



**National Survey  
of Student Engagement**

**The University of Arizona**

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**Benchmark Comparisons**

August 2009

## Interpreting the Benchmark Comparisons Report

To focus discussions about the importance of student engagement and to guide institutional improvement efforts, NSSE created five Benchmarks of Effective Educational Practice: Level of Academic Challenge, Active and Collaborative Learning, Student-Faculty Interaction, Enriching Educational Experiences, and Supportive Campus Environment. This Benchmark Comparisons Report compares the performance of your institution with your selected peers or consortium. In addition, page 9 provides two other comparisons between your school and (a) above-average institutions with benchmarks in the top 50% of all NSSE institutions and (b) high-performing institutions with benchmarks in the top 10% of all NSSE institutions. These displays allow you to determine if the engagement of your typical student differs in a statistically significant, meaningful way from the average student in these comparison groups. They also provide more insight into how the student experience varies on your campus and in comparison groups. More detailed information about how benchmarks are created can be found on the NSSE Web site at [www.nsse.iub.edu/2009\\_Institutional\\_Report/](http://www.nsse.iub.edu/2009_Institutional_Report/).

**Class and Sample Means** are reported for first-year students and seniors. Institution-reported class levels are used. All randomly selected students are included in these analyses. Students in targeted or locally administered oversamples are not included.

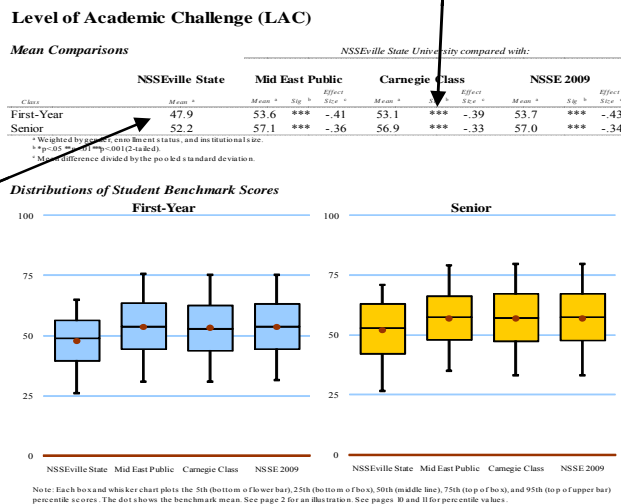
**Statistical Significance**  
Benchmarks with mean differences that are larger than would be expected by chance alone are noted with one, two, or three asterisks, denoting one of three significance levels ( $p < .05$ ,  $p < .01$ , and  $p < .001$ ). The smaller the significance level, the smaller the likelihood that the difference is due to chance. Please note that statistical significance does not guarantee that the result is substantive or important. Large sample sizes (as with the NSSE project) tend to produce more statistically significant results even though the magnitude of mean differences may be inconsequential. It is recommended to consult effect sizes to judge the practical meaning of the results.

**Effect Size<sup>a</sup>**  
Effect size indicates the practical significance of the mean difference. It is calculated by dividing the mean difference by the pooled standard deviation. In practice, an effect size of .2 is often considered small, .5 moderate, and .8 large. A positive sign indicates that your institution's mean was greater, thus showing an affirmative result for the institution. A negative sign indicates the institution lags behind the comparison group, suggesting that the student behavior or institutional practice represented by the item may warrant attention.

**Mean**  
The mean is the arithmetic average of the student level benchmark scores.

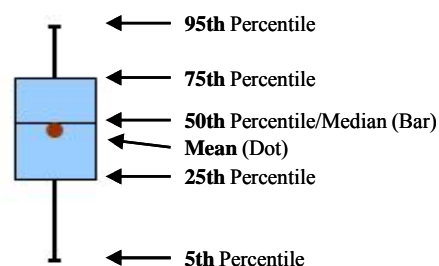
**Benchmark Description & Survey Items**  
A description of the benchmark and the individual items used in its creation is provided.

**Box and Whiskers Key**  
A box and whiskers chart is a concise way to summarize the variation of student benchmark scores. This display compares the distribution of scores at your institution, in percentile terms, with that of your comparison groups. The ends of the whiskers show the 5th and 95th percentile scores, while the box is bounded by the 25th and 75th percentiles. The bar inside the box indicates the median score, and the dot shows the mean score.



