Using NSSE to Understand Students’ Experiences: Making the Most of Data in Assessment
SUNY Assessment Initiative, April 2005

Jillian Kinzie, Ph.D
Center for Postsecondary Research, Indiana University Bloomington

The Challenge
How might we assess quality in undergraduate education and provide evidence of student learning to motivate and inspire institutional improvement and promote student success?

Overview
Student Engagement Research Base
NSSE Overview
Understanding NSSE data
Using NSSE data Questions

Topic #1 - What Matters to Student Success: Lessons from the Research
Pre-college Characteristics Associated with Student Success
- Academic preparation
- Ability
- Family support
- Financial wherewithal

What Matters to Student Success:
Lessons from the Research
Most important to student success:
a. Frequency and quality of contacts with institutional agents and peers; and
b. Time and effort devoted to studying, talking with faculty and peers about resources (library, fine arts programs), and so on.

What Really Matters in College: Student Engagement
Because individual effort and involvement are the critical determinants of college impact, institutions should focus on the ways they can shape their academic, interpersonal, and extracurricular offerings to encourage student engagement.

Pascarella & Terenzini, How College Affects Students, 2005, p. 602
Lessons from the Research

- What matters most is what students do, not who they are
- A key factor is the quality of effort students expend
- Educationally effective institutions channel student energy toward the right activities

Two Components of Student Engagement

1. What students do -- time and energy devoted to educationally purposeful activities
2. What institutions do -- using effective educational practices to induce students to do the right things

Foundations of Student Engagement

Quality of Effort (Pace)
Student Involvement (Astin)
Social and Academic Integration (Tinto)
Good Practices in Undergraduate Education (Chickering & Gamson)
Learning and Development Model (Pascarella)
Student Engagement (Kuh)

Principles of Good Practice in Undergraduate Education
(Chickering & Gamson, 1987)

- Student-faculty contact
- Active learning
- Prompt feedback
- Time on task
- High expectations
- Experiences with diversity
- Cooperation among students

Topic #2 - Survey & Administration

College student survey that assesses the extent to which students engage in educational practices associated with high levels of learning and development

NSSE’s Purposes

- Provide reliable national indicators of “good educational practices”
- Support institutional improvement and accountability efforts
- Foster comparative & consortium activity
- Refocus conversations about quality in undergraduate education
NSSE Project Scope

- Launched in 2000
- First Years & Seniors
- Spring Administration
- Database = 613,500 students from 850+ different schools
- 50 states, PR, Canada
- 40+ consortia
- 41% response rate

<table>
<thead>
<tr>
<th>Project Year</th>
<th>Colleges &amp; Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>276</td>
</tr>
<tr>
<td>2002</td>
<td>321</td>
</tr>
<tr>
<td>2003</td>
<td>366</td>
</tr>
<tr>
<td>2004</td>
<td>437</td>
</tr>
<tr>
<td>2005</td>
<td>473</td>
</tr>
</tbody>
</table>

Pre-Administration Checklist

- Secure campus partners
- Determine mode and sample size
- Explore response rates, incentive plans, and need for survey awareness campaign
- Think about joining a consortium
- Gather required materials (letters, signatures, etc.)

NSSE - Taking a look at *The College Student Report*

- Based on effective educational practices
- Face validity of items
- Designed & tested for high validity and reliability
- Relatively stable over time
- Credibility of self-reported data
- Students will participate
- Actionable data

Mode and Sample Size

The ability to maximize respondents plays a critical role in making the most of your data.

<table>
<thead>
<tr>
<th>Undergraduate Enrollment</th>
<th>Standard Sample Size</th>
<th>Approximate Total Number of Respondents</th>
<th>Sampling Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(n = total number of first-year and senior students)</td>
</tr>
<tr>
<td>(20% paper response rate)</td>
<td>(60% paper &amp; 40% web response rate)</td>
<td>(40% web response rate)</td>
<td>450</td>
</tr>
<tr>
<td>4,000 to 10,000</td>
<td>700</td>
<td>2,100</td>
<td>2,800</td>
</tr>
<tr>
<td>More than 15,000</td>
<td>1,000</td>
<td>3,000</td>
<td>4,000</td>
</tr>
</tbody>
</table>

Assuming sample size of 2,000.

