

2012
NATIONAL SURVEY OF STUDENT ENGAGEMENT
SUMMARY REPORT FOR THE
SCHOOL OF SCIENCE

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INTRODUCTION

The National Survey of Student Engagement (NSSE) was developed to achieve a greater understanding of students' educational experiences in college by exploring how institutions emphasize effective teaching practices and student engagement in various activities. The final NSSE report consists of five scales called Benchmarks of Effective Educational Practice (Benchmarks). Each Benchmark consists of a group of scaled items derived from the NSSE survey. The five Benchmarks are Level of Academic Challenge (LAC), Active and Collaborative Learning (ACL), Student-Faculty Interaction (SFI), Enriching Educational Experiences (EEE), and Supportive Campus Environment (SCE). Toward the end of the survey, a series of Learning Gains items are included in order to provide an assessment of students' perceptions of their learning in college. The items in this section have been organized into three scales which reflect general areas of learning in college.

The following report is a summary of responses for the School of Science. This report organizes the NSSE items according to scalelets, or clusters of highly related items that measure a specific aspect of the educational experiences of a group of students. Each scalelet is nested under the corresponding Benchmark with which it is associated. The table below depicts the number of scalelets in each benchmark (as well as the learning gains) for both first-year and senior respondents identified as an "area of strength" (an effect size of 0.2 standard deviations greater than the IUPUI average), "asset to protect" (between 0.05 and 0.2 standard deviations greater than the average), "issue to be mindful of" (between -0.05 and -0.2 standard deviations below IUPUI average) and "opportunity for improvement" (an effect size of 0.2 standard deviations below the IUPUI average or more.)

In Spring semester 2012, a random sample of 3,860 seniors and 2,397 first-year students at IUPUI and IUPUC were invited to complete the original version of NSSE (other students completed the NSSE 2.0 pilot test, for which data is available upon request). A total of 1,043 seniors responded to the survey for a response rate of 27.0%. Similarly, 559 first-year students responded to the survey for a response rate of 23.3%. Of Science respondents, 118 were seniors and 52 were first-year students. For further information on NSSE, please contact Steven Graunke in the Office of Information Management and Institutional Research at sgraunke@iupui.edu.

TABLE 1
AREAS OF STRENGTH, ASSETS TO PROTECT, ISSUES TO BE MINDFUL OF, AND OPPORTUNITIES FOR IMPROVEMENT

	Overall descriptor	Total number of Scalelets	Areas of Strength	Assets to Protect		Issues to be Mindful of	Opportunities for Improvement
Level of Academic Challenge							
First-year	No label	3	1	0	0	1	1
Senior	Issue to be mindful of	3	0	0	0	2	1
Active and Collaborative Learning							
First-year	Issue to be mindful of	2	1	0	0	0	1
Senior	Opportunity for improvement	2	0	0	0	1	1
Student-Faculty Interaction							
First-year	Issue to be mindful of	2	0	1	0	0	1
Senior	Asset to protect	2	1	0	0	1	0
Enriching Educational Experiences							
First-year	Asset to protect	3	0	1	2	0	0
Senior	Asset to protect	3	0	1	1	0	1
Supportive Campus Environment							
First-year	Issue to be mindful of	2	0	0	1	1	0
Senior	Issue to be mindful of	2	0	0	0	2	0
Learning Gains							
First-year		3	0	2	0	1	0
Senior		3	0	0	1	1	1

TABLE 2
BENCHMARK, SCALELET, AND LEARNING GAINS SCORES FOR
SENIORS ENROLLED IN THE SCHOOL OF SCIENCE

	N	Mean	Standard Deviation	Standard Error	IUPUI Mean	Effect Size
Level of Academic Challenge^c	113	54.6	14.0	1.30	56.7	-0.15
Course Challenge ^c	108	62.7	16.9	1.60	63.9	-0.07
Writing ^c	109	42.3	17.4	1.65	44.4	-0.13
Higher-Order Thinking Skills ^d	112	62.6	18.0	1.68	67.6	-0.28
Active and Collaborative Learning^d	117	47.8	17.6	1.61	52.4	-0.25
Collaborative Learning ^c	113	48.4	18.9	1.76	51.4	-0.15
Active Learning ^d	108	46.0	20.9	1.99	53.4	-0.34
Student-Faculty Interaction^b	114	43.1	22.3	2.06	39.8	0.16
Out-of-Class Interaction ^a	112	36.2	28.3	2.64	28.4	0.30
Course Interaction ^c	114	49.2	21.5	1.99	50.7	-0.06
Enriching Educational Experiences^b	112	41.2	18.8	1.76	39.8	0.08
Varied Experiences ^b	98	35.8	22.4	2.24	32.3	0.18
Diversity	109	54.9	25.9	2.39	55.8	-0.03
Information Technology ^d	109	71.0	18.8	1.78	77.7	-0.35
Supportive Campus Environment^c	110	55.6	18.6	1.76	57.0	-0.07
Support for Student Success ^c	108	41.7	24.1	2.29	42.9	-0.05
Interpersonal Environment ^c	112	70.0	18.5	1.73	71.0	-0.05
Gains in General Education	103	72.0	19.6	1.91	72.8	-0.03
Gains in Practical Skills^c	104	70.9	20.6	1.99	72.5	-0.07
Gains in Personal and Social Skills^d	107	49.4	24.6	2.35	54.9	-0.23

^a“Area of strength”

^b“Asset to protect”

^c“Issue to be mindful of”

^d“Opportunity for Improvement”

TABLE 3
BENCHMARK, SCALELET, AND LEARNING GAINS SCORES FOR
FIRST-YEARS ENROLLED IN THE SCHOOL OF SCIENCE

	N	Mean	Standard Deviation	Standard Error	IUPUI Mean	Effect Size
Level of Academic Challenge	47	54.0	15.2	2.20	54.0	0.00
Course Challenge ^a	42	68.6	14.7	2.25	65.7	0.20
Higher-Order Thinking Skills ^c	47	58.4	18.9	2.73	61.0	-0.15
Writing ^d	47	37.8	16.7	2.41	42.9	-0.32
Active and Collaborative Learning ^c	51	45.4	13.6	1.88	46.3	-0.05
Collaborative Learning ^a	46	50.0	16.9	2.47	46.0	0.20
Active Learning ^d	47	38.1	16.2	2.34	45.5	-0.36
Student-Faculty Interaction ^c	47	34.4	16.5	2.39	36.4	-0.13
Out-of-Class Interaction ^b	44	27.3	18.5	2.76	26.2	0.05
Course Interaction ^d	46	40.8	18.3	2.68	46.2	-0.25
Enriching Educational Experiences ^b	45	31.4	12.7	1.88	30.6	0.06
Diversity ^b	43	58.1	23.2	3.52	53.5	0.17
Varied Experiences	42	22.9	13.9	2.13	22.5	0.03
Information Technology	43	69.5	20.7	3.14	69.1	0.02
Supportive Campus Environment ^c	43	59.8	17.8	2.70	61.0	-0.07
Support for Student Success ^c	43	50.4	25.6	3.87	52.1	-0.07
Interpersonal Environment	45	69.0	18.1	2.68	69.8	-0.04
Gains in Personal and Social Skills ^b	41	56.7	21.8	3.39	53.6	0.14
Gains in Practical Skills ^b	42	70.4	20.2	3.09	68.8	0.07
Gains in General Education ^c	42	69.4	19.6	3.00	71.1	-0.08

^a“Area of strength”

^b“Asset to protect”

^c“Issue to be mindful of”

^d“Opportunity for Improvement”