

# Ferris State University

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## Multi-Year Benchmark Report

August 2010

## 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 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/NSSE Multi-Year Data Analysis Guide.pdf](http://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 students' scores, using only randomly sampled students (including those from census administrations) from each year's data.

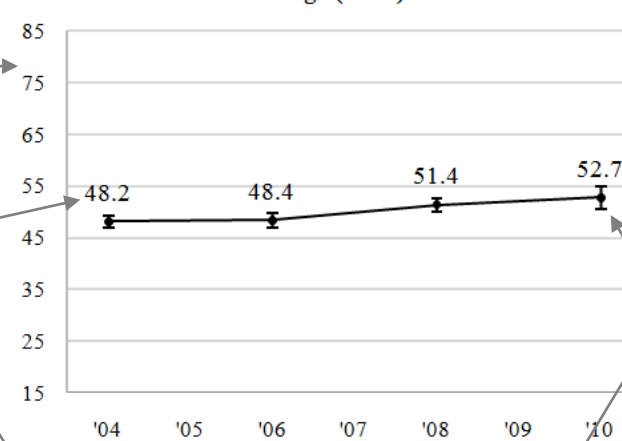
#### n

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.

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	2009	2010
<b>LAC</b>	<b>48.2</b>	<b>48.4</b>	<b>48.4</b>	<b>48.4</b>	<b>51.4</b>	<b>51.4</b>	<b>52.7</b>
n	405	303	303	303	307	307	155
SD	12.1	12.3	12.3	12.3	11.8	11.8	13.7
SEM	.60	.71	.71	.71	.67	.67	1.10
Upper	49.4	49.8	49.8	49.8	52.7	52.7	54.9
Lower	47.0	47.0	47.0	47.0	50.1	50.1	50.6

#### 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 for both first-year and senior respondents in each year. 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
2004							
2005							
2006	Web-only	22%	18%	4.3%	4.8%	448	365
2007							
2008	Web-only	26%	27%	3.4%	3.4%	636	682
2009							
2010	Web-only	36%	37%	3.1%	2.6%	652	898

<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).

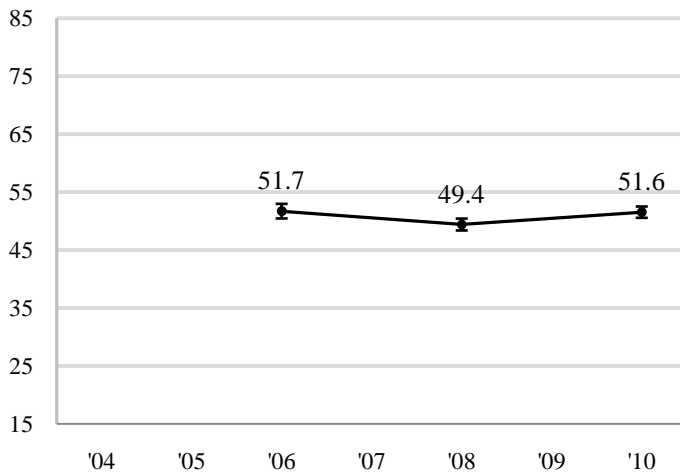
<sup>c</sup> Response rates (number of respondents divided by sample size) adjusted for ineligibility, nondeliverable mailing addresses, and students who were unavailable during the survey administration.

<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.

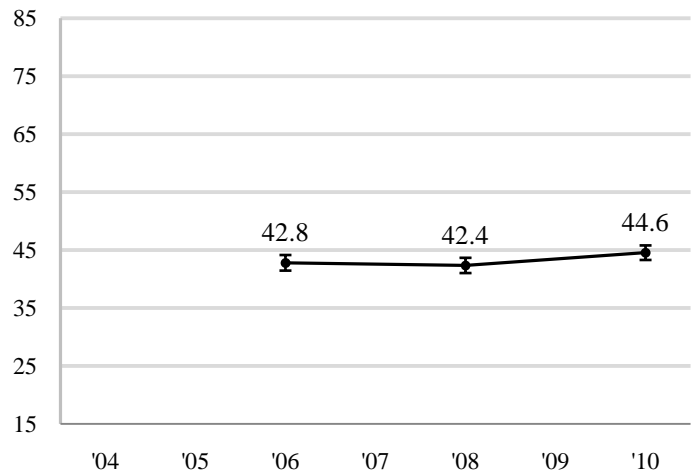
<sup>e</sup> This is the original count used to calculate response rates and sampling errors for each administration's *Respondent Characteristics* report. This number includes all randomly sampled students (including those from census administrations). In 2004 and 2005 it may also include targeted oversamples. 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**

