



# Western Carolina University

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**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](http://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

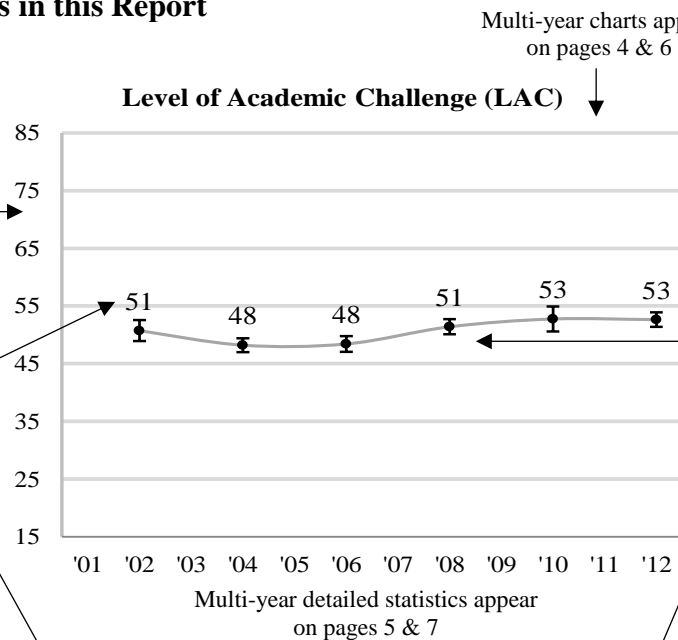
The benchmark score is the weighted average of the students’ scores, using all census-administered and randomly sampled students from each year’s data.

#### 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
<b>LAC</b>		<b>50.7</b>		<b>48.2</b>		<b>48.4</b>		<b>51.4</b>		<b>52.7</b>		<b>52.6</b>
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 <sup>a</sup>	Mode <sup>b</sup>	Response Rate <sup>c</sup>		Sampling Error <sup>d</sup>		Number of Respondents <sup>e</sup>	
		FY	SR	FY	SR	FY	SR
2001	Web	31%		5.2%	5.8%	272	216
2002							
2003							
2004	Paper	21%	23%	10.9%	11.9%	77	62
2005							
2006	Web+	27%	27%	4.5%	4.4%	385	371
2007	Web-only	34%	38%	3.2%	3.3%	617	529
2008	Web-only	20%	29%	6.0%	3.6%	217	537
2009	Web-only	21%	24%	5.5%	4.7%	252	360
2010							
2011							
2012	Web-only	14%	18%	6.8%	5.5%	179	263

<sup>a</sup> All NSSE administration years since 2001 are listed regardless of participation.

<sup>b</sup> 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).

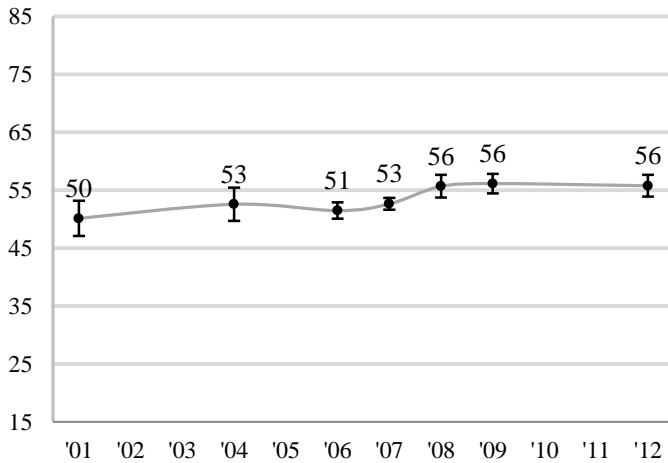
<sup>c</sup> Response rates (number of respondents divided by sample size) adjusted for ineligibility, nondeliverable addresses, and students who were unavailable during the survey administration. Before 2003, response rates were not calculated separately by class so overall response rates are reported.

<sup>d</sup> 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.

