


Using NSSE to Understand Students' Experiences: Digging Deeper into Data to Improve Effective Educational Practice


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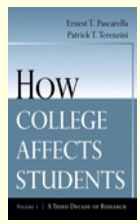
Overview



"NESSIE"

- Introductions
- Overview of NSSE
 - NSSE Foundations
 - Administration & Results
- Beyond the Standard Report
- Digging Deeper into Data
- Demonstrations and Exercises
- Closing Discussion/Questions

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)

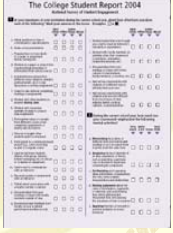
- ◆ Student-faculty contact
- ◆ Active learning
- ◆ Prompt feedback
- ◆ Time on task
- ◆ High expectations
- ◆ Experiences with diversity
- ◆ Cooperation among students



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



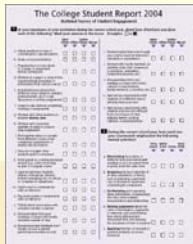
NSSE Project Scope

- 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	529

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



Steps to a Successful NSSE Administration - NSSE Cycle

<p><i>Late May - July</i></p> <ul style="list-style-type: none"> • Registration opens NSSE & FSSE <p><i>July - September</i></p> <ul style="list-style-type: none"> • Registration remains open • Institutions submit materials <p><i>October</i></p> <ul style="list-style-type: none"> • Institutions submit materials • Population file submission deadline 10/31 <p><i>November - December</i></p> <ul style="list-style-type: none"> • FSSE registration closes 11/1 • Institutions continue to submit <p><i>January</i></p> <ul style="list-style-type: none"> • Institutions upload late materials 	<p><i>February - March</i></p> <ul style="list-style-type: none"> • First wave NSSE sent out • Special local admin. surveys sent <p><i>March - April</i></p> <ul style="list-style-type: none"> • Web admin. of FSSE begins • NSSE/FSSE, CSR, and institutions conduct aggressive follow-up -letters and emails <p><i>May</i></p> <ul style="list-style-type: none"> • FSSE admin. closes mid-May <p><i>June - July</i></p> <ul style="list-style-type: none"> • NSSE web and paper closes 6/1 • Analysis of NSSE data • Prep of NSSE Institutional Reports <p><i>August</i></p> <ul style="list-style-type: none"> • Institutional Reports sent <p><i>November</i></p> <ul style="list-style-type: none"> • Benchmark & Annual Reports sent
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Step 1: Pre-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?


Step 1: Pre-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?

Step 1: Pre-Administration Checklist

- Secure campus partners
- Determine mode and sample size
- Explore response rates, incentive plans, and need for survey awareness campaign
- Think about FSSE, BCSSE, joining a consortium
- Gather required materials (letters, signatures, etc.)



Step 1: 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	Web+	Web-Only	Paper	Web+	Web-Only
Less than 4,000	450	1,350	All FY and SR	Paper (40% response rate)	Web+ (20% Web response rate & 20% paper response rate)	Web-Only (40% response rate)	±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.

FSSE

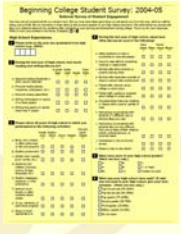
Faculty Survey of Student Engagement

- ◆ 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



BCSSE – Beginning College 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



NSSE Consortium & 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

Sample Consortium questions

Additional Questions

- Your school has requested that you answer some additional questions regarding your undergraduate experience.
- A1.** Prior to your official entry into a higher education institution, how many college credits did you earn in high school using Advanced Placement, dual credit, part-time study on campus, or other similar programs?
- ▶ None
 - ▶ A few (2-6)
 - ▶ Some (7-13)
 - ▶ Many (16-24)
 - ▶ Lots (More than 24)
- A2.** What factor was the strongest influence on your decision to attend this institution? (Choose only one)
- ▶ Overall academic reputation
 - ▶ Liberal arts program
 - ▶ Cost, including financial aid available
 - ▶ Strong academic program in my area of interest
 - ▶ Other – location, athletics, student life
- A3.** Assuming you had a choice, did you first enroll at this institution without having declared a specific major (or academic program)? That is, did you enter as an undecided student?
- ▶ Yes
 - ▶ No
 - ▶ Does not apply – all students enter without a specific major (or academic program)
- A5.** What has been the primary source of your academic advising during the current academic year? (Choose only one)
- ▶ My officially assigned advisor
 - ▶ An advisor in the Advising Center/Inquiry Student Resource, or other advising center
 - ▶ An instructor or staff member not assigned as your advisor
 - ▶ Friends or family
 - ▶ Institution publications/institution web site
- A6.** During this academic year, to what extent have you experienced a sense of community at this institution (that is, being part of a group who share common interests, goals, values, and experiences)?
- ▶ Very strongly
 - ▶ Strongly
 - ▶ Somewhat
 - ▶ Not at all
 - ▶ No opinion
- A7.** If you are not living at home while attending this institution (that is, you are living either on campus or off-campus), approximately how many weekends per academic term do you spend back home or elsewhere away from campus?
- ▶ None
 - ▶ A few (1-3)
 - ▶ Some (4-6)
 - ▶ Many (6 or more)
 - ▶ Does not apply – I am a commuter

Step 2: Administration

- ◆ Decisions
 - ◆ Choosing Mode
 - ◆ Web, Web+, Paper (Firewalls)
- ◆ New for 2006: Collected After Registration
 - ◆ Consortium
 - ◆ Finding like schools
 - ◆ Additional Questions
 - ◆ Sample Size
 - ◆ Oversampling Options
 - ◆ Special Groups
 - ◆ Subpopulations at your school

Step 2: Response Rates Tips

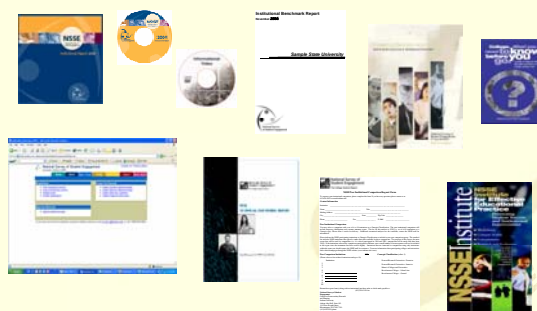
- ◆ Start Early
- ◆ Check Often
- ◆ Be Creative
- ◆ Know your Students
- ◆ Disseminate and Use
- ◆ Try not to Over-Survey
- ◆ Get Broad Buy-In



Step 2: During the Administration

- ◆ Monitor Response Rates
- ◆ 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

Step 3: NSSE Deliverables



Step 3: NSSE Institutional Report

- Overview
- Institutional data file
- 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)

Step 3: NSSE Reports - Respondent Characteristics

- A quick snapshot of your institution
- Confirms if sample is representative
- Response Rate and Sample Error

