



# National Survey of Student Engagement

## Calvin College

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### Multi-Year Benchmark Report

August 2009

## 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 may be 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 participation, (b) *multi-year charts*, and (c) *detailed statistics*. Key terms and features of (b) and (c) are described below using data from the fictional “NSSEville State University.”

For more information and recommendations for analyzing past and present NSSE data for trends or stability, consult the *Multi-Year Data Analysis Guide*: [www.nsse.iub.edu/pdf/NSSE Multi-Year Data Analysis Guide.pdf](http://www.nsse.iub.edu/pdf/NSSE%20Multi-Year%20Data%20Analysis%20Guide.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 student-level scores, using only randomly sampled students from each year’s data.

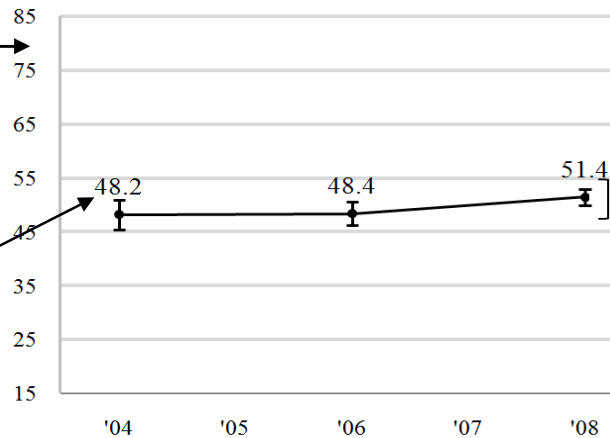
#### n

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.

**Level of Academic Challenge (LAC)**



#### 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.

	2004	2005	2006	2007	2008
<b>LAC</b>	<b>48.2</b>		<b>48.4</b>		<b>51.4</b>
n	405		303		307
SD	12.1		12.3		11.8
SEM	.60		.71		.67
Upper	49.4		49.8		52.7
Lower	47.0		47.0		50.1

#### 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.

Some NSSE administrations at an institution may yield more precise population estimates than others. The values in this table were drawn from the *Respondent Characteristics* reports for each NSSE administration. An important early step in conducting a multi-year analysis is to review the quality of your data for both first-year and senior respondents in each 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
2004							
2005							
2006	Web+	56%	50%	2.8%	3.2%	545	463
2007							
2008							
2009	Web	48%	55%	3.4%	3.0%	434	479

<sup>a</sup> All NSSE administration years since 2004 are listed regardless of participation.

<sup>b</sup> Modes include *Paper* (students receive a paper survey and the 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).

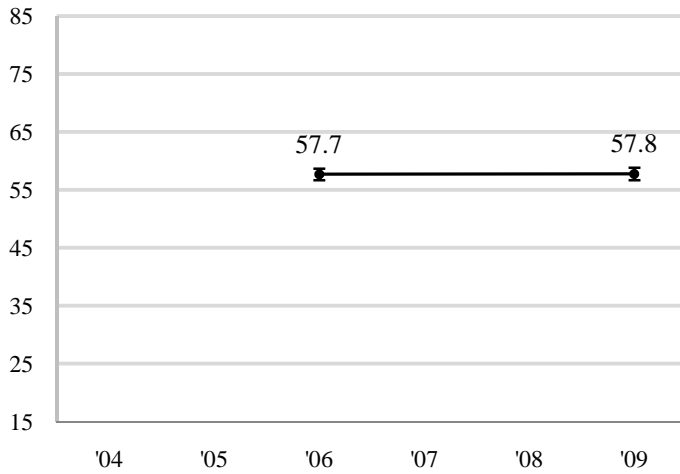
<sup>c</sup> Response rates (number of respondents divided by sample size) were adjusted for ineligibility, nondeliverable mailing addresses, and students who were unavailable during the survey administration.

<sup>d</sup> Sampling error gauges the precision of estimates 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.