**Level of Academic Challenge (LAC) Items**  
Challenging intellectual and creative work is central to student learning and collegiate quality. Colleges and universities promote high levels of student achievement by emphasizing the importance of academic effort and setting high expectations for student performance.

- Preparing for class (studying, reading, writing, doing homework or lab work, etc. related to academic program)
- Number of assigned textbooks, books, or book-length packs of course readings
- Number of written papers or reports of 20 pages or more; number of written papers or reports of between 5 and 19 pages; and number of written papers or reports of fewer than 5 pages
- Coursework emphasizes: Analysis of the basic elements of an idea, experience or theory
- Coursework emphasizes: Synthesis and organizing of ideas, information, or experiences into new, more complex interpretations and relationships
- Coursework emphasizes: Making judgments about the value of information, arguments, or methods
- Coursework emphasizes: Applying theories or concepts to practical problems or in new situations
- Working harder than you thought you could to meet an instructor's standards or expectations
- Campus environment emphasizes: Spending significant amount of time studying and on academic work.



<sup>a</sup> See *Contextualizing NSSE Effect Sizes* at [www.nsse.iub.edu/pdf/effect\\_size\\_guide.pdf](http://www.nsse.iub.edu/pdf/effect_size_guide.pdf) for additional information.

## Level of Academic Challenge (LAC)

### Mean Comparisons

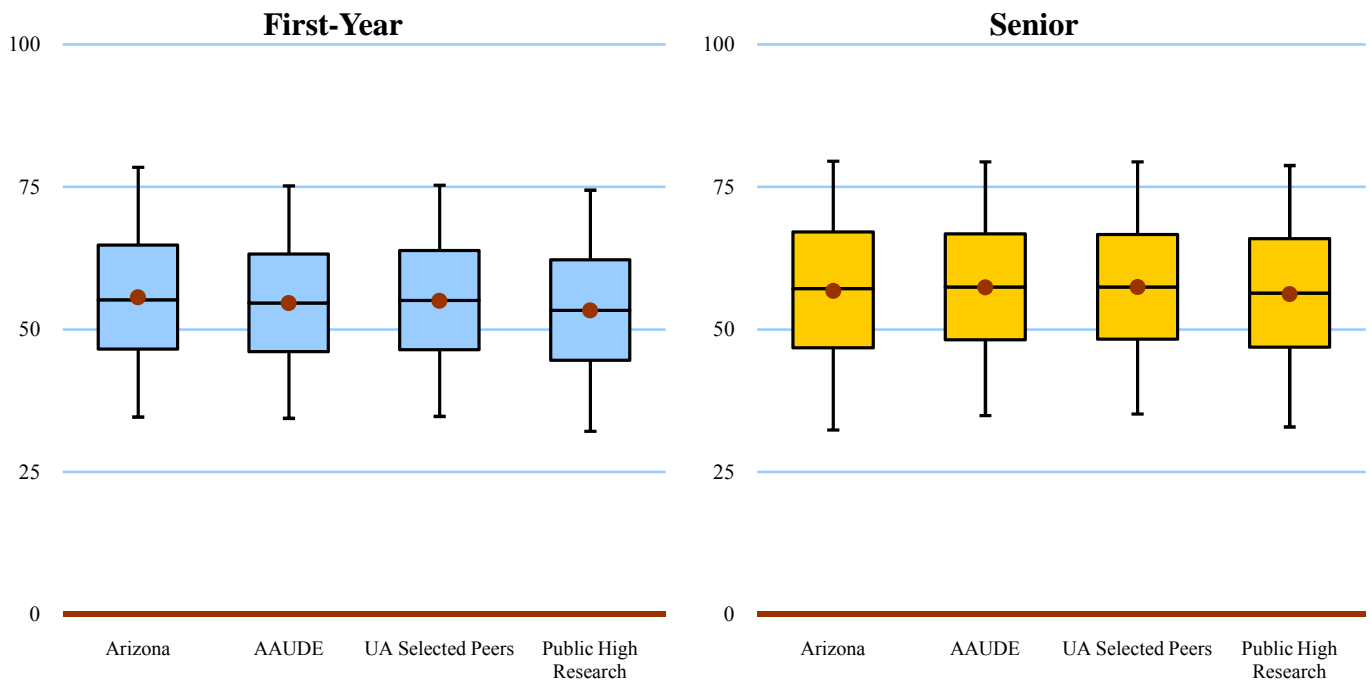
The University of Arizona compared with:

