



Marshall 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 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.

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 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 past and present NSSE data for trends or stability, consult the *Multi-Year Data Analysis Guide*. 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

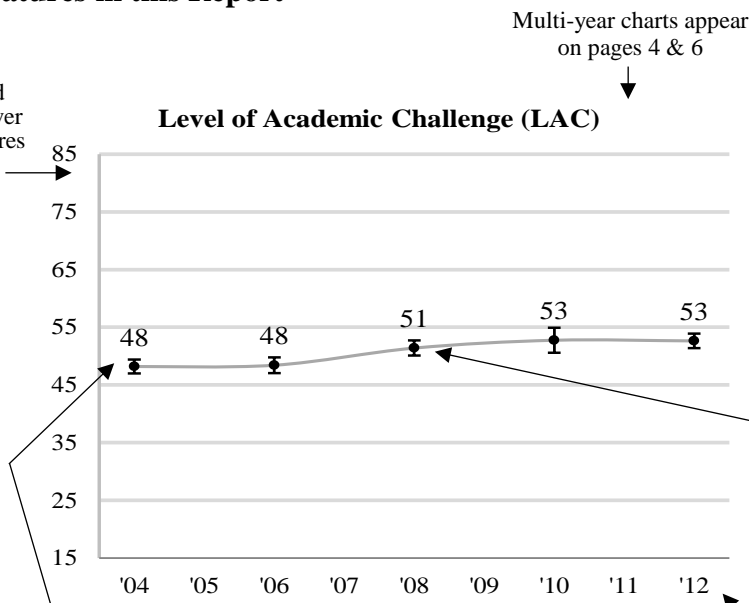
The benchmark score is the weighted average of the students' scores, using all census-administration and randomly sampled students from each year's data.

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 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.

Multi-year detailed statistics appear on pages 5 & 7

Year

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

SD

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

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
2004							
2005							
2006							
2007							
2008	Web-only	18%	23%	4.7%	4.2%	356	459
2009	Web-only	37%	34%	3.4%	3.3%	512	582
2010	Web-only	21%	32%	4.6%	3.5%	351	547
2011	Web-only	22%	25%	4.5%	3.9%	372	464
2012	Web-only	16%	27%	5.2%	3.7%	300	514

^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-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).

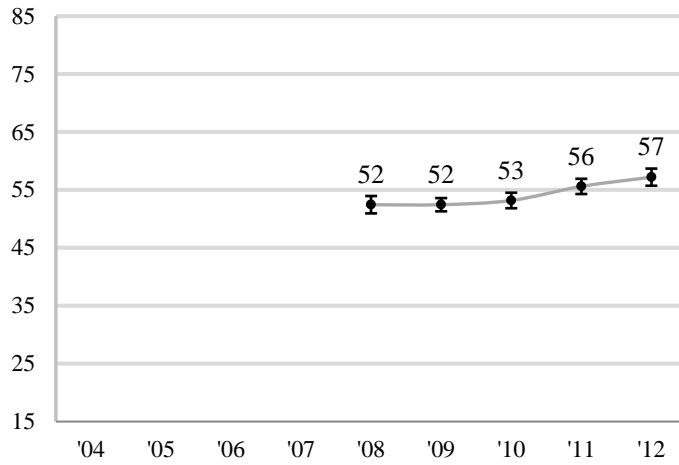
^c Response rates (number of respondents divided by sample size) adjusted for ineligibility, nondeliverable addresses, and students who were unavailable during the survey administration.

^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.

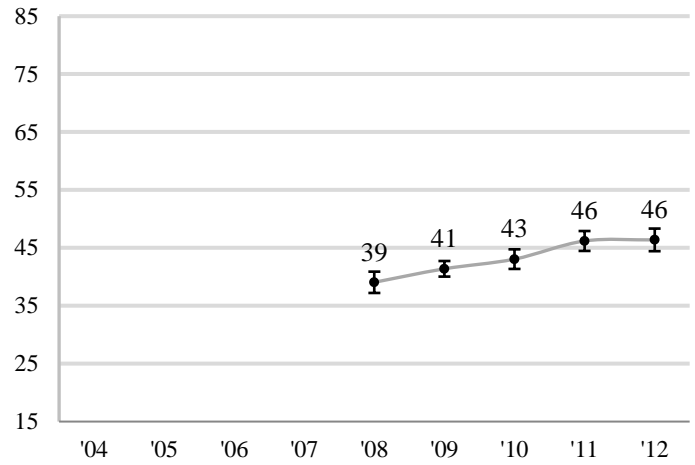
^e This is the original count used to calculate response rates and sampling errors for each administration's *Respondent Characteristics* report. This number includes all census-administered and randomly sampled students. In 2004 and 2005 it may also include targeted oversamples. For this reason, the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