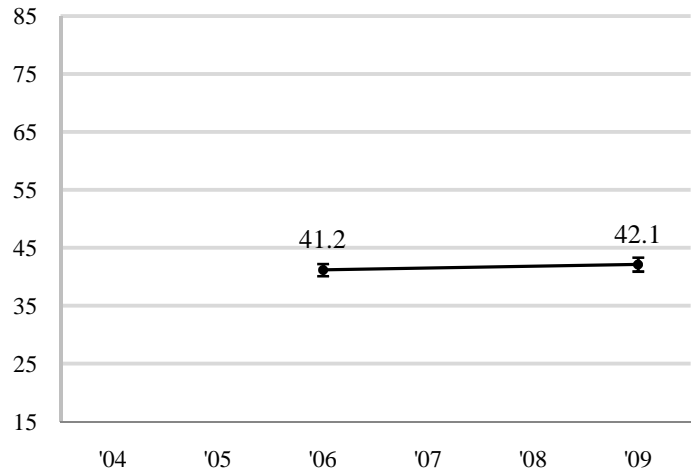
<sup>e</sup> This is the original count used to calculate response rates and sampling errors for each administration's *Respondent Characteristics* report. This number includes all randomly sampled students. In 2004 and 2005 it may also include targeted oversamples. For this reason, the counts for 2004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

**First-Year Students**

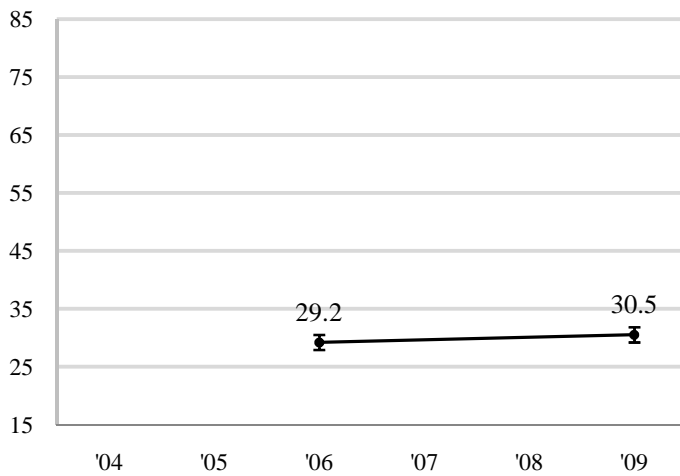
**Level of Academic Challenge (LAC)**



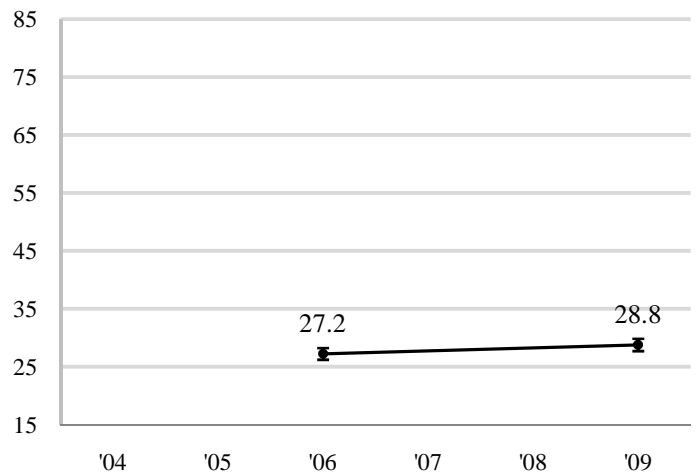
**Active and Collaborative Learning (ACL)**



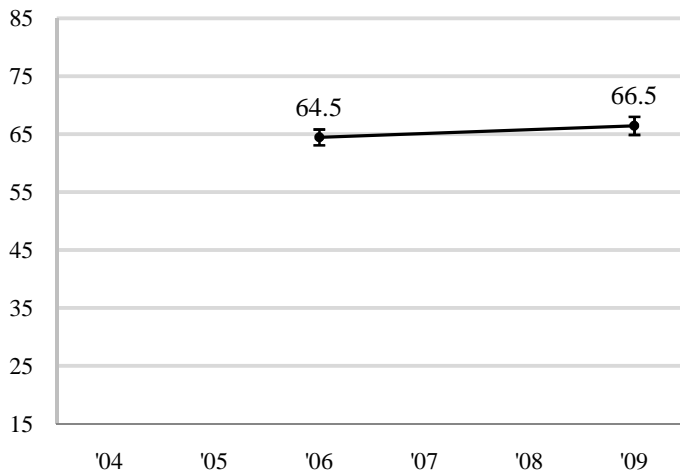
**Student-Faculty Interaction (SFI)**



**Enriching Educational Experiences (EEE)**



**Supportive Campus Environment (SCE)**



**Notes:**

- Benchmark scores are charted for all years of participation. See page 5 for detailed statistics.
- For more information and recommendations for analyzing multi-year NSSE data, consult the *Multi-Year Data Analysis Guide*: [www.nsse.iub.edu/pdf/NSSE\\_Multi-Year\\_Data\\_Analysis\\_Guide.pdf](http://www.nsse.iub.edu/pdf/NSSE_Multi-Year_Data_Analysis_Guide.pdf).