Class	Arizona	AAUDE		UA Selected Peers		Public High Research				
	Mean	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>
First-Year	55.6	54.6	*	.08	55.0		.05	53.3	***	.18
Senior	56.8	57.4		-.05	57.4		-.05	56.2		.04

<sup>a</sup> \* p<.05 \*\* p<.01 \*\*\*p<.001 (2-tailed).

<sup>b</sup> Mean difference divided by the pooled standard deviation.

### Distributions of Student Benchmark Scores



Note: Each box and whiskers chart plots the 5th (bottom of lower bar), 25th (bottom of box), 50th (middle line), 75th (top of box), and 95th (top of upper bar) percentile scores. The dot shows the benchmark mean. See page 2 for an illustration. See pages 10 and 11 for percentile values.

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- Coursework emphasizes: **Making of judgments** about the value of information, arguments, or methods
- Coursework emphasizes: **Applying** theories or concepts to practical problems or in new situations
- Working harder than you thought you could to meet an instructor's standards or expectations
- Campus environment emphasizes: Spending significant amount of time studying and on academic work.

## Active and Collaborative Learning (ACL)

### Mean Comparisons

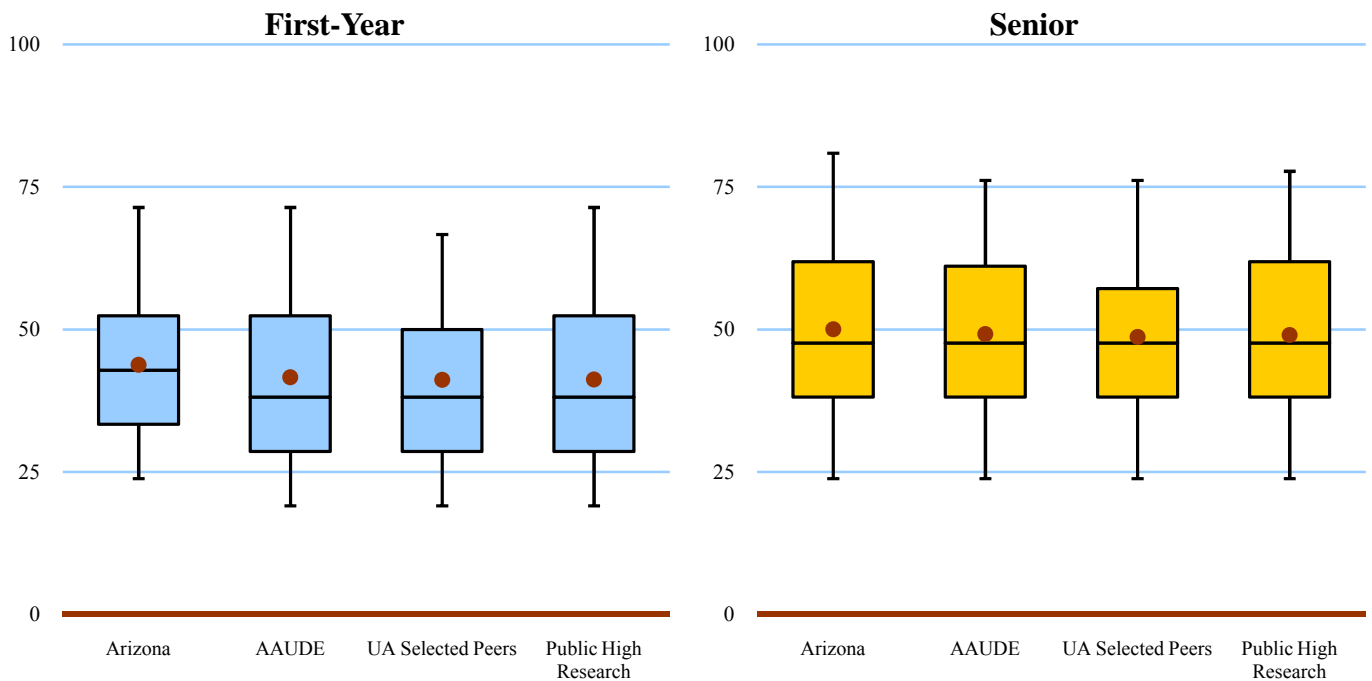
The University of Arizona compared with:

