Validation of NSSE with Liberal Arts Outcomes:
Findings from the Wabash National Study of Liberal Arts Education

Charles F. Blaich, Center of Inquiry at Wabash College
Tricia A. Seifert, Ontario Institute for Studies in Education

Presentation for the NSSE Symposium, October 2009, Indianapolis, Indiana
Wabash National Study

• 49 institutions
• More than 17,000 students to date
• Longitudinal
• Purpose – identify high impact practices that promote liberal education
What practices promote growth on multiple outcomes?
Enter college
- Gather student background information
- Give students surveys/tests

End 1st year
- Ask students about their college experiences
- Give students surveys/tests

2nd year

3rd year
- Ask students about their college experiences
- Give students surveys/tests

4th year
Data

- First year of the Wabash National Study
  - Longitudinal (pretest-posttest) design permitted control of array of potential confounding influences
  - 3,081 first-time, full-time students at 19 institutions
  - Data collected in Fall 2006 and Spring 2007
Liberal Arts Outcomes

• Effective reasoning and problem solving
  – CAAP Critical Thinking

• Psychological well-being
  – Scales of Psychological Well-Being

• Inclination to inquire and lifelong learning
  – Need for Cognition scale
  – Positive Attitude toward Literacy scale

• Intercultural effectiveness
  – Miville-Guzman Universality-Diversity scale
  – Openness to Diversity/Challenge scale

• Leadership
  – Socially Responsible Leadership scale

• Moral character
  – Defining Issues Test (DIT2) N-2 score of moral reasoning
The NSSE Benchmarks

• Academic Challenge – emphasizes the importance of academic effort and setting high expectations for student performance
• Active & Collaborative Learning – applies learning in different settings and collaborates with others to solve problems
• Student-Faculty Interaction – interacts with faculty members inside and outside the classroom
• Supportive Campus Environment – institutional commitment to cultivate positive working and social relations among different groups on campus.
• Enriching Educational Experience – engages in learning opportunities to complement the classroom
The Deep Learning Scales

• Higher-order Learning – emphasizes analysis and synthesis to arrive at more complex interpretations

• Integrative Learning – integrates ideas from various, diverse perspectives and discuss these ideas outside of class

• Reflective Learning – examines strengths and weaknesses of personal views to arrive at changed understanding

• Total Deep Learning – 3 subscales summed together
Institutional-level Analysis

Pretest Score

NSSE Scales

Posttest Score

Center of Inquiry at Wabash College

www.liberalarts.wabash.edu
## Institutional-level Results

<table>
<thead>
<tr>
<th></th>
<th>AC</th>
<th>ACL</th>
<th>SFI</th>
<th>SCE</th>
<th>EEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAAP Critical Thinking</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>DIT-2 Moral Reasoning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Need For Cognition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Attitude Toward Literacy</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGUDS Universality-Diversity</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Openness to Diversity/Challenge</td>
<td></td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Scales of Psychological Well-Being</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>

Center of Inquiry at Wabash College

www.liberalarts.wabash.edu
Individual-level Analysis

NSSE Benchmarks*
---
Deep Learning Scales

Other College Experiences
- Residence
- Amount worked
- LA coursework
- Inst. type

Liberal Arts Assessments
- Critical Thinking
- Moral Reasoning
- Psych. Well-Being
- Leadership
- Need for Cognition
- Attitude toward Literacy
- MGUDS
- Openness to Diversity

*Controlling for Background and Pre-college characteristics:
Gender, race/ethnicity, parental education, high school involvement, academic motivation, tested academic preparation, pretest

Center of Inquiry at Wabash College
www.liberalarts.wabash.edu
Effects of Benchmarks on LAOs*

- **Academic Challenge**
  - Scales of Psychological Well-Being
  - Miville-Guzman Universality-Diversity scale
  - Openness to Diversity/Challenge scale
  - Socially Responsible Leadership scale

- **Active and Collaborative Learning**
  - CAAP Critical Thinking
  - Scales of Psychological Well-Being
  - Need for Cognition scale
  - Openness to Diversity/Challenge scale
  - Socially Responsible Leadership scale
  - Defining Issues Test of moral reasoning
Effects of Benchmarks on LAOs*

- Student-Faculty Interaction
  - (neg) CAAP Critical Thinking

- Supportive Campus Environment
  - Scales of Psychological Well-Being
  - Positive Attitude Toward Literacy scale
  - Miville-Guzman Universality-Diversity scale
  - Openness to Diversity/Challenge scale
  - Socially Responsible Leadership scale
Effects of Deep Learning Scales

- **Higher-order Learning**
  - Scales of Psychological Well-Being
  - Openness to Diversity/Challenge scale
  - Socially Responsible Leadership scale

- **Integrative Learning**
  - Need for Cognition scale
  - Positive Attitude toward Literacy Scale
  - Miville-Guzman Universality-Diversity scale
  - Openness to Diversity/Challenge scale
  - Socially Responsible Leadership scale
  - Defining Issues Test of moral reasoning

- **Reflective Learning** – all LAOs

- **Total Deep Learning** – all LAOs but CAAP
Conclusions

• NSSE scales measure practices and experiences that positively influence cognitive and personal growth
• This influence appears to be discernable as early as the first year of college
• Validating NSSE against important college outcomes may be a cost effective means of assessing institutional effectiveness
• Suggest areas where institutions can affect change and improve the quality of undergraduate education
For more information on the Wabash National Study: http://www.liberalarts.wabash.edu/study-overview/