National Survey of Student Engagement

Indiana University of Pennsylvania

Multi-Year Benchmark Report
August 2009

Interpreting the Multi-Year Benchmark Report

For institutions that have participated in multiple NSSE administrations, this *Multi-Year Benchmark Report* presents comparable benchmark scores by year so that patterns of change or stability may be discernible. It also provides statistics such as *number of respondents*, *standard deviation*, and *standard error* so that shorthand mean comparison tests can be calculated.

Questions that might be answered with this report include, "How stable was the level of student-faculty interaction over the years?" or "Given the implementation of initiative X three years ago, did the level of active and collaborative learning increase?"

This report has three main parts: (a) a table of *data quality indicators* (p. 3), which provides a quick reference to important statistics for each year's participation, (b) *multi-year charts,* and (c) *detailed statistics*. Key terms and features of (b) and (c) are described below using data from the fictional "NSSEville State University."

For more information and recommendations for analyzing past and present NSSE data for trends or stability, consult the *Multi-Year Data Analysis Guide*: **www.nsse.iub.edu/pdf/NSSE Multi-Year Data Analysis Guide.pdf.**

Key Terms and Features in this Report

Multi-year charts
appear on pages 4 & 6.

Y-Axis
Benchmarks are computed on a 0 to 100 scale, however nearly all institutional scores are between the y-axis values of 15 and 85.

Benchmark Score
The benchmark score is the weighted average of the student-level scores, using only randomly sampled students from each year's data.
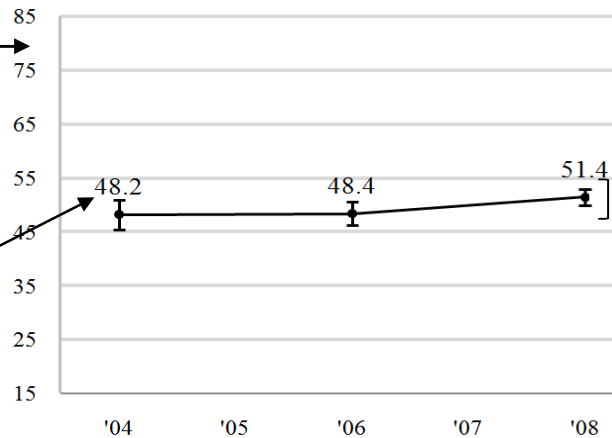
n
Unweighted number of respondents represented in the data.

SEM
Standard error of the mean is how much a score based on a sample may differ from the true population score. *SEM* is used to compute confidence intervals.

Error Bars/Confidence Intervals
Error bars around each benchmark score show the upper and lower bounds of the 95% confidence interval (mean +/- 1.96 * *SEM*), a range of values 95% likely to contain the true population score. "Upper" and "Lower" limits are also reported in the detailed statistics tables. Where confidence intervals do not overlap between years, a statistically significant difference ($p < .05$) is likely to be present.

Level of Academic Challenge (LAC)

Multi-year detailed statistics
appear on pages 5 & 7.

Year
All NSSE administration years since 2004 are listed regardless of participation.

	2004	2005	2006	2007	2008
LAC	**48.2**		**48.4**		**51.4**
n	405		303		307
SD	12.1		12.3		11.8
SEM	.60		.71		.67
Upper	49.4		49.8		52.7
Lower	47.0		47.0		50.1

SD
Standard deviation, the average amount by which students' scores differ from the mean.

Some NSSE administrations at an institution may yield more precise population estimates than others. The values in this table were drawn from the *Respondent Characteristics* reports for each NSSE administration. An important early step in conducting a multi-year analysis is to review the quality of your data for both first-year and senior respondents in each year.

Year[a]	Mode[b]	Response Rate[c]		Sampling Error[d]		Number of Respondents[e]	
		FY	SR	FY	SR	FY	SR
2004							
2005							
2006							
2007	Web+	19%	21%	5.3%	4.5%	314	378
2008							
2009	Web	35%	39%	2.4%	3.0%	1,141	667

[a] All NSSE administration years since 2004 are listed regardless of participation.

