NSSE Foundation Session: Experienced Users

Overview
- Review NSSE Reports
- Discuss Benchmarks
- Reading & Sharing your Reports
- Beyond the Standard Report
- Future NSSE Developments
- Discussion & Questions

Goals
- Provide good introduction to later sessions
- Cover issues of interest to veteran NSSE participants
- Two-way conversation

A Quick Survey to Get Things Started....
- Years of participation in NSSE
- Years of involvement in project
- Background of attendees

The NSSE Reports
- Respondent Characteristics
- Mean Comparisons
- Detailed Statistics
- Frequency Distributions
- Benchmark Comparisons
- Benchmark Recalculation Report
- Executive Summary Report

The NSSE Reports: New Features
- Comparison groups (2005-2007)
- Early benchmark report (2006)
- Frequency distributions and mean comparisons reports weighted (2006)
- Weighted to account for population size (2006)
- Electronic report will be delivered online (2007)
New Carnegie Classifications

- Carnegie 2000
  - Doctoral Extensive
  - Doctoral Intensive
  - Master’s
  - Baccalaureate Liberal Arts
  - Baccalaureate General Focus

- Carnegie 2005
  - Research Universities
    - Very High Research Activities
    - High Research Activities
    - Doctoral/Research
  - Master’s
    - Large
    - Medium
    - Small
  - Baccalaureate
    - Liberal Arts
    - Diverse Fields

The NSSE Reports: Respondent Characteristics

- A quick snapshot of your institution
- Data quality: Confirming if sample is representative
- Response Rate and Sampling Error

2006 NSSE Response Rates by Carnegie Classification

2006 NSSE Sampling Error by Carnegie Classification

The NSSE Reports: Mean Comparisons

Means, statistical significance and effect sizes

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The NSSE Reports: Mean Comparisons

What is Statistical Significance?
- Helps you answer the question, “How likely is it that the difference between my average student and the average student at [comparison group] is due to chance?”
- Significance determined by standard alpha values of p<.05, .01, or .001

The NSSE Reports: Mean Comparisons

What is Effect Size?
- Practical importance of the mean difference
- ES = mean difference/standard deviation
- .2 is often considered small, .5 moderate, and .8 large (but rare!)
- For example, while the difference in the means is statistically significant, the difference is so nominal that it doesn’t warrant further attention

The NSSE Reports: Detailed Statistics

What are Confidence Intervals?
- 95% CI = Mean ± 1.96 SEM
- A better predictor than mean
- More respondents → smaller standard error of the mean (SEM), more precise estimate
- Higher standard deviation → greater SEM, less precise estimate

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The NSSE Reports: Frequency Distributions

Tip: Consider merging response options to create dichotomous variables (1/0)

- Frequently = often + very often
- Substantial = quite a bit + very much

Level of Academic Challenge

- Challenging intellectual and creative work is central to student learning and collegiate quality.
- Institutions promote high levels of achievement by setting high expectations for student performance.
- 11 items include:
  - Preparing for class
  - Reading and writing
  - Using higher-order thinking skills
  - Institutional environment emphasizes academic work

Active and Collaborative Learning

- Students learn more when they are more intensely involved in their education.
- Collaborating with others prepares students to handle practical, real-world problems.
- 7 items include:
  - Asking questions in class
  - Making presentations
  - Working with other students on projects
  - Discussing ideas from readings or classes with others

Student Interactions with Faculty

- Interacting with faculty show students first-hand how to think about and solve practical problems.
- Teachers become role models and mentors for learning.
- 6 items include:
  - Discussing assignments with a professor
  - Talking about career plans with faculty member or advisor
  - Getting prompt feedback on academic performance
  - Working with a faculty member on a research project

Enriching Educational Experiences

- Students need learning opportunities that complement the goals of the academic program.
- Provide opportunities to integrate and apply knowledge.
- 11 items include:
  - Experiencing diversity
  - Using technology
  - Participating in internships
  - Culminating senior experience

NSSE Benchmarks of Effective Educational Practice

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

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Supportive Campus Environment

- Students perform better and are more satisfied at colleges that are committed to their success.
- Does institution cultivate positive working and social relationships among different groups on campus?
- 6 items include:
  - Helping students achieve academically
  - Helping students cope with non-academic responsibilities
  - Quality of relationship between student and peers, faculty, and administrative personnel

Using Benchmark Scores

To stimulate conversation on campus:
- How does your institution compare to your peers?
- Have your scores changed from prior years?
- Are scores aligned with your institutional mission?
- Do scores make sense in light of recent institutional initiatives?
- Do scores mirror impressions of your institution on campus and in your community?