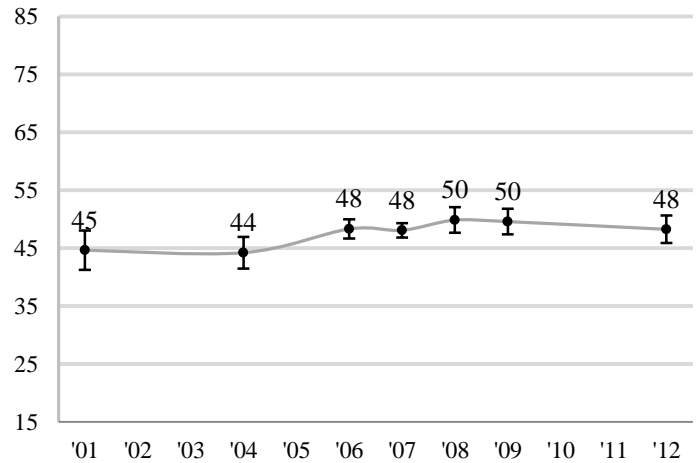
<sup>e</sup> This is the original count used to calculate response rates and sampling errors for each administration's *Respondent Characteristics* report. This number includes all census-administered and randomly sampled students. From 2001 to 2005 it may also include targeted oversamples. For this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

First-Year Students

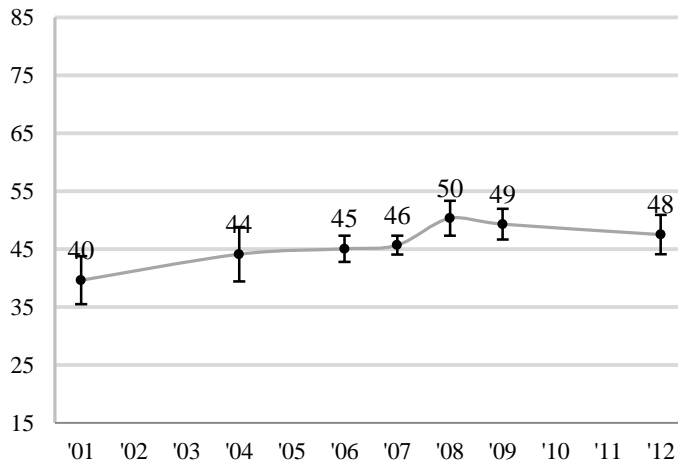
Level of Academic Challenge (LAC)



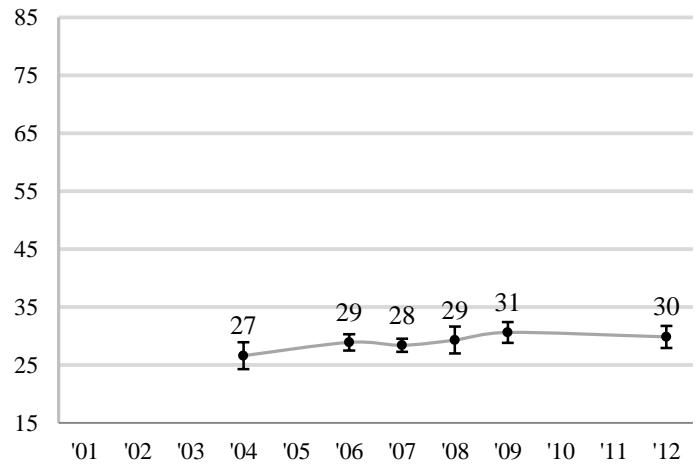
Active and Collaborative Learning (ACL)



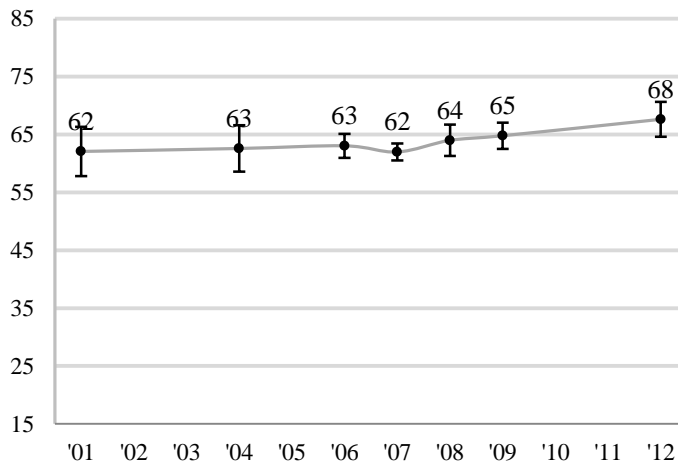
Student-Faculty Interaction (SFC)<sup>b</sup>



