



Central Washington University

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

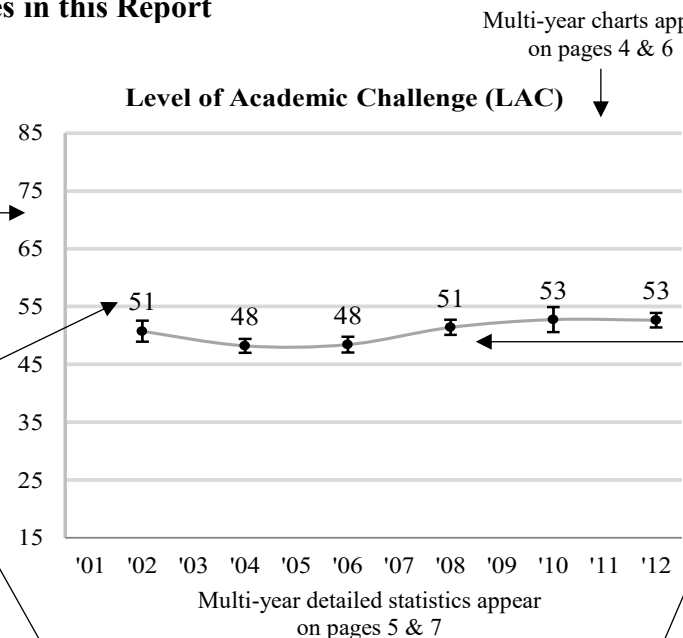
The benchmark score is the weighted average of the students' scores, using all census-administered and randomly sampled students from each year's data.

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 +/- 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	47%		7.2%	7.3%	159	167
2002							
2003							
2004	Paper	35%	42%	7.6%	7.1%	147	171
2005	Paper	32%	41%	6.2%	5.4%	219	280
2006	Web-only	25%	34%	4.2%	3.2%	417	628
2007	Web-only	16%	25%	5.2%	3.8%	298	521
2008	Web-only	12%	27%	6.3%	3.4%	212	614
2009							
2010							
2011							
2012	Web-only	17%	20%	4.7%	3.5%	360	638

