minority-serving institution (-)
- Selectivity (-)
- Carn-Research/DRU
- Carn-Masters (-)
- Carn-Other
- Carn-Bac (ref group)
Q2 Results: Inst. Acceptance

S1. Student demographics
- First-generation (-)
- Traditionally-aged
- Women
- White (ref group)
- Asian, Asian American
- Black, African American
- Latino or Hispanic
- Other race/ethnicity

S1. Institutional context
- Private
- Minority-serving institution
- Selectivity

S1. College experiences
- Full-time
- Took all courses online
- Majored in STEM
- Mostly As (ref group)
- Mostly Bs (-)
- Mostly Cs (--)
- Living situation
  - Greek member (+)
  - Carn-Research/DRU
  - Carn-Masters
  - Carn-Other
  - Carn-Bac (ref group)
Q2 Results: Inst. Acceptance

S1. Student demographics
- First-generation (-)
- Traditionally-aged
- Women
- White (ref group)
- Asian, Asian American
- Black, African American
- Latino or Hispanic
- Other race/ethnicity

S1. College experiences
- Full-time
- Took all courses online
- Majored in STEM
- Mostly As (ref group)
- Mostly Bs (-)
- Mostly Cs (--)
- Living situation
  - Greek member (+)

S1. Institutional context
- Private (++)
- Minority-serving institution
- Selectivity (+)
- Carn-Research/DRU (---)
- Carn-Masters (-)
- Carn-Other (-)
- Carn-Bac (ref group)
Q3 RESULTS: HIPs

- All HIPs were positively related to both sense of belonging measures, *with the exception of research with faculty*
- However, research with faculty had a strong positive relationship with students’ sense of institutional acceptance
- HIPs had a positive but weaker relationship with students’ sense of peer belonging
DISCUSSION

• Corroborates previous research in several ways
• Adds nuance to *sense of belonging* literature
• Expands generalizability of findings
• Sense of belonging and student engagement go hand-in-hand
• Limitations
• Direction for future research
Amy Ribera
akribera@indiana.edu

Angie Miller
anglmill@indiana.edu

Amber D. Dumford
adlamber@indiana.edu

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