Planning a Successful NSSE Administration

Before the Administration

- What do you want to get out of the survey?
- What questions are you hoping to have answered?
- Should you oversample?
- Should you join a consortium?
- What are your current understandings of your students?

Planning a Successful NSSE Administration

Before the Administration, cont’d

- What other data do you have about your students?
- How can you get others involved?
- Student Affairs, Students, Faculty
- Give a “sample NSSE” or partial NSSE
- Build excitement and understanding
- Have you started any new initiatives?
- How to ensure student participation?
**NSSE Consortiums & Peer Groups**

- 6 or more institutions sharing comparative data
- Great way to add value to participation
- Often times mission specific
- Ability to ask additional questions

**Select Consortia**
- Urban Institutions
- Women's Colleges
- Private Liberal Arts
- Research Universities
- HBCUs
- Christian Colleges
- Jesuit Institutions
- State Systems

**Planning a Successful NSSE Administration**

**During the Administration**

- Monitor response rate [institutional interface]
- Intervene with Direct and Indirect contacts
- Continue the discussion on campus
- Begin to link questions to activities or offices on campus as well as the educational mission
- Make plans for the results
- Distribution
- Meetings to discuss

**FSSE - Faculty Survey of Student Engagement**

- Designed to parallel NSSE undergraduate survey
- Catalyst for productive discussions related to teaching and learning
- To date more than 34,000 faculty members at 276 four-year institutions

**BSSE - Beginning Student Survey of Engagement**

- Based on numerous requests over the years for pre-college controls
- Measures first-year students’ expectations for college and selected high school experiences
- Ability to combine with spring NSSE data for pre- and post-look at first-year experience
- Piloted in fall 2004 at 20 institutions

**Topic #3 - NSSE Institutional Report**

- Overview
- Institutional data
- Item averages and response percentages
- Respondent characteristics
- First-year students and seniors
- Comparisons by consortium, Carnegie, and national
- Information video
- Using NSSE Data
- Accreditation toolkit
- Benchmarks (Nov)

**Your NSSE Data**

- Respondent Characteristics
- Comparative data [National, Carnegie, Choice]
- Means Comparison
- Frequency Distribution
- Benchmark Data
- Institutional Engagement Index
- Data File
1. Are you doing better or worse given your institutional and student characteristics?

2. Compared to 90th%?  

NSSE Data

Reading your data

- Ask general questions first
- What confirms what you suspected?
- What surprises you?
- How accurate was your “sample NSSE”?
- Look at trends as well as individual items
Topic #4 - Using NSSE Data

- Problem Identification - results point to things institutions can do something about - almost immediately
- Mobilize Action
- Context Setting - paint a picture of the institution
- Evidence of outcomes & processes

- Refocus conversation about collegiate quality
- Helps inform decision-making
- Provides lexicon for talking about collegiate quality in an understandable, meaningful way

Using NSSE Results...Stimulating Conversation on Campus

“NSSE is a great way to stimulate reflection and debate about what we do more and less well, and why. For us it’s proving an exciting and enlivening tool for self-reflection and self-improvement.”

-- Michael McPherson, President of The Spencer Foundation (former President of Macalaster College)

Communicating Results - INTERNAL

<table>
<thead>
<tr>
<th>Internal Sharing of NSSE 2004 Results</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>80</td>
</tr>
<tr>
<td>Faculty</td>
<td>71</td>
</tr>
<tr>
<td>Administrative Staff</td>
<td>68</td>
</tr>
<tr>
<td>Department Chairs</td>
<td>59</td>
</tr>
<tr>
<td>Academic Advisors</td>
<td>51</td>
</tr>
<tr>
<td>Governing Board</td>
<td>34</td>
</tr>
<tr>
<td>Students</td>
<td>32</td>
</tr>
<tr>
<td>Other (web site, fact book, etc.)</td>
<td>20</td>
</tr>
</tbody>
</table>

Communicating Results - EXTERNAL

<table>
<thead>
<tr>
<th>External Sharing of NSSE 2003 Data</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No External Disclosure</td>
<td>35</td>
</tr>
<tr>
<td>Accreditation Agencies</td>
<td>31</td>
</tr>
<tr>
<td>Web Site</td>
<td>25</td>
</tr>
<tr>
<td>Media</td>
<td>13</td>
</tr>
<tr>
<td>Prospective Students</td>
<td>13</td>
</tr>
<tr>
<td>Parents</td>
<td>13</td>
</tr>
<tr>
<td>Alumni</td>
<td>13</td>
</tr>
<tr>
<td>State Agencies</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
</tr>
</tbody>
</table>

Sharing your NSSE data

- Provide summaries of results
  - Copy NSSE tables; create your own
  - Involve groups from the beginning
  - Make meaning of the data; why are the numbers what they are?
  - Go back to other data sources
  - How might scores be improved?

