



The University of Arizona

Multi-Year Benchmark Report

August 2012

Interpreting the Multi-Year Benchmark Report

For institutions that have participated in multiple NSSE administrations, this *Multi-Year Benchmark Report* presents recalculated and comparable benchmark scores by year so that patterns of change or stability are discernible. It also provides statistics such as *number of respondents*, *standard deviation*, and *standard error* so that shorthand mean comparison tests can be calculated. This report is necessary because improvements and modifications have been made over time, complicating multi-year analysis of NSSE data. Specifically, the following issues are relevant:

- Response options for question 7 (Done, Plan to do, etc.) were changed in 2004, making current results on these items incompatible with those of 2003 and earlier. Therefore, it is not possible to compare the 2004-2012 Enriching Educational Experiences benchmark with prior years (2001-2003). Also, an alternate version of the Student-Faculty Interaction benchmark – labeled ‘SFC’ – removes the ‘research with faculty’ item, allowing this revised version to be compared with prior years (2001-2003).
- In 2004 NSSE changed the way benchmarks were calculated, requiring that benchmarks prior to 2004 be recalculated to more accurately compare institutional performance across years.
- Scores from NSSE 2000 are not included because several significant changes were made to the survey instrument and benchmarks beginning in 2001, making year-to-year comparisons unsuitable.
- The samples used to develop institutional estimates have been refined in recent years, making direct comparisons of reported benchmarks over the years potentially less stable.

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 administration, (b) *multi-year charts*, and (c) *detailed statistics*. Key terms and features of (b) and (c) are illustrated below.

For more information and recommendations for analyzing NSSE data over time, consult the *Multi-Year Data Analysis Guide* on the NSSE Web site. nsse.iub.edu/pdf/MYDAG.pdf

Key Terms and Features in this Report

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

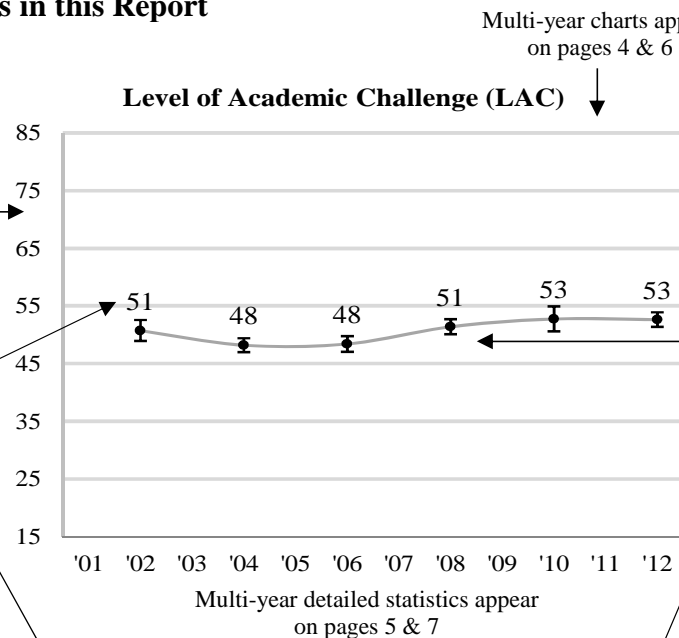
The benchmark score is the weighted average of the students’ scores, using all census-administered and randomly sampled students from each year’s data.

n

Number of respondents represented in the data weighted by gender and enrollment status.

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 \pm 1.96 * *SEM*), a range of values 95% likely to contain the true population score. "Upper" and "Lower" limits are 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.

Year

All NSSE administration years are listed regardless of participation.

SD

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

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
LAC		50.7		48.2		48.4		51.4		52.7		52.6
n		179		405		303		307		155		171
SD		12.3		12.1		12.3		11.8		13.7		13.1
SEM		.92		.60		.71		.67		1.10		.65
Upper		52.5		49.4		49.8		52.7		54.9		53.9
Lower		48.9		47.0		47.0		50.1		50.6		51.4

An important early step in conducting a multi-year analysis is to review the quality of your data in each year for both first-year and senior respondents. The precision of an institution's population estimates can vary from one year to the next. The values in this table were drawn from the *Respondent Characteristics* reports from each NSSE administration.