[b] Modes include *Paper* (students receive a paper survey and the option of completing a Web version), *Web* (students receive all correspondence by e-mail and complete the Web version), and *Web+* (students initially invited to participate via e-mail; a subgroup of nonrespondents receive paper surveys).

[c] Response rates (number of respondents divided by sample size) were adjusted for ineligibility, nondeliverable mailing addresses, and students who were unavailable during the survey administration.

[d] Sampling error gauges the precision of estimates based on a sample survey. It is an estimate of how much survey item percentages for your respondents could differ from those of the entire population of students at your institution. Data with larger sampling errors (such as +/-10%) need not be dismissed out of hand, but any results using them should be interpreted more conservatively.

[e] This is the original count used to calculate response rates and sampling errors for each administration's *Respondent Characteristics* report. This number includes all randomly sampled students. In 2004 and 2005 it may also include targeted oversamples. For this reason, the counts for 2004 and 2005 may not match those given in the detailed statistics on pages 5 and 7.
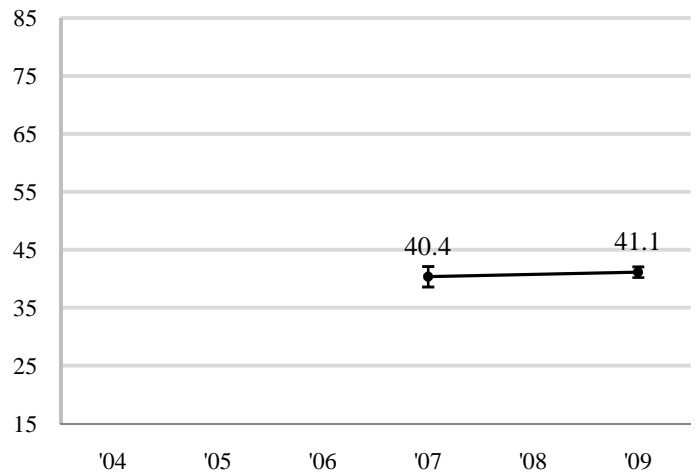
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First-Year Students

Level of Academic Challenge (LAC)
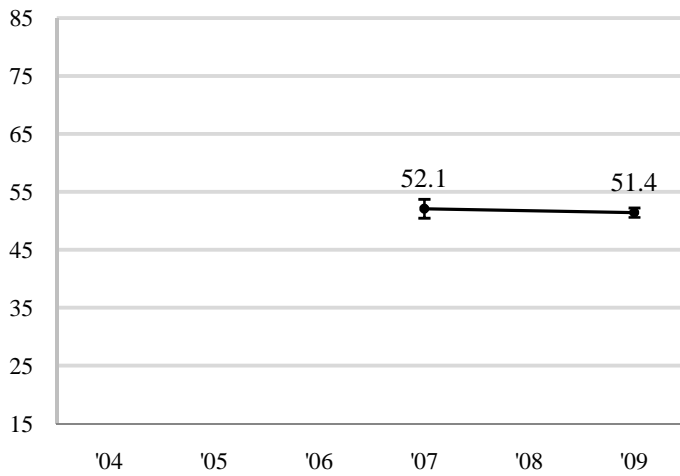
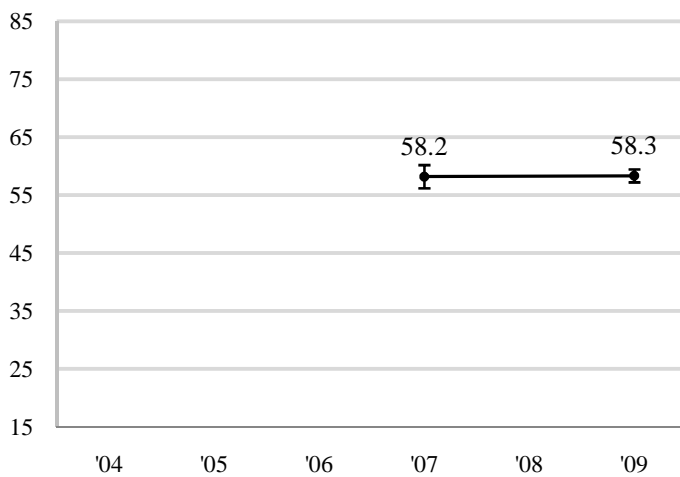52.1   51.4