National Survey of Student Engagement

NSSE 2004 Means Comparison Report

Nesseville State University

Variable	Acad. level	Class	Nesseville State		Nesseville State compared with:					
			Mean	SD	Master's	NSSE 2004	Mean	SD	Sig*	Stat†
<i>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=very often)</i>										
a.					1.96	2.50			2.69	
					3.11	3.10			3.18	
b.					2.28	2.23	***	.48	2.24	***
					2.65	2.74			2.45	
c.					2.96	2.49	**	.29	2.44	**
					2.53	2.66	**	.27	2.68	***
d.					3.20	3.04			3.05	
					3.27	3.35			3.35	
e.					2.82	2.73			2.73	
					2.73	2.81			2.81	
f.					1.77	1.89			1.99	*
					1.82	2.10			2.03	*
g.					2.45	2.37			2.33	
					2.68	2.51	*	.20	2.44	**
h.					2.05	2.32	**	-.33	2.39	***
					2.54	2.71	*	-.19	2.73	**
i.					2.57	2.44			2.47	
					2.68	2.84	*	-.20	2.86	*

Step 3: NSSE Reports - Benchmarks

- Benchmarks of Effective Educational Practice
- How Benchmarks are Calculated:
 - Level of Academic Challenge
 - Active and Collaborative Learning
 - Student-Faculty Interaction
 - Enriching Educational Experiences
 - Supportive Campus Environment
 - Items are converted to a 100 point scale
 - Part-time students' scores are adjusted on four Level of Academic Challenge items.
 - Student-level scale scores are created for each group of items by taking the mean.
 - Institutional benchmarks are created by calculating weighted averages of the student-level scale scores.

Benchmark Report

Level of Academic Challenge (in percentages)

Decile	1	2	3	4	5	6	7	8	9	10
National	100	90	80	70	60	50	40	30	20	10
Peer-Decile	100	90	80	70	60	50	40	30	20	10
Peer-Decile	100	90	80	70	60	50	40	30	20	10
Peer-Decile	100	90	80	70	60	50	40	30	20	10
Peer-Decile	100	90	80	70	60	50	40	30	20	10
Peer-Decile	100	90	80	70	60	50	40	30	20	10
Peer-Decile	100	90	80	70	60	50	40	30	20	10
Peer-Decile	100	90	80	70	60	50	40	30	20	10
Peer-Decile	100	90	80	70	60	50	40	30	20	10
Peer-Decile	100	90	80	70	60	50	40	30	20	10

First-year Students

Hours spent	0 hrs/week	1-5 hrs/week	6-10 hrs/week	11-15 hrs/week	16-20 hrs/week	21-25 hrs/week	26-30 hrs/week
0 hrs/week	0	1	0	0	0	0	0
1-5 hrs/week	17	20	22	10	18	5	18
6-10 hrs/week	24	26	27	20	25	14	24
11-15 hrs/week	21	20	19	21	19	19	20
16-20 hrs/week	18	15	15	19	16	19	16
21-25 hrs/week	10	9	9	14	11	17	10
26-30 hrs/week	6	5	5	9	6	13	6

The NSSE Reports: Benchmark Recalculation

Recalculated NSSE Benchmarks*	2001	2002	2003	2004
Level of Academic Challenge	FY 50	53	51	50
	SR 54	55	54	55
Active and Collaborative Learning	FY 47	43	41	41
	SR 46	48	48	51
Student-Faculty Interaction†	FY 37	34	38	37
	SR 63	59	57	61
Enriching Educational Experiences†	FY 42	41	38	39
	SR 55	49	51	48
Supportive Campus Environment	FY 56	58	57	57
	SR 50	50	51	55

- Changes made to the 2004 Benchmarks
- Allows for comparisons across time
- Some caveats
 - SFI
 - EEE

Institutional Engagement Index

Benchmark	FY				SR			
	Actual ²	Predicted ³	Residual	Standardized Residual ⁴	Actual ²	Predicted ³	Residual	Standardized Residual ⁴
Level of Academic Challenge	56.0	52.4	3.5	1.3	60.0	56.9	3.1	1.1
Active and Collaborative Learning	43.5	41.4	2.1	0.6	58.8	54.0	4.8	1.5
Student-Faculty Interaction	42.7	35.8	6.9	1.7	48.4	45.4	3.0	0.8
Enriching Educational Experiences	50.6	50.4	0.2	0.0	44.7	48.7	-4.0	-0.9
Supportive Campus Environment	70.8	63.3	7.5	2.0	67.4	62.6	4.7	1.2

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

2. Compared to 90th%? ➡

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

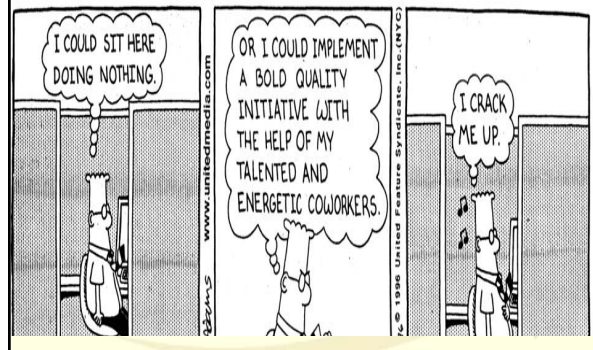
Step 3: Reading Your Data

- ◆ 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

Step 3: Reading Your Data

- ◆ 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?

Step 4: Using NSSE Results...



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)*

FSSE and NSSE Point to "Disorienting Dilemmas"

Situations in which usual perspectives or ways of responding do not work or don't fit are more likely to motivate us to learn and change (Mezirow, 1990)

Using NSSE Data for Improvement



- ◆ 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

Step 4: Using Your Data

Sharing 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

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

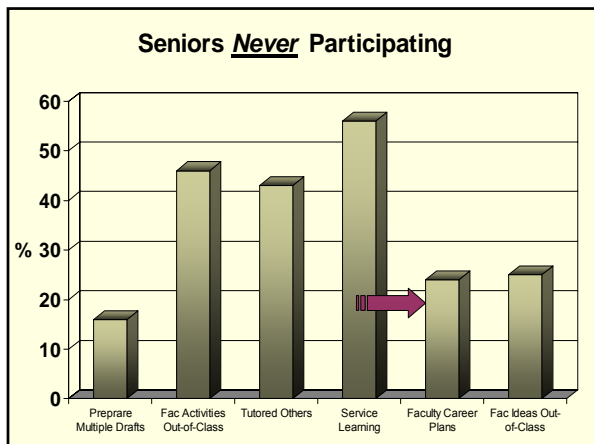
Making Sense of Data: Benchmarking


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.





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

- ### Step 4: Using Your Data
- ◆ **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?**

- ### Step 4: How NSSE can help
- ◆ **Intra-institution vs. Inter-institution**
 - ◆ Selecting a peer group
 - ◆ By mission
 - ◆ By size
 - ◆ By department
 - ◆ By Race
 - ◆ By Locale
 - ◆ Current or Aspirant Peers
 - ◆ New for 2005: You pick it!