Data Quality Indicators for Each NSSE Participation Year

Year ^a	Mode ^b	Response Rate ^c		Sampling Error ^d		Number of Respondents ^e	
		FY	SR	FY	SR	FY	SR
2001	Paper	39%		7.7%	6.5%	159	214
2002							
2003							
2004							
2005							
2006	Web-only	29%	31%	3.5%	3.6%	684	685
2007							
2008							
2009	Web-only	27%	31%	3.8%	3.5%	614	704
2010							
2011							
2012	Web-only	16%	19%	2.5%	2.5%	1248	1212

^a All NSSE administration years since 2001 are listed regardless of participation.

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

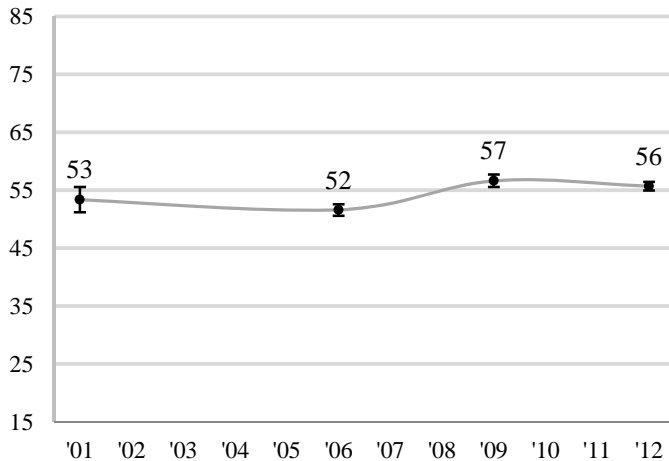
^c Response rates (number of respondents divided by sample size) adjusted for ineligibility, nondeliverable addresses, and students who were unavailable during the survey administration. Before 2003, response rates were not calculated separately by class so overall response rates are reported.

^d Sampling error gauges the precision of results 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.

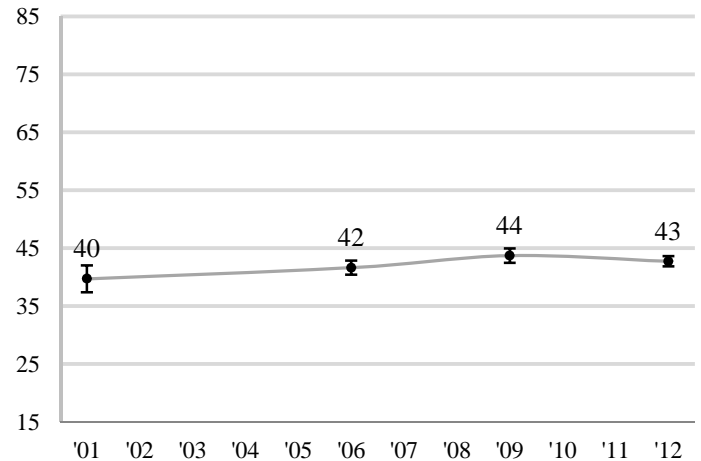
^e This is the original count used to calculate response rates and sampling errors for each administration's *Respondent Characteristics* report. This number includes all census-administered and randomly sampled students. From 2001 to 2005 it may also include targeted oversamples. For this reason, the counts for 2001 to 2005 may not match those given in the detailed statistics on pages 5 and 7.

First-Year Students

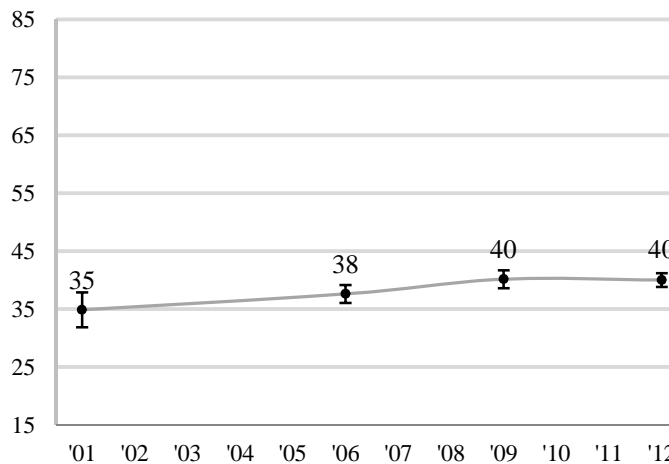
Level of Academic Challenge (LAC)