Making Sense of Data: Benchmarking

Two Approaches:
- Normative - compares your students’ responses to those of students at other colleges and universities.
- Criterion - compares your school’s performance against a predetermined value or level appropriate for your students, given your institutional mission, size, curricular offerings, funding, etc.
Making Sense of Data: Two Approaches

✓ Most valued activities
What is most valued at your institution, in departments, what does the data show?

✓ Eliminate “Nevers”
Work on reducing or eliminating reports by students of never doing specific engagement activities.

Outcome Measures - NSSE & Educational and Personal Gains (% “very much” or “quite a bit”)

<table>
<thead>
<tr>
<th>Self-Reported Educational and Personal Gains from College</th>
<th>First-Year Students</th>
<th>Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thinking critically and analytically</td>
<td>82%</td>
<td>87%</td>
</tr>
<tr>
<td>Acquiring a broad general education</td>
<td>82%</td>
<td>88%</td>
</tr>
<tr>
<td>Working effectively with others</td>
<td>69%</td>
<td>76%</td>
</tr>
<tr>
<td>Writing clearly and effectively</td>
<td>72%</td>
<td>77%</td>
</tr>
<tr>
<td>Learning effectively on your own</td>
<td>79%</td>
<td>77%</td>
</tr>
<tr>
<td>Using computer and information technology</td>
<td>75%</td>
<td>79%</td>
</tr>
<tr>
<td>Acquiring job or work-related knowledge and skills</td>
<td>57%</td>
<td>72%</td>
</tr>
<tr>
<td>Speaking clearly and effectively</td>
<td>58%</td>
<td>75%</td>
</tr>
<tr>
<td>Understanding yourself</td>
<td>60%</td>
<td>84%</td>
</tr>
<tr>
<td>Evaluating quantitative problems</td>
<td>55%</td>
<td>85%</td>
</tr>
<tr>
<td>Solving complex real-world problems</td>
<td>49%</td>
<td>58%</td>
</tr>
<tr>
<td>Understanding people of other racial and ethnic backgrounds</td>
<td>50%</td>
<td>52%</td>
</tr>
<tr>
<td>Exploring local, state, or national traditions</td>
<td>24%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Outcome Measures - Deep Learning Activities Clusters

• Higher-Order Learning— activities that require students to utilize higher levels of mental activity than those required for rote memorization (2b,c,d,e)
• Integrative Learning— activities that require integrating acquired knowledge, skills, and competencies into a meaningful whole (1d,e,i,p,t)
• Reflective Learning — activities that ask students to explore their experiences of learning to better understand how they learn

Outcome Measures - NSSE & Graduation Rates

<table>
<thead>
<tr>
<th>Outcome Measures - NSSE</th>
<th>First-year students</th>
<th>Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Challenge</td>
<td>.60</td>
<td>.46</td>
</tr>
<tr>
<td>Active &amp; Collaborative Learning</td>
<td>.23</td>
<td>.09</td>
</tr>
<tr>
<td>Student Faculty Interaction</td>
<td>.28</td>
<td>.37</td>
</tr>
<tr>
<td>Enriching Educational Experiences</td>
<td>.53</td>
<td>.48</td>
</tr>
<tr>
<td>Supportive Campus Environment</td>
<td>.38</td>
<td>.26</td>
</tr>
</tbody>
</table>

*All correlations are significant at p<.01
NSSE Scales

Complex Learning
- Deep Learning: integrat, divclass, intideas, facideas, oocideas, synthesz, analysis, evaluate, applying
- Higher Order Thinking: integrat, synthesz, evaluate, applying
- Integrative Learning: integrat, divclass, intideas, facideas, oocideas
- Diversity: divrstud, diffstu2, envdivrs

Gains Factors
- Personal/Social: gnethics, gncommun, graspent, grasself, grntrivers, gnpromote, gnself, gndivers, gnprobsv, gncitizn, gnisms, gnothers
- General Education: gnwrite, graspread, grasanaly, grundled
- Practical Competence: gnwork, gncmpts, gnquant

Converting NSSE Data Into Action: Institutional Examples

Many schools are positively influencing student engagement by talking about and using effective educational practices.