Class	Arizona	AAUDE		UA Selected Peers			Public High Research			
	Mean	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>
First-Year	43.8	41.6	***	.14	41.2	***	.17	41.2	***	.17
Senior	50.0	49.2		.05	48.7	*	.08	49.0	*	.06

<sup>a</sup> \* p<.05 \*\* p<.01 \*\*\*p<.001 (2-tailed).

<sup>b</sup> Mean difference divided by the pooled standard deviation.

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### Active and Collaborative Learning (ACL) Items

Students learn more when they are intensely involved in their education and asked to think about what they are learning in different settings. Collaborating with others in solving problems or mastering difficult material prepares students for the messy, unscripted problems they will encounter daily during and after college.

- Asked questions in class or contributed to class discussions
- Made a class presentation
- Worked with other students on projects **during class**
- Worked with classmates **outside of class** to prepare class assignments
- Tutored or taught other students (paid or voluntary)
- Participated in a community-based project (e.g., service learning) as part of a regular course
- Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

## Student-Faculty Interaction (SFI)

### Mean Comparisons

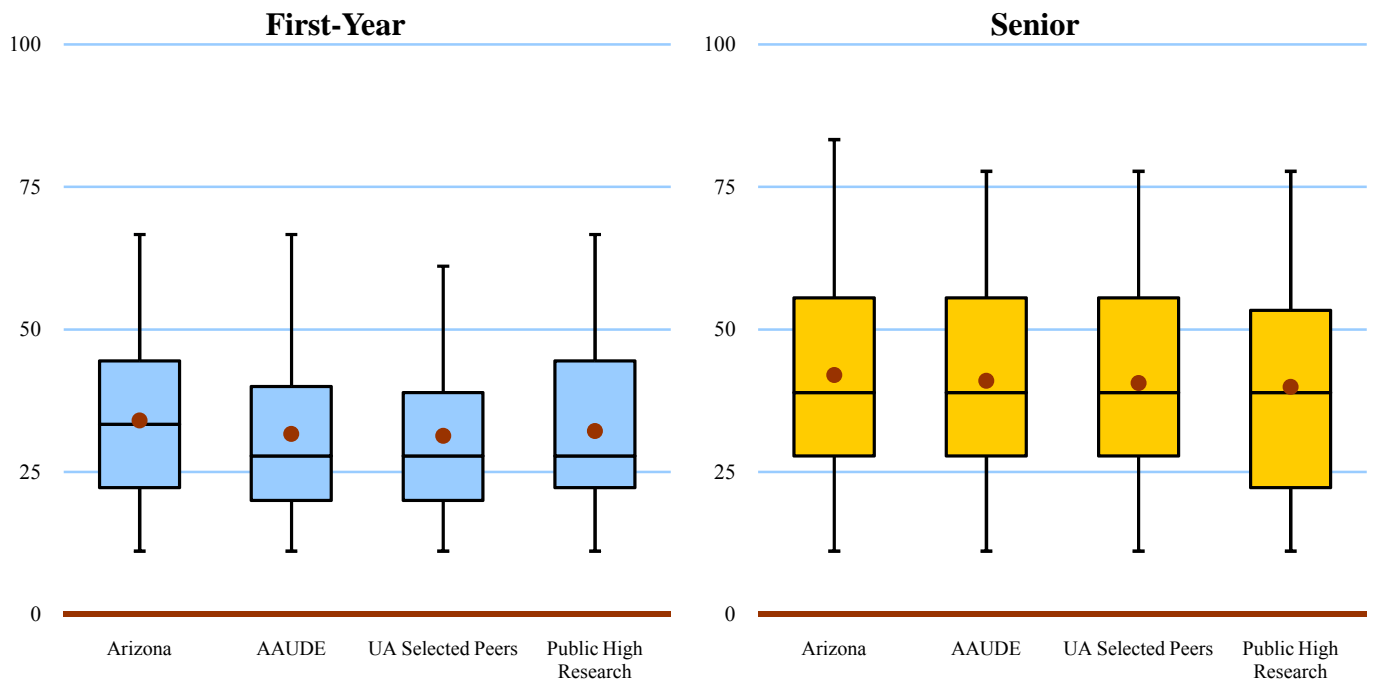
The University of Arizona compared with:

