

Using NSSE to Understand Students' Experiences: Making the Most of Data in Assessment

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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



"NESSIE"

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



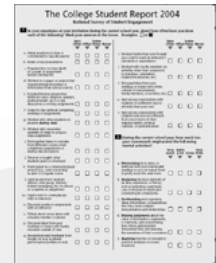
NSSE Project Scope

- 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

Project Year	Colleges & Universities
2000	276
2001	321
2002	366
2003	437
2004	473
2005	510

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



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.)



Mode and Sample Size

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

Comparison of Sampling Procedures and Outcomes by Mode

Undergraduate Enrollment	Standard Sample Size			Approximate Total Number of Respondents			Sampling Error (n = total number of first-year and senior students)		
	Paper	Web+	Web-Only	Paper (40% response rate)	Web+ (20% Web response rate & 20% paper response rate)	Web-Only (40% response rate)	Paper (40% response rate)	Web+ (20% Web response rate & 20% paper response rate)	Web-Only (40% response rate)
Less than 4,000	450	1,350	All FY and SR	180	306	800*	±6.6% n=1,000	±4.7% n=1,000	±1.6% n=1,000
4,000 to 15,000	700	2,100	2,800	280	476	1,120	±5.6% n=4,000	±4.2% n=4,000	±2.5% n=4,000
More than 15,000	1,000	3,000	4,000	400	680	1,600	±4.8% n=10,000	±3.6% n=10,000	±2.2% n=10,000

* 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 Consortia & 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



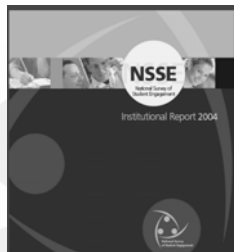
BSSE – Beginning Student Survey of Engagement

- ◆ 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

Item	Mean	SD	Min	Max
1. I am excited about going to college	4.1	0.8	1	5
2. I am nervous about going to college	2.8	0.9	1	5
3. I am confident about my ability to succeed in college	3.5	0.9	1	5
4. I am unsure about my ability to succeed in college	2.5	0.9	1	5
5. I am looking forward to meeting new people	4.0	0.8	1	5
6. I am nervous about meeting new people	2.7	0.9	1	5
7. I am confident about my ability to do well in college	3.4	0.9	1	5
8. I am unsure about my ability to do well in college	2.6	0.9	1	5
9. I am looking forward to learning new things	4.1	0.8	1	5
10. I am nervous about learning new things	2.8	0.9	1	5
11. I am confident about my ability to make good choices	3.6	0.9	1	5
12. I am unsure about my ability to make good choices	2.4	0.9	1	5
13. I am looking forward to living in a new place	3.9	0.8	1	5
14. I am nervous about living in a new place	2.9	0.9	1	5
15. I am confident about my ability to get along with others	3.7	0.9	1	5
16. I am unsure about my ability to get along with others	2.3	0.9	1	5
17. I am looking forward to having a good education	4.2	0.8	1	5
18. I am nervous about having a good education	2.6	0.9	1	5
19. I am confident about my ability to find a job	3.3	0.9	1	5
20. I am unsure about my ability to find a job	2.7	0.9	1	5
21. I am looking forward to making a difference in the world	4.0	0.8	1	5
22. I am nervous about making a difference in the world	2.9	0.9	1	5
23. I am confident about my ability to be a good citizen	3.8	0.9	1	5
24. I am unsure about my ability to be a good citizen	2.2	0.9	1	5
25. I am looking forward to being part of a team	3.9	0.8	1	5
26. I am nervous about being part of a team	2.8	0.9	1	5
27. I am confident about my ability to work with others	3.6	0.9	1	5
28. I am unsure about my ability to work with others	2.4	0.9	1	5
29. I am looking forward to being a leader	3.7	0.9	1	5
30. I am nervous about being a leader	2.7	0.9	1	5
31. I am confident about my ability to be a good student	3.5	0.9	1	5
32. I am unsure about my ability to be a good student	2.5	0.9	1	5
33. I am looking forward to being a good person	4.1	0.8	1	5
34. I am nervous about being a good person	2.8	0.9	1	5
35. I am confident about my ability to be a good citizen	3.8	0.9	1	5
36. I am unsure about my ability to be a good citizen	2.2	0.9	1	5
37. I am looking forward to being a good person	4.0	0.8	1	5
38. I am nervous about being a good person	2.9	0.9	1	5
39. I am confident about my ability to be a good citizen	3.7	0.9	1	5
40. I am unsure about my ability to be a good citizen	2.3	0.9	1	5

