Measuring Service Learning While Promoting Student Engagement
Overview

• Foundation in student engagement
• Data source
• Why service learning
• Our findings:
  – Who does service-learning
  – What they do
  – What they get out of it
• Implications
Service Learning

• Definition: a teaching/learning method that is used to connect meaningful community services experiences with academic learning, person growth, and civic responsibility.

• Deliberate connection between service and academic learning.

• A form of work-based learning, parallels many job training efforts.
Service Learning

Themes

Collaboration

Charity

Change
Trends in Service Learning

- The number of states that require community service as a high school graduation requirement is increasing.

- Increased personal, social, and intellectual growth, and preparation for work.
Trends in Service Learning

• Major universities are increasingly implementing service learning programs.

• Schools who begin Service Learning programs have high commitment rates.

• Service Learning has been shown to sustain democracy and economic opportunity by involving youth in addressing community problems.
Significance

• Most of the studies in service learning only focused on students from very specific areas
  – Our study will respond to this point of view by showing the broad aspects of service learning in a wide range of disciplines.
Methods

• Framework
• Measurements
• Data
What is student engagement?

Student engagement represents two critical features of collegiate quality:

• The first is the amount of time and effort students put into their studies and other educationally purposeful activities.
• The second is how the institution deploys its resources and organizes the curriculum and other learning opportunities to get students to participate in activities that decades of research studies show are linked to student learning.

Why Student Engagement is Important?

The time and energy students devote to educationally purposeful activities is the single best predictor of their learning and personal development.
What is NSSE?

• NSSE annually gathers valid, reliable information on the extent to which students engage in and are exposed to proven educational practices that correspond to desirable learning outcomes.
  – Over 1,500 bachelor’s degree-granting colleges and universities
  – More than a million college students surveyed every year
  – Results provide estimate of how undergraduates spend their time and what they gain from college.
  – NSSE items represent empirically confirmed ‘good practices’; behaviors associated with student learning and development.
What is NSSE?

Assessing Student Engagement:

• What students do –
  – What matters most is what students do, not who they are.

• What institutions do –
  – Using effective educational practices to induce students to do the right things
Core Surveys: NSSE

- Research based on effective educational practices
- Designed and tested for high validity and reliability
- Relatively stable over time
Additional Questions: NSSE

• Ability to explore in greater depth
• Service-Learning
  – Do students do it?
  – How often?
  – How many of their classes include service-learning?
  – Is service-learning voluntary or required?
  – Where service-learning took place?
  – What types of activities do students do in their service-learning?
  – What are students getting out of service-learning?

• Sample
  – 2892 students at 42 institutions
Findings

• In 2012, more than 285,000 census-administered or randomly sampled students attending 546 U.S. bachelor’s degree-granting institutions that participated in NSSE.

• Sample descriptive
  - N=4607
  - First-year student: 1715
  - Seniors: 2892
  - 42 institutions
Percentage of students who had service learning experience

By Carnegie Classification

<table>
<thead>
<tr>
<th></th>
<th>First-Year Seniors</th>
<th>Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>RU/VH</td>
<td>37%</td>
<td>43%</td>
</tr>
<tr>
<td>RU/H</td>
<td>41%</td>
<td>45%</td>
</tr>
<tr>
<td>DRU</td>
<td>45%</td>
<td>42%</td>
</tr>
<tr>
<td>Master's L</td>
<td>40%</td>
<td>51%</td>
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<tr>
<td>Master's M</td>
<td>45%</td>
<td>53%</td>
</tr>
<tr>
<td>Master's S</td>
<td>42%</td>
<td>54%</td>
</tr>
<tr>
<td>Bac/A&amp;S</td>
<td>43%</td>
<td>54%</td>
</tr>
<tr>
<td>Bac/Diverse</td>
<td>47%</td>
<td>54%</td>
</tr>
</tbody>
</table>

Students reported participating in service learning at least “sometimes” during the current school year.
Time Spent on Service-learning based on Institutional type

