Quick Takes – 30 min Webinar
Beyond NSSE Benchmarks: Underused Nuggets of Effective Educational Practice

Thank you for joining us.
The Webinar will begin at 3:00pm.
Some general advice before we begin:
• Please turn up your computer speakers or plug in your headphones to listen to the Webinar.
For best results, close all other applications as they may interfere with the audio feed for this Webinar.
• What to do if you don’t hear anything:
  • If you cannot hear anything, click on “Meeting” in left of dark grey tool bar at the top of the screen and select “Audio Setup Wizard.” Complete the first part of the Wizard, which ends with a speaker test, in order to ensure you are properly connected for webinar audio. If you cannot hear anything after this, please consult your technology support person.
  • If this does not work, the Webinar is being recorded. You will be able to view the session on the NSSE Web site several days after the live session.
• Using the Chat feature:
  • The Chat window will be available throughout the presentation for participants to interact with presenters and each other. Please use chat to pose questions, suggest a resource etc.

Overview

Introduction to Nuggets

Nuggets = Constructs, approaches proven useful at institutions to generate interest in results, to study educational issues; generally helpful for advancing improvement agenda.
1. Scales and Scalelets
2. High-Impact Practices
3. Multi-Year Analysis
4. Linking data
5. Variation with-in

Benchmarks as a Broad Overview

• Benchmarks are good for broad overview, & external comparison purposes; a constellation
• Discover patterns, identify strengths, challenges
• Compare based on student and institutional characteristics

But...
• BM are gross measures, difficult to know exactly where to focus action
• Masks “variation with-in” (race-ethnicity, gender, major)
• BM not the best performers in analysis (predicting retention or GPA, multi-year change)

NSSE Scales

NSSE Scales and Scalelets

Smaller, more reliable measures

NSSE Scale properties:

Deep approaches to learning
[see NSSE Annual Reports 2006 – 2008]

Diversity experiences (1e, u,v,10c,11l)

Scales to measure perceived gains in social, practical, and academic competence

Level of Academic Challenge
Active and Collaborative Learning
Student-Faculty Interaction
Enriching Educational Experiences
Supportive Campus Environment

Peer Groups
Top 50% and Top 10%
Means, significant differences, and effect size
Detailed statistics

Quick Takes – 30 min. Webinar
Beyond NSSE Benchmarks:
Underused Nuggets of Effective Educational Practice
Jillian Kinzie, Associate Director

Make better use of the hidden gems in your NSSE results. "Beyond NSSE Benchmarks: Underused Nuggets of Effective Educational Practice" highlights a half-dozen novel, but proven approaches for making NSSE results more meaningful and useful to efforts to enhance student learning and success.

Topics include: NSSE scales, including deep approaches to learning, and "scalelets"; high-impact practices, and models for exploring retention and persistence.
NSSE Scales

“Scalelet scores are most useful to academic affairs, student affairs, and assessment professionals charged with taking NSSE results and translating them into a series of action items to improve the student experience on campus.”


- GA Tech linked multiple years NSSE responses to several outcomes: FY retention, GPA, pursuit of graduate education, & employment outcome upon commencement/degree conferral. Found BM offered little explanatory power, but scales and items showed promise.


NSSE Scales

Gains items (alphas .83 - .88) — solid outcome variables

Student Self-Reported Gains

| Gains in Practical Competence | 1. graduate | Acquiring job or work-related knowledge and skills |
| 2. graduate | Working effectively with others |
| 3. graduate | Using computing and information technology |
| 4. graduate | Analyzing quantitative problems |
| 5. graduate | Solving complex real-world problems |

| Gains in General Education | 1. graduate | Writing clearly and effectively |
| 2. graduate | Speaking clearly and effectively |
| 3. graduate | Acquiring a broad general education |
| 4. graduate | Thinking critically and analytically |

NSSE Scales

Deep approaches to learning

- Higher order thinking (item 2b,c,d,e)
- Integrated learning (items 1d,e,i,p,t)
- Reflective learning (items 6d,e,f)

- Educationally substantive information, interesting to faculty
- Perform well in analyses

NSSE Deep/Integrative Learning

- Integrating ideas or information from various sources
- Included diverse perspectives in class discussions/writing
- Put together ideas from different courses
- Discussed ideas with faculty members outside of class
- Discussed ideas with others outside of class
- Analyzing the basic elements of an idea, experience, or theory

- Synthesizing & organizing ideas, info., or experiences
- Making judgments about the value of information
- Applying theories to practical problems or in new situations
- Examined the strengths and weaknesses of your own views
- Tried to better understand someone else’s views
- Learned something that changed how you understand an issue

Using Scales: Miami University

Engaging with Other Learners Outside of the Classroom

Assessment brief from Miami University (OH), that explores degree to which first-year and senior students engaged in learning activities outside the classroom.