- ### 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

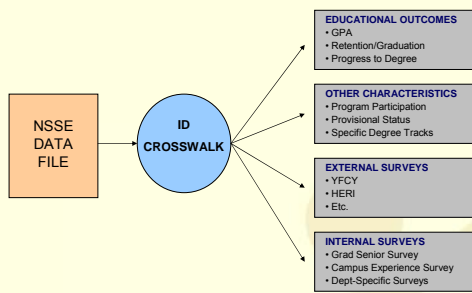
Step 5: Beyond the Standard Reports

- ♦ Working with Your Data File
- ♦ Utilizing NSSE Resources
- ♦ NSSE Student-Level Measurement Scales
- ♦ Possibilities for Digging Deeper
- ♦ Considerations in Analysis
- ♦ Ways to Improve Level of Analysis
 - ♦ Special Analyses
 - ♦ Oversampling
 - ♦ Consortium Participation

Working with Your Data File

- ♦ Maintain student "crosswalk" files
- ♦ Develop appropriate population files
- ♦ Document how population files are created
- ♦ OPEN 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



Utilizing NSSE Resources

Materials available on NSSE website

- ♦ FAQs (Psychometric, Benchmark, Media, etc.)
- ♦ NSSEville generic binder materials
- ♦ SPSS Syntax
- ♦ Codebooks
- ♦ New NSSE Institute website
- ♦ Featured articles on NSSE home page and features bar

Utilizing NSSE Resources

Materials in Development

- ♦ Sample Analyses
- ♦ Customized Report Engine
- ♦ Data and reports available online
- ♦ NSSE Knowledge Base

Student-Level Measurement Scales

Benchmarks of Effective Educational Practice

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

Complex Learning

Deep Learning
 Higher Order Thinking
 Integrative Learning
 Diversity

Student-Level 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

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

Calculating Scale Scores

- ♦ First recode each item on a scale of 0 to 100
- ♦ Items are converted using the formula :
[(response value - 1)/(total number of response values - 1)]
- ♦ Thus, a item where a student has been given a 1, 2, 3, or 4, that student receives a value of 0, 33.33, 66.67, or 100.
- ♦ Items that the student indicated they have "done" get a 100, while students who indicate otherwise get a 0.
- ♦ Scales are then calculated for each student by taking the mean of all items, as long as the student answered at least 3/5ths of the items.

Using Student-Level Scale Scores

Used to stimulate conversation on campus:

- ♦ 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?

Using Student-Level Scale Scores

Institutions may use student-level scale scores 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.

Possibilities for Digging Deeper

- ♦ Descriptive displays of engagement patterns by any number of student characteristics
- ♦ Tracking student engagement year to year
- ♦ Merging NSSE data with school records
- ♦ Prediction models for retention, degree attainment, grades, other outcomes
- ♦ Special comparisons against aspirational, regional, and mission-related peer institutions
- ♦ Program assessment
- ♦ Accreditation reporting
- ♦ Consortium and system data sharing
- ♦ Scholarly research

A deeper understanding

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

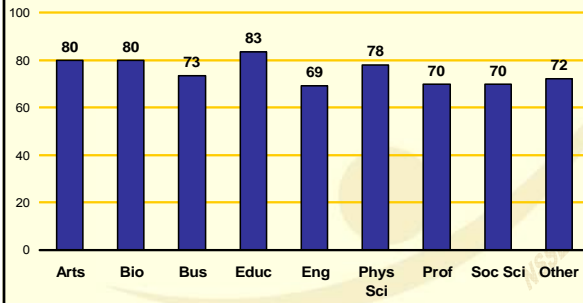
A deeper understanding

- ♦ Comparisons over time
 - ♦ Program implementation
 - ♦ First year students → Seniors
- ♦ Create your own benchmark scales
 - ♦ Technology
 - ♦ Spirituality/Ethics
 - ♦ Satisfaction
- ♦ Other Surveys
 - ♦ FSSE: Faculty/Student Perceptions
 - ♦ BCSS: Incoming characteristics
 - ♦ Outside Surveys: YFVC, HERI
 - ♦ Internal Data