<table>
<thead>
<tr>
<th>Institutional Type</th>
<th>0 hour</th>
<th>1 hour</th>
<th>2 hours</th>
<th>3 hours</th>
<th>4 hours</th>
<th>5 hours</th>
<th>6 hours</th>
<th>7 or more hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral</td>
<td>12.9%</td>
<td>12.5%</td>
<td>21.8%</td>
<td>16.1%</td>
<td>8.5%</td>
<td>8.9%</td>
<td>2.8%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Master's</td>
<td>9.3%</td>
<td>18.1%</td>
<td>20.5%</td>
<td>15.1%</td>
<td>10.8%</td>
<td>6.4%</td>
<td>4.2%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Bachelor's</td>
<td>8.8%</td>
<td>20.0%</td>
<td>25.5%</td>
<td>15.9%</td>
<td>9.7%</td>
<td>5.2%</td>
<td>2.9%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Other</td>
<td>15.4%</td>
<td>30.8%</td>
<td>23.1%</td>
<td>7.7%</td>
<td>7.7%</td>
<td>7.7%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>
Percentage of students who had service learning experience

By race/ethnicity

<table>
<thead>
<tr>
<th></th>
<th>First-Year Seniors</th>
<th>Senior Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American/Black</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>47%</td>
<td>51%</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>41%</td>
<td>49%</td>
</tr>
<tr>
<td>Other</td>
<td>46%</td>
<td>48%</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>39%</td>
<td>47%</td>
</tr>
</tbody>
</table>
Percentage of students who had service learning experience

By Major

<table>
<thead>
<tr>
<th>Major</th>
<th>First-Year</th>
<th>Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>49%</td>
<td>67%</td>
</tr>
<tr>
<td>Professional (other)</td>
<td>44%</td>
<td>64%</td>
</tr>
<tr>
<td>Social sciences</td>
<td>42%</td>
<td>51%</td>
</tr>
<tr>
<td>Biological sciences</td>
<td>41%</td>
<td>44%</td>
</tr>
<tr>
<td>Arts &amp; Humanities</td>
<td>38%</td>
<td>43%</td>
</tr>
<tr>
<td>Business</td>
<td>41%</td>
<td>40%</td>
</tr>
<tr>
<td>Physical sciences</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>Engineering</td>
<td>36%</td>
<td>34%</td>
</tr>
</tbody>
</table>
### Percentage of students who had service learning experience

<table>
<thead>
<tr>
<th></th>
<th>First-Year</th>
<th>Seniors</th>
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</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>41%</td>
<td>44%</td>
</tr>
<tr>
<td>Female</td>
<td>41%</td>
<td>51%</td>
</tr>
<tr>
<td><strong>Enrollment Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than full-time</td>
<td>28%</td>
<td>38%</td>
</tr>
<tr>
<td>Full-time</td>
<td>42%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>First-generation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>42%</td>
<td>49%</td>
</tr>
<tr>
<td>Yes</td>
<td>40%</td>
<td>47%</td>
</tr>
<tr>
<td><strong>Transfer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Started here</td>
<td>42%</td>
<td>52%</td>
</tr>
<tr>
<td>Started elsewhere</td>
<td>34%</td>
<td>44%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 24 years</td>
<td>43%</td>
<td>53%</td>
</tr>
<tr>
<td>24 years &amp; older</td>
<td>25%</td>
<td>41%</td>
</tr>
</tbody>
</table>
Patterns in Service-Learning Courses
Course Design

The number of courses that students participated in service-learning

First-year Students
- 1 courses: 60.2%
- 2 courses: 19.9%
- 3 courses: 5.4%
- 4 or more courses: 14.5%

Seniors
- 1 courses: 57.7%
- 2 courses: 22.4%
- 3 courses: 8.0%
- 4 or more courses: 11.8%