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)



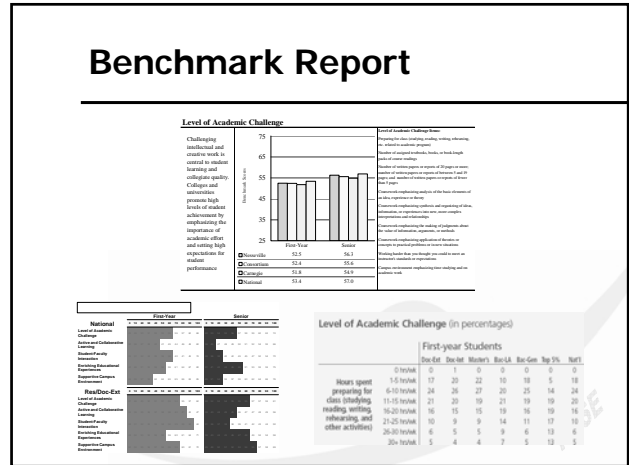
Your NSSE Data

- ◆ Respondent Characteristics
- ◆ Comparative data [National, Carnegie, Choice]
 - ◆ Means Comparison
 - ◆ Frequency Distribution
 - ◆ Benchmark Data
 - ◆ Institutional Engagement Index
- ◆ Data File

National Survey of Student Engagement

NSSE 2004 Means Comparison Report
Nesville State University

Variable	Benchmark	Class	Nesville State compared with:					
			Nesville State		Master's NSSE 2004			
			Mean	SD	Mean	SD	Mean	SD
In your experience at your institution during the current school year, about how often have you done each of the following? 1=never, 2=sometimes, 3=often, 4=every class								
a. Asked questions in class or contributed to class discussions	CLQUEST	ACL	FY: 1.96 SR: 3.11	2.50 3.10	2.69 3.18			
b. Made a class presentation	CLPRESN	ACL	FY: 2.38 SR: 2.65	2.23 2.74	2.24 2.45	*** .48	*** .50	
c. Prepared two or more drafts of a paper or assignment before turning it in	BEWRPAP	FY	FY: 2.96 SR: 2.53	2.49 2.66	2.44 2.68	** .29	** .32	
d. Worked on a paper or project that required integrating ideas or information from various sources	INTEGRAT	FY	FY: 3.20 SR: 3.27	3.04 3.35	3.05 3.35			
e. Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments	DIVCLASS	FY	FY: 2.82 SR: 2.73	2.73 2.81	2.73 2.81			
f. Come to class without completing readings or assignments	CLINPREP	FY	FY: 1.77 SR: 1.82	1.89 2.10	1.99 2.03	* -.24	* -.18	
g. Worked with other students on projects during class	CLASSGRP	ACL	FY: 2.45 SR: 2.68	2.37 2.51	2.33 2.44	* .20	** .28	
h. Worked with classmates outside of class to prepare class assignments	OCCORP	ACL	FY: 2.05 SR: 2.54	2.32 2.71	2.39 2.73	** -.33	** -.21	
i. Put together ideas or concepts from different courses when completing assignments or during class discussions	INTIDEAS	FY	FY: 2.57 SR: 2.68	2.44 2.84	2.47 2.86	* -.20	* -.22	



Institutional Engagement Index

Benchmark	FY			SR			Standardized Residual
	Actual	Predicted	Residual	Actual	Predicted	Residual	
Level of Academic Challenge	56.0	52.4	3.5	60.0	56.9	3.1	1.1
Active and Collaborative Learning	43.5	41.4	2.1	58.8	54.0	4.8	1.5
Student-Faculty Interaction	42.7	35.8	6.9	48.4	45.4	3.0	0.8
Enriching Educational Experiences	50.6	50.4	0.2	44.7	48.7	-4.0	-0.9
Supportive Campus Environment	70.8	63.3	7.5	67.4	62.6	4.7	1.2