Class	Arizona	AAUDE			UA Selected Peers			Public High Research		
	Mean	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>
First-Year	34.0	31.7	***	.14	31.3	***	.16	32.1	**	.11
Senior	42.0	41.0		.05	40.6	*	.07	39.9	***	.10

<sup>a</sup> \* p<.05 \*\* p<.01 \*\*\*p<.001 (2-tailed).

<sup>b</sup> Mean difference divided by the pooled standard deviation.

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### Student-Faculty Interaction (SFI) Items

Students learn firsthand how experts think about and solve practical problems by interacting with faculty members inside and outside the classroom. As a result, their teachers become role models, mentors, and guides for continuous, life-long learning.

- Discussed grades or assignments with an instructor
- Talked about career plans with a faculty member or advisor
- Discussed ideas from your readings or classes with faculty members outside of class
- Worked with faculty members on activities other than coursework (committees, orientation, student-life activities, etc.)
- Received prompt written or oral feedback from faculty on your academic performance
- Worked on a research project with a faculty member outside of course or program requirements

## Enriching Educational Experiences (EEE)

### Mean Comparisons

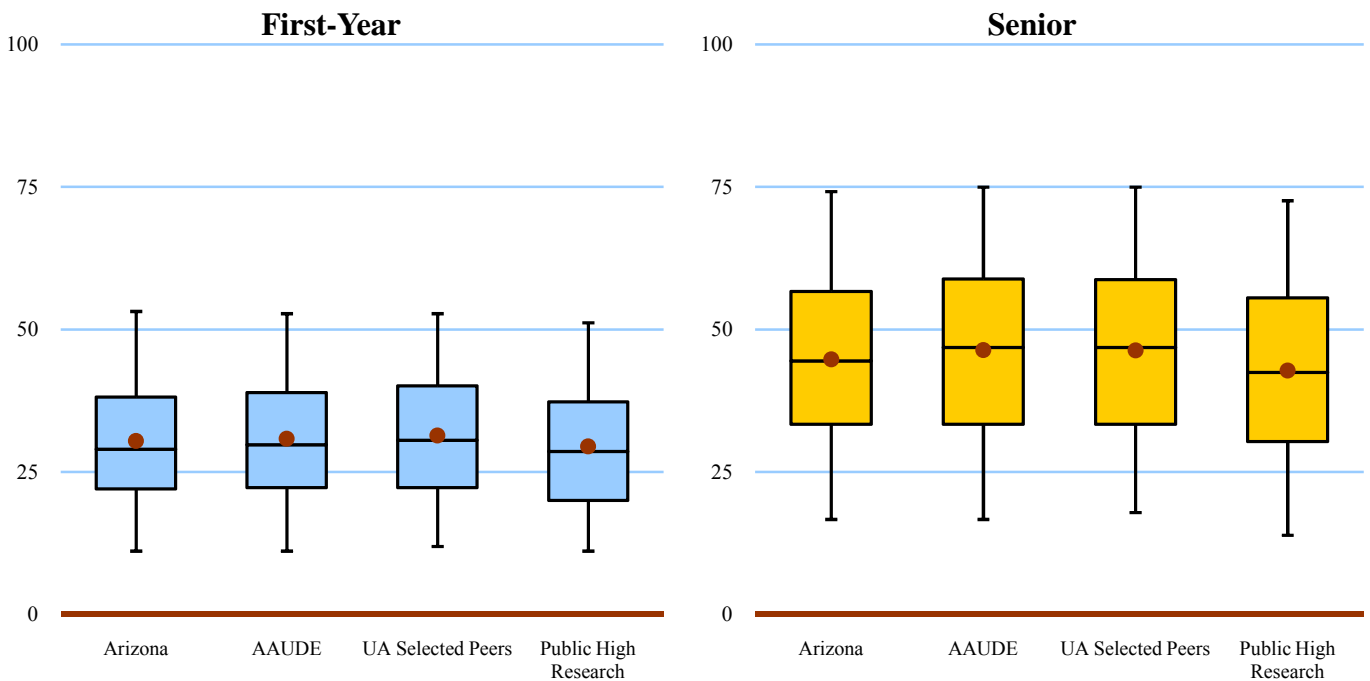
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	Mean	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>
First-Year	30.4	30.8		-.03	31.4	*	-.08	29.4	*	.08
Senior	44.8	46.4	**	-.09	46.3	**	-.09	42.8	***	.11