First-Year Students

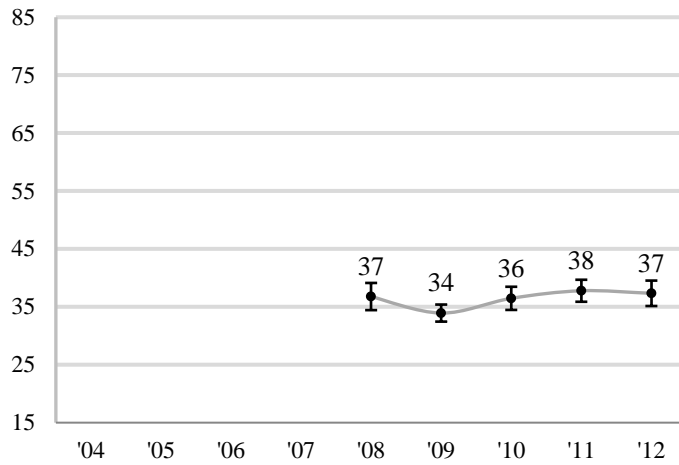
Level of Academic Challenge (LAC)



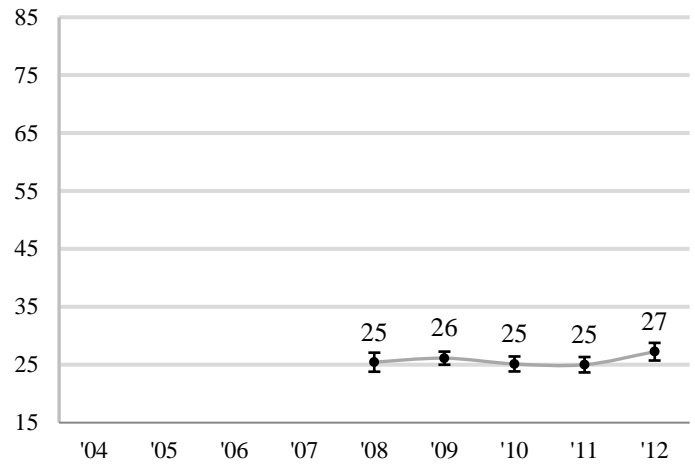
Active and Collaborative Learning (ACL)



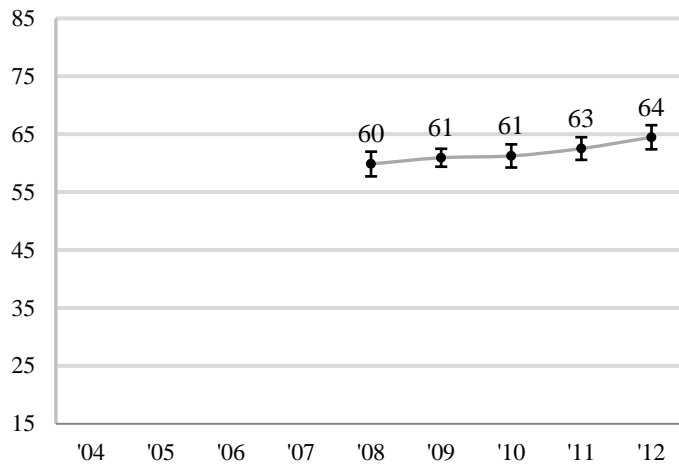
Student-Faculty Interaction (SFI)



Enriching Educational Experiences (EEE)



Supportive Campus Environment (SCE)



