Abstract: Implementing institutional change is difficult. Measuring the effect of change is even tougher. Institutions want to know if the improvements they invest in are making a difference in the undergraduate experience. In particular, there is great interest in how institutions that have participated in NSSE multiple years might assess and interpret differences in engagement scores over time. This paper uses several statistical methods to examine trends in NSSE scale scores across three data points to identify institutions where NSSE scores changed and discusses ways to detect evidence of campus change initiatives in NSSE results.

Scales used for Analyses

**Deep Learning: Higher Order Thinking**

First-year alpha .84  Senior alpha .84

1. Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components
2. Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships
3. Making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions
4. Applying theories or concepts to practical problems or in new situations

**Deep Learning: Integrative Learning**

First-year alpha .71  Senior alpha .72

1. Worked on a paper or project that required integrating ideas or information from various sources
2. Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments
3. Put together ideas or concepts from different courses when completing assignments or during class discussions
4. Discussed ideas from your readings or classes with faculty members outside of class
5. Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

**Course-Related Interactions with Faculty**

First-year alpha .64  Senior alpha .65

1. Discussed grades or assignments with an instructor
2. Discussed ideas from your readings or classes with faculty members outside of class
3. Received prompt written or oral feedback from faculty on your academic performance

**Out-of-Class Interactions with Faculty**

First-year alpha .51  Senior alpha .61

1. Talked about career plans with a faculty member or advisor
2. Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)
3. Worked on a research project with a faculty member outside of course or program requirements

**Diversity**

First-year alpha .67  Senior alpha .67

1. Had serious conversations with students of a different race or ethnicity than your own
2. Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values
3. Encouraging contact among students from different economic, social, and racial or ethnic backgrounds
Active-Learning Experiences  
First-year alpha .49  Senior alpha .51

1. Asked questions in class or contributed to class discussions  
2. Made a class presentation  
3. Participated in a community-based project (e.g., service learning) as part of a regular course

Collaborative Learning Experience  
First-year alpha .55  Senior alpha .52

1. Worked with other students on projects during class  
2. Worked with classmates outside of class to prepare class assignments  
3. Tutored or taught other students (paid or voluntary)  
4. Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

Environment Emphases  
First-year alpha .82  Senior alpha .80

1. Spending significant amounts of time studying and on academic work  
2. Providing the support you need to help you succeed academically  
3. Using computers in academic work  
4. Encouraging contact among students from different economic, social, and racial or ethnic backgrounds  
5. Helping you cope with your non-academic responsibilities (work, family, etc.)  
6. Providing the support you need to thrive socially  
7. Attending campus events and activities (special speakers, cultural performances, athletic events, etc.)

Environmental Support for Academic Success  
First-year alpha .73  Senior alpha .74

1. Providing the support you need to help you succeed academically  
2. Relationships with faculty members  
3. Relationships with administrative personnel and offices  
4. Overall, how would you evaluate the quality of academic advising you have received at your institution?

High Impact Practices  
Individual items (not a scale)

1. Done: Community service or volunteer work (FY & SR)  
2. Done: Study abroad (SR)  
3. Done: Culminating senior experience (capstone course, senior project, thesis, comprehensive exam, etc.) (SR)  
4. Done: Practicum, internship, field experience, co-op experience, or clinical assignment (SR)  
5. Participated in a learning community or some other formal program where groups of students take two or more classes together (FY)  
6. Worked on a research project with a faculty member outside of course or program requirements (SR)

Scale properties and norms can be found on the NSSE website: “Researchers” tab