



# University of Wisconsin- Madison

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**Multi-Year Benchmark Report**  
August 2011

## 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:

- All items in question 7 were rescaled in 2004, making newer results on these items incompatible with those of 2003 and earlier. Therefore, it is not possible to compare the 2004-2011 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

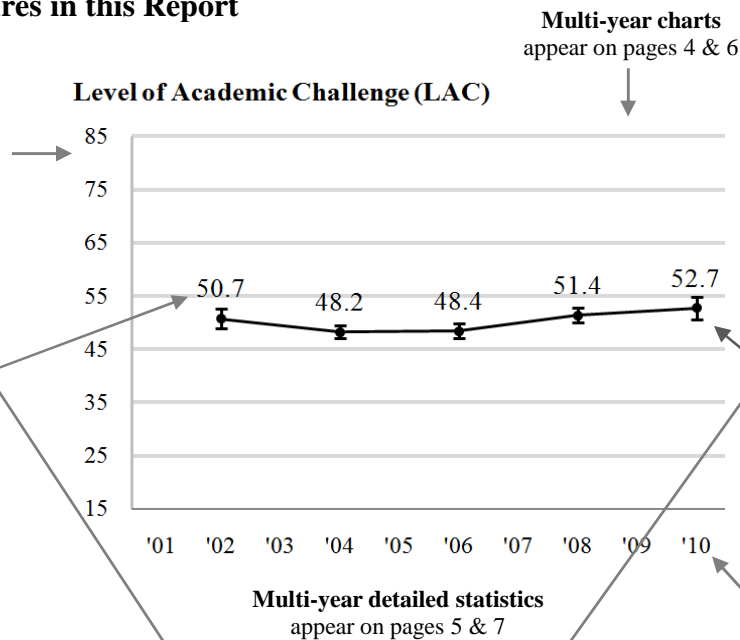
The benchmark score is the weighted average of the students' scores, using only randomly sampled students (including those from census administrations) from each year's data.

#### 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  $\pm$  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
<b>LAC</b>		<b>50.7</b>		<b>48.2</b>		<b>48.4</b>		<b>51.4</b>		<b>52.7</b>
n		179		405		308		307		155
SD		12.3		12.1		12.3		11.8		13.7
SEM		.92		.60		.71		.67		1.10
Upper		52.5		49.4		49.8		52.7		54.9
Lower		48.9		47.0		47.0		50.1		50.6

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	Paper	56%		5.9%	5.7%	266	286
2002							
2003							
2004	Web-only	31%	34%	4.5%	2.9%	437	1033
2005							
2006	Web-only	30%	38%	3.4%	3.0%	721	916
2007							
2008	Web-only	33%	35%	3.1%	2.9%	840	969
2009							
2010							
2011	Web-only	20%	21%	2.5%	2.0%	1189	1830

<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* (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).

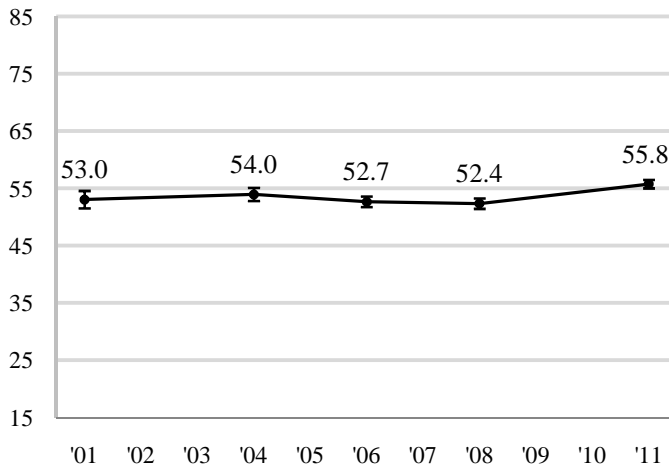
<sup>c</sup> Response rates (number of respondents divided by sample size) adjusted for ineligibility, nondeliverable mailing addresses, and students who were unavailable during the survey administration. Before 2003, response rates were not calculated separately by class so overall response rates are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