Benchmark Calculation

How are benchmark scores calculated?
1. Items are converted to a 100-point scale: 
   \[ \frac{(response\ value - 1)}{(total\ #\ of\ response\ values - 1)} \times 100 \]
2. Part-time students’ scores are adjusted on four Academic Challenge items.
3. Student-level scores are created for each group of items by taking the mean, as long as 3/5ths of the items were answered.
4. Institutional benchmarks are the weighted averages of the student-level scores.

Using Student-Level Benchmarks

- Enables meaningful intra-institutional analysis
- Higher power of analysis than institution-level
- Institutions may use student-level “benchmarks” to:
  - Investigate differences in key institutional subgroups (Program, departments, colleges, etc.)
  - Investigate difference in key student sub-groups (gender, major, etc.)
  - Incorporate scale scores into predictive models of student outcomes
  - Investigate what groups are served better than others on your campus.

New Benchmark Report Features

- Student-level comparisons
- Statistical comparisons
- Decile tables and engagement index discontinued
- Two new reference groups, top 50% and top 10%

The NSSE Reports: Benchmark Comparisons

Analysis mirrors Means report

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The NSSE Reports: Benchmark Comparisons

HLM used to identify top 50% and top 10% of NSSE institutions by class and benchmark score

Legend
- Vertical line: Top 50%
- Vertical line: Top 10%

This display compares your institution with those that score in the top 50% and top 10% of all NSSE 2006 U.S. institutions on the benchmark.

First-Year Students

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>NSSEville State</th>
<th>Selected Peers</th>
<th>Carnegie Peers</th>
<th>NSSE 2006</th>
<th>Top 50%</th>
<th>Top 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL OF ACADEMIC CHALLENGE (LAC)</td>
<td>52.3 13.8 .8 33 43 52 62 74</td>
<td>51.6 13.1 .2 31 43 51 60 73</td>
<td>50.4 13.5 .2 29 41 51 60 73</td>
<td>51.8 13.4 .0 30 43 52 61 74</td>
<td>55.8 12.9 .1 34 47 56 65 77</td>
<td>60.5 12.2 .2 40 52 60 69 80</td>
</tr>
</tbody>
</table>

Recalculated Benchmark Report

- Driven by new calculation process that began for the 2004 administration
- Benchmark scores are not directly related to those calculated in prior years (prior to 2004)
- Comparison group information available on website

Table 1: Recalculated Benchmarks for All Years of NSSE Participation

<table>
<thead>
<tr>
<th>Level of Academic Challenge</th>
<th>NSSEville State</th>
<th>Selected Peers</th>
<th>Carnegie Peers</th>
<th>NSSE 2006</th>
<th>Top 50%</th>
<th>Top 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active and Collaborative Learning</td>
<td>40.8 51.3</td>
<td>45.8 54.6</td>
<td>50.7 58.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-Faculty Interaction</td>
<td>21.8 38.1</td>
<td>30.0 46.6</td>
<td>34.4 57.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive Campus Environment</td>
<td>44.4 49.4</td>
<td>47.3 54.0</td>
<td>52.0 66.6</td>
<td>69.0 54.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Executive Summary Report

- Provided with NSSE Annual Report
- A quick summary of your NSSE results
- Item comparisons with select peers

Online Resources

- Grand Means and Frequencies by Carnegie classifications
- NSSE Benchmark Descriptive Statistics
- NSSE Psychometric Portfolio
- Answers to your questions about NSSE Data and Reports

http://nsse.iub.edu

Reading Your Reports

- Ask general questions first
  - What confirms what you suspected?
  - What surprises you?
- How accurate was your NSSE sample?
- Look at trends as well as individual items

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Reading Your Reports

- Think about who your comparison groups are
- Look at significance and effect size
- Go back to data set – there is more variance within institutions than between
- Do different types of students answer in different ways?