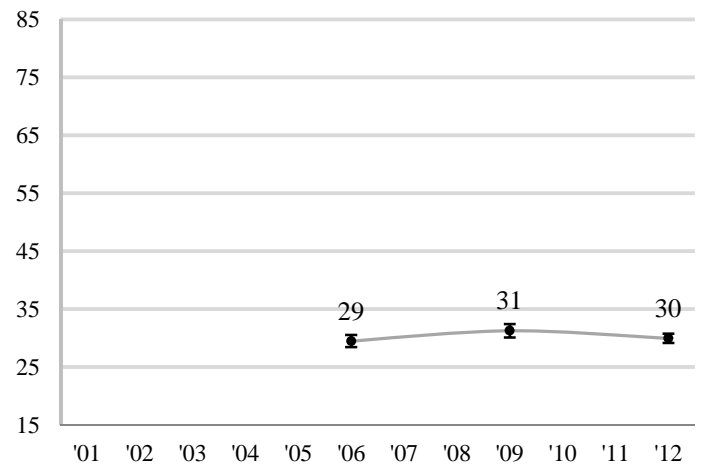
Active and Collaborative Learning (ACL)



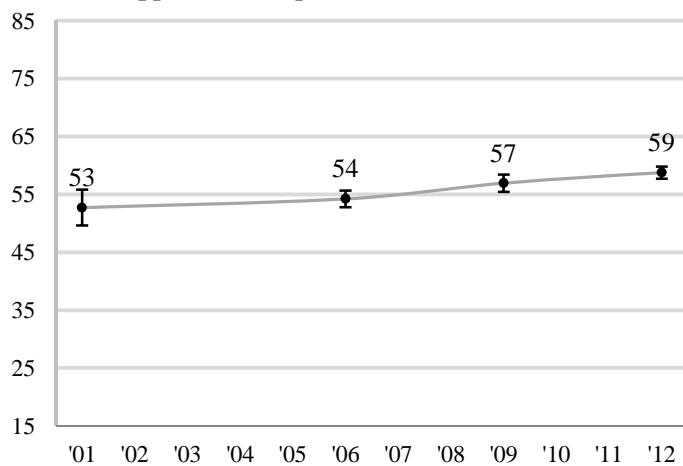
Student-Faculty Interaction (SFC)^b



Enriching Educational Experiences (EEE)^c



Supportive Campus Environment (SCE)



Notes:

- a. Recalculated benchmark scores are charted for all years of participation since 2001. See page 5 for detailed statistics. For more information and recommendations for analyzing multi-year NSSE data, consult the *Multi-Year Data Analysis Guide*. nsse.iub.edu/pdf/MYDAG.pdf
- b. For institutions with 2001-2003 data, due to a change to the 'research with faculty' item in 2004, 'SFC' (a version of 'SFI' that does not include that item) is charted on this page. Statistics for both versions are provided on page 5.
- c. 2001-2003 'EEE' scores are not provided because response options for several 'EEE' items were altered in 2004, and thus scores are incompatible with those of later years.

		First-Year Students											
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Level of Academic Challenge	LAC	53.4					51.6			56.6			55.7
	n	153					626			576			1158
	SD	13.9					12.7			13.0			12.9
	SEM	1.12					.51			.54			.38
	Upper	55.6					52.6			57.7			56.4
	Lower	51.2					50.6			55.6			55.0
Active and Collaborative Learning	ACL	39.7					41.6			43.7			42.7
	n	153					681			614			1244
	SD	14.7					16.1			15.6			16.1
	SEM	1.19					.62			.63			.46
	Upper	42.0					42.8			44.9			43.6
	Lower	37.4					40.4			42.5			41.9
Student-Faculty Interaction^b	SFC	34.9					37.6			40.2			40.0
	n	153					639			589			1180
	SD	19.2					20.0			19.0			20.5
	SEM	1.55					.79			.78			.60
	Upper	37.9					39.2			41.7			41.2
	Lower	31.8					36.1			38.6			38.9
Enriching Educational Experiences^c	SFI	-					32.4			34.8			34.6
	n	-					630			581			1167
	SD	-					18.2			17.6			18.5
	SEM	-					.72			.73			.54
	Upper	-					33.8			36.2			35.7
	Lower	-					31.0			33.4			33.6
Supportive Campus Environment	EEE	-					29.5			31.3			29.9
	n	-					615			555			1125
	SD	-					13.5			14.0			13.8
	SEM	-					.54			.59			.41
	Upper	-					30.5			32.4			30.7
	Lower	-					28.4			30.1			29.1
Supportive Campus Environment	SCE	52.7					54.2			56.9			58.8
	n	153					607			550			1108
	SD	19.4					17.9			17.7			17.9
	SEM	1.57					.73			.76			.54
	Upper	55.8					55.6			58.4			59.8
	Lower	49.6					52.8			55.5			57.7