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

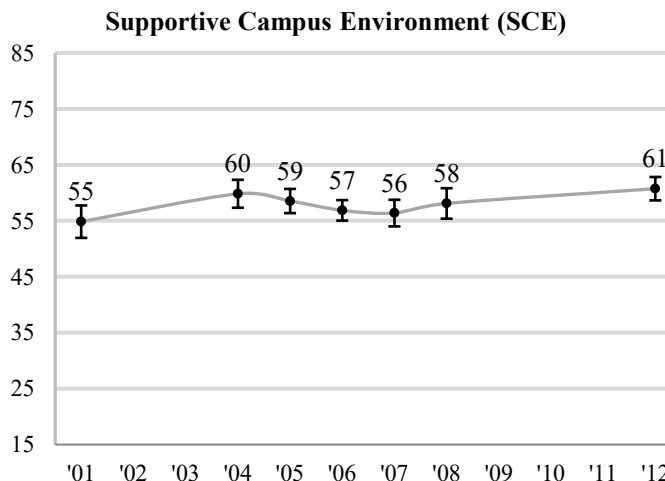
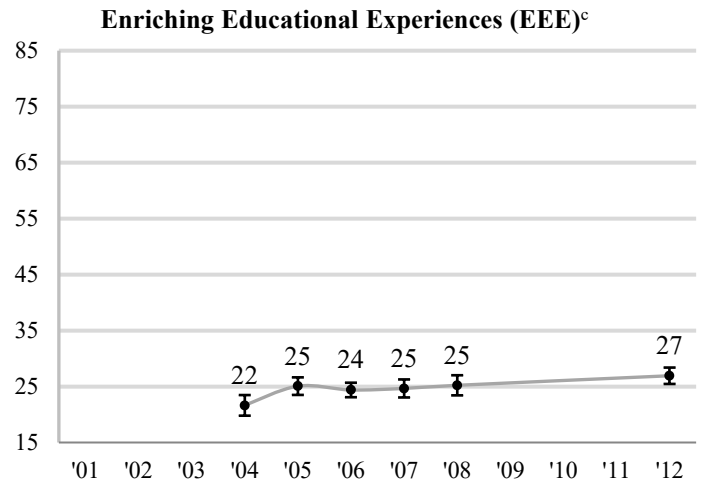
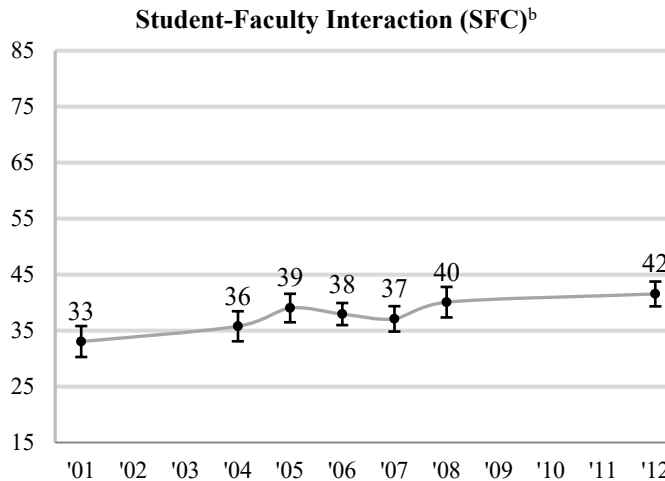
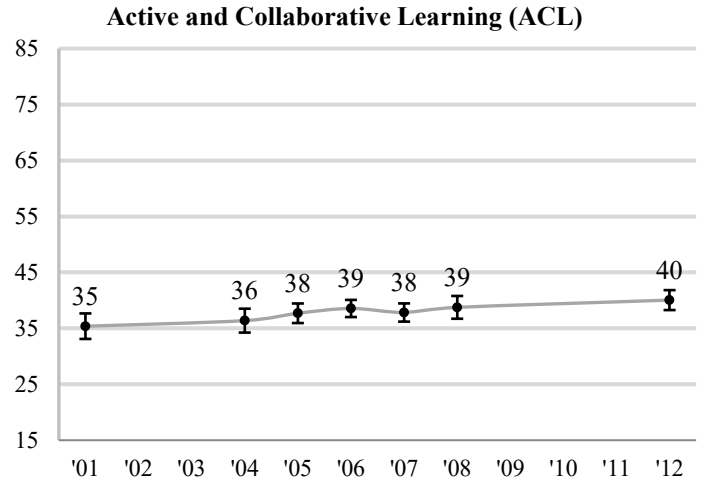
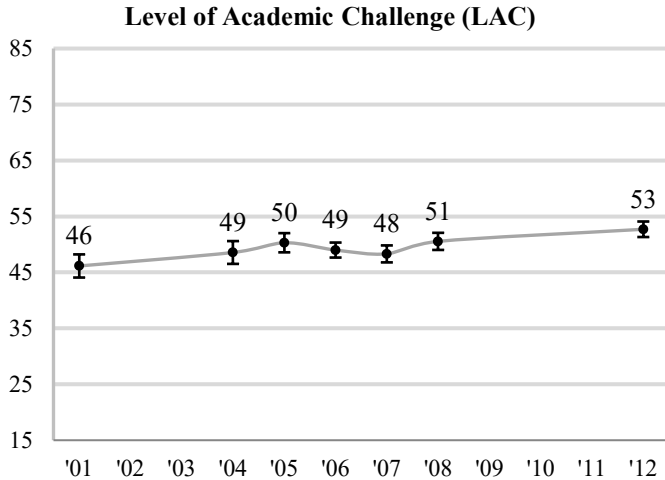
^b Modes include *Paper* (students receive a paper survey, with an option of completing a Web version), *Web-only* (students receive all correspondence by e-mail and complete the Web version), and *Web+* (students initially invited to participate via email; a subgroup of nonrespondents receive paper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