Active and Collaborative Learning (ACL)

40.4   41.1

Student-Faculty Interaction (SFI)

34.7   34.0

Enriching Educational Experiences (EEE)

24.5   24.9

Supportive Campus Environment (SCE)

58.2   58.3
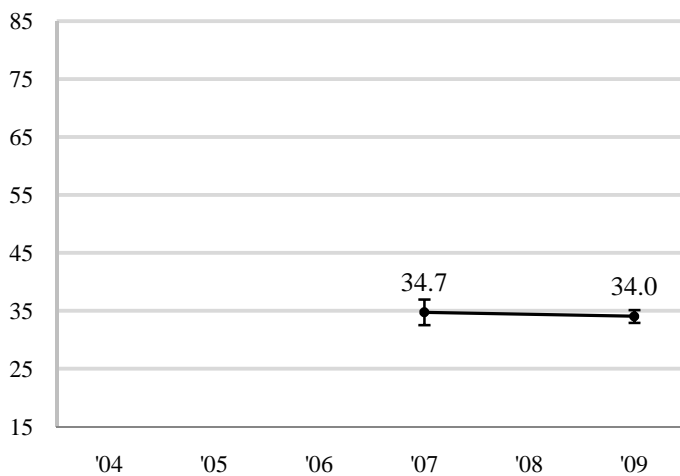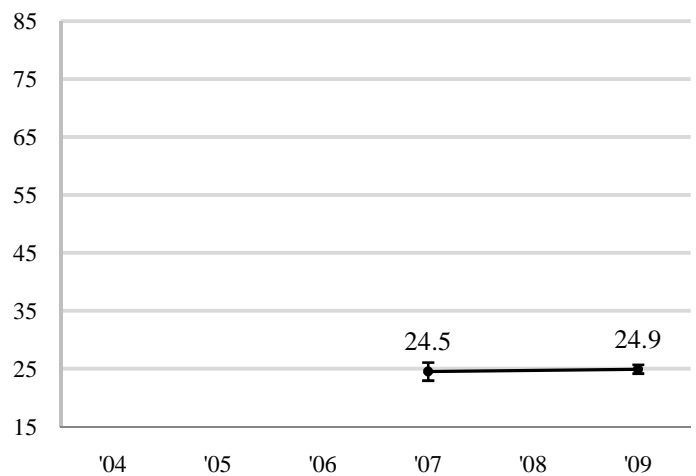
Notes:

- Benchmark scores are charted for all years of participation. See page 5 for detailed statistics.

- For more information and recommendations for analyzing multi-year NSSE data, consult the *Multi-Year Data Analysis Guide*: www.nsse.iub.edu/pdf/NSSE Multi-Year Data Analysis Guide.pdf.

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		First-Year Students					
		2004	*2005*	*2006*	*2007*	*2008*	*2009*
Level of Academic Challenge	**LAC**				**52.1**		**51.4**
	n				273		1066
	SD				13.8		13.4
	SEM				.83		.41
	Upper				53.7		52.2
	Lower				50.5		50.6
Active and Collaborative Learning	**ACL**				**40.4**		**41.1**
	n				314		1138
	SD				16.0		16.1
	SEM				.90		.48
	Upper				42.1		42.1
	Lower				38.6		40.2
Student Faculty Interaction	**SFI**				**34.7**		**34.0**
	n				277		1088
	SD				18.8		18.5
	SEM				1.13		.56
	Upper				37.0		35.2
	Lower				32.5		32.9
Enriching Educational Experiences	**EEE**				**24.5**		**24.9**
	n				267		1046
	SD				13.0		12.5
	SEM				.80		.39
	Upper				26.1		25.7
	Lower				23.0		24.2
Supportive Campus Environment	**SCE**				**58.2**		**58.3**
	n				259		1023
	SD				16.5		18.4
	SEM				1.02		.57
	Upper				60.2		59.5
	Lower				56.2		57.2