Descriptive Analysis

Responses of Seniors
by Major

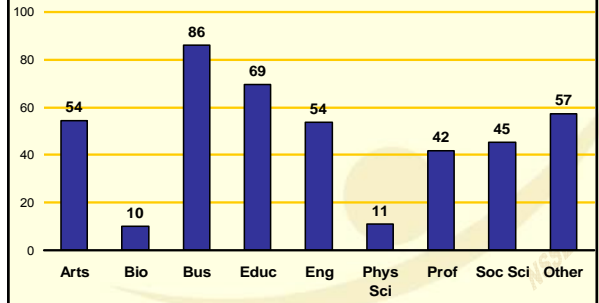
"Frequently" Asked Questions in Class



Descriptive Analysis

Responses of Seniors
by Major

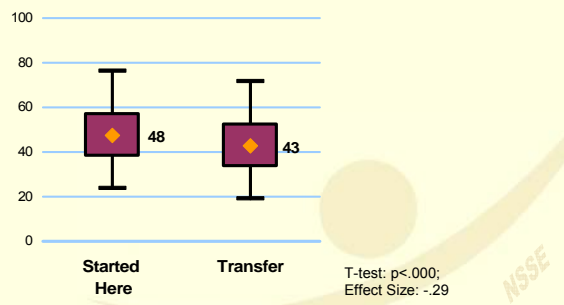
"Frequently" Made a Class Presentation



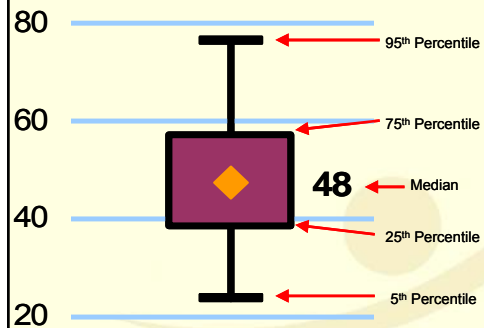
Descriptive Analysis

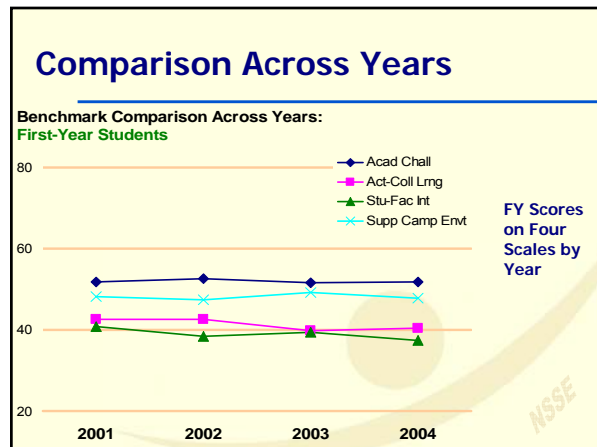
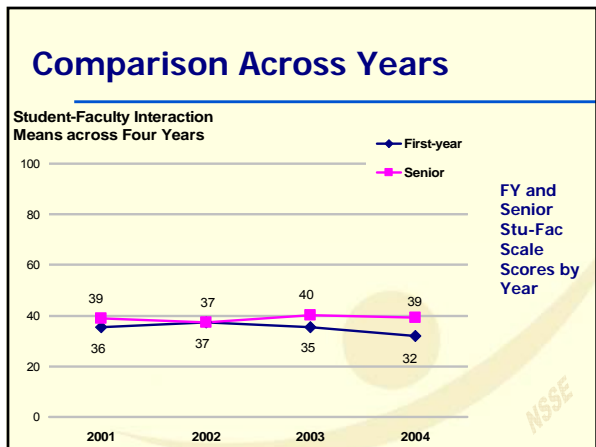
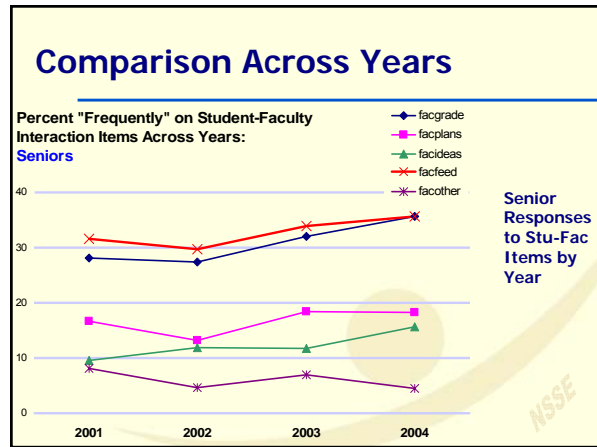
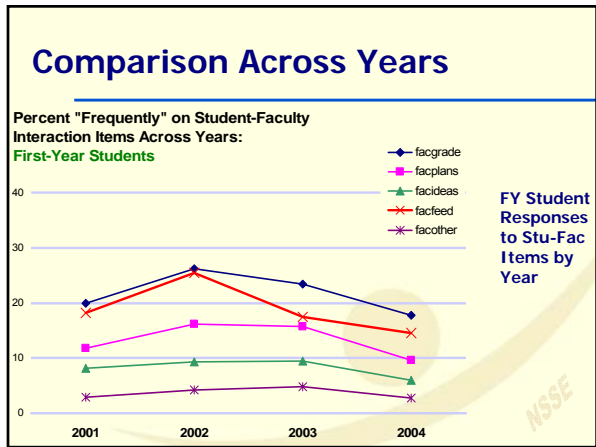
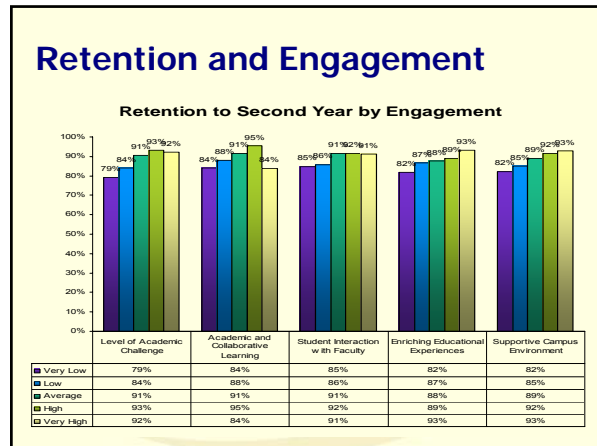
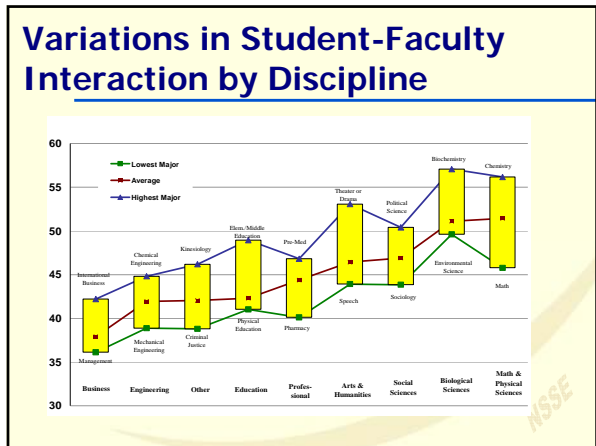
Seniors Scale Scores
by Transfer Status

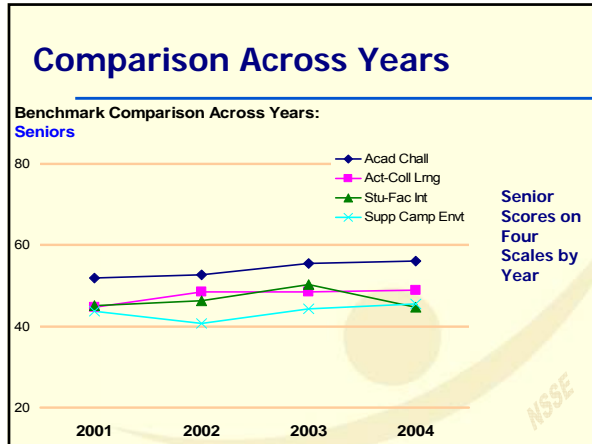
Active/Collaborative Learning



Descriptive Analysis







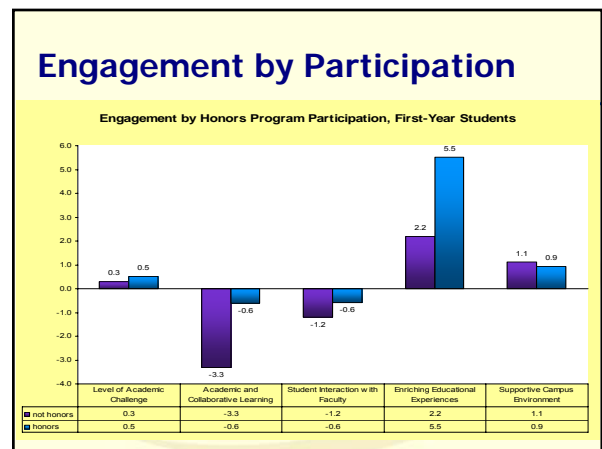
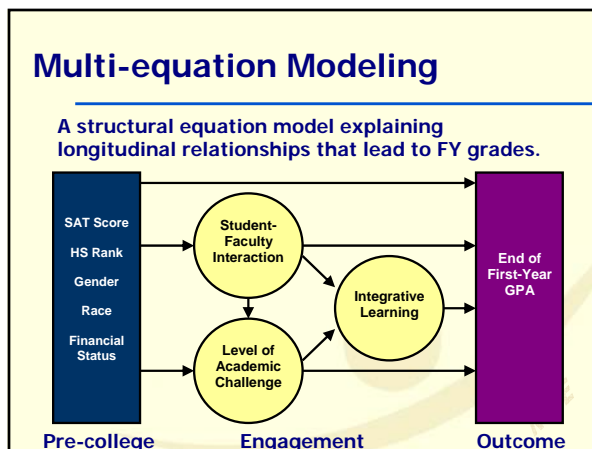
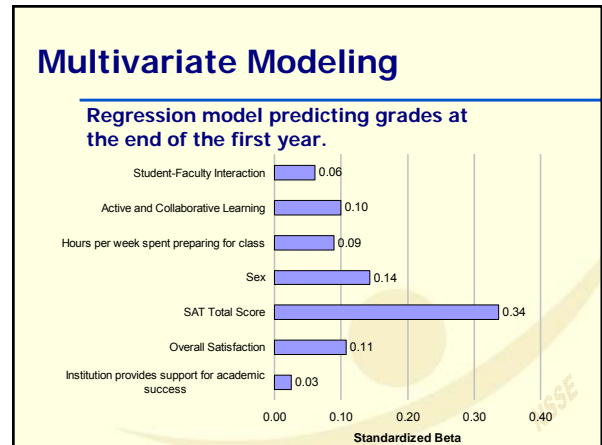
FY Student t-test Comparisons 2003 and 2004 at Nesseeville State

Independent Samples t-tests of FY Students between 2003 and 2004

Student-Level "Benchmark" Score	2003	2004	SD	sig.	Effect Size
Academic Challenge	55	54	13	.23	.08
Active and Collaborative Learning	41	41	15	.65	.00
Student-Faculty Interaction	41	38	19	.00	.16
Supportive Campus Environment	61	60	17	.35	.06