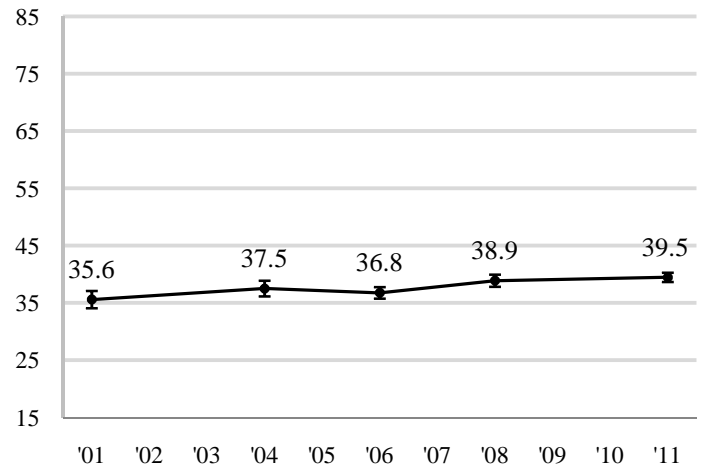
<sup>e</sup> This is the original count used to calculate response rates and sampling errors for each administration's *Respondent Characteristics* report. This number includes all randomly sampled students (including those from census administrations). From 2001 to 2005 it may also include targeted 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**

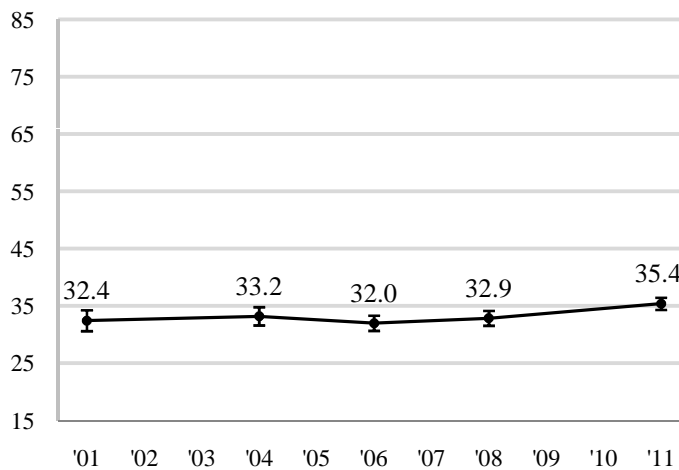
**Level of Academic Challenge (LAC)**



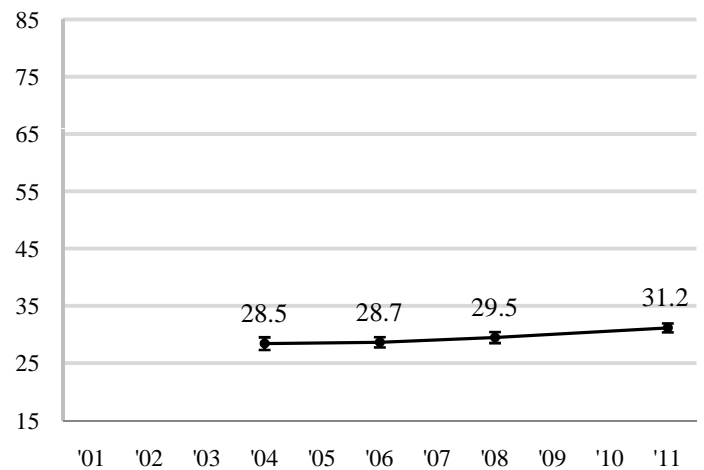
**Active and Collaborative Learning (ACL)**