[a] n=number of respondents; *SD* =standard deviation; *SEM* =standard error of the mean; Upper/Lower=95% confidence interval limits
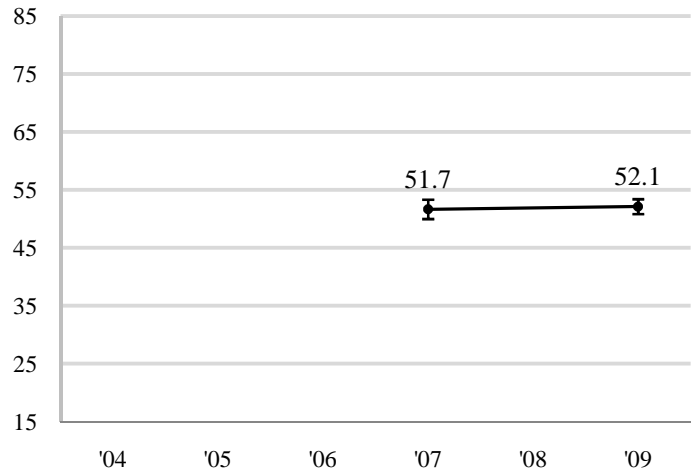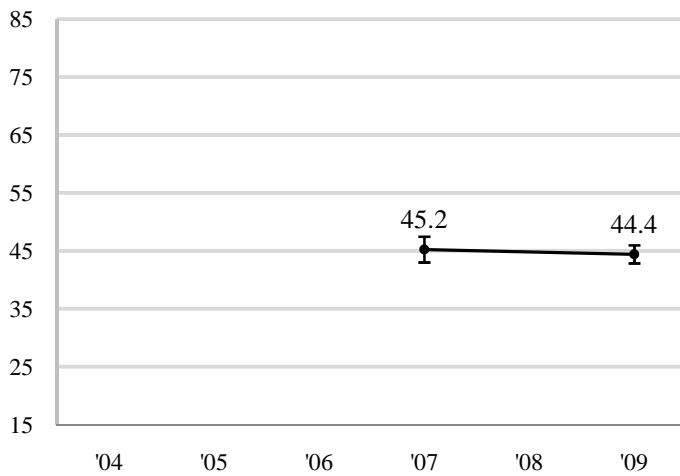
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Seniors

Level of Academic Challenge (LAC)
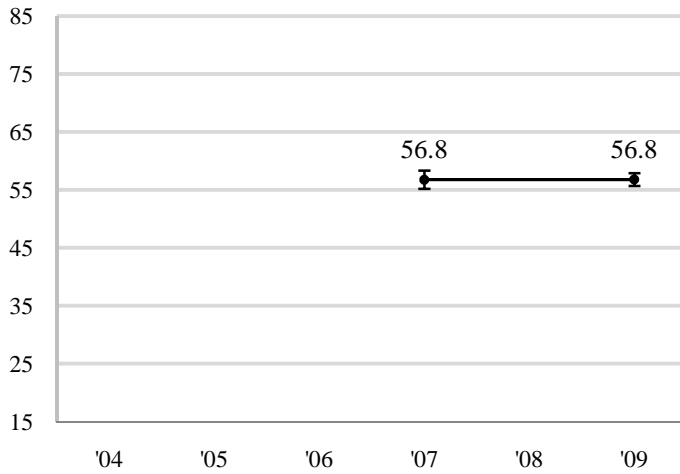
56.8   56.8

Active and Collaborative Learning (ACL)

