



NSSE 2019

Multi-Year Report

Tennessee Technological University

About Your Multi-Year Report

For institutions participating in multiple NSSE administrations since 2013, the year of the last survey update, this report presents year-to-year results for Engagement Indicators (EIs), High-Impact Practices (HIPs), and key academic challenge items to illustrate patterns of change or stability. It also provides details such as number of respondents, standard deviation, and standard error so that statistical tests can be calculated.

For more information and recommendations for analyzing NSSE data over time, view our webinar entitled *Recommendations for Using Multiple Years of NSSE Data*: nsse.indiana.edu/links/webinar

This report contains three main parts: (a) a page that provides a quick reference to important information about each year's administration, (b) multi-year figures, and (c) detailed statistics. Key terms and features are illustrated below.

Report sections

Administration Summaries (p. 3)	A summary of respondent counts, response rates, sampling errors, and administration details for each participation year.
Engagement Results by Theme (pp. 4-7)	Results for ten EIs and selected individual survey items are displayed, organized under four broad themes. The Academic Challenge theme is represented by four EIs as well as several individual items. The three remaining engagement themes (Learning with Peers, Experiences with Faculty, and Campus Environment) are each represented by two EIs.
High-Impact Practices (pp. 8-9)	Results for six HIPs are displayed. First-year student results indicate students who participated in service-learning, a learning community, and research with faculty, and who <i>planned to do</i> an internship or field experience, study abroad, and a culminating senior experience. Senior results indicate students who participated in all six.
Detailed Statistics (pp. 10-13)	Displays detailed information for results including counts, standard errors, and confidence intervals (CIs) for each measure.

Interpreting year-to-year results

When examining year-to-year results, you may wonder whether observed differences signify meaningful change and whether a trend is indicated. Figures display CIs around each score showing the range of values that is estimated to contain the population score 95% of the time. Upper and lower CI bounds are also reported in the Detailed Statistics section.

For further investigation

The Report Builder, updated with current data in the fall, allows for multi-year analysis of Engagement Indicators and individual items (including HIPs). It also affords the analysis of results by subpopulation.

The precision of an institution's population estimates can vary between administrations. An important early step in conducting a multi-year analysis is to review data quality. The values in the tables below were drawn from your *Administration Summary* reports.

Response Details by Participation Year

Year	First-year students					Seniors				
	Response rate ^a	Sampling error ^b	Total respondents ^c	Full completions	Partial completions	Response rate ^a	Sampling error ^b	Total respondents ^c	Full completions	Partial completions
2013										
2014	19%	+/- 3.7%	571	466	105	29%	+/- 3.1%	732	612	120
2015										
2016	17%	+/- 4.8%	353	265	88	19%	+/- 3.9%	522	400	122
2017	21%	+/- 4.3%	419	302	117	20%	+/- 3.7%	575	440	135
2018										
2019	26%	+/- 3.5%	586	472	114	22%	+/- 3.5%	614	507	107
2020										