Regression on Student-Faculty Interaction with Year

	B	Std. Error	Beta	t	Sig.
(Constant)	39.6	9.6		4.1	0.000
international	3.6	3.1	0.0	1.1	0.255
enrollment	-2.5	4.2	0.0	-0.6	0.551
sex	-1.1	1.3	0.0	-0.8	0.397
major: art	1.5	2.5	0.0	0.6	0.553
major: bio	0.1	2.8	0.0	0.0	0.983
major: bus	3.5	2.4	0.1	1.4	0.156
major: phys	-4.3	4.4	0.0	-1.0	0.325
major: sos	-0.1	2.7	0.0	0.0	0.975
major: und	-5.0	4.6	0.0	-1.1	0.279
major: oth	1.9	2.6	0.0	0.7	0.473
major: pro	2.5	2.9	0.0	0.9	0.391
YEAR	3.6	1.2	0.1	2.9	0.004



Considerations in Analysis

- Sampling error
- Sample size and statistical tests
- Oversampling
 - Random
 - Targeted
 - Local
- Non-response bias
- Weighting your sample to look like the population
- Cautions about recoding certain items
 - Enriching items are categorical
- Test for self-report accuracy
- Comparability of survey items year-to-year

Ways to Improve Level of Analysis

- Request Special Analysis
 - Allows wider scope of analysis than possible with just your data file
- Oversampling
 - Allows you to target specific groups you would like to address
- Consortium Participation
 - Allows you to compare results against group of institutions with common interests and characteristics

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

Special Peer Comparisons

Standard Means Report

		Nesseville compared with:					
		Nesseville		Master's		NSSE 2003	
Variable	Class	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? <small>1=never, 2=sometimes, 3=often, 4=very often</small>							
CLQUEST	FY	2.95	2.81			2.84	
	SR	3.19	3.13			3.12	
CLPRESN	FY	2.51	2.27	**	.31	2.24	*** .35
	SR	2.90	2.90			2.84	
BEWOPAD	FY	2.95	2.74	*	.22	2.70	* .25
	SR	2.97	2.96			2.91	
INTEGRAT	FY	3.13	3.05			3.06	
	SR	3.37	3.34			3.34	
DIVCLASS	FY	2.84	2.71			2.73	
	SR	2.83	2.76			2.75	
CLINPREP	FY	1.99	1.98			2.01	
	SR	1.94	2.03			2.07	
CLASSGRP	FY	2.57	2.39	*	.22	2.34	** .28
	SR	2.53	2.54			2.56	
OCCGRP	FY	2.03	2.33	***	-.36	2.40	*** -.45
	SR	2.54	2.71	*	-.20	2.73	* -.22

Special Peer Comparisons

Standard Means Report

		Nesseville compared with:					
		Nesseville		Master's		NSSE 2003	
Variable	Class	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? <small>1=never, 2=sometimes, 3=often, 4=very often</small>							
CLQUEST	FY	2.95	2.81			2.84	
	SR	3.19	3.13			3.12	

Special Peer Report - Residential

		Nesseville Residential compared with:					
		Nesseville Residential		Master's Residential		NSSE 2003 Residential	
Variable	Class	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? <small>1=never, 2=sometimes, 3=often, 4=very often</small>							
CLQUEST	FY	3.04	2.81			2.85	
	SR	3.54	3.19			3.20	

Special Peer Report - Commuter

		Nesseville Commuters compared with:					
		Nesseville Commuters		Master's Commuters		NSSE 2003 Commuters	
Variable	Class	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? <small>1=never, 2=sometimes, 3=often, 4=very often</small>							
CLQUEST	FY	3.11	2.80	**	.21	2.81	** .22
	SR	3.16	3.12			3.10	

Oversampling

Oversamples allow institutions to target specific students who NSSE should contact regardless of whether they are selected for the national norms sample.

- Highly recommended if the institution is interested in school or department level analysis
- Also allows the school to target groups with a traditionally low response rate.

Demonstrations and Examples

- ◆ Department-Level Analysis
- ◆ Consortia Analysis
- ◆ Using a "Group" variable for program analysis

Exercise 1 : Department-Level Analysis

- ◆ Scenario
 - ◆ Nesseville State University is preparing for an upcoming ABET accreditation
 - ◆ The college was encouraged to incorporate more "student voice" into their educational outcomes assessment
 - ◆ The University Provost and College Dean have worked to increase buy-in for using NSSE to collect information
 - ◆ Engineering seniors were oversampled
 - ◆ NSU requested a special analysis comparing their seniors against other engineering students

Exercise 1 : Department-Level Analysis

- ◆ Concerns to Address
 - ◆ Faculty are concerned that the College, compared to others at the university, places too little emphasis on challenging and engaging pedagogical practice
 - ◆ The Dean is concerned that some of the departments are not preparing their students for life after graduation as well as others
 - ◆ The Provost would like to know how NSU engineering students compare to Engineering students nationwide
 - ◆ In previous Campus Surveys Engineering students have voiced dissatisfaction with their undergraduate experience

Exercise 1 : Department-Level Analysis

- ◆ Building the Analysis
 - ◆ In submitting their population file, Nesseville State University included an extra variable to identify Engineering students
 - ◆ Nesseville State indicated that they wished to oversample all Engineering seniors not identified for the random institutional sample
 - ◆ NSU used their crosswalk to link their data file to institutional major records.
 - ◆ NSU constructed several NSSE student-level scales to use as a basis for their analysis

Exercise 1 : Department-Level Analysis

- ◆ Questions about results:
 - ◆ What are some patterns that are evident in these results?
 - ◆ What are considerations in examining these data?
 - ◆ Were the expressed stakeholder concerns confirmed?
 - ◆ What differences are notable among departments?
 - ◆ What additional questions do you have about the results?

Exercise 1 : Department-Level Analysis

- ◆ Questions about analysis:
 - ◆ What are some other sources of data on campus that would be ideal to shed light on these results?
 - ◆ What additional analyses would you want to conduct?
 - ◆ Would you recommend taking this analysis university-wide, if so what changes are needed for the analysis?
 - ◆ What additional questions do you have about the analysis?

Exercise 1 : Department-Level Analysis

- ◆ Questions about sharing the results:
 - ◆ How might these results be used to promote effective educational practice with the Engineering College?
 - ◆ What are some strategies you would recommend for disseminating these results, within the college, within the university and externally?
 - ◆ What are some barriers to having faculty buy-in to these results?
 - ◆ What are some additional steps you might take?
 - ◆ What additional questions do you have about sharing these results?