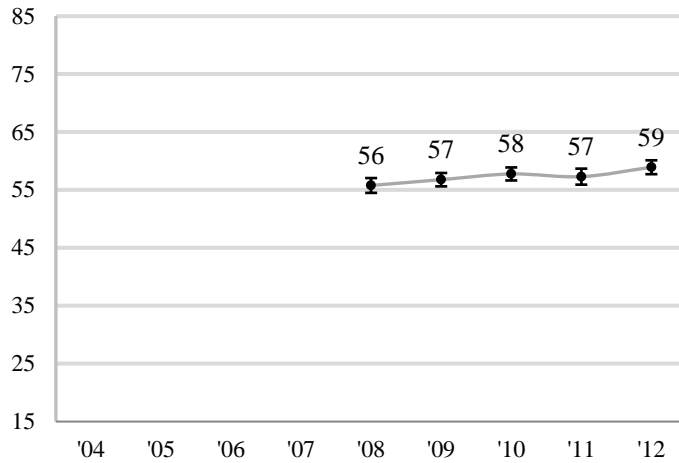
First-Year Students

		2004	2005	2006	2007	2008	2009	2010	2011	2012
Level of Academic Challenge	LAC					52.4	52.4	53.2	55.6	57.2
	n					310	492	335	358	290
	<i>SD</i>					13.5	12.9	12.5	12.7	12.9
	<i>SEM</i>					.77	.58	.68	.67	.76
	Upper					54.0	53.6	54.5	56.9	58.7
	Lower					50.9	51.3	51.8	54.3	55.7
Active and Collaborative Learning	ACL					39.0	41.4	43.0	46.2	46.4
	n					354	504	351	371	300
	<i>SD</i>					17.7	15.4	16.2	16.9	17.3
	<i>SEM</i>					.94	.69	.86	.88	1.00
	Upper					40.9	42.7	44.7	47.9	48.3
	Lower					37.2	40.0	41.4	44.5	44.4
Student-Faculty Interaction	SFI					36.8	33.9	36.5	37.8	37.3
	n					312	491	337	357	290
	<i>SD</i>					21.1	16.7	18.7	18.3	19.1
	<i>SEM</i>					1.20	.75	1.02	.97	1.12
	Upper					39.1	35.4	38.5	39.7	39.5
	Lower					34.4	32.4	34.5	35.9	35.1
Enriching Educational Experiences	EEE					25.4	26.1	25.1	25.0	27.3
	n					301	491	329	354	284
	<i>SD</i>					14.5	12.8	12.0	12.8	13.1
	<i>SEM</i>					.84	.58	.66	.68	.78
	Upper					27.1	27.3	26.4	26.3	28.8
	Lower					23.8	25.0	23.8	23.7	25.7
Supportive Campus Environment	SCE					59.9	60.9	61.3	62.5	64.5
	n					296	479	322	347	280
	<i>SD</i>					18.7	17.3	18.3	18.6	17.8
	<i>SEM</i>					1.09	.79	1.02	1.00	1.06
	Upper					62.0	62.5	63.3	64.5	66.6
	Lower					57.7	59.4	59.3	60.6	62.4

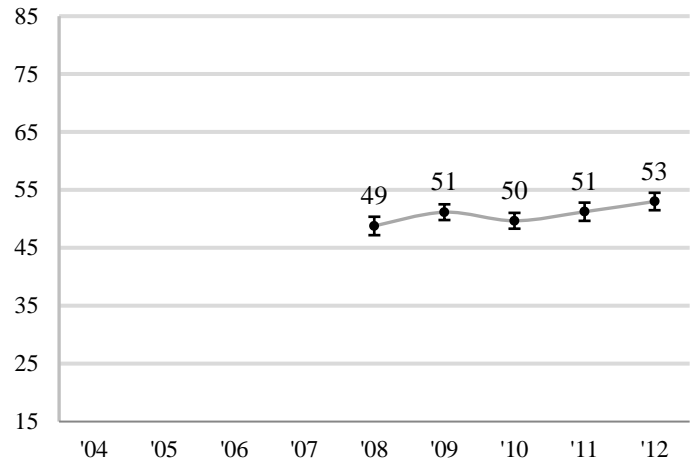
^a n=number of respondents; *SD*=standard deviation; *SEM*=standard error of the mean; Upper/Lower=95% confidence interval limits

Seniors

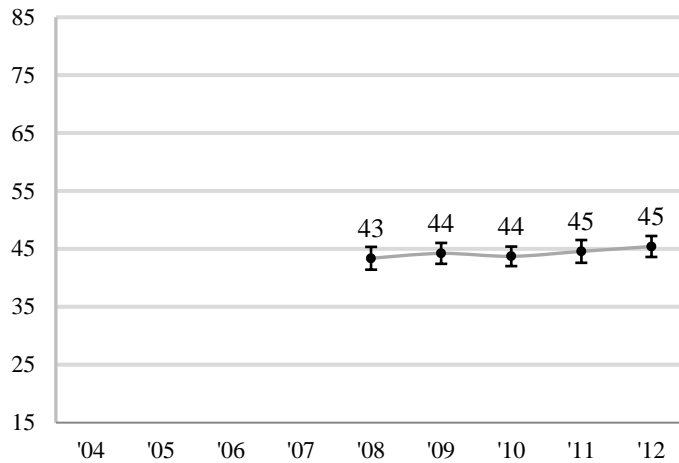
Level of Academic Challenge (LAC)