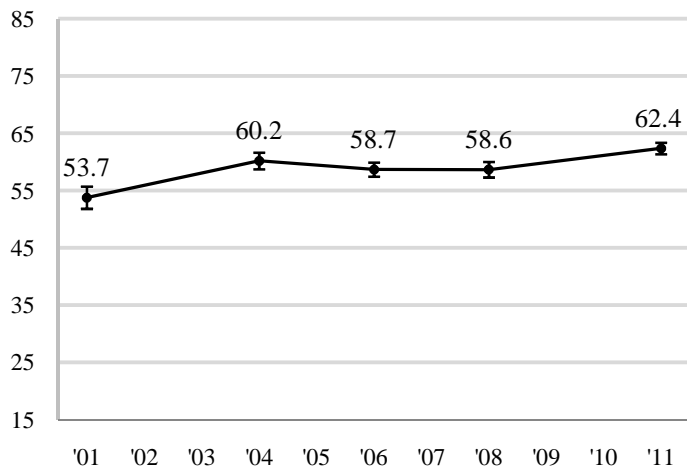
**Student-Faculty Interaction (SFC)<sup>b</sup>**



**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
<b>Level of Academic Challenge</b>	<b>LAC</b>	<b>53.0</b>			<b>54.0</b>		<b>52.7</b>		<b>52.4</b>			<b>55.8</b>
	n	265			404		656		736			1071
	SD	12.7			11.7		12.1		12.6			12.3
	SEM	.78			.58		.47		.46			.38
	Upper	54.6			55.1		53.6		53.3			56.5
Lower	51.5			52.8		51.7		51.5			55.0	
<b>Active and Collaborative Learning</b>	<b>ACL</b>	<b>35.6</b>			<b>37.5</b>		<b>36.8</b>		<b>38.9</b>			<b>39.5</b>
	n	265			404		720		829			1185
	SD	12.5			14.1		13.6		15.4			14.2
	SEM	.77			.70		.51		.53			.41
	Upper	37.1			38.9		37.8		40.0			40.3
Lower	34.1			36.2		35.8		37.9			38.7	
<b>Student Faculty Interaction<sup>b</sup></b>	<b>SFC</b>	<b>32.4</b>			<b>33.2</b>		<b>32.0</b>		<b>32.9</b>			<b>35.4</b>
	n	265			404		675		765			1111
	SD	15.1			16.3		17.6		18.4			18.0
	SEM	.93			.81		.68		.67			.54
	Upper	34.3			34.8		33.3		34.2			36.4
	Lower	30.6			31.6		30.7		31.6			34.3
	<b>SFI</b>	-			<b>28.2</b>		<b>27.4</b>		<b>28.1</b>			<b>30.5</b>
	n	-			404		662		740			1080
	SD	-			14.5		15.8		16.0			16.1
	SEM	-			.72		.61		.59			.49
Upper	-			29.6		28.6		29.3			31.4	
Lower	-			26.7		26.2		27.0			29.5	
<b>Enriching Educational Experiences<sup>c</sup></b>	<b>EEE</b>	-			<b>28.5</b>		<b>28.7</b>		<b>29.5</b>			<b>31.2</b>
	n	-			404		648		716			1053
	SD	-			11.3		11.6		13.2			12.8
	SEM	-			.56		.46		.50			.39
	Upper	-			29.6		29.6		30.5			32.0
Lower	-			27.4		27.8		28.5			30.4	
<b>Supportive Campus Environment</b>	<b>SCE</b>	<b>53.7</b>			<b>60.2</b>		<b>58.7</b>		<b>58.6</b>			<b>62.4</b>
	n	264			404		636		704			1039
	SD	16.0			14.9		15.9		18.2			16.4
	SEM	.98			.74		.63		.69			.51
	Upper	55.7			61.6		59.9		60.0			63.4
Lower	51.8			58.7		57.4		57.3			61.4	

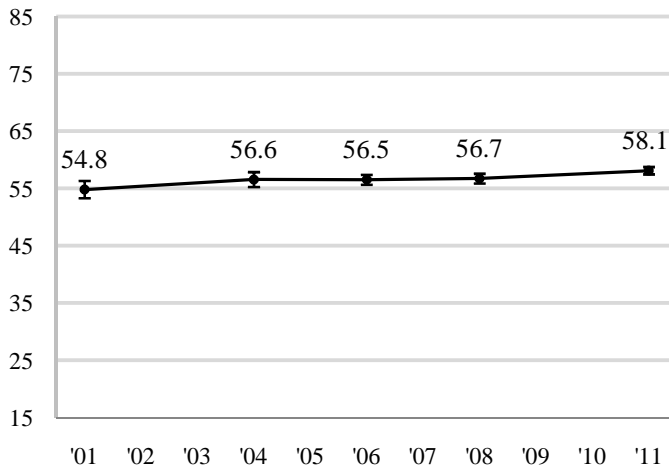
<sup>a</sup> n=number of respondents; SD=standard deviation; SEM=standard error of the mean; Upper/Lower=95% confidence interval limits

<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.