The number of courses REQUIRED participation in service-learning

First-year Students
- 1 courses: 21.3%
- 2 courses: 50.6%
- 3 courses: 15.0%
- 4 or more courses: 5.1%
- 5 or more courses: 8.0%

Seniors
- 1 courses: 16.2%
- 2 courses: 51.8%
- 3 courses: 18.3%
- 4 or more courses: 6.8%
- 5 or more courses: 6.8%
Course Design

The places that students service-learning experiences took place

- Faith-based organization: 16.1%
- For-profit business: 4.2%
- Government office or agency: 3.5%
- Elementary or secondary school, preschool, or day care center: 19.6%
- College or university: 32.6%
- Non-profit or community-based organization: 30.1%
- Other: 4.7%
- None of my service-learning experiences involved placement in an organization or agency: 13.2%
Course Design

The places that students service-learning experiences took place

- Non-profit or community-based organization: 38.4%
- Elementary or secondary school, preschool, or day care center: 29.6%
- College or university: 23.8%
- Other: 7.6%
- None of my service-learning experiences involved placement in an organization: 7.5%
- Government office or agency: 7.0%
- For-profit business: 3.2%
- Faith-based organization: 7.5%
Course Design

Participants at my service cite or in my service project

<table>
<thead>
<tr>
<th></th>
<th>0%</th>
<th>20%</th>
<th>40%</th>
<th>60%</th>
<th>80%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>18.2</td>
<td></td>
<td>53.1</td>
<td></td>
<td>28.7</td>
<td></td>
</tr>
<tr>
<td>Seniors</td>
<td></td>
<td>26.3</td>
<td></td>
<td>47.7</td>
<td></td>
<td>26.0</td>
</tr>
</tbody>
</table>

- **I was the only student**
- **Other students in the course**
- **The instructor and other students from the course**
Student Involvement

The time spent on service-learning in a typical 7-day week

<table>
<thead>
<tr>
<th></th>
<th>0 hour</th>
<th>1 hour</th>
<th>2 hours</th>
<th>3 hours</th>
<th>4 hours</th>
<th>5 hours</th>
<th>6 hours</th>
<th>7 or more hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-year Students</td>
<td>14.1</td>
<td>22.1</td>
<td>22.8</td>
<td>15.9</td>
<td>9.6</td>
<td>5.9</td>
<td>2.8</td>
<td>7.0</td>
</tr>
<tr>
<td>Seniors</td>
<td>6.7</td>
<td>16.2</td>
<td>21.4</td>
<td>15.1</td>
<td>10.8</td>
<td>6.4</td>
<td>4.3</td>
<td>19.1</td>
</tr>
</tbody>
</table>
The Format of Service-learning Project

**First-year Students**
- Presentation on my own: 32.2%
- Presentation with other students: 25.2%
- Journal, diary, or log book (including online writings): 23.7%
- Other product: 27.4%
- No product or activity other than participation in the service project: 4.5%

**Seniors**
- Presentation on my own: 31.5%
- Presentation with other students: 33.8%
- Journal, diary, or log book (including online writings): 16.1%
- Other product: 10.2%
- No product or activity other than participation in the service project: 16.1%
Student Involvement

Papers or Reports of **FEWER** than 10 Pages Were Required

<table>
<thead>
<tr>
<th>Category</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First-year Students</strong></td>
<td>33.4</td>
<td>26.6</td>
<td>14.3</td>
<td>12.0</td>
<td>4.62</td>
<td>5.6</td>
<td>6.6</td>
</tr>
<tr>
<td><strong>Seniors</strong></td>
<td>23.4</td>
<td>27.6</td>
<td>16.5</td>
<td>11.3</td>
<td>6.1</td>
<td>3.7</td>
<td>11.5</td>
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</tbody>
</table>