<sup>a</sup> \* p<.05 \*\* p<.01 \*\*\*p<.001 (2-tailed).

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### Distributions of Student Benchmark Scores



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### Enriching Educational Experiences (EEE) Items

Complementary learning opportunities enhance academic programs. Diversity experiences teach students valuable things about themselves and others. Technology facilitates collaboration between peers and instructors. Internships, community service, and senior capstone courses provide opportunities to integrate and apply knowledge.

- Participating in co-curricular activities (organizations, campus publications, student government, social fraternity or sorority, etc.)
- Practicum, internship, field experience, co-op experience, or clinical assignment
- Community service or volunteer work
- Foreign language coursework / Study abroad
- Independent study or self-designed major
- Culminating senior experience (capstone course, senior project or thesis, comprehensive exam, etc.)
- Serious conversations with students of different religious beliefs, political opinions, or personal values
- Serious conversations with students of a different race or ethnicity than your own
- Using electronic medium (e.g., listserv, chat group, Internet, instant messaging, etc.) to discuss or complete an assignment
- Campus environment encouraging contact among students from different economic, social, and racial or ethnic backgrounds
- Participate in a learning community or some other formal program where groups of students take two or more classes together

## Supportive Campus Environment (SCE)

### Mean Comparisons

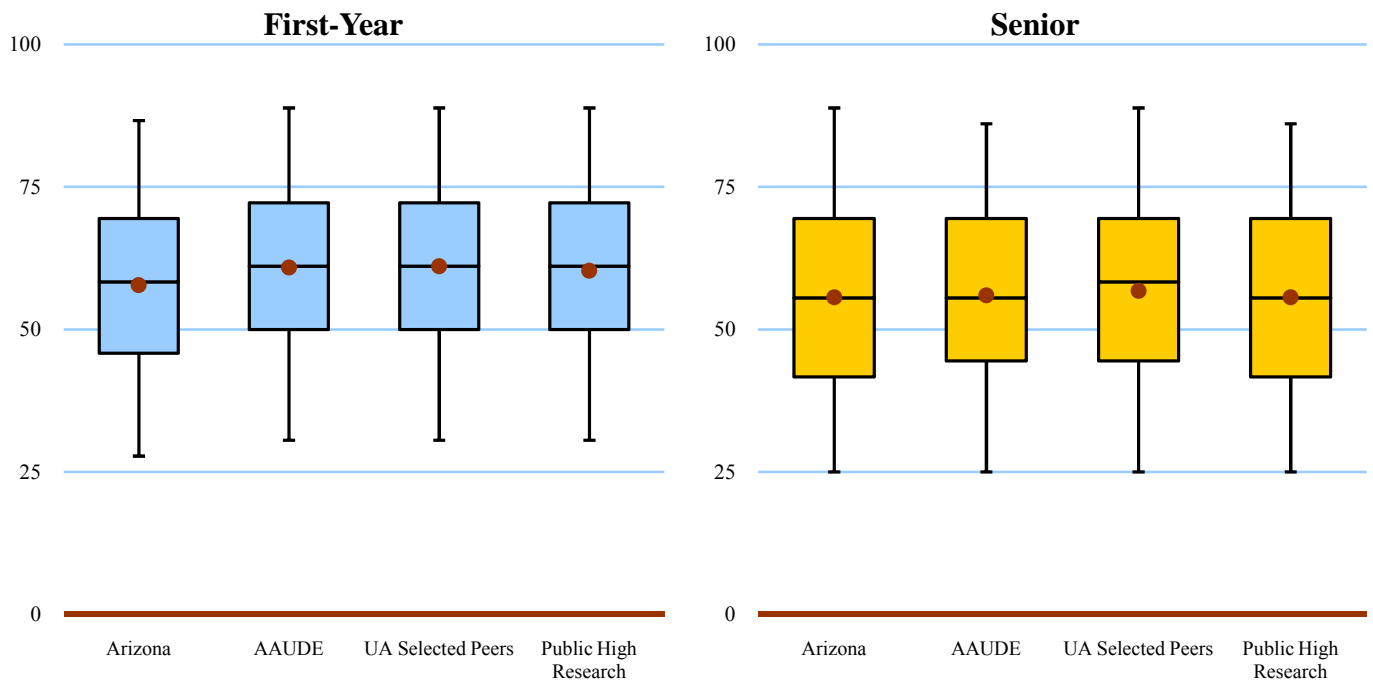
The University of Arizona compared with:

