Combining NSSE and the Collegiate Learning Assessment (CLA) to Assess Student Learning

Jillian Kinzie
NSSE User Workshop
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Opening Discussion

1. What other data do you collect about student success and learning outcomes?

2. What are the benefits and opportunities created by combining NSSE and CLA data?

3. What obstacles stand in the way?

4. What are you hoping to learn from this session?
The Value of Using Multiple Measures

- Application and combination of several data points or sources helps overcome weaknesses of single-measure studies
- Increases confidence in findings through convergence of different perspectives
- The point at which perspectives converge is seen to represent reality
- Builds a rich data resource
Linking Educational Processes and 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.
Path Model for Assessing Change in Student Learning (Pascarella)

- Structural/Organizational Characteristics of Institutions
- Interactions with Agents of Socialization
- Learning and Cognitive Development
- Institutional Environment
- Quality of Student Effort
- Student Background/Precollege Traits
Path Model for Assessing Change in Student Learning (Pascarella)
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Key Challenges

1. How do we interpret the relationship between engagement scores and measured learning outcomes?

2. How do we use these in our work?
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

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<thead>
<tr>
<th></th>
<th>All Schools</th>
<th>Your School</th>
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<tbody>
<tr>
<td>Performance Task</td>
<td>1072</td>
<td>1083</td>
</tr>
<tr>
<td>Analytic Writing Task</td>
<td>1101</td>
<td>1057</td>
</tr>
<tr>
<td>Make-an-Argument</td>
<td>1096</td>
<td>1046</td>
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<tr>
<td>Critique-an-Argument</td>
<td>1104</td>
<td>1064</td>
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<tr>
<td>Total score</td>
<td>1086</td>
<td>1072</td>
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<tr>
<td>SAI score</td>
<td>1068</td>
<td>1061</td>
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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
Two questions guided inquiry of CLA results: (1) What attributes of a Kalamazoo education might account for this overall performance? (2) What variations in students’ educational pathways might account for differences in CLA performance at Kalamazoo?

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.”
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; and (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.
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.
Two NSSE Administration Options

- Standard Administration
  - For institutions planning to administer NSSE in 2009

- Local Administration
  - For 2006, 2007 or 2008 NSSE participants not participating in 2009
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Standard Administration: Special Considerations

- Identify first-year CLA participants for inclusion in NSSE sample (oversample fee may apply)
- Monitor senior NSSE administration (using NSSE Web tool) to identify CLA invitees
- Promotion is vital: invitation does not ensure participation
## NSSE Administration Options

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Local NSSE Administration: Details

- Institution administers paper survey
- Surveys returned to NSSE for scanning and data file preparation
- Participation fee of $500
- $3.00 per survey shipped (nonrefundable)
Local Administration: Special Considerations

Institution must...

- Handle all logistics for survey administration
- Follow administration protocol for survey invitation and administration, in accordance with IRB requirements
- Implement special procedures to enter student IDs on NSSE surveys, to enable linking with CLA results
BCSSE Option

- Administer the Beginning College Survey of Student Engagement as a census during orientation or before classes start
  - Assess precollege engagement
  - Assess expectations for engagement during college
- Link to first-year CLA and NSSE results
- For information and registration information, go to www.bcsse.iub.edu
Once you have NSSE data matched with CLA data, what do you do with it?
Sample Assessment Topics: First-Year Students

- Examine the relationship between baseline CLA performance and first-year engagement
  - Are CLA high performers predisposed to high engagement?
- Identify students with performance/engagement mismatch:

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Sample Study Topics: Seniors

- Examine the relationship between student activities & experiences and CLA performance
  - Do students with high levels of senior-year engagement perform better on CLA tasks?
  - What is the relationship between CLA performance and involvement in capstone experiences, research with faculty, etc.?
Sample Study Topics: Seniors (continued)

- Adjusting for precollege achievement scores (SAT/ACT), do seniors who have engaged in deeper ways of learning (analysis, synthesis, integration, reflection) score better on CLA tests?

- Do students learn more when they write more?
Sample Study Topics: First-Year Students w/ BCSSE

- Examine the relationship between precollege attributes and first-year engagement
  - Do students who were highly engaged in high school perform better on CLA tasks?
  - Do students with high expectations for engagement in college perform better on CLA tasks?
What about other data?

- Course records
- Writing portfolio assessments
- Transfer students
- Learning communities
- Other student subpopulations
Linking Data…

- In-house surveys
- National surveys (a growing list)
  - CIRP – Freshman Survey/ YFCY / CSS
  - CLA
  - CSEQ / CSXQ
  - 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.
Astin’s I-E-O Model

Environments
CSS, YFCY, EBI, NSSE
(e.g., place of residence, interactions with peers and faculty, engagement, programmatic features, curricular & co-curricular experiences)

Inputs
CIRP Freshman, BCSSE, MAP-Works
(e.g., academic performance in high school, financial concerns prior to college entry, expectations for college, degree aspirations, self-concept in high school)

Outcomes
YFCY, CSS, EBI, NSSE
(e.g., post-college aspirations, satisfaction with college, academic and social adjustment, degree completion rates)
**CIRP, NSSE, and FYP Improvement at Elon…**

- **Elon University**
  - High institutional ethos of assessment
  - Building a student database
  - Value-added assessment methodology guides studies

- **Both CIRP/YFCY and NSSE…**
  - Lead to additional research
  - Are utilized for longitudinal study & benchmarking
  - Provide valuable measures of cognitive skills
  - Assess student interaction with faculty
  - Help to understand overall educational experience
**Key uses of YFCY**

- Time allocation
- Benchmark for issues of campus community
- Cognitive and skill changes
- Measuring use and satisfaction with campus programs and services
- Facilities evaluation (classrooms, labs, library)
- Social activities and behaviors

**Primarily used by Student Life & more recently, General Education Office**
Key uses of NSSE

- Activities inside the classroom (e.g., speaking up, presentations, working with students)
- Activities outside the classroom (e.g., plays, museums, events)
- Evaluation of various functions (e.g., administrators, academic advising)
- Academic rigor

Primarily used by Student Life & Academic Affairs
Combining CIRP, NSSE, EBI

*Survey Administration Examples...*

- Administer all surveys to all students and merge them together with campus data to create an extensive student information system.
- NSSE every 3 years, alternate CIRP, EBI institutional surveys.
- Administer NSSE and EBI two years in a row to establish baseline data and assess needs for first-year learning communities.
- Administer NSSE to a random sample of first-year students and YFCY to those remaining.
- Administer CIRP TFS and YFCY and/or BCSSE and NSSE for program participation patterns and outcomes; supplement more detailed programmatic information from EBI.
Group Discussion

- How might you use NSSE + CLA data to assess your students?
- What other data might you link to NSSE?
- What questions do you still have?