1. Are you doing better or worse given your institutional and student characteristics?

	FY	SR
Ac Chall	-	+
Active Coll	=	=
Stu Fac	-	+
Enrich	=	=
Supportive	-	-

2. Compared to 90th%? ➡

NSSE Accreditation Toolkit

Accreditation Tool-Kit-Middle States

NSSE Questions		MS Criteria
I. Academic and Intellectual Experiences		
a.	Asked questions in class or contributed to class discussions	14
b.	Made a class presentation	12, 14
c.	Prepared two or more drafts of a paper or assignment before turning it in	14
d.	Worked on a paper or project that required integrating ideas or information from various sources	14
e.	Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments	6, 14

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

NSSE Data

Reading your data, cont'd

- Think about your comparison groups
- Special Analysis
- 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?

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

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

Communicating Results - EXTERNAL

External Sharing of NSSE 2003 Data	%
No External Disclosure	35
Accreditation Agencies	31
Web Site	25
Media	13
Prospective Students	13
Parents	13
Alumni	13
State Agencies	11
Other	7

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

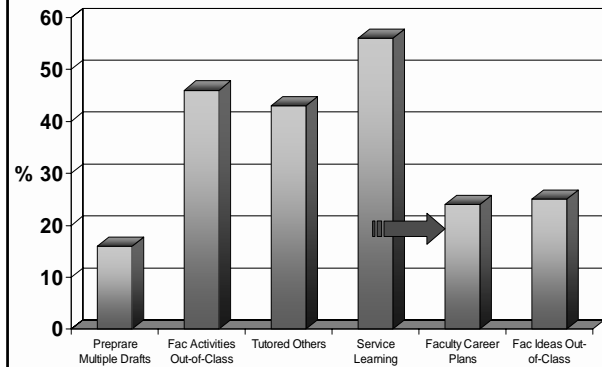
✓ **Most valued activities**

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

✓ **Eliminate “Nevers”**

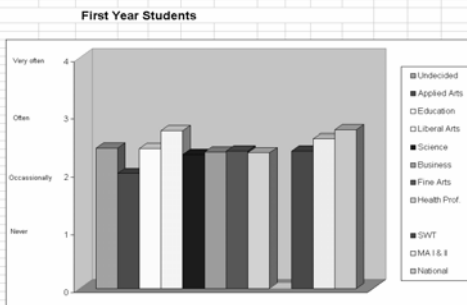
Work on reducing or eliminating reports by students of *never* doing specific engagement activities.

Seniors *Never* Participating



Making Sense of Data: Internal Discipline Specific Comparisons

Used e-mail to communicate with an instructor or other students.



Outcome Measures -NSSE & Graduation Rates

	First-year students*	Seniors*
Academic Challenge	.60	.46
Active & Collaborative Learning	.23	.09
Student Faculty Interaction	.28	.37
Enriching Educational Experiences	.53	.48
Supportive Campus Environment	.38	.26

*All correlations are significant at $p < .01$

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

Self-Reported Educational and Personal Gains from College	First-Year Students	Seniors
Thinking critically and analytically	81%	87%
Acquiring a broad general education	82%	86%
Working effectively with others	66%	78%
Writing clearly and effectively	72%	77%
Learning effectively on your own	70%	77%
Using computing and information technology	65%	76%
Acquiring job or work-related knowledge and skills	57%	72%
Speaking clearly and effectively	60%	72%
Understanding yourself	60%	66%
Analyzing quantitative problems	55%	65%
Solving complex real-world problems	49%	58%
Understanding people of other racial and ethnic backgrounds	50%	52%
Voting in local, state, or national elections	24%	23%