Exercise 2: Deeper Application

- ◆ Using NSSE data to improve the First Year Experience
- ◆ Effects of multi-institutional attendance on educational gains, satisfaction, and enriching educational experiences

Using NSSE to Improve Institutional Practices

- ◆ Getting More Out of your Data: Two ways...
 - ◆ Identify groups in NSSE population file
 - ◆ NSSE allows up to 6 group variables
 - ◆ Group variables may be:
 - ◆ Dichotomous (1=learning community, 2 = otherwise)
 - ◆ Polytomous (1=engineering, 2=chemistry, 3=business)
 - ◆ Creates opportunity for:
 - ◆ Additional standard comparisons (internal or NSSE)
 - ◆ Designing a study to address a campus policy or practice**

Using NSSE to Improve Institutional Practices

- ◆ Getting More Out of your Data: Two ways...
 - ◆ Join a consortium
 - ◆ NSSE allows up to 20 additional items per consortium
 - ◆ Consortium variables may be:
 - ◆ Nominal (1=Catholic, 2=Jewish, 3=Muslim...)
 - ◆ Ordinal (1=Strongly disagree to 4=Strongly agree)
 - ◆ Scale (test scores, parent income, etc.)
 - ◆ Creates opportunity for:
 - ◆ Additional standard comparisons (internal or NSSE)
 - ◆ Studying relationship between engagement and construct(s)**

Using NSSE to Improve Institutional Practices

- ◆ Nsseville State University
 - ◆ Public
 - ◆ Doctoral/Research Intensive
 - ◆ Size ~ 25,000
 - ◆ Urban campus
 - ◆ Commuter focus

Using NSSE to Improve Institutional Practices

- ◆ Nsseville State University
 - ◆ Public
 - ◆ Doctoral/Research Intensive
 - ◆ Size ~ 25,000
 - ◆ Urban campus
 - ◆ Commuter focus
 - ◆ Home of the "Flying Nssevillians"



Using NSSE to Improve Institutional Practices

- ◆ Case 1: Improving First-year Experience
 - ◆ First-Year Retention
 - ◆ FY Retained = 80%
 - ◆ Exit Survey Results
 - ◆ FY Transferred = 15%
 - ◆ FY Dropout = 5%
 - ◆ Top reasons for leaving (Typical of a larger institution?):
 - ◆ Wanted more collaborative learning
 - ◆ Lack of student-faculty interaction
 - ◆ Unsupportive climate

Using NSSE to Improve Institutional Practices

- ◆ Case 1: Improving First-year Experience
 - ◆ Two foci:
 - ◆ Continue to shape expectations via orientation
 - ◆ Improve first-year success by adding a seminar
 - ◆ Currently offer summer orientation program
 - ◆ Not mandatory; attendance encouraged (85%)
 - ◆ Concern about effectiveness of orientation program
 - ◆ Create first-year seminar (i.e., Nsseville State 101)
 - ◆ Communicating expectations/fostering relationships
 - ◆ Students will be randomly selected

Using NSSE to Improve Institutional Practices

- ◆ Case 1: Improving First-year Experience
 - ◆ Assess effectiveness of orientation and seminar on:
 - ◆ Collaborative learning experiences with other students
 - ◆ Interaction between students and faculty
 - ◆ General supportiveness (academic and social) of campus
 - ◆ Participated in NSSE
 - ◆ NSSE benchmarks
 - ◆ Active and Collaborative Learning
 - ◆ Student-Faculty Interaction
 - ◆ Supportive Campus Environment
 - ◆ Group variables
 - ◆ Attended orientation (=1), Otherwise (=2)
 - ◆ Attended seminar (=1), Otherwise (=2)

Using NSSE to Improve Institutional Practices

- ◆ Case 1: Improving First-year Experience
 - ◆ NSSE benchmarks: Active and Collaborative Learning
 - ◆ Asked questions in class or contributed to class discussions
 - ◆ Made a class presentation
 - ◆ Worked with other students on projects during class
 - ◆ Worked with classmates outside of class to prepare class assignments
 - ◆ Tutored or taught other students (paid or voluntary)
 - ◆ Participated in a community-based project (e.g., service learning) as part of a regular course
 - ◆ Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

Using NSSE to Improve Institutional Practices

- ◆ Case 1: Improving First-year Experience
 - ◆ NSSE benchmarks: Student-Faculty Interaction
 - ◆ Discussed grades or assignments with an instructor
 - ◆ Discussed ideas from your readings or classes with faculty members outside of class
 - ◆ Talked about career plans with a faculty member or advisor
 - ◆ Received prompt feedback from faculty on your academic performance (written or oral)
 - ◆ Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)

Using NSSE to Improve Institutional Practices

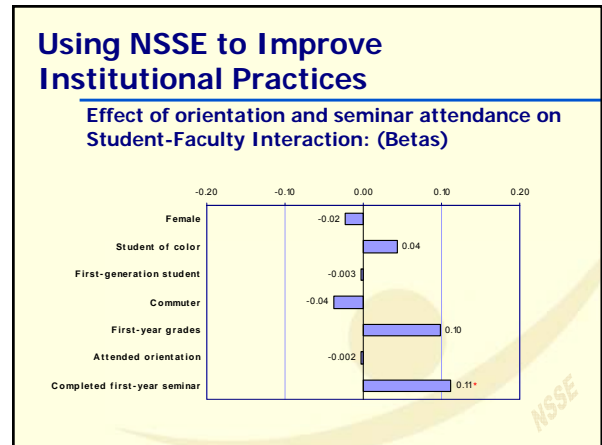
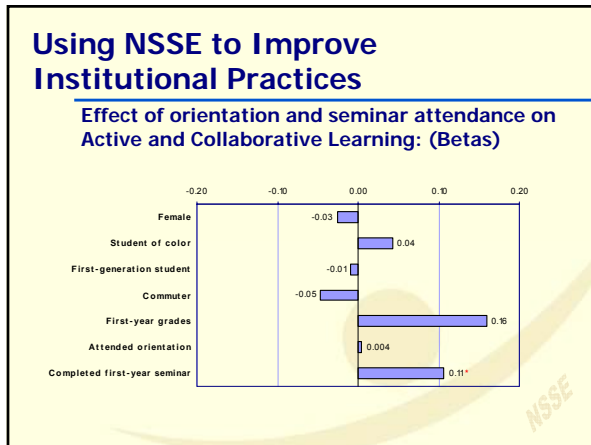
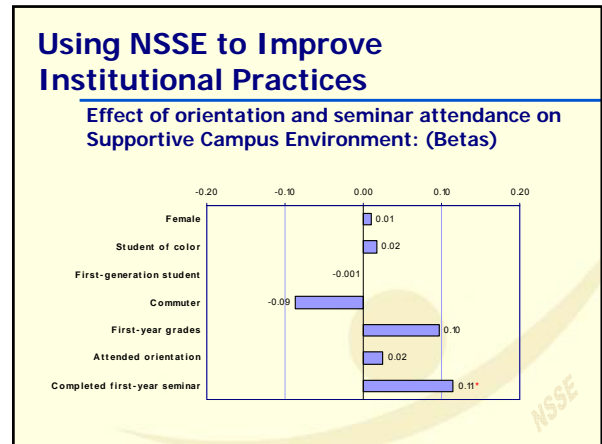
- ◆ Case 1: Improving First-year Experience
 - ◆ NSSE benchmarks: Supportive Campus Environment
 - ◆ Institutional emphasis: Providing the support you need to thrive socially
 - ◆ Institutional emphasis: Providing the support you need to help you succeed academically
 - ◆ Institutional emphasis: Helping you cope with your non-academic responsibilities (work, family, etc.)
 - ◆ Quality: Your relationships with other students
 - ◆ Quality: Your relationships with faculty members
 - ◆ Quality: Your relationships with administrative personnel and offices

Using NSSE to Improve Institutional Practices

- Case 1: Improving First-year Experience

	Mean	Std. Dev.
Female	0.67	0.47
Student of color	0.20	0.40
First-generation student	0.38	0.49
Part-time student	0.03	0.17
Commuter	0.19	0.39
First-year grades	0.00	1.00
Attended orientation	0.88	0.32
Completed first-year seminar	0.54	0.50
Active and Collaborative Learning	0.00	1.00
Student-Faculty Interaction	0.00	1.00
Supportive Campus Environment	0.00	1.00

- Study Variables



Using NSSE to Improve Institutional Practices

- Case 1: Improving First-year Experience
- Summary
 - Attendance at Summer Orientation:
 - No significant unique effect on all three NSSE student scale scores
 - Attendance at First-year Seminar:
 - Significant unique effect on all three NSSE student scale scores
 - Effect of attending first-year seminar has an average effect size of .22 (i.e., standard-deviation increase in NSSE student scale scores)

Using NSSE to Improve Institutional Practices

- Case 2: Examining Multiple-Institution Attendance
 - Nsseville State's seniors are swirling!