Enriching Educational Experiences (EEE)<sup>c</sup>



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](http://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
<b>Level of Academic Challenge</b>	<b>LAC</b>	<b>50.1</b>			<b>52.6</b>		<b>51.5</b>	<b>52.6</b>	<b>55.7</b>	<b>56.2</b>			<b>55.8</b>
	n	70			74		341	567	188	220			164
	SD	12.9			12.5		13.3	12.4	13.8	12.8			12.4
	SEM	1.54			1.45		.72	.52	1.00	.86			.97
	Upper	53.2			55.4		52.9	53.7	57.7	57.9			57.7
	Lower	47.1			49.7		50.1	51.6	53.7	54.5			53.9
<b>Active and Collaborative Learning</b>	<b>ACL</b>	<b>44.7</b>			<b>44.2</b>		<b>48.3</b>	<b>48.1</b>	<b>49.9</b>	<b>49.6</b>			<b>48.3</b>
	n	70			74		384	616	217	251			179
	SD	14.6			12.0		16.4	15.7	16.6	17.9			16.2
	SEM	1.74			1.40		.84	.63	1.13	1.13			1.21
	Upper	48.1			47.0		50.0	49.3	52.1	51.8			50.6
	Lower	41.2			41.5		46.7	46.9	47.6	47.4			45.9
<b>Student-Faculty Interaction<sup>b</sup></b>	<b>SFC</b>	<b>39.6</b>			<b>44.1</b>		<b>45.1</b>	<b>45.7</b>	<b>50.3</b>	<b>49.3</b>			<b>47.5</b>
	n	70			74		352	585	192	231			170
	SD	17.7			20.5		21.9	20.4	21.4	20.5			22.6
	SEM	2.11			2.39		1.16	.84	1.54	1.34			1.74
	Upper	43.8			48.8		47.3	47.4	53.4	52.0			50.9
	Lower	35.5			39.4		42.8	44.0	47.3	46.7			44.1
	<b>SFI</b>	-			<b>36.9</b>		<b>39.0</b>	<b>40.2</b>	<b>43.6</b>	<b>42.9</b>			<b>42.2</b>
	n	-			74		345	576	189	224			166
	SD	-			17.5		20.3	18.7	20.0	19.0			20.7
	SEM	-			2.03		1.09	.78	1.45	1.27			1.61
	Upper	-			40.9		41.1	41.7	46.4	45.4			45.3
	Lower	-			32.9		36.9	38.7	40.7	40.4			39.0
<b>Enriching Educational Experiences<sup>c</sup></b>	<b>EEE</b>	-			<b>26.6</b>		<b>28.9</b>	<b>28.4</b>	<b>29.3</b>	<b>30.6</b>			<b>29.9</b>
	n	-			74		326	547	181	213			156
	SD	-			10.2		13.1	13.6	15.9	13.3			12.2
	SEM	-			1.19		.72	.58	1.18	.91			.98
	Upper	-			28.9		30.3	29.6	31.6	32.4			31.8
	Lower	-			24.3		27.5	27.3	27.0	28.8			28.0
<b>Supportive Campus Environment</b>	<b>SCE</b>	<b>62.1</b>			<b>62.6</b>		<b>63.0</b>	<b>62.0</b>	<b>64.0</b>	<b>64.8</b>			<b>67.6</b>
	n	70			74		322	530	176	210			153
	SD	18.3			17.5		18.9	17.3	18.4	16.6			19.0
	SEM	2.18			2.04		1.05	.75	1.38	1.15			1.53
	Upper	66.4			66.6		65.1	63.5	66.7	67.0			70.6
	Lower	57.8			58.6		61.0	60.5	61.3	62.5			64.6

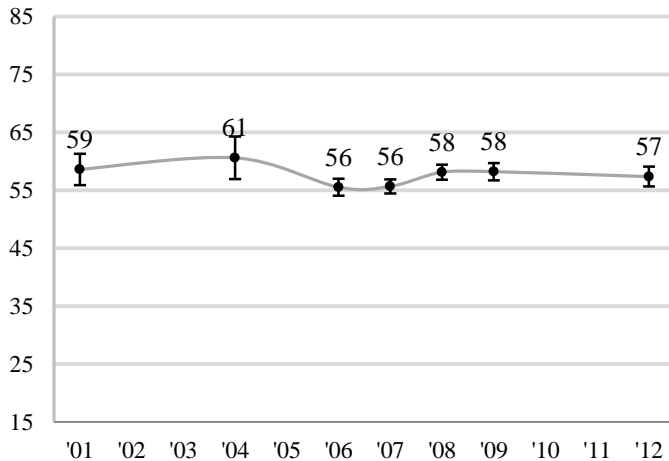
<sup>a</sup> n=number of respondents; SD=standard deviation; SEM=standard error of the mean; Upper/Lower=95% confidence interval limits

<sup>b</sup> 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.