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	Mean	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>	Mean	Sig <sup>a</sup>	Effect Size <sup>b</sup>
First-Year	57.8	60.9	***	-.18	61.1	***	-.19	60.3	***	-.14
Senior	55.6	56.0		-.02	56.8	*	-.06	55.7		.00

<sup>a</sup> \* p<.05 \*\* p<.01 \*\*\*p<.001 (2-tailed).

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### Supportive Campus Environment (SCE) Items

Students perform better and are more satisfied at colleges that are committed to their success and cultivate positive working and social relations among different groups on campus.

- Campus environment provides the support you need to help you succeed academically
- Campus environment helps you cope with your non-academic responsibilities (work, family, etc.)
- Campus environment provides the support you need to thrive socially
- Quality of relationships with other students
- Quality of relationships with faculty members
- Quality of relationships with administrative personnel and offices

***First-Year Students***

		Mean Statistics			Distribution Statistics					Reference Group Comparison Statistics			
		Mean	SD <sup>a</sup>	SEM <sup>b</sup>	Percentiles <sup>c</sup>					Deg. of Freedom <sup>d</sup>	Mean Diff.	Sig. <sup>e</sup>	Effect size <sup>f</sup>
		5th	25th	50th	75th	95th							
<b>LEVEL OF ACADEMIC CHALLENGE (LAC)</b>													
Arizona	(N = 817)	55.6	13.5	.5	35	47	55	65	78				
AAUDE		54.6	12.4	.2	34	46	55	63	75	997	1.0	.049	.08
UA Selected Peers		55.0	12.4	.1	35	46	55	64	75	966	.6	.240	.05
Public High Research		53.3	12.9	.1	32	45	53	62	74	14,416	2.3	.000	.18
<b>ACTIVE AND COLLABORATIVE LEARNING (ACL)</b>													
Arizona	(N = 870)	43.8	15.1	.5	24	33	43	52	71				
AAUDE		41.6	15.6	.2	19	29	38	52	71	7,990	2.2	.000	.14
UA Selected Peers		41.2	15.1	.2	19	29	38	50	67	9,412	2.6	.000	.17
Public High Research		41.2	15.8	.1	19	29	38	52	71	15,766	2.6	.000	.17
<b>STUDENT-FACULTY INTERACTION (SFI)</b>													
Arizona	(N = 825)	34.0	17.7	.6	11	22	33	44	67				
AAUDE		31.7	17.1	.2	11	20	28	40	67	7,422	2.4	.000	.14
UA Selected Peers		31.3	16.7	.2	11	20	28	39	61	8,767	2.7	.000	.16
Public High Research		32.1	17.4	.1	11	22	28	44	67	14,549	1.9	.002	.11
<b>ENRICHING EDUCATIONAL EXPERIENCES (EEE)</b>													
Arizona	(N = 796)	30.4	12.7	.4	11	22	29	38	53				
AAUDE		30.8	12.8	.2	11	22	30	39	53	7,214	-.4	.395	-.03
UA Selected Peers		31.4	12.8	.1	12	22	31	40	53	8,535	-1.0	.043	-.08
Public High Research		29.4	12.9	.1	11	20	29	37	51	14,070	1.0	.039	.08
<b>SUPPORTIVE CAMPUS ENVIRONMENT (SCE)</b>													
Arizona	(N = 784)	57.8	17.6	.6	28	46	58	69	87				
AAUDE		60.9	17.7	.2	31	50	61	72	89	7,068	-3.1	.000	-.18
UA Selected Peers		61.1	17.6	.2	31	50	61	72	89	8,374	-3.3	.000	-.19
Public High Research		60.3	18.1	.2	31	50	61	72	89	13,730	-2.5	.000	-.14

<sup>a</sup> Standard deviation is a measure of the average amount the individual scores deviate from the mean of all the scores in the distribution.