Using NSSE Data: Elon University

Using NSSE Data: Drew University

Strategy for dealing with mixed results
1) Filter results through Drew’s catalog so faculty and administrators couldn’t say these things are not important to us
   - A curriculum that integrates modes of learning
   - Application of advanced technologies
   - Faculty advising
2) Use faculty & student focus groups to better understand results and to establish another point of triangulation.
3) Make results “personal” to departments and established internal benchmarking mechanism for faculty to compare pedagogy across disciplines.
4) Receive statistical assistance from math faculty member to lend additional credibility to the analysis

Result
- Helped make “engagement” part of campus vocabulary
- Prompted increased attention to class size
- Reviewed course evals to assess for effective educational practices

Using NSSE Data: Oregon State University

Student affairs initiative; “Blue Ribbon” steering committee (students)
Using NSSE Data: Towson University

- Disaggregated NSSE results from seniors by those who started at the institution as first-year students and those who entered as transfer students
- Better understand the transfer student experience.
- Combined with CIRP to develop a fuller portrait of the transfer student experience.

Using NSSE Data: Westminster College

- Uses NSSE results along with other sources of data in its strategic planning and performance indicator dashboard
- President set goals to enhance student engagement across all five NSSE benchmarks by one decile over the next five years
- Benchmarks itself against a selected aspirational peer group of liberal arts colleges
- Combines FSSE with its annual local faculty and staff survey to monitor the degree to which faculty and staff perceive the College to be open, collaborative and inclusive

Using NSSE Data: Texas State University - San Marcos

Faculty Development tool - http://www.assessment.swt.edu/Bibliography/page1.htm

Of the questions that showed significance at the 0.1 level, four either directly or indirectly related to the objectives of the freshman seminar course as outlined in the proposal. These included the following questions:

1. A--Asked questions class or contributed to class discussion.
10. F--Attending campus events and activities (special speakers, cultural performances, etc.)
11. K--Understanding yourself
13. --How would you evaluate your entire educational experience at this institution?

(Summary Report—NSSE 2003 Special Course Oversample April 19, 2004)

NSSE Cautions

- Only one source of information about student experience
- Not everyone will jump on the student engagement bandwagon
- Managing denial when confronted with less-than-desirable results
- Be sure results are thoroughly vetted
- Data don’t speak for themselves
- Link results to other data

NSSE Virtues

- Survey has compelling face validity
- Concept of engagement is accessible
- Window into the areas that all colleges and universities espouse to be important
- Points to areas where improvement is possible
- Benchmark data reveal national picture
Incorporating NSSE Data in Change Efforts: 8 Lessons Learned

1. Make sure faculty and staff understand and endorse the concept of student engagement
2. Collect enough results so the information is usable at the department or unit level
3. Understand what student engagement data represent and use results wisely
4. Report engagement results in a responsible way

5. Don't allow the numbers to speak for themselves
6. Examine the results from multiple perspectives
7. Link results to other information about the student experience and complementary initiatives
8. Don’t go it alone

Effective Practice -- Properties Common to DEEP Schools*

1) A “living” mission and a “lived” educational philosophy
2) An unshakeable focus on student learning
3) Clearly marked pathways to student success
4) Environments adapted for educational enrichment
5) An improvement-oriented campus culture
6) Shared responsibility for educational quality and student success

* 20 schools with better than predicted student engagement and grad rates

Reporting the Findings from Project DEEP
Jossey-Bass March, 2005

NSSE Institute for Effective Educational Practice

- Campus Audits: Comprehensive or targeted campus audits to identify institutional strengths and challenges
- Workshops: Institution based, regional, consortium workshops to assist with improvement initiatives
- On-going Research and Evaluation: Focused research and evaluation of initiatives and specific campus evaluation needs

Discussion and Comments

Jillian Kinzie, PhD.
NSSE Institute
Indiana University Center for Postsecondary Research
1900 East 10th Street
Eigenmann Hall, Suite 419
Bloomington, IN 47406
Ph: 812-856-5824
Fax: 812-856-5150
nsse@indiana.edu