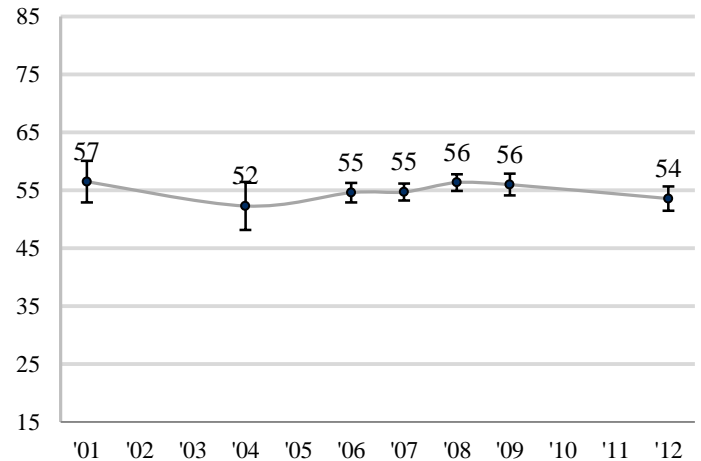
<sup>c</sup> 2001-2003 'EEE' scores are not provided because they are not comparable with those of later years. This is because response options for several of 'EEE' items were substantially altered in 2004.

Seniors

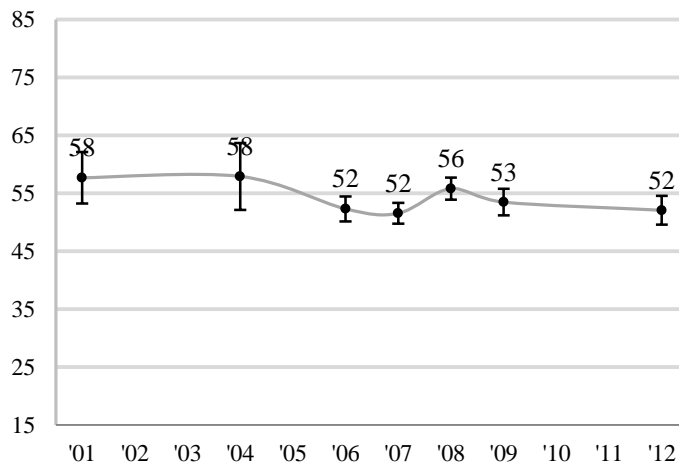
Level of Academic Challenge (LAC)



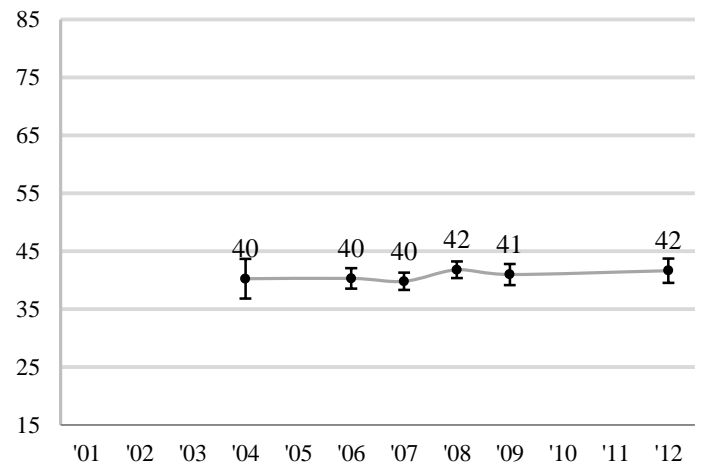
Active and Collaborative Learning (ACL)