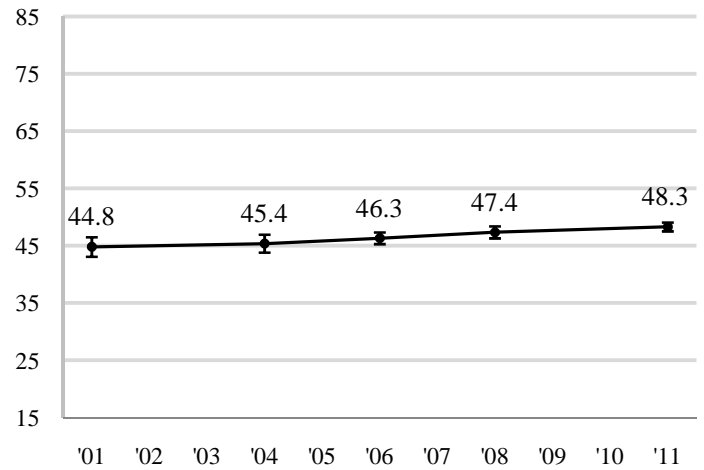
<sup>c</sup> 2001-2003 'EEE' scores are not provided because they are not comparable with those of later years. This is because response options for several of 'EEE' items were substantially altered in 2004.

**Seniors**

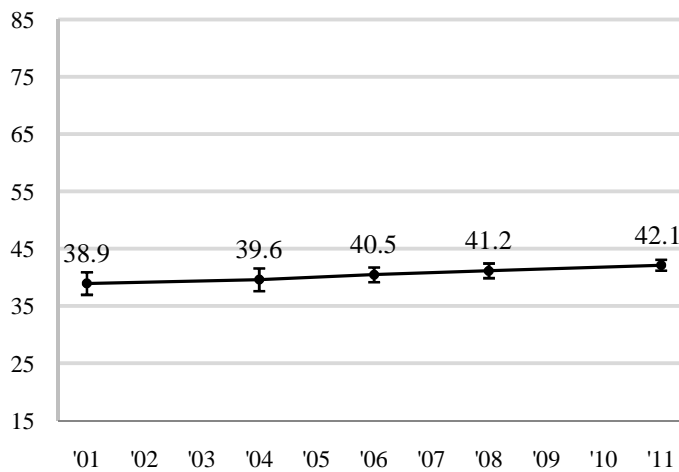
**Level of Academic Challenge (LAC)**



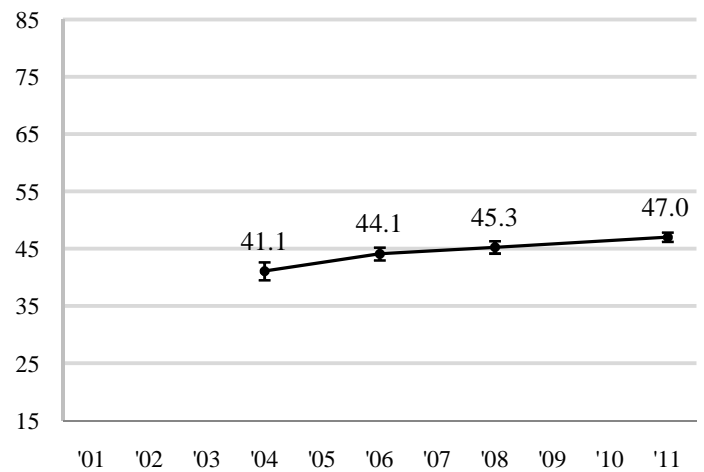
**Active and Collaborative Learning (ACL)**