<sup>b</sup> The 95% confidence interval for the population mean is equal to the sample mean plus/minus 1.96 times the standard error of the mean.

<sup>c</sup> A percentile is the point in the distribution of student-level benchmark scores at or below which a given percentage of benchmark scores fall.

<sup>d</sup> Degrees of freedom used to compute the t-tests. Values vary for the total Ns due to the equal variance assumption.

<sup>e</sup> Statistical significance represents the probability that the difference between the mean of your institution and that of the comparison group occurred by chance.

<sup>f</sup> Effect size is calculated by subtracting the comparison group mean from the school mean, and dividing the result by the pooled standard deviation.



**Seniors**

	Mean Statistics			Distribution Statistics					Reference Group Comparison Statistics			
	Mean	SD <sup>a</sup>	SEM <sup>b</sup>	Percentiles <sup>c</sup>					Deg. of Freedom <sup>d</sup>	Mean Diff.	Sig. <sup>e</sup>	Effect size <sup>f</sup>
				5th	25th	50th	75th	95th				
<b>LEVEL OF ACADEMIC CHALLENGE (LAC)</b>												
Arizona (N = 1214)	56.8	14.4	.4	32	47	57	67	80				
AAUDE	57.4	13.6	.1	35	48	57	67	79	1,538	-.6	.153	-.05
UA Selected Peers	57.4	13.5	.1	35	48	57	67	79	1,505	-.6	.144	-.05
Public High Research	56.2	14.0	.1	33	47	56	66	79	17,126	.6	.179	.04
<b>ACTIVE AND COLLABORATIVE LEARNING (ACL)</b>												
Arizona (N = 1261)	50.0	17.3	.5	24	38	48	62	81				
AAUDE	49.2	16.5	.2	24	38	48	61	76	1,596	.8	.102	.05
UA Selected Peers	48.7	16.4	.2	24	38	48	57	76	1,562	1.3	.011	.08
Public High Research	49.0	17.0	.1	24	38	48	62	78	18,188	1.0	.040	.06
<b>STUDENT-FACULTY INTERACTION (SFI)</b>												
Arizona (N = 1219)	42.0	21.0	.6	11	28	39	56	83				
AAUDE	41.0	20.2	.2	11	28	39	56	78	9,717	1.0	.100	.05
UA Selected Peers	40.6	20.0	.2	11	28	39	56	78	1,520	1.4	.031	.07
Public High Research	39.9	20.3	.2	11	22	39	53	78	1,395	2.1	.001	.10
<b>ENRICHING EDUCATIONAL EXPERIENCES (EEE)</b>												
Arizona (N = 1203)	44.8	17.4	.5	17	33	44	57	74				
AAUDE	46.4	17.6	.2	17	33	47	59	75	9,462	-1.6	.003	-.09
UA Selected Peers	46.3	17.5	.2	18	33	47	59	75	10,322	-1.6	.004	-.09
Public High Research	42.8	17.6	.1	14	30	42	56	73	16,787	2.0	.000	.11
<b>SUPPORTIVE CAMPUS ENVIRONMENT (SCE)</b>												
Arizona (N = 1191)	55.6	19.1	.6	25	42	56	69	89				
AAUDE	56.0	18.2	.2	25	44	56	69	86	1,522	-.4	.533	-.02
UA Selected Peers	56.8	18.4	.2	25	44	58	69	89	10,152	-1.2	.043	-.06
Public High Research	55.7	18.7	.2	25	42	56	69	86	16,463	.0	.988	.00

<sup>a</sup> Standard deviation is a measure of the average amount the individual scores deviate from the mean of all the scores in the distribution.

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