Outcome Measures - Deep Learning Activities Clusters

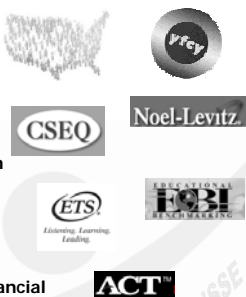
- ◆ Higher-Order Learning— activities that require students to utilize higher levels of mental activity than those required for rote memorization (2b,c,d,e)
- ◆ Integrative Learning— activities that require integrating acquired knowledge, skills, and competencies into a meaningful whole (1d,e,i,p,t)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

NSSE Scales

Complex Learning	
Deep Learning	integrat, divclass, intideas, facideas, oocideas, synthesz, analyze, evaluate, applying
Higher Order Thinking	analyze, synthesz, evaluate, applying
Integrative Learning	integrat, divclass, intideas, facideas, oocideas
Diversity	divrstud, diffstu2, envdivrs
Gains Factors	
Personal/Social	gnethics, gncommun, gnspirit, gnself, gndivers, gnprobs, gncitizn, gningq, gnothers
General Education	gnwrite, gnspeak, gnanaly, gngenled
Practical Competence	gnwork, gncmpts, gnquant

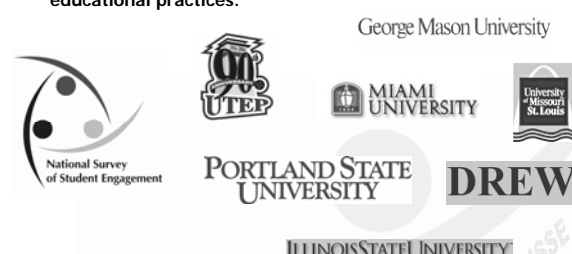
Link to Other Student Data

- In-house surveys
- National surveys
 - CIRP / CSS
 - YFICY
 - CSEQ / CSXQ
 - EBI Benchmarking surveys
 - Noel Levitz Student Satisfaction Inventory
 - ETS Major Field Tests
 - ACT Collegiate Assessment of Academic Proficiency
- Institutional data such as GPA, financial aid, transcripts, retention, certification tests, etc.

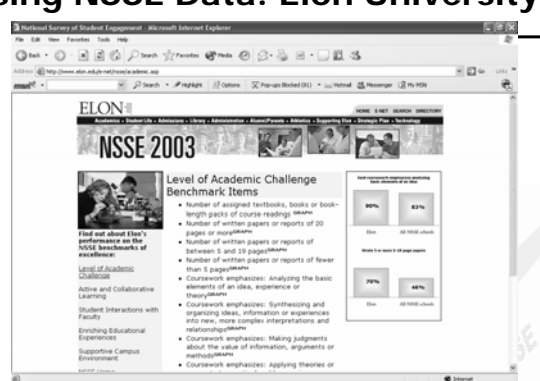


Converting NSSE Data Into Action: Institutional Examples

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



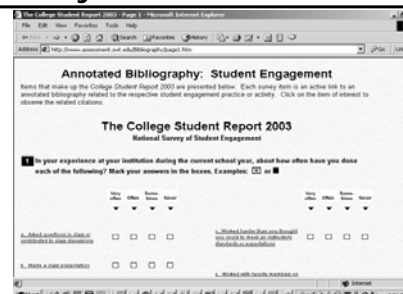
AQIP and the Freshman Seminar Proposal

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)

Using NSSE Data: Texas State University – San Marcos



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

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



NSSE

Incorporating NSSE Data in Change Efforts: 8 Lessons Learned

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



NSSE

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

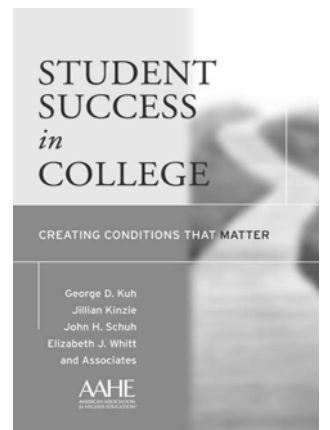


*20 schools with better than predicted student engagement and grad rates

NSSE

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



NSSE

Discussion and Comments

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NSSE