Converting Data into Actionable Results

Jillian Kinzie, Associate Director
NSSE Institute for Effective Educational Practice
The NSSE Challenge

How might we more effectively use data about quality in undergraduate education to:
✓ provide evidence of student learning
✓ motivate and inspire effective educational practice
✓ strengthen the learning environment and enhance student success?
Converting Results to Action

• Assessment information should be actionable

• If assessment doesn’t help improve teaching and learning activities and ultimately, student success... *why bother with it?*

• Implementing large-scale, transformational change in colleges and universities is difficult
Assessment into Action

Putting Student Engagement Data to Use: 4 Institutional Success Stories
Integrating NSSE Results with Other Institutional Data

- Examines NSSE data in relation to direct measures of learning and progress – *within subpopulations*

- Compares NSSE to internal survey data on general education and diversity
Pace University (NY)

Using NSSE data for improvement throughout the entire university

• Emphasized goal of “student-centeredness”
• Used NSSE items in program assessments (service learning, capstone courses, study abroad)
• Improving the sophomore experience
Pace University (NY)

Using NSSE data for improvement throughout the entire university

- Examined engagement by school/college, including professional accreditation
- Assigned full-time faculty to teach Univ 101 course, and advise the same students
- “One-stop” initiative for student services
Viterbo University (WI)

Effectively Communicating Results Internally and Externally

• Benchmarks against peer institutions
• Disseminates item results related to active and collaborative learning for faculty, and the campus environment for administrators.
• Assesses diversity learning
• Faculty increased active learning strategies
Wittenberg University (OH)

Appointed a Presidential Task Force on engagement in both academic and co-curricular environments

• Encouraged faculty investment by stressing that engagement is rooted in academics

• Identified functional areas that helped promote student success
Collective Wisdom from NSSE Users: Converting Data to Action

- Campuses that maximize their student engagement results, in that action is taken to improve the quality of the undergraduate experience, and student engagement and success is enhanced, do the following....
Collective Wisdom from Users: Moving from Data to Action

Plan Action During Pre-results Phase
- Identify how results fit stakeholder assessment plans
- Create a campaign to raise awareness
- Solicit stakeholder input on selection of comparison groups
- Consider how results can be used for educational processes

Examine & Share Results
- Disseminate to those who can do something about results
- Develop short reports & share regularly
- Involve all stakeholders in interpretation of results
- Share results with faculty & administrative NSSE liaisons

Move Beyond NSSE Reports: Additional Analyses & Data Collection
- Connect NSSE data to other student information
- Add respondent voices & institutional context to data by conducting interviews & focus groups
- Conduct additional analyses relative to institutional issues
- Use data to assess impact of interventions to increase student engagement

Plan Action Before Results Arrive

Plan Action During Pre-results Phase

- Identify how results fit stakeholder assessment plans
- Create a campaign to raise awareness
- Solicit stakeholder input on selection of comparison groups
- Consider how results can be used for educational processes
Institutional Examples: Before Results Arrive...

• **Illinois State University** – involved all potential stakeholders in planning survey administration, connected promise of results with units in invested in Council for the First Year Experience.

• **Texas State San Marcos** – heightened interest of academic deans/departments by soliciting input regarding selection of institutions in comparison groups. Circulated list of options, asked department heads to choose 20.
Disseminating Your Results

Examine & Share Results

- Disseminate to those who can do something about results
- Develop short reports & share regularly
- Involve all stakeholders in interpretation of results
- Share results with faculty & administrative NSSE liaisons
Institutional Examples: Examine & Share Results

• **Grand Valley State University** – presented NSSE results (higher order learning, gains scores) relevant to institution’s Claiming a Liberal Education campus change initiative (reform of gen ed).

• **University of Tulsa** – identifies faculty and staff leaders in each college/dept. to serve as liaisons to IR office. Liaisons disseminate results, more likely to convince colleagues of potential for reflection on pedagogy
Going Beyond Reports

Move Beyond NSSE Reports: Additional Analyses & Data Collection

- Connect NSSE data to other student information
- Add respondent voices & institutional context to data by conducting interviews & focus groups
- Conduct additional analyses relative to institutional issues
- Use data to assess impact of interventions to increase student engagement
Institutional Examples: Beyond Reports

- **GA Institute of Technology** – added NSSE results to retention & persistence models identified several items that distinguish GA Tech experience and persistence. Campus leaders focused on ensuring student engagement in these activities.

- **Univ of Wisconsin Stout Teaching and Learning Center** – added student voices to quantitative results. Distilled short list of effective educational practices.
Buffalo State College Student Stakeholder Forums
Qualitative Assessment Project (Focus: NSSE dimensions)
Purpose of Stakeholder Assessment Project:

- **Explore** with students what the college can do to support and enhance their academic and personal success.

- **Engage** Buffalo State students in active, face-to-face dialogue re. their needs and opinions.

- **Inform** the College Planning Council about priority student concerns.
Two central questions asked with a focus on the NSSE dimensions:

• What things should Buffalo State College **continue** that are working well to support your success as a student?

and

• What should the College **change** that is not working well?
Student Stakeholder Project
Spring, 2008

What things should Buffalo State College continue that are working well to support your success as a student? - and - What should the College change that is not working well?

Part A. We are interested in knowing what Buffalo State should continue in order to support your success as a student, and what the College needs to change because it is not working well. In the spaces provided below, please describe the positive and negative aspects of each of the following areas. Please print clearly.