Gains items (alphas .83 - .88) — solid outcome variables

<table>
<thead>
<tr>
<th>Order in Percent Total Social Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. graduate</td>
</tr>
<tr>
<td>2. graduate</td>
</tr>
<tr>
<td>3. graduate</td>
</tr>
<tr>
<td>4. graduate</td>
</tr>
<tr>
<td>5. graduate</td>
</tr>
<tr>
<td>6. graduate</td>
</tr>
<tr>
<td>7. graduate</td>
</tr>
</tbody>
</table>
**NSSE High-Impact Practices**

AAC&U defined “High-Impact Practices” align with NSSE measures:
- Learning Communities
- Service Learning
- Research with a Faculty Member
- Study Abroad
- Culminating Senior Experience

Findings from AAC&U & NSSE: Growing evidence that “high-impact practices” provide substantial educational benefits to students


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**Multi-Year Analysis**

- What is the best approach to using results from multiple NSSE administrations?
- More than 75% of NSSE participating institutions have administered the survey more than once.
- Some look for changes in the way their current students are engaged, some track possible trends, and others evaluate specific campus initiatives.

**Identifying Multi-Year Questions**

- Confirming stability and reliability
- Measuring change due to campus initiatives
- Identifying trends over time

**Methods for Multi-Year Analysis**

**NSSE 2004**

- First-Year
- Senior

**NSSE 2008**

- First-Year
- Senior

A: ☑️ B: ☞ C: ☞

**NSSEville State University – Research Question**

“Undergraduate Student Research Program” (2006-07) gives resources to students and faculty for research projects outside of class.

**Question:** Did research with faculty increase between 2006 and 2008? If so, did changes vary by gender?
### NSSEville Multi-Year Results

worked on a research project with a faculty member outside of course or program requirements

<table>
<thead>
<tr>
<th>Year</th>
<th>Gender</th>
<th>N</th>
<th>Percent &quot;done&quot;</th>
<th>Statistical Difference?</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>F-Y Male</td>
<td>69</td>
<td>4%</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>F-Y Female</td>
<td>133</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>F-Y Female</td>
<td>306</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>F-Y Female</td>
<td>309</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>SR Male</td>
<td>82</td>
<td>21%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>SR Male</td>
<td>143</td>
<td>22%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>SR Female</td>
<td>238</td>
<td>18%</td>
<td></td>
<td>.17</td>
</tr>
<tr>
<td>2008</td>
<td>SR Female</td>
<td>325</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Multi-Year Results

Percentage of excellent ratings of the quality of academic advising

![Graph showing percentage of excellent ratings by year and field]

### Linking Data

- In-house surveys
- National surveys (a growing list)
  - CLA
  - CSEQ / CSXQ
  - CIRP – Freshman Survey / YFCY / CSS
  - EBI Benchmarking surveys
  - Noel Levitz Student Satisfaction Inventory
  - ETS Major Field Tests
  - ACT Collegiate Assessment of Academic Proficiency
- Institutional data: GPA, financial aid, transcripts, retention, certification tests, etc.

### Linking Educational Processes & Outcomes

- Lee Shulman (2007)...use multiple data points to develop a complex institutional narrative
- CLA provides information about learning outcomes, but just knowing this provides little insights about educational practices and student behaviors that account for these scores, or what might be done to improve low performance
- By combining NSSE & CLA, institutions can learn more about programmatic features that correlate with gains in students’ analytical reasoning, critical thinking, and writing skills

### Combining NSSE + CLA

**Option 1 – In Tandem**
- Administer CLA and NSSE to same cohort of students
- Examine results from NSSE and CLA in tandem to think about the relationship between CLA performance and student engagement

**Option 2 – Matched Results**
- Match CLA and NSSE results at the student level
- Affords appropriate analyses of the relationship between CLA performance and student engagement