Using NSSE to Improve Institutional Practices

Case 2: Examining Multiple-Institution Attendance

Nsseville State's seniors are swirling!



- ◆ 45% of seniors transferred
- ◆ Avg. senior has a half-year of transfer credits
- ◆ Avg. senior attended 1.7 postsecondary institutions before enrolling at Nsseville State
- ◆ 8% of seniors are concurrently enrolled
- ◆ Avg. senior has taken 1 course per year at another institution since enrolling in Nsseville State

NSSE

Using NSSE to Improve Institutional Practices

Case 2: Examining Multiple-Institution Attendance

- ◆ Three foci:
 - ◆ Extent of swirl among NSU students
 - ◆ Reasons for swirl at NSU
 - ◆ Effects of swirl on student engagement at NSU
- ◆ Participated in NSSE
 - ◆ Joined a consortium of Urban institutions
 - ◆ Created a set of consortium questions re three foci
 - ◆ Received standard NSSE reports with consortium comparisons
 - ◆ Used combined NSSE-consortium data to study senior swirl

NSSE

Using NSSE to Improve Institutional Practices

Case 2: Examining Multiple-Institution Attendance

- ◆ Descriptive statistics for extent of and reasons for senior swirl
- ◆ Interested in effects of senior swirl on:
 - ◆ Participation in enriching educational experiences
 - ◆ Student developmental gains in college
 - ◆ Student satisfaction with their college experience

NSSE

Using NSSE to Improve Institutional Practices

- ◆ NSSE benchmarks: Enriching Educational Experiences
 - ◆ Practicum, internship, field experience, co-op experience, or clinical assignment
 - ◆ Community service or volunteer work
 - ◆ Participate in a learning community or some other formal program where groups of students take two or more classes together
 - ◆ Foreign language coursework
 - ◆ Study abroad
 - ◆ Independent study or self-designed major
 - ◆ Culminating senior experience (comprehensive exam, capstone course, thesis, project, etc.)
 - ◆ Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values
 - ◆ Had serious conversations with students of a different race or ethnicity than your own
 - ◆ Encouraging contact among students from different economic, social, and racial or ethnic backgrounds
 - ◆ Hours per 7-day week spent participating in co-curricular activities (organizations, campus publications, student government, social fraternity or sorority, intercollegiate or intramural sports, etc.)
 - ◆ Used an electronic medium (listserv, chat group, Internet, instant messaging, etc.) to discuss or complete an assignment

NSSE

Using NSSE to Improve Institutional Practices

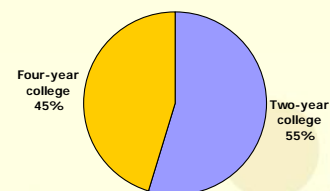
- ◆ NSSE General Developmental Gains
 - ◆ Acquiring a broad general education
 - ◆ Acquiring job or work-related knowledge and skills
 - ◆ Writing clearly and effectively
 - ◆ Speaking clearly and effectively
 - ◆ Thinking critically and analytically
 - ◆ Analyzing quantitative problems
 - ◆ Using computing and information technology
 - ◆ Working effectively with others
 - ◆ Voting in local, state, or national elections
 - ◆ Learning effectively on your own
 - ◆ Understanding yourself
 - ◆ Understanding people of other racial and ethnic backgrounds
 - ◆ Solving complex real-world problems
 - ◆ Developing a personal code of values and ethics
 - ◆ Contributing to the welfare of your community
 - ◆ Developing a deepened sense of spirituality

- ◆ NSSE Satisfaction with College
 - ◆ How would you evaluate your entire educational experience at this institution?
 - ◆ If you could start over again, would you go to the SAME INSTITUTION you are now attending?

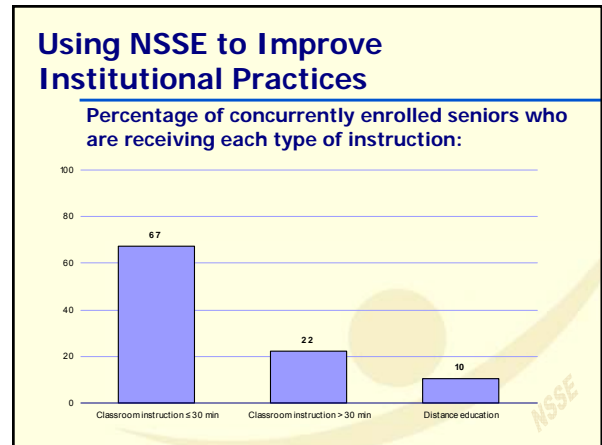
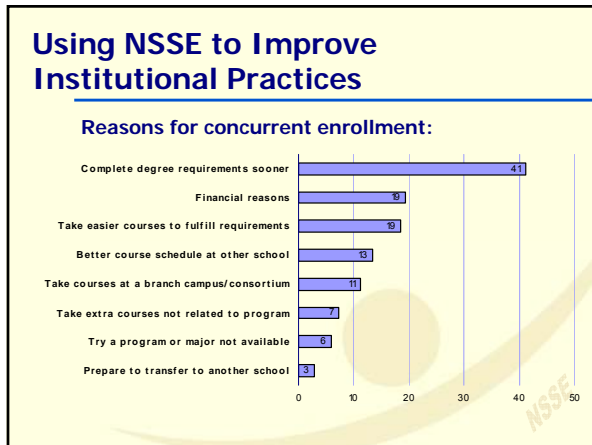
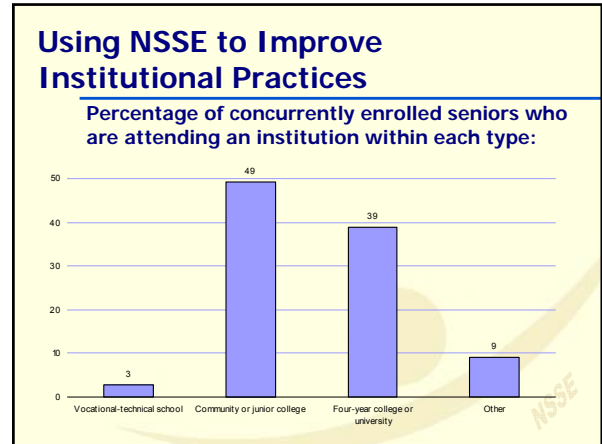
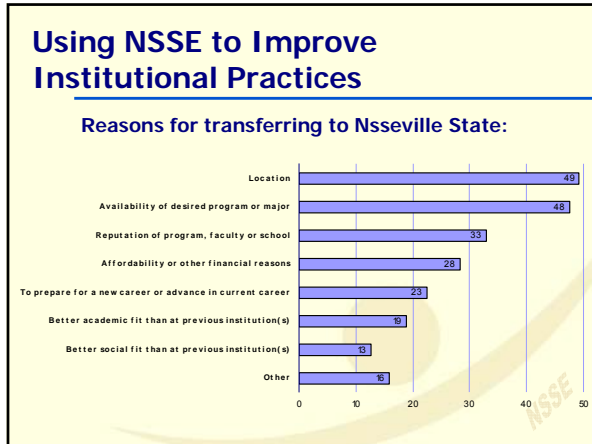
NSSE