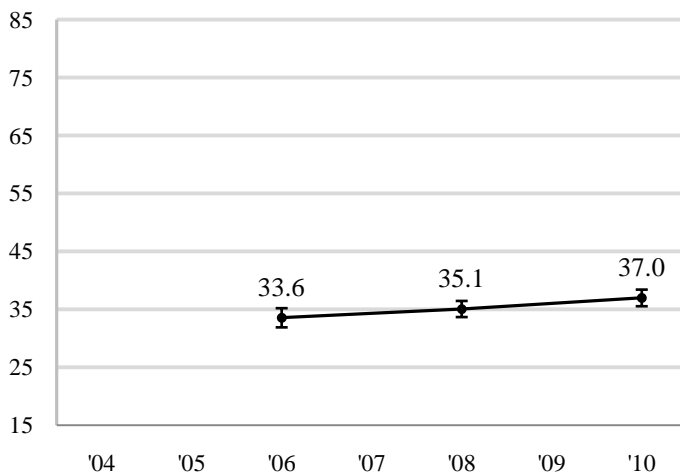
**Level of Academic Challenge (LAC)**



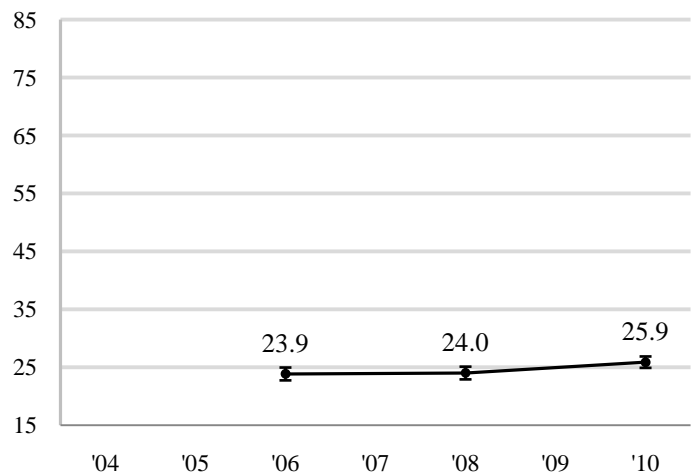
**Active and Collaborative Learning (ACL)**



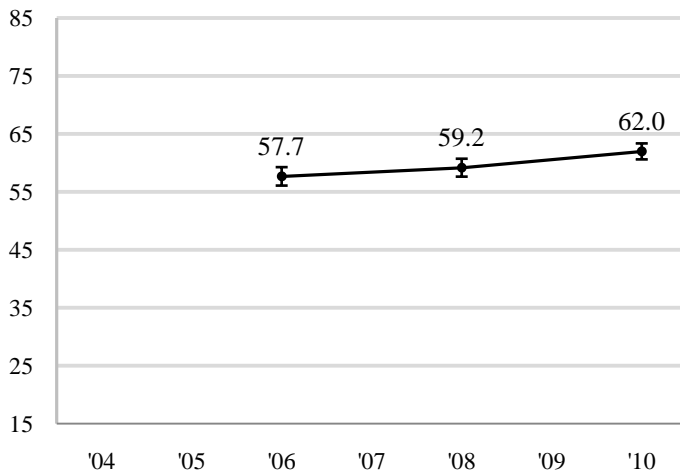
**Student-Faculty Interaction (SFI)**



**Enriching Educational Experiences (EEE)**



**Supportive Campus Environment (SCE)**



**Notes:**

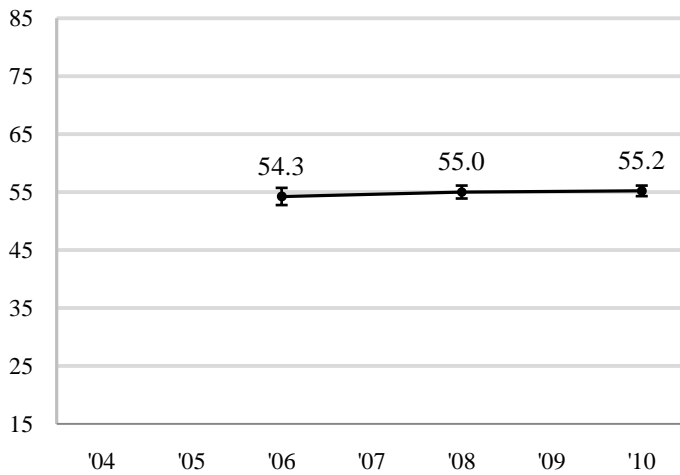
- Benchmark scores are charted for all years of participation. See page 5 for detailed statistics.
- For more information and recommendations for analyzing multi-year NSSE data, consult the *Multi-Year Data Analysis Guide*. [nsse.iub.edu/pdf/NSSE\\_Multi-Year\\_Data\\_Analysis\\_Guide.pdf](http://nsse.iub.edu/pdf/NSSE_Multi-Year_Data_Analysis_Guide.pdf)