### Option 1 – In Tandem

**CLA Senior performance – Mean scores**

<table>
<thead>
<tr>
<th>Performance Area</th>
<th>All Schools Mean</th>
<th>Your School Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytic Writing Task</td>
<td>10.04</td>
<td>10.02</td>
</tr>
<tr>
<td>Critique an Argument</td>
<td>11.04</td>
<td>10.04</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>10.04</td>
<td>10.02</td>
</tr>
<tr>
<td>SAT score</td>
<td>1200</td>
<td>1200</td>
</tr>
</tbody>
</table>

**NSSE SR writing items compared to select peers**

- % SR writing papers > 5 pgs
- % SR students who prepare 2 or more drafts
- % SR reporting substantial gains in writing effectively
- % SR worked on paper requiring integrating ideas, sources
To explore these questions K-College: compared “typical” indicators of students’ academic abilities (i.e., GPA & SAT) to CLA performance, disaggregated CLA scores by academic divisions, performed similar analyses of NSSE data, and interviewed students about their college experiences. Hypothesized that student engagement would correlate positively with CLA scores. Using matched data from seniors who completed both NSSE and CLA (n=48) revealed no significant correlations; however, “analyses...suffers from the small sample size and a relatively homogeneous group of students.”

NSSE results revealed patterns that corroborated K-College faculty hunches about variation in CLA data:

- Students who write well & who have had more experience making judgments about the value of information would theoretically perform better on CLA
- The following patterns emerged: foreign language proficiency correlated positively with CLA scores; students who used phrases like “personal initiative” generally did better on CLA; and some science majors seemed to get “lost” in their major, but those who did explore other disciplines tended to do well on the CLA

Variation With-in:

- Re-examined data from all seniors who took NSSE 2005–6 (RR ~76%) by comparing responses from students majoring in 5 academic divisions
- Level of Academic Challenge [LAC] benchmark differed significantly among divisions
- LAC score for natural sciences significantly lower than scores for humanities & social sciences, prompting reexamination of responses to each question in benchmark. Humanities & social sciences significantly higher than natural sciences in three items:
  1. number of written papers between five and nineteen pages;
  2. number of assigned textbooks;
  3. (3) making judgments about the value of information. If these responses highlight different experiences of students in these disciplines, this might explain interdivisional differences in CLA performance and suggest possibilities for improving curriculum

Variation With-in:

- What does it mean to look at variation within?
  - Examine variation in student experience by major, by groups of related majors, or demographic or enrollment subgroups
  - Or, examine: who are the least engaged students (for ex: the bottom quarter of the distribution within an institution), and what can be done to improve their experience so as to narrow the gap between an institution’s least and most engaged students?

- Another implication: even high-performing institutions have work to do to improve the experience of all students.

- Two case studies based on real data from two NSSE 2008 institutions illustrated in NSSE AR 2008:
  1. Examine Supportive Environment for 3 student groups: Honors, Educational Opportunity Program (EOP) and, “All Other Students.”
  2. Examine Enriching Experiences by discipline/major

Beyond Benchmarks & Standard Reports:

- Doing your own within-institution analyses using NSSE resources
- SPSS data
- Codebooks
- Syntax library (http://nsse.iub.edu/html/syntax_library.cfm)

- Additional tools and services from NSSE
- Special analyses
- Voluntary System of Accountability
- Accreditation Toolkits (regional and specialized)
- Multi-year Data Guide
Discussion

- Have you mined these nuggets?
- How have you been using scales and "looking within," and what have you found?
- What are other productive approaches for sharing results and identifying areas for improvement?
- What else could NSSE do to support your efforts?

Upcoming NSSE Webinars
Registration Opens Today

Digging Deeper series of Webinars presented by NSSE research analysts, [http://cpr.iub.edu/qform.cfm?qform_id=43](http://cpr.iub.edu/qform.cfm?qform_id=43)
- April 7 – Core Concepts
- April 14 – Intermediate Concepts
- April 28 – Advanced Use: Multi-year Analysis

Please note that the number of Webinar registrants is limited and sessions fill up very quickly.

Future topics also include:
- using NSSE in accreditation
- using high impact activities to maximize student gains
- integrating NSSE results across academic/support departments
- linking NSSE data with other institutional data.

For dates, check our complete Webinar listing at [www.nsse.iub.edu/webinars](http://www.nsse.iub.edu/webinars)