Papers or Reports of **MORE** than 10 Pages Were Required

<table>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First-year Students</strong></td>
<td>67.2</td>
<td>13.9</td>
<td>8.4</td>
<td>5.8</td>
<td>2.4</td>
<td>1.2</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Seniors</strong></td>
<td>55.6</td>
<td>24.5</td>
<td>9.4</td>
<td>5.1</td>
<td>2.4</td>
<td>2.2</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Faculty Involvement

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-year Students</td>
<td>28.1</td>
<td>33.4</td>
<td>38.5</td>
</tr>
<tr>
<td>Seniors</td>
<td>25.7</td>
<td>32.6</td>
<td>45.9</td>
</tr>
</tbody>
</table>
Learning Outcomes

My service-learning experience helped me to understand the subject matter of the course

<table>
<thead>
<tr>
<th></th>
<th>First-year Students</th>
<th>Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>19.3</td>
<td>13.4</td>
</tr>
<tr>
<td>Somewhat</td>
<td>41.2</td>
<td>32.0</td>
</tr>
<tr>
<td>Very much</td>
<td>39.5</td>
<td>54.5</td>
</tr>
</tbody>
</table>

My service-learning experience helped me to understand the connection between studies and real life

<table>
<thead>
<tr>
<th></th>
<th>First-year Students</th>
<th>Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>16.8</td>
<td>11.3</td>
</tr>
<tr>
<td>Somewhat</td>
<td>39.1</td>
<td>29.7</td>
</tr>
<tr>
<td>Very much</td>
<td>44.1</td>
<td>59.0</td>
</tr>
</tbody>
</table>
The Impact of Service-Learning
### Adjusted Mean Difference in Engagement Between Service-Learning Participants

<table>
<thead>
<tr>
<th>Benchmarks</th>
<th>First-year Student</th>
<th>Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Diff.</td>
<td>Effect Size</td>
</tr>
<tr>
<td><strong>Academic Challenge</strong></td>
<td>4.40***</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>Active and Collaborative Learning</strong></td>
<td>14.45***</td>
<td>0.195</td>
</tr>
<tr>
<td><strong>Student-Faculty Interaction</strong></td>
<td>11.29***</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>Enriching Educational Experiences</strong></td>
<td>7.52***</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Supportive Campus Environment</strong></td>
<td>5.38***</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Note. Mean difference were calculated from adjusted means. Controls included gender, enrollment, race/ethnicity, age, first-generation, self-reported grades, transfer, living on campus, major, working, international, distance education, Carnegie Basic Classification, and institutional control.

ES is the partial eta square. **Small effect**: .0 to .04, **medium effects**: .05 to .13, and **large effect** .14 or higher.

*** p<.001
Comparison of Effect Sizes in Benchmarks between Service-Learning Participants (First-year student)

Mean Differences

- Active and Collaborative Learning: 14.45
- Student-Faculty Interaction: 11.29
- Enriching Educational Experiences: 7.52
- Supportive Campus Environment: 5.38
- Academic Challenge: 4.40

Bar Chart:
- Active and Collaborative Learning: 0.195
- Student-Faculty Interaction: 0.09
- Enriching Educational Experiences: 0.08
- Academic Challenge: 0.03
- Supportive Campus Environment: 0.02
Comparison of Effect Sizes in Benchmarks between Service-Learning Participants (Seniors)

Mean Differences

- Active and Collaborative Learning: 0.22
- Student-Faculty Interaction: 0.08
- Enriching Educational Experiences: 0.079
- Supportive Campus Environment: 0.03
- Academic Challenge: 0.06
Peer-interactions
(Active and Collaborative Learning)
by Service Learning
Student-Faculty interactions by Service learning

- Discussed grades or assignments with an instructor
- Discussed ideas from your readings or classes with faculty members outside of class
- Talked about career plans with a faculty member or advisor
- Received prompt written or oral feedback from faculty on your academic performance
- Worked harder than you thought to meet an instructor's standards

The highlighted columns show a sharp difference in item responses between having done SL and having not.
Effect of Service-Learning: Diversity

Adjusted Mean Difference in Diversity Scale Between Service-Learning Participants and Their Peers

<table>
<thead>
<tr>
<th></th>
<th>Mean Diff</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>0.7***</td>
<td>0.02</td>
</tr>
<tr>
<td>Senior</td>
<td>0.8***</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Note. Mean difference were calculated from adjusted means. Controls included gender, enrollment, race/ethnicity, age, first-generation, self-reported grades, transfer, living on campus, major, working, international, distance education, Carnegie Basic Classification, and institutional control.