Using NSSE to Improve Institutional Practices

Percentage of Nsseville State transfer students from two-year and four-year institutions:



NSSE

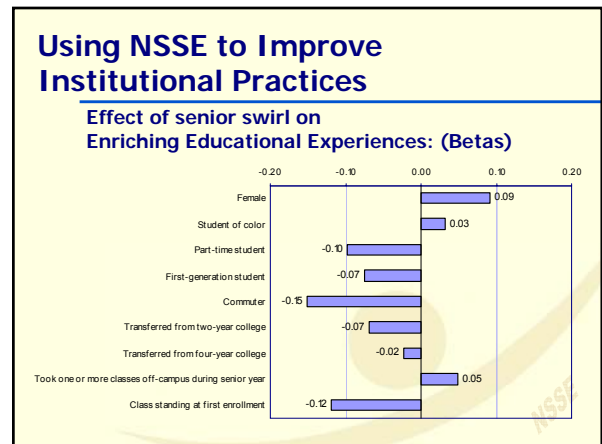


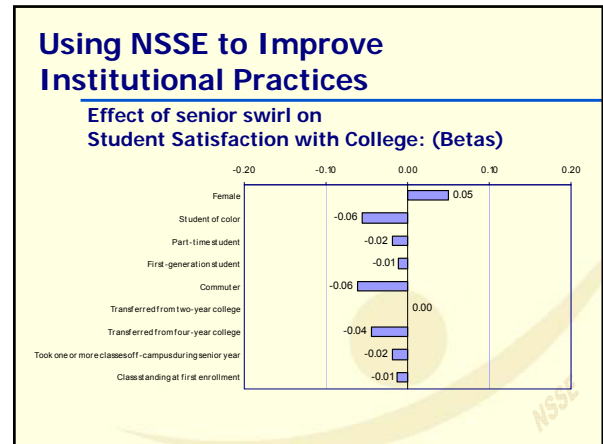
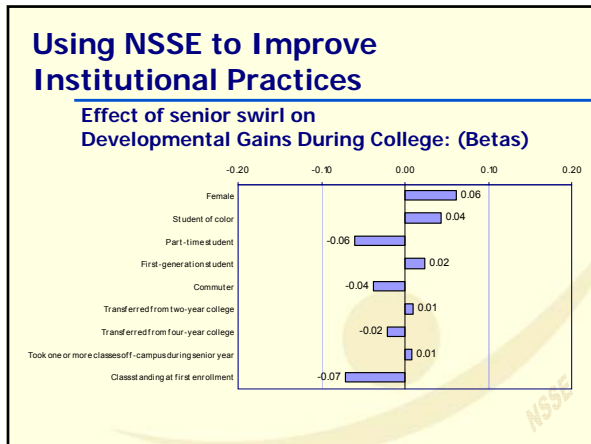
Using NSSE to Improve Institutional Practices

♦ Case 2: Examining Multiple-Institution Attendance

	Mean	Std. Dev.
Female	0.65	0.48
Student of color	0.19	0.39
First-generation student	0.42	0.49
Part-time student	0.12	0.33
Commuter	0.51	0.50
Class standing at first enrollment	1.57	0.88
Transferred from two-year college	0.24	0.43
Transferred from four-year college	0.20	0.40
Took one or more classes off-campus during senior year	0.08	0.27
Enriching Educational Experiences	0.00	1.00
Self-reported general gains in college	0.00	1.00
Satisfaction with college	0.00	1.00

♦ Study Variables





- ### Using NSSE to Improve Institutional Practices
- Case 2: Examining Multiple-Institution Attendance
 - Summary
 - Transferring from a two-year college had a negative effect on participation in enriching experiences, but was negligible with regard to student gains and satisfaction.
 - Concurrent enrollees had slightly greater participation in enriching experiences, and were somewhat less satisfied with their college experiences at Nseseville State. Suggests that these students are savvy consumers of education.
 - The longer students wait to transfer to Nseseville State, the lower their levels of participation in enriching experiences, and the less they report gaining from their experience at Nseseville State.


- ### Link to Other Student Data
- In-house surveys
 - National surveys
 - CIRP / CSS
 - YFCY
 - SEI / CSXQ
 - EBCI 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)

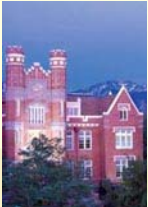

Using NSSE Data: Towson University



- 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

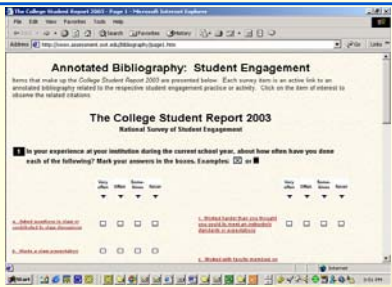
AQIP and the Freshman Seminar Proposal

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>

Incorporating NSSE Data in Change Efforts: 8 Lessons Learned

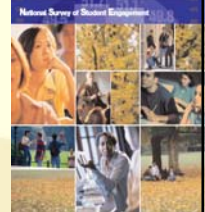
1. Make sure faculty and staff understand and endorse the concept of student engagement
2. Collect enough results so the information is usable at the department or unit level
3. Understand what student engagement data represent and use results wisely
4. Report engagement results in a responsible way



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

Other Current Activities

- ✓ Accreditation tool kit
- ✓ AACSCU "American Democracy"
- ✓ "Foundations of Excellence"
- ✓ Collegiate Learning Assessment (RAND-CAE)
- ✓ "Connecting the Dots"
- ✓ Collaborative research with CCSSE, independent scholars
- ✓ NCES "student success" synthesis
- ✓ Linking BCSE with NSSE

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

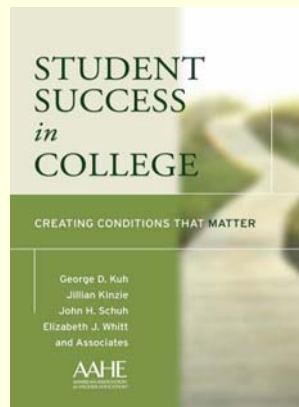


*20 schools with better than predicted student engagement and grad rates

NSSE

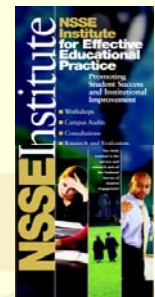
Sharing Lessons about Effective Educational Practice

Jossey-Bass
 April, 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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Copies of this presentation as well as other papers and presentations are available through the website

NSSE