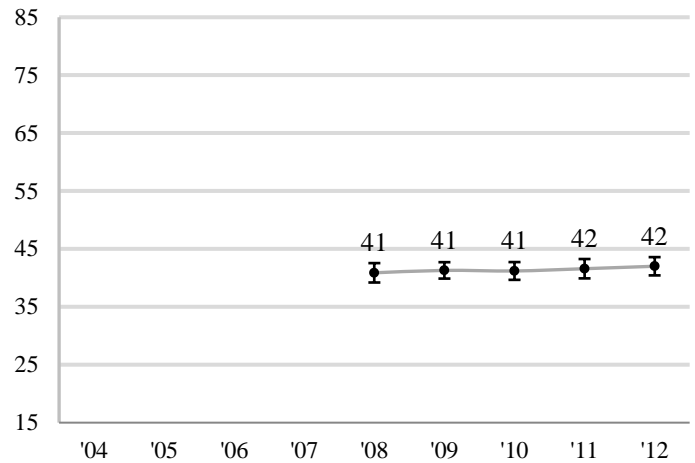
Active and Collaborative Learning (ACL)



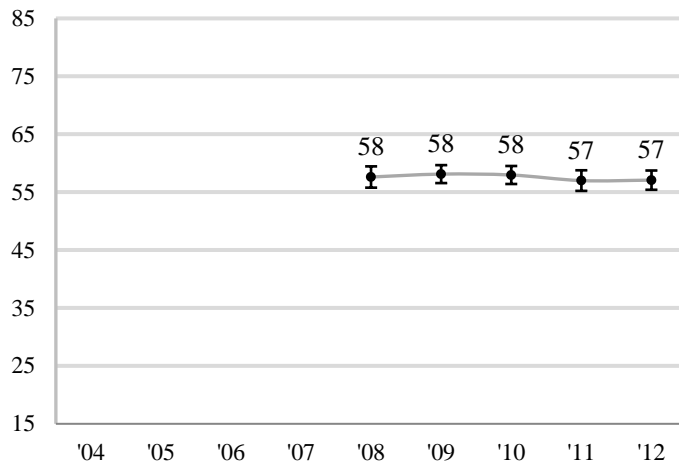
Student-Faculty Interaction (SFI)



Enriching Educational Experiences (EEE)



Supportive Campus Environment (SCE)



		Seniors								
		2004	2005	2006	2007	2008	2009	2010	2011	2012
Level of Academic Challenge	LAC					55.8	56.8	57.8	57.3	58.9
	n					439	562	539	448	505
	<i>SD</i>					13.7	14.0	13.3	14.9	13.7
	<i>SEM</i>					.65	.59	.57	.70	.61
	Upper					57.0	57.9	58.9	58.7	60.1
	Lower					54.5	55.6	56.6	55.9	57.7
Active and Collaborative Learning	ACL					48.8	51.2	49.7	51.2	53.0
	n					457	566	539	464	514
	<i>SD</i>					17.3	16.5	16.2	17.3	17.4
	<i>SEM</i>					.81	.69	.70	.80	.77
	Upper					50.4	52.5	51.0	52.8	54.5
	Lower					47.2	49.8	48.3	49.7	51.5
Student-Faculty Interaction	SFI					43.4	44.2	43.7	44.6	45.4
	n					440	562	537	448	503
	<i>SD</i>					21.1	21.8	20.0	21.2	20.7
	<i>SEM</i>					1.00	.92	.86	1.00	.92
	Upper					45.3	46.0	45.4	46.5	47.2
	Lower					41.4	42.4	42.0	42.6	43.6
Enriching Educational Experiences	EEE					40.9	41.3	41.2	41.6	42.0
	n					431	556	537	444	495
	<i>SD</i>					17.7	17.0	18.1	18.0	17.9
	<i>SEM</i>					.85	.72	.78	.85	.80
	Upper					42.5	42.7	42.7	43.3	43.6
	Lower					39.2	39.9	39.7	39.9	40.4
Supportive Campus Environment	SCE					57.6	58.1	58.0	57.0	57.1
	n					424	551	531	440	485
	<i>SD</i>					19.3	18.6	18.3	19.0	18.7
	<i>SEM</i>					.94	.79	.79	.91	.85
	Upper					59.5	59.7	59.5	58.8	58.7
	Lower					55.8	56.6	56.4	55.2	55.4

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