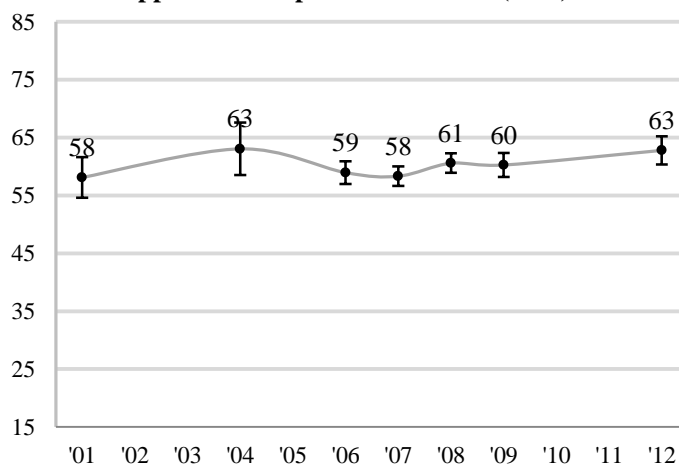
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		Seniors											
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Level of Academic Challenge</b>	<b>LAC</b>	<b>58.6</b>			<b>60.6</b>		<b>55.5</b>	<b>55.7</b>	<b>58.1</b>	<b>58.2</b>			<b>57.4</b>
	n	81			61		356	502	514	339			251
	SD	12.5			14.6		13.9	14.0	14.7	14.0			13.8
	SEM	1.38			1.87		.74	.62	.65	.76			.87
	Upper	61.3			64.3		57.0	56.9	59.4	59.7			59.1
Lower	55.9			57.0		54.1	54.5	56.9	56.7			55.7	
<b>Active and Collaborative Learning</b>	<b>ACL</b>	<b>56.5</b>			<b>52.3</b>		<b>54.6</b>	<b>54.7</b>	<b>56.3</b>	<b>56.0</b>			<b>53.6</b>
	n	81			61		371	529	530	359			261
	SD	16.6			16.4		16.7	17.2	16.8	18.1			17.3
	SEM	1.84			2.10		.87	.75	.73	.96			1.07
	Upper	60.1			56.4		56.3	56.2	57.8	57.9			55.7
Lower	52.9			48.2		52.9	53.3	54.9	54.1			51.5	
<b>Student-Faculty Interaction<sup>b</sup></b>	<b>SFC</b>	<b>57.7</b>			<b>57.9</b>		<b>52.3</b>	<b>51.6</b>	<b>55.8</b>	<b>53.5</b>			<b>52.1</b>
	n	81			61		364	518	515	348			255
	SD	20.5			23.0		21.0	21.2	21.9	21.9			20.3
	SEM	2.27			2.95		1.10	.93	.97	1.17			1.27
	Upper	62.1			63.7		54.5	53.4	57.7	55.8			54.6
Lower	53.2			52.2		50.2	49.7	53.9	51.2			49.6	
<b>Enriching Educational Experiences<sup>c</sup></b>	<b>SFI</b>	-			<b>51.2</b>		<b>47.8</b>	<b>46.7</b>	<b>50.0</b>	<b>49.2</b>			<b>47.7</b>
	n	-			61		360	508	511	345			252
	SD	-			21.7		20.7	21.0	21.3	21.2			20.1
	SEM	-			2.78		1.09	.93	.94	1.14			1.26
	Upper	-			56.6		49.9	48.5	51.9	51.5			50.1
Lower	-			45.7		45.6	44.8	48.2	47.0			45.2	
<b>Supportive Campus Environment</b>	<b>EEE</b>	-			<b>40.3</b>		<b>40.3</b>	<b>39.8</b>	<b>41.8</b>	<b>41.0</b>			<b>41.6</b>
	n	-			61		350	489	510	330			248
	SD	-			13.7		16.9	16.6	16.2	17.1			17.1
	SEM	-			1.76		.90	.75	.72	.94			1.08
	Upper	-			43.7		42.1	41.3	43.2	42.8			43.8
Lower	-			36.8		38.5	38.3	40.4	39.1			39.5	
<b>Supportive Campus Environment</b>	<b>SCE</b>	<b>58.1</b>			<b>63.0</b>		<b>58.9</b>	<b>58.3</b>	<b>60.6</b>	<b>60.3</b>			<b>62.8</b>
	n	81			61		345	477	497	324			243
	SD	16.1			18.0		18.6	18.6	19.2	19.1			19.4
	SEM	1.79			2.31		1.00	.85	.86	1.06			1.24
	Upper	61.6			67.6		60.9	60.0	62.3	62.3			65.2
Lower	54.6			58.5		57.0	56.7	58.9	58.2			60.3	

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

<sup>b</sup> 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.

<sup>c</sup> 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.