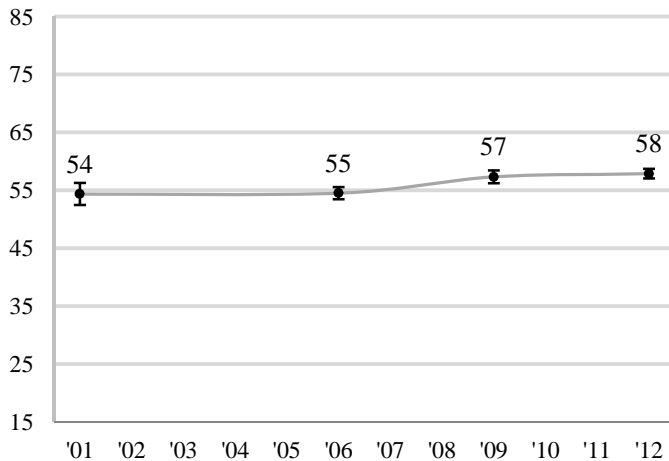
^a n=number of respondents; SD=standard deviation; SEM=standard error of the mean; Upper/Lower=95% confidence interval limits

^b Due to a change to the 'research with faculty' item in 2004, statistics for 'SFC' (the alternate version of Student-Faculty Interaction that does not include that item) are reported for all years, and 'SFI' is reported beginning with 2004.

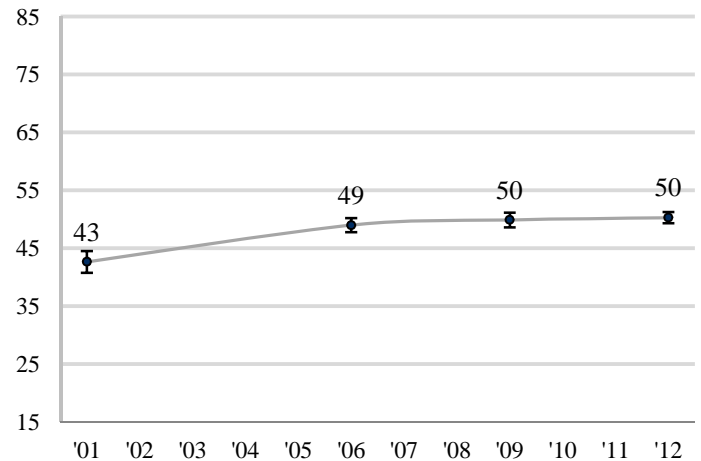
^c 2001-2003 'EEE' scores are not provided because they are not comparable with those of later years. This is because response options for several of 'EEE' items were substantially altered in 2004.

Seniors

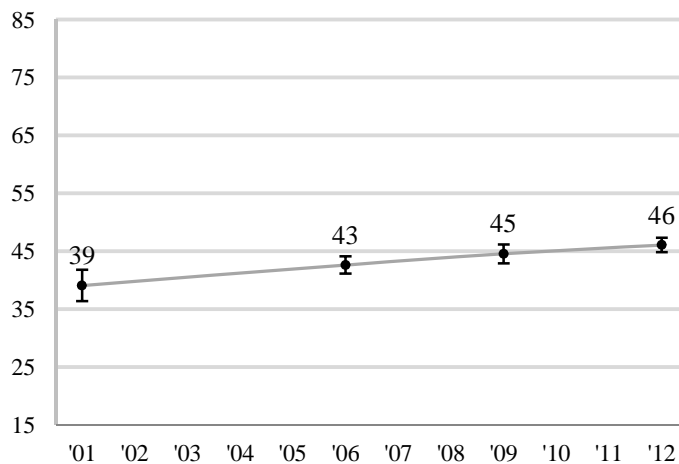
Level of Academic Challenge (LAC)



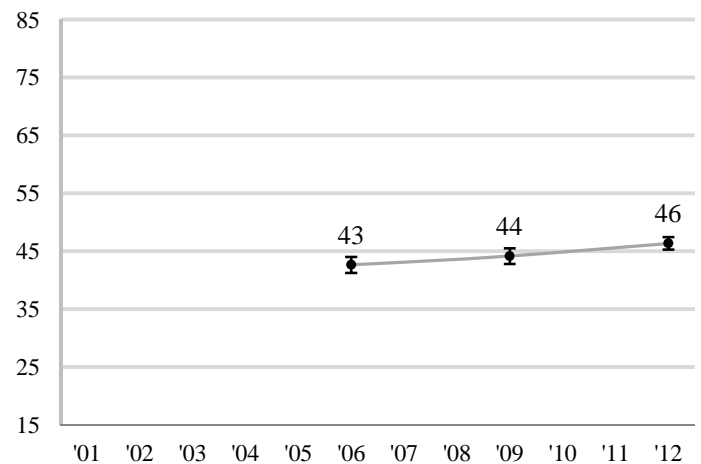
Active and Collaborative Learning (ACL)