Sharing Your Results

Share results...
- Provide summaries of results
- Involve the 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

Next Steps: Beyond Standard Reports

- Doing NSSE is just the first step. What you do with it is what makes a difference
- Use is institutional specific - what are the questions on your campus? Diversity? Adult learners? Community service initiatives?
- Start thinking about follow-ups, next NSSE administration, what other questions do you want answered?

Next Steps: Beyond Standard Reports

- Work with your data file
- Examine subsets of your campus
- Multi-year comparisons
  - Work with student-level benchmarks
  - What constitutes meaningful change?
- Work with scales
- NSSE special peer analysis

Working with Your Data File

- Maintain student “crosswalk” files
- Develop appropriate population files
- Document how population files are created
- Familiarize yourself with your data file
- Merge data file with other sources of data on your campus and nationally
  - student educational outcomes
  - other student characteristics
  - other campus surveys
  - other national surveys

Working with Your Data File

- NSSE DATA FILE
- ID
- CROSSWALK
- EDUCATIONAL OUTCOMES
  - GPAs
  - Retention/Graduation
  - Progress to Degree
- OTHER CHARACTERISTICS
  - Program Participation
  - Provisional Status
  - Specific Degree Tracks
- EXTERNAL SURVEYS
  - YFCC
  - HERI
  - Etc.
- NATIONAL SURVEYS
  - Grad Survey
  - Campus Experience Survey
  - Dept Specific Surveys
2006 NSSE Dataset Details

What do you need to know to match your Institutional Report numbers?
- "smpl05" (sampling type)
  - use 1 (base sample), 2 (standard oversample), 3 (requested oversample) values
- "inelig"
  - exclude all ineligible respondents
  - use those with values of 1 for "inelig"

Examining Subsets of Your Campus

- Comparisons by Demographics
  - Minority Students
  - Adult/Transfer Students
  - Athletes
  - By College or Department
- Comparisons by Behaviors
  - Community Service
  - Study Abroad
  - High Faculty Interaction
  - Oversampling

Moving to deeper understanding

- Comparisons over time
  - Program implementation
  - Multiple year comparisons
- Create your own benchmark scales
  - Technology
  - Spirituality/Ethics
  - Satisfaction
- Other Surveys
  - FSSE: Faculty/Student Perceptions
  - BCSS: Incoming characteristics
  - Outside Surveys: YPYC, HERI
  - Internal Data

Measurement Scales

- Satisfaction
  - General Satisfaction
  - Satisfaction plus Quality of Campus Relationships
- Campus Environment
  - Environmental Emphases
  - Quality of Campus Relationships
- Gains Factors
  - Personal/Social
  - General Education
  - Practical Competence

Deep Learning Activities

- 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 (6d,e,f)

NSSE Scales

- Course Challenge
- Writing
- Active Learning
- Collaborative Learning
- Course Interaction
- Out-of-Class Interaction
- Gains (academic, personal, vocational)
- Varied Experiences
- Information Technology
- Diversity
- Support for Student Success
- Interpersonal Environment

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The NSSE Reports: Special Analysis

- Allows wider scope of analysis than possible with just your data file
- Customized based on individual needs
- Can be used to target specific research questions
- No limit to requests

Special Analyses Examples

- Aspirational peer group of institutions
- Alternate Carnegie classification
- Institutions with specific characteristics
  - Private/Public
  - Urbanicity
  - Size
- Comparison of particular major/group at your institution against similar students in national sample

Some final thoughts

- Decide early
- Get Buy-In
- Include students
- NSSE is only one instrument
- What surprises you is probably more important than what you expect

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
- Data don’t speak for themselves
- Link results to other data points

Future Developments

- Customized Report Engine
- Common URL project
- Archiving of reports and datasets online
- Pocket Guide Report
- NSSE Syntax Library
- Participating Institutions Query Engine

Discussion and Comments

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