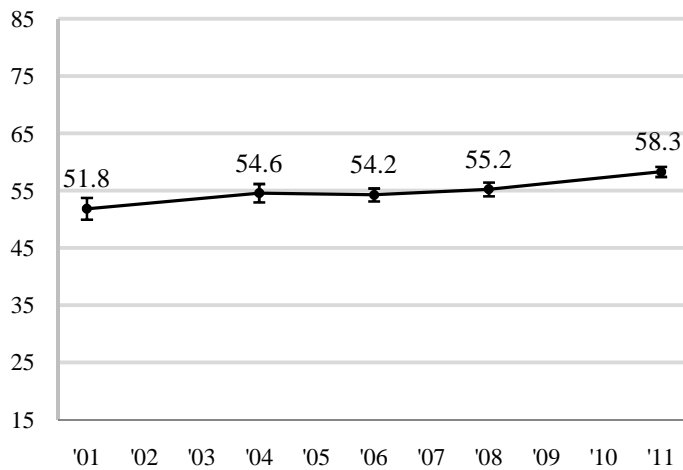
**Student-Faculty Interaction (SFC)<sup>b</sup>**



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



**Supportive Campus Environment (SCE)**



**Notes:**

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- 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
<b>Level of Academic Challenge</b>	<b>LAC</b>	<b>54.8</b>			<b>56.6</b>		<b>56.5</b>		<b>56.7</b>			<b>58.1</b>
	n	282			394		865		893			1674
	SD	13.0			13.2		13.0		13.1			13.3
	SEM	.77			.66		.44		.44			.32
	Upper	56.3			57.9		57.4		57.6			58.8
	Lower	53.3			55.3		55.7		55.9			57.5
<b>Active and Collaborative Learning</b>	<b>ACL</b>	<b>44.8</b>			<b>45.4</b>		<b>46.3</b>		<b>47.4</b>			<b>48.3</b>
	n	283			394		915		956			1825
	SD	14.7			15.8		15.7		16.6			16.8
	SEM	.87			.80		.52		.54			.39
	Upper	46.5			46.9		47.3		48.4			49.1
	Lower	43.1			43.8		45.3		46.3			47.5
<b>Student Faculty Interaction<sup>b</sup></b>	<b>SFC</b>	<b>38.9</b>			<b>39.6</b>		<b>40.5</b>		<b>41.2</b>			<b>42.1</b>
	n	283			394		887		918			1729
	SD	16.8			20.0		19.4		19.9			20.1
	SEM	1.00			1.01		.65		.66			.48
	Upper	40.9			41.6		41.8		42.4			43.1
	Lower	37.0			37.6		39.2		39.9			41.2
	<b>SFI</b>	-			<b>37.0</b>		<b>38.6</b>		<b>39.9</b>			<b>41.0</b>
	n	-			394		871		896			1690
	SD	-			19.9		19.3		19.8			19.9
	SEM	-			1.00		.65		.66			.48
	Upper	-			39.0		39.9		41.2			42.0
	Lower	-			35.1		37.3		38.7			40.1
<b>Enriching Educational Experiences<sup>c</sup></b>	<b>EEE</b>	-			<b>41.1</b>		<b>44.1</b>		<b>45.3</b>			<b>47.0</b>
	n	-			394		843		875			1642
	SD	-			16.0		16.6		16.2			16.8
	SEM	-			.80		.57		.55			.41
	Upper	-			42.7		45.2		46.3			47.8
	Lower	-			39.5		43.0		44.2			46.2
<b>Supportive Campus Environment</b>	<b>SCE</b>	<b>51.8</b>			<b>54.6</b>		<b>54.2</b>		<b>55.2</b>			<b>58.3</b>
	n	282			394		833		856			1611
	SD	16.3			16.3		16.8		17.9			18.2
	SEM	.97			.82		.58		.61			.45
	Upper	53.7			56.2		55.4		56.4			59.2
	Lower	49.9			52.9		53.1		54.0			57.4

<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.