		First-Year Students						
		2004	2005	2006	2007	2008	2009	2010
<b>Level of Academic Challenge</b>	<b>LAC</b>			<b>51.7</b>		<b>49.4</b>		<b>51.6</b>
	n			401		588		612
	<i>SD</i>			12.9		12.7		12.3
	<i>SEM</i>			.64		.52		.50
	Upper			53.0		50.4		52.5
	Lower			50.5		48.4		50.6
<b>Active and Collaborative Learning</b>	<b>ACL</b>			<b>42.8</b>		<b>42.4</b>		<b>44.6</b>
	n			448		624		652
	<i>SD</i>			14.5		16.8		16.4
	<i>SEM</i>			.69		.67		.64
	Upper			44.2		43.7		45.8
	Lower			41.5		41.0		43.3
<b>Student Faculty Interaction</b>	<b>SFI</b>			<b>33.6</b>		<b>35.1</b>		<b>37.0</b>
	n			407		587		616
	<i>SD</i>			17.0		17.2		18.2
	<i>SEM</i>			.84		.71		.73
	Upper			35.2		36.5		38.4
	Lower			31.9		33.7		35.5
<b>Enriching Educational Experiences</b>	<b>EEE</b>			<b>23.9</b>		<b>24.0</b>		<b>25.9</b>
	n			385		576		599
	<i>SD</i>			11.1		13.5		12.3
	<i>SEM</i>			.57		.56		.50
	Upper			25.0		25.1		26.9
	Lower			22.7		22.9		24.9
<b>Supportive Campus Environment</b>	<b>SCE</b>			<b>57.7</b>		<b>59.2</b>		<b>62.0</b>
	n			376		563		591
	<i>SD</i>			15.7		18.7		17.1
	<i>SEM</i>			.81		.79		.70
	Upper			59.3		60.7		63.4
	Lower			56.1		57.6		60.6

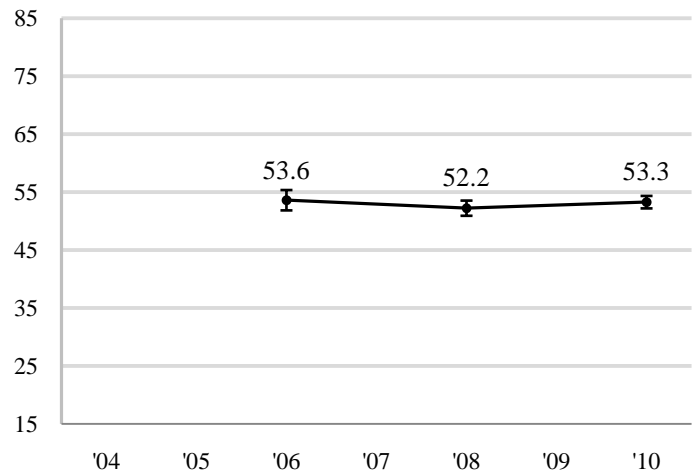
<sup>a</sup> n=number of respondents; *SD* =standard deviation; *SEM* =standard error of the mean; Upper/Lower=95% confidence interval limits

Seniors

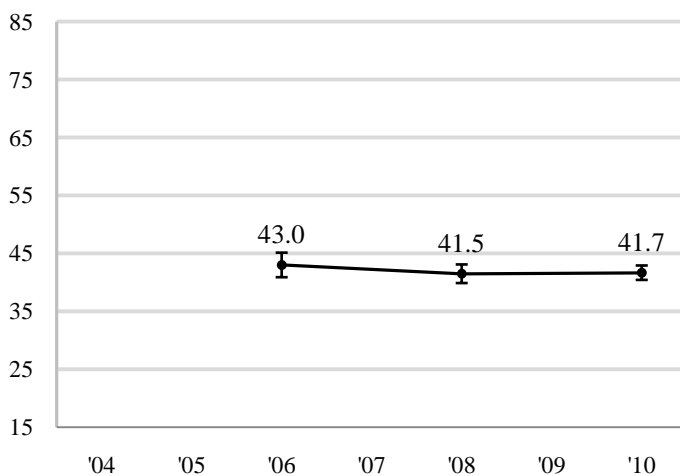
Level of Academic Challenge (LAC)