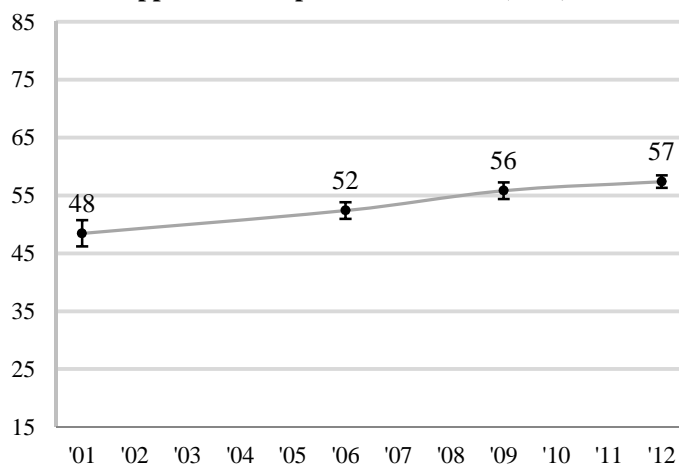
Student-Faculty Interaction (SFC)^b



Enriching Educational Experiences (EEE)^c



Supportive Campus Environment (SCE)



Notes:

- a. Recalculated benchmark scores are charted for all years of participation since 2001. See page 7 for detailed statistics. For more information and recommendations for analyzing multi-year NSSE data, consult the *Multi-Year Data Analysis Guide*. nsse.iub.edu/pdf/MYDAG.pdf
- b. For institutions with 2001-2003 data, due to a change to the 'research with faculty' item in 2004, 'SFC' (a version of 'SFI' that does not include that item) is charted on this page. Statistics for both versions are provided on page 7.
- c. 2001-2003 'EEE' scores are not provided because response options for several 'EEE' items were altered in 2004, and thus scores are incompatible with those of later years.

		Seniors											
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Level of Academic Challenge	LAC	54.4					54.5			57.3			57.9
	n	215					641			680			1151
	<i>SD</i>	14.2					13.4			14.7			14.1
	<i>SEM</i>	.97					.53			.56			.41
	Upper	56.3					55.6			58.4			58.7
Lower	52.5					53.5			56.2			57.1	
Active and Collaborative Learning	ACL	42.6					49.0			49.9			50.3
	n	217					683			703			1211
	<i>SD</i>	14.3					16.5			17.3			17.4
	<i>SEM</i>	.97					.63			.65			.50
	Upper	44.5					50.2			51.2			51.3
Lower	40.7					47.8			48.6			49.3	
Student-Faculty Interaction^b	SFC	39.1					42.6			44.6			46.1
	n	217					653			687			1165
	<i>SD</i>	20.4					19.3			21.7			21.6
	<i>SEM</i>	1.38					.75			.83			.63
	Upper	41.8					44.1			46.2			47.3
Lower	36.4					41.2			42.9			44.8	
Enriching Educational Experiences^c	SFI	-					39.5			41.8			43.8
	n	-					644			681			1158
	<i>SD</i>	-					19.0			20.9			21.4
	<i>SEM</i>	-					.75			.80			.63
	Upper	-					40.9			43.3			45.1
Lower	-					38.0			40.2			42.6	
Supportive Campus Environment	EEE	-					42.6			44.2			46.4
	n	-					631			674			1120
	<i>SD</i>	-					17.7			17.8			18.3
	<i>SEM</i>	-					.71			.68			.55
	Upper	-					44.0			45.5			47.4
Lower	-					41.3			42.8			45.3	
Supportive Campus Environment	SCE	48.4					52.4			55.8			57.4
	n	216					622			667			1101
	<i>SD</i>	17.0					18.2			19.0			18.3
	<i>SEM</i>	1.16					.73			.74			.55
	Upper	50.7					53.8			57.3			58.5
Lower	46.2					51.0			54.4			56.3	

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

^b Due to a change to the 'research with faculty' item in 2004, statistics for 'SFC' (the alternate version of Student-Faculty Interaction that does not include that item) are reported for all years, and 'SFI' is reported beginning with 2004.

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