51.7   52.1

Student-Faculty Interaction (SFI)

45.2   44.4

Enriching Educational Experiences (EEE)

40.6   39.7

Supportive Campus Environment (SCE)

54.8   57.1
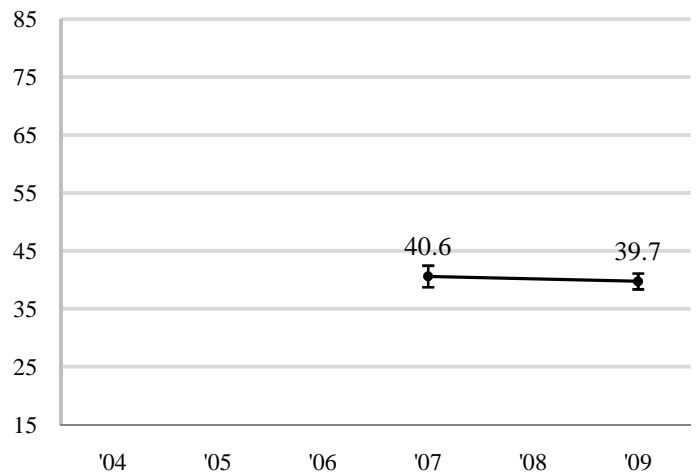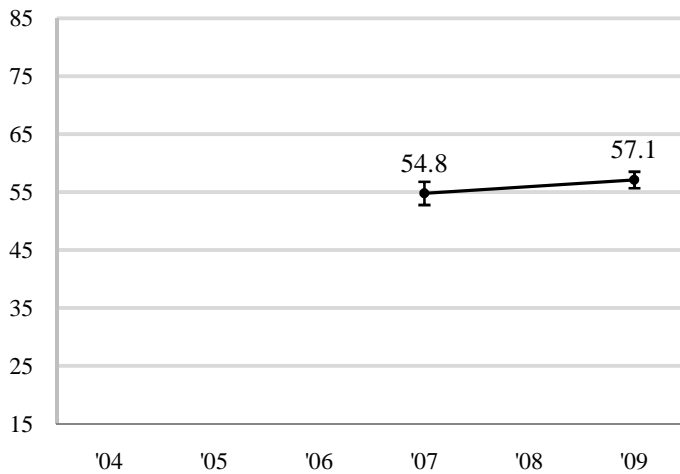
Notes:

- Benchmark scores are charted for all years of participation. See page 7 for detailed statistics.

- For more information and recommendations for analyzing multi-year NSSE data, consult the *Multi-Year Data Analysis Guide*: www.nsse.iub.edu/pdf/NSSE Multi-Year Data Analysis Guide.pdf.

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		Seniors					
		2004	*2005*	*2006*	*2007*	*2008*	*2009*
Level of Academic Challenge	**LAC**				**56.8**		**56.8**
	n				331		638
	SD				14.6		14.4
	SEM				.80		.57
	Upper				58.3		57.9
	Lower				55.2		55.7
Active and Collaborative Learning	**ACL**				**51.7**		**52.1**
	n				376		666
	SD				16.6		16.9
	SEM				.86		.66
	Upper				53.3		53.4
	Lower				50.0		50.8
Student Faculty Interaction	**SFI**				**45.2**		**44.4**
	n				339		644
	SD				20.9		20.1
	SEM				1.14		.79
	Upper				47.5		46.0
	Lower				43.0		42.9
Enriching Educational Experiences	**EEE**				**40.6**		**39.7**
	n				321		629
	SD				17.0		17.5
	SEM				.95		.70
	Upper				42.5		41.1
	Lower				38.7		38.4
Supportive Campus Environment	**SCE**				**54.8**		**57.1**
	n				318		622
	SD				18.3		18.1
	SEM				1.02		.73
	Upper				56.8		58.5
	Lower				52.8		55.7

[a] n=number of respondents; *SD* =standard deviation; *SEM* =standard error of the mean; Upper/Lower=95% confidence interval limits