1. Opportunities to participate in the campus community through experiences outside the classroom.

Negative things that need to be changed Positive things that should be continued
Eight areas of inquiry:

1. Participation in campus community through experiences outside the classroom (EEE);
2. Interacting with other students (EEE);
3. Quality of services and support available for your non-academic needs (SCE);
4. Extent to which lectures, course readings, assignments and test / exams are challenging (LAC);
Eight areas of inquiry (Cont’d):

5. Participation in class discussions and work with other students on projects, etc. (ACL);

6. Interactions with faculty both in class and outside of class (SFI);

7. Feeling a part of, and identifying with, Buffalo State College (SCE); and

8. Other suggestions and comments related to the College’s goal of supporting your success as a student.
Student Stakeholder Assessment Project
Spring, 2008
Summary of Findings

Areas of Student Satisfaction
(“Things the College should continue that are working well to support your success as a student”)

- Quality of relationships with faculty and staff
- Support received from student service areas
- Variety of student organizations and events
- Advisement
- Transportation (NFTA bus pass program)
- Technology (Angel)
- The conduct and experience of courses.
- Student peer relationships
- Campus safety
Areas in Need of Improvement
( “What the College should change that is not working well” )

- Dining facilities and services
- Faculty and staff responsiveness to students’ needs
- More aid for daily living expenses
- Parking
- Academic rigor
- Communication about events, programs, activities.
- Accessibility for students with disabilities.
- Safety concerns
- Student facilities and services
Are Institutions Improving?

- Opportunity: 10th NSSE administration
- Institutions with multiple years of NSSE make it possible to assess change (or stability) in engagement over time.
- Comparing results over time
  - Four NSSE administrations, 2004-2009
  - Examined Benchmarks and High-Impact Practices
  - As indicated by effect size and linearity of trend
Are Institutions Improving?

• Evidence of improvement found at 41% of institutions on at least one measure;
  – These institutions represented all types and sizes
  – Examples of downward trends were rare
Are Institutions Improving?

Active & Collaborative Learning: First-year Students
Are Institutions Improving?

Yes.

Systematic improvement efforts have paid off.
Lessons Learned: Taking Action on Results

1. Find relevancy and entice with results
2. Continuously disseminate data in small doses
3. Appoint NSSE ambassadors
4. Connect student engagement results to the study of real campus problems
5. Infuse data into continuous improvement processes
6. Dig deeper into results
7. Improvement may begin in small ways, but accumulates over time
Final thoughts...

1. If assessment doesn’t help improve teaching and learning activities and ultimately, student success... *why bother with it*?
2. Link data to develop a solid foundation for action.
3. Improvement begins in small ways – so start something!
5. Implementing change in colleges and universities is difficult, and takes *time...be in it for the long haul!*
Improvement & Positive Change

• Implementing large-scale, transformational change in colleges and universities is difficult

• Link data to develop a solid foundation for action

• Improvement begins in small ways – so start something!

• Evaluate effectiveness of action. Celebrate and tweak.
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.
NSSE Benchmarks

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
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...
  - Breadth conceals strong/weak items
  - 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 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

“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.

Using Scales: Miami University Assessment

Engaging with Other Learners Outside of the Classroom

**NSSE Overview**
In the Spring of 2005, 873 undergraduate students (556 first-years and 317 seniors) on the Oxford campus of Miami University completed the National Survey of Student Engagement (NSSE). The NSSE contains 29 questions that assess the extent to which students engage in a variety of effective educational processes. A total of 5,813 students at 27 peer institutions also completed the NSSE during the Spring of 2005.¹

**Engaging with Learners Outside of the Class**
On all questions reported below, seniors at Miami University reported significantly higher levels of engagement than did first-year students (p < .01).

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

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

<table>
<thead>
<tr>
<th>Gains in Practical Competence</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 gnwork</td>
<td>Acquiring job or work-related knowledge and skills</td>
</tr>
<tr>
<td></td>
<td>2 gnothers</td>
<td>Working effectively with others</td>
</tr>
<tr>
<td></td>
<td>3 gncmpts</td>
<td>Using computing and information technology</td>
</tr>
<tr>
<td></td>
<td>4 gnquant</td>
<td>Analyzing quantitative problems</td>
</tr>
<tr>
<td></td>
<td>5 gnprobsv</td>
<td>Solving complex real-world problems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gains in General Education</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 gnwrite</td>
<td>Writing clearly and effectively</td>
</tr>
<tr>
<td></td>
<td>2 gnspeak</td>
<td>Speaking clearly and effectively</td>
</tr>
<tr>
<td></td>
<td>3 gngenled</td>
<td>Acquiring a broad general education</td>
</tr>
<tr>
<td></td>
<td>4 gnanaly</td>
<td>Thinking critically and analytically</td>
</tr>
</tbody>
</table>
**Gains items (alphas .83 - .88) — solid outcome variables**

<table>
<thead>
<tr>
<th>Gains in Personal and Social Development</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gnetics</td>
<td>Developing a personal code of values and ethics</td>
<td></td>
</tr>
<tr>
<td>2 gnsel</td>
<td>Understanding yourself</td>
<td></td>
</tr>
<tr>
<td>3 gndivers</td>
<td>Understanding people of other racial and ethnic backgrounds</td>
<td></td>
</tr>
<tr>
<td>4 gcitizen</td>
<td>Voting in local, state, or national elections</td>
<td></td>
</tr>
<tr>
<td>5 gniqe</td>
<td>Learning effectively on your own</td>
<td></td>
</tr>
<tr>
<td>6 gncommun</td>
<td>Contributing to the welfare of your community</td>
<td></td>
</tr>
<tr>
<td>7 gnspirit</td>
<td>Developing a deepened sense of spirituality</td>
<td></td>
</tr>
</tbody>
</table>
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
Taking Action in KY

• What successes have you experienced with your NSSE results? challenges?

• What action was taken on your results? If no action was taken, why?

• How might the KY CPE support and further your work?

• How can NSSE help?

• What might you do when you return to campus?