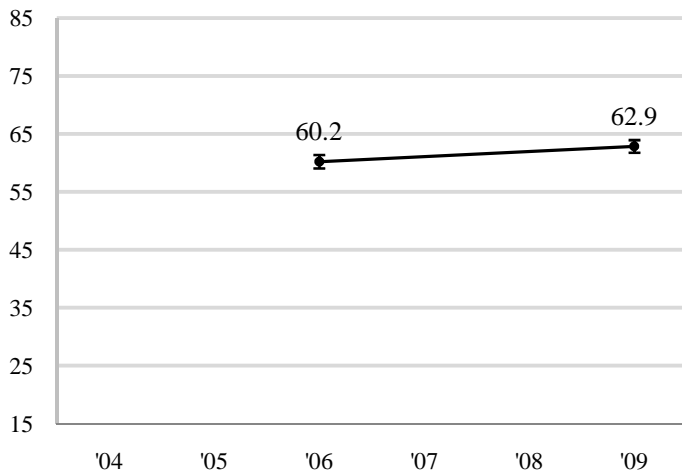


		First-Year Students					
		2004	2005	2006	2007	2008	2009
<b>Level of Academic Challenge</b>	<b>LAC</b>			<b>57.7</b>			<b>57.8</b>
	n			515			421
	SD			11.4			11.3
	SEM			.50			.55
	Upper			58.7			58.8
	Lower			56.7			56.7
<b>Active and Collaborative Learning</b>	<b>ACL</b>			<b>41.2</b>			<b>42.1</b>
	n			545			433
	SD			12.6			12.9
	SEM			.54			.62
	Upper			42.2			43.3
	Lower			40.1			40.9
<b>Student Faculty Interaction</b>	<b>SFI</b>			<b>29.2</b>			<b>30.5</b>
	n			516			425
	SD			15.0			13.8
	SEM			.66			.67
	Upper			30.5			31.8
	Lower			27.9			29.2
<b>Enriching Educational Experiences</b>	<b>EEE</b>			<b>27.2</b>			<b>28.8</b>
	n			512			414
	SD			11.5			10.9
	SEM			.51			.54
	Upper			28.2			29.8
	Lower			26.2			27.7
<b>Supportive Campus Environment</b>	<b>SCE</b>			<b>64.5</b>			<b>66.5</b>
	n			508			410
	SD			15.7			16.1
	SEM			.69			.80
	Upper			65.8			68.0
	Lower			63.1			64.9

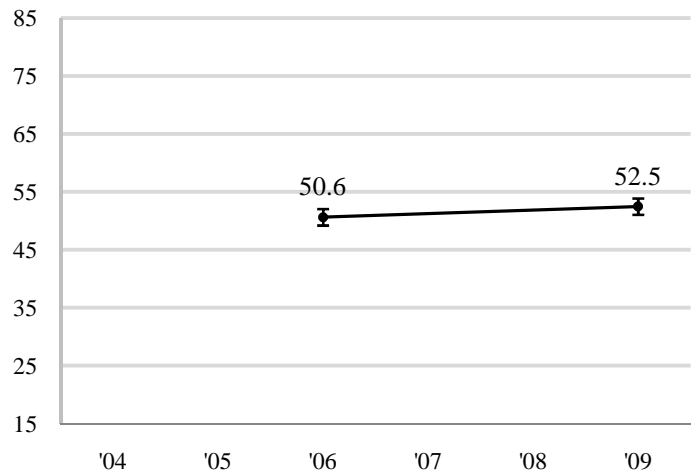
<sup>a</sup> n=number of respondents; SD=standard deviation; SEM=standard error of the mean; Upper/Lower=95% confidence interval limits