***p<.001.

ES is the partial eta square. Small effect range from .0 to .04, medium effects from .05 to .13, and large effect .14 or higher.
Substantial\(^a\) Diversity Experience by Service Learning Participation

- Had serious conversations with students of a different race or ethnicity
- Had serious conversations with students who have different religious beliefs, political opinions, or personal values
- School encourages contact among students from different economic, social, and racial or ethnic backgrounds

- First-Year Students: Done
- First-Year Students: Not Done
- Seniors: Done
- Seniors: Not Done

\(^a\) Percentage responding “Very much” or “Quite a bit”.

2013 NASPA Annual Conference * Orlando, Florida * March 16-20, 2013
## Effect of Service-Learning: Gains

### Adjusted Mean Difference in Gains Between Service-Learning Participants and Their Peers

<table>
<thead>
<tr>
<th></th>
<th>Mean Diff</th>
<th>Sig.</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gains in Practical Competence</td>
<td>7.8</td>
<td>***</td>
<td>0.03</td>
</tr>
<tr>
<td>Gains in Personal and Social Development</td>
<td>12.8</td>
<td>***</td>
<td>0.06</td>
</tr>
<tr>
<td>Gains in General Education</td>
<td>6.4</td>
<td>***</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Note. Mean difference were calculated from adjusted means. Controls included gender, enrollment, race/ethnicity, age, first-generation, self-reported grades, transfer, living on campus, major, working, international, distance education, Carnegie Basic Classification, and institutional control.

***p<.001.

ES is the partial eta square. Small effect range from .0 to .04, medium effects from .05 to .13, and large effect .14 or higher.
Effect of Service-Learning: Gains

Substantial\textsuperscript{a} Perceived Gains by Service Learning Participation

- Contributing to the welfare of your community
- Understanding people of other racial and ethnic backgrounds
- Developing a personal code of values and ethics
- Solving complex real-word problems
- Working effectively with others

\textsuperscript{a} Percentage responding “Very much” or “Quite a bit”.

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Conclusion

• Concentration of service-learning courses in Education and Social Sciences majors
• Female and minority students participate in service-learning at higher rates (compensatory effect)
• Students who are less likely to have done service-learning
  – First-generation
  – Part-time
  – Non-traditional students
  – Transfer students
Conclusion

• Not all service-learning is equal
  – Need assess
    ▪ Time on task
    ▪ Amount of writing and presentations
    ▪ Connections to course work
    ▪ Diverse interactions
    ▪ Interactions with peers
    ▪ Feedback from faculty
Conclusion

• Service-learning is positively related to a number of student outcome
  – Diverse interaction
  – Peer interactions
  – Student-faculty interaction
  – Self-reported gains
  – Satisfaction
# Conclusions & Implications

<table>
<thead>
<tr>
<th>Conclusion</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major difference</td>
<td>Encourage arts, sciences, business, and engineering students to do SL</td>
</tr>
<tr>
<td>Female and minority students participate in SL at higher rates</td>
<td>Develop programs to attract all students</td>
</tr>
<tr>
<td>First-generation/part-time/non-traditional/transfer students do SL less</td>
<td>Develop programs to attract all students</td>
</tr>
<tr>
<td>Multiple aspects of SL</td>
<td>Need assess all aspects of SL</td>
</tr>
<tr>
<td>Positive effects of SL</td>
<td>More SL experiences!</td>
</tr>
</tbody>
</table>
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