° 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



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

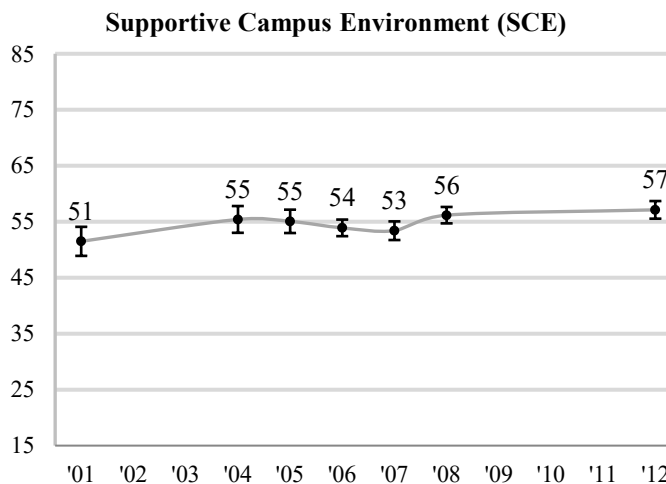
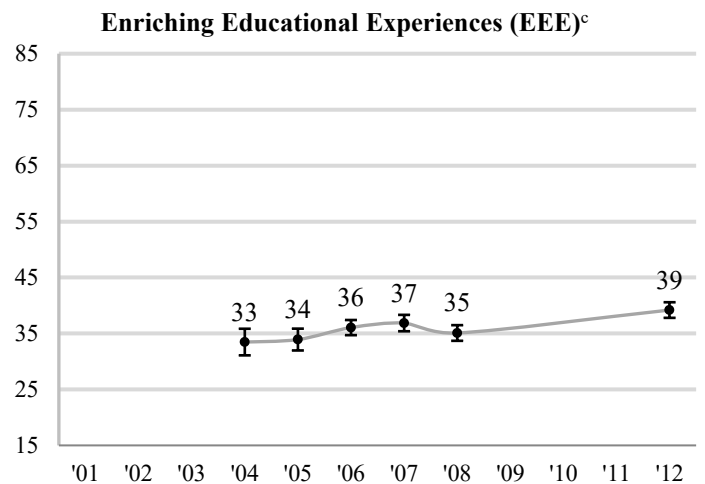
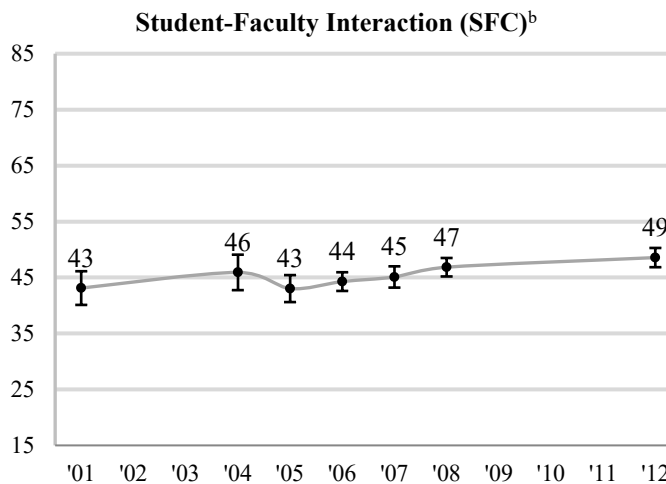
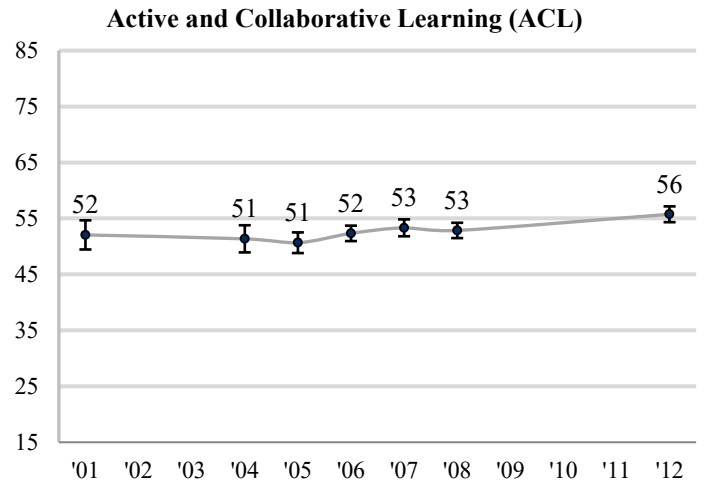
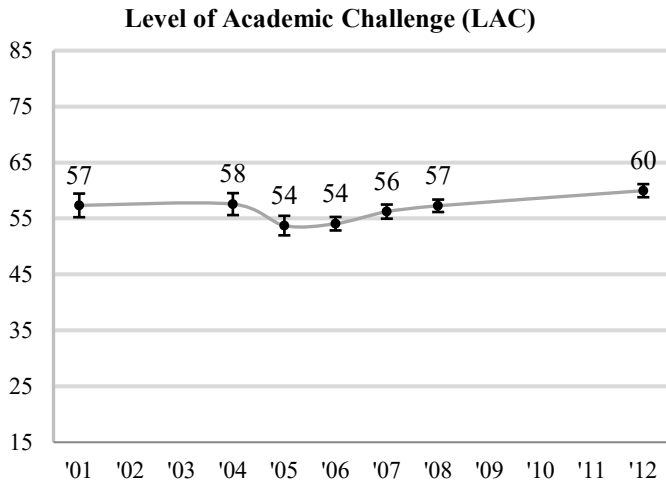
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Level of Academic Challenge	LAC	46.1			48.6	50.3	49.0	48.3	50.5				52.7
	n	158			139	205	363	259	188				327
	SD	13.3			12.3	12.5	13.0	12.5	10.7				12.8
	SEM	1.06			1.04	.88	.68	.77	.78				.71
	Upper	48.2			50.6	52.0	50.3	49.8	52.1				54.1
	Lower	44.1			46.5	48.6	47.6	46.8	49.0				51.3
Active and Collaborative Learning	ACL	35.4			36.4	37.7	38.5	37.8	38.7				40.0
	n	158			139	217	414	298	210				358
	SD	14.6			12.9	13.2	15.9	14.3	15.0				17.2
	SEM	1.16			1.09	.89	.78	.83	1.04				.91
	Upper	37.7			38.5	39.4	40.1	39.5	40.8				41.8
	Lower	33.1			34.2	35.9	37.0	36.2	36.7				38.3
Student-Faculty Interaction^b	SFC	33.0			35.8	39.0	37.9	37.1	40.1				41.5
	n	158			139	206	386	273	193				338
	SD	17.7			16.2	18.6	19.8	19.1	19.3				20.8
	SEM	1.41			1.37	1.30	1.01	1.16	1.39				1.13
	Upper	35.8			38.4	41.6	39.9	39.4	42.8				43.8
	Lower	30.3			33.1	36.5	36.0	34.8	37.3				39.3
Enriching Educational Experiences^c	SFI	-			29.9	32.9	32.5	31.9	34.0				36.1
	n	-			139	205	370	261	189				331
	SD	-			13.6	16.3	17.3	17.2	16.5				19.1
	SEM	-			1.15	1.14	.90	1.06	1.20				1.05
	Upper	-			32.2	35.1	34.3	34.0	36.3				38.2
	Lower	-			27.6	30.7	30.7	29.9	31.6				34.0
Supportive Campus Environment	EEE	-			21.6	25.1	24.4	24.7	25.2				26.9
	n	-			139	204	349	248	179				321
	SD	-			11.1	11.4	12.3	12.9	12.3				13.4
	SEM	-			.94	.80	.66	.82	.92				.75
	Upper	-			23.5	26.6	25.7	26.3	27.0				28.4
	Lower	-			19.8	23.5	23.1	23.0	23.4				25.5