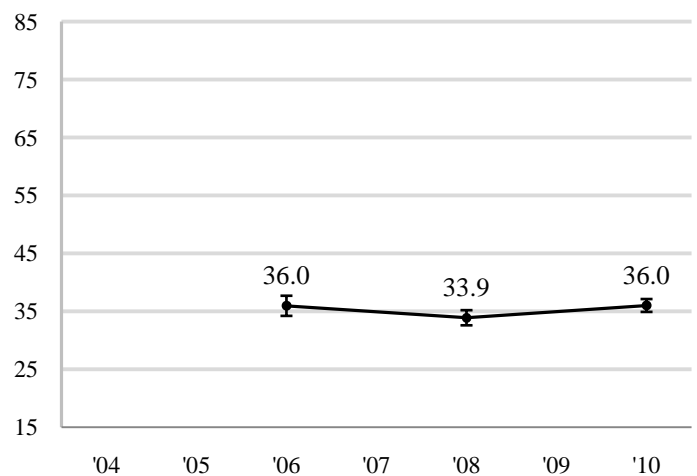
Active and Collaborative Learning (ACL)



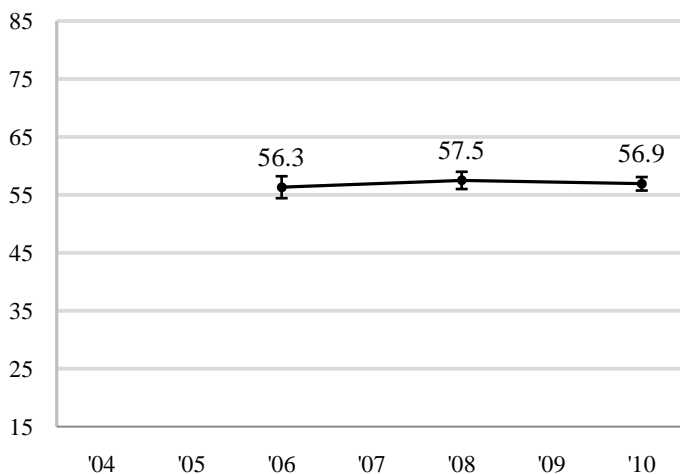
Student-Faculty Interaction (SFI)



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*. [nsse.iub.edu/pdf/NSSE Multi-Year Data Analysis Guide.pdf](http://nsse.iub.edu/pdf/NSSE_Multi-Year_Data_Analysis_Guide.pdf)

		Seniors						
		2004	2005	2006	2007	2008	2009	2010
<b>Level of Academic Challenge</b>	<b>LAC</b>			<b>54.3</b>		<b>55.0</b>		<b>55.2</b>
	n			343		640		873
	<i>SD</i>			14.0		14.4		13.8
	<i>SEM</i>			.76		.57		.47
	Upper			55.7		56.1		56.1
	Lower			52.8		53.9		54.3
<b>Active and Collaborative Learning</b>	<b>ACL</b>			<b>53.6</b>		<b>52.2</b>		<b>53.3</b>
	n			364		675		895
	<i>SD</i>			17.1		17.4		16.4
	<i>SEM</i>			.90		.67		.55
	Upper			55.4		53.5		54.4
	Lower			51.9		50.9		52.2
<b>Student Faculty Interaction</b>	<b>SFI</b>			<b>43.0</b>		<b>41.5</b>		<b>41.7</b>
	n			348		644		871
	<i>SD</i>			20.2		20.8		18.7
	<i>SEM</i>			1.08		.82		.63
	Upper			45.1		43.1		42.9
	Lower			40.9		39.9		40.4
<b>Enriching Educational Experiences</b>	<b>EEE</b>			<b>36.0</b>		<b>33.9</b>		<b>36.0</b>
	n			335		625		863
	<i>SD</i>			16.2		16.7		16.6
	<i>SEM</i>			.89		.67		.57
	Upper			37.7		35.2		37.1
	Lower			34.2		32.6		34.9
<b>Supportive Campus Environment</b>	<b>SCE</b>			<b>56.3</b>		<b>57.5</b>		<b>56.9</b>
	n			329		615		853
	<i>SD</i>			17.5		18.8		17.4
	<i>SEM</i>			.97		.76		.60
	Upper			58.2		59.0		58.1
	Lower			54.4		56.0		55.8

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