**Seniors**

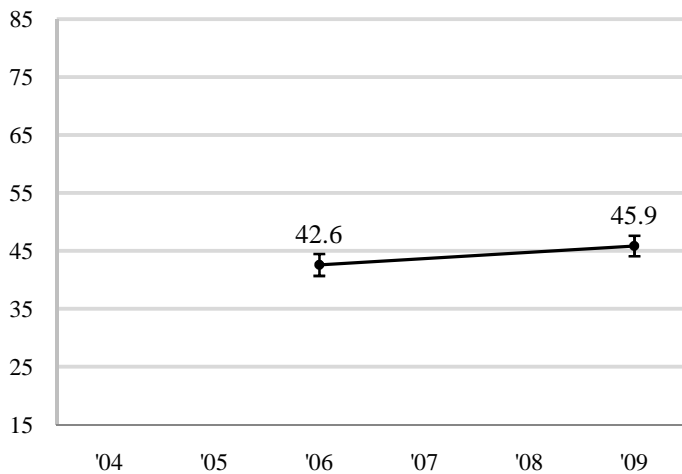
**Level of Academic Challenge (LAC)**



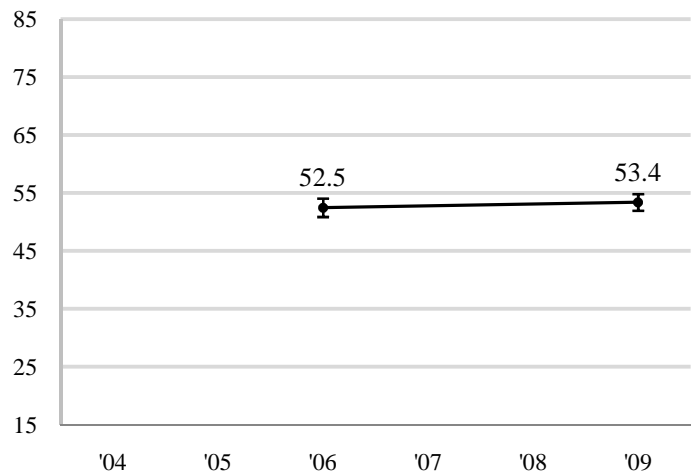
**Active and Collaborative Learning (ACL)**



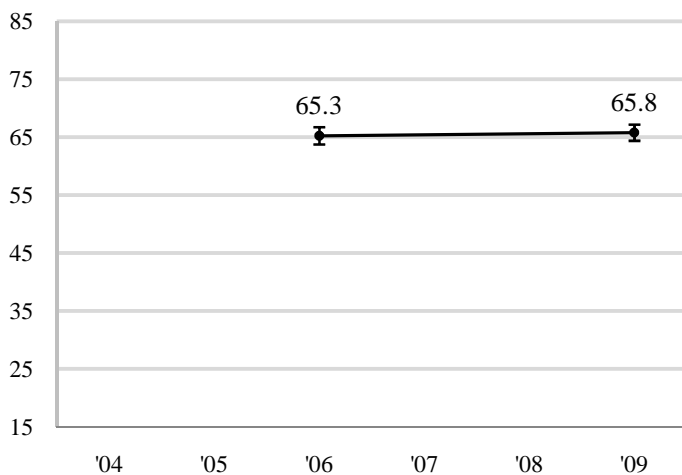
**Student-Faculty Interaction (SFI)**



**Enriching Educational Experiences (EEE)**



**Supportive Campus Environment (SCE)**



**Notes:**

- Benchmark scores are charted for all years of participation. See page 7 for detailed statistics.
- For more information and recommendations for analyzing multi-year NSSE data, consult the *Multi-Year Data Analysis Guide*: [www.nsse.iub.edu/pdf/NSSE\\_Multi-Year\\_Data\\_Analysis\\_Guide.pdf](http://www.nsse.iub.edu/pdf/NSSE_Multi-Year_Data_Analysis_Guide.pdf).



		Seniors					
		2004	2005	2006	2007	2008	2009
<b>Level of Academic Challenge</b>	<b>LAC</b>			<b>60.2</b>			<b>62.9</b>
	n			441			469
	SD			12.3			12.1
	SEM			.59			.56
	Upper			61.4			64.0
	Lower			59.1			61.8
<b>Active and Collaborative Learning</b>	<b>ACL</b>			<b>50.6</b>			<b>52.5</b>
	n			460			476
	SD			15.6			15.6
	SEM			.73			.72
	Upper			52.1			53.9
	Lower			49.2			51.1
<b>Student Faculty Interaction</b>	<b>SFI</b>			<b>42.6</b>			<b>45.9</b>
	n			443			470
	SD			20.3			19.5
	SEM			.97			.90
	Upper			44.5			47.6
	Lower			40.7			44.1
<b>Enriching Educational Experiences</b>	<b>EEE</b>			<b>52.5</b>			<b>53.4</b>
	n			440			467
	SD			16.9			15.9
	SEM			.81			.74
	Upper			54.0			54.8
	Lower			50.9			52.0
<b>Supportive Campus Environment</b>	<b>SCE</b>			<b>65.3</b>			<b>65.8</b>
	n			431			461
	SD			15.9			15.3
	SEM			.76			.71
	Upper			66.8			67.2
	Lower			63.8			64.4

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