^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



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
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- 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	57.3			57.6	53.7	54.1	56.2	57.3				60.0
	n	167			171	279	596	489	590				601
	SD	13.9			13.1	14.9	15.0	14.3	13.8				14.6
	SEM	1.08			1.00	.89	.62	.65	.57				.60
	Upper	59.4			59.5	55.5	55.3	57.5	58.4				61.1
	Lower	55.2			55.6	52.0	52.9	55.0	56.1				58.8
Active and Collaborative Learning	ACL	52.1			51.4	50.7	52.3	53.3	52.9				55.7
	n	168			171	280	627	520	609				636
	SD	17.2			16.2	15.8	17.6	17.6	17.3				18.2
	SEM	1.33			1.24	.94	.70	.77	.70				.72
	Upper	54.7			53.8	52.5	53.7	54.8	54.2				57.2
	Lower	49.4			48.9	48.8	51.0	51.8	51.5				54.3
Student-Faculty Interaction^b	SFC	43.1			45.9	43.0	44.3	45.1	46.8				48.6
	n	168			171	278	609	498	596				612
	SD	19.9			21.1	20.5	21.0	21.6	20.6				21.7
	SEM	1.54			1.62	1.23	.85	.97	.84				.88
	Upper	46.1			49.1	45.4	45.9	47.0	48.5				50.3
	Lower	40.1			42.7	40.6	42.6	43.2	45.2				46.8
Enriching Educational Experiences^c	SFI	-			40.3	38.2	39.7	40.6	41.7				44.2
	n	-			171	278	602	494	591				601
	SD	-			19.9	19.9	20.3	21.0	19.9				21.0
	SEM	-			1.52	1.19	.83	.95	.82				.86
	Upper	-			43.3	40.6	41.3	42.4	43.3				45.8
	Lower	-			37.4	35.9	38.0	38.7	40.1				42.5
Supportive Campus Environment	EEE	-			33.5	33.9	36.1	36.9	35.1				39.2
	n	-			171	278	587	483	579				580
	SD	-			15.9	16.6	16.7	16.4	17.2				17.1
	SEM	-			1.21	.99	.69	.75	.71				.71
	Upper	-			35.8	35.9	37.4	38.3	36.5				40.6
	Lower	-			31.1	32.0	34.7	35.4	33.7				37.8

^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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