Administration Details by Participation Year

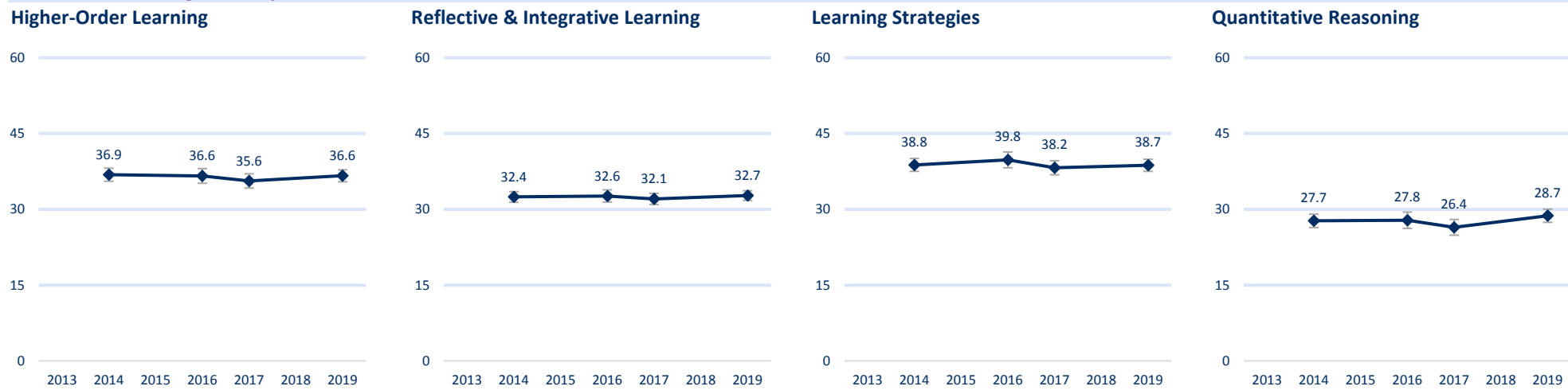
Year	Recruitment method	Sample type	Incentives offered	Additional question sets	Report Sample identified ^d	BCSSE	FSSE
2013							
2014	Email	Census	Yes	Transferable Skills, Global Perspectives	No	No	No
2015							
2016	Email	Census	Yes	Transferable Skills, Information Literacy	No	No	No
2017	Email	Census	Yes	Transferable Skills, Information Literacy	No	No	Yes
2018							
2019	Email	Census	Yes	Transferable Skills, Information Literacy	No	No	Yes
2020							

Note: All of your institution's participation years since 2013 (the first year of the updated NSSE) are reported. Years in which your institution did not participate are blank.

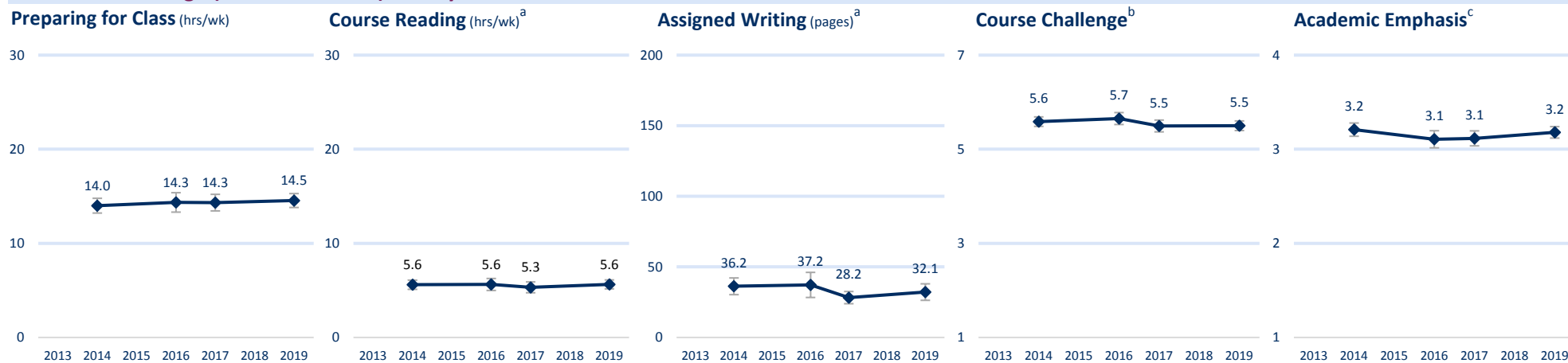
- a. Response rates (number of respondents divided by sample size) are adjusted for ineligibility, nondeliverable addresses, and students who were unavailable during the survey administration.
- b. Sampling error gauges the precision of results based on a sample survey. It is an estimate (at the 95% confidence level) of how much survey item percentages for your respondents could differ from those of the entire population of students at your institution. While data with larger sampling errors (such as +/-10%) need not be dismissed out of hand, such results should be interpreted more conservatively.
- c. Count used to calculate response rates and sampling errors for each *Administration Summary* report. Includes all census-administered and randomly sampled students, regardless of "Report Sample" designation.
- d. Starting in 2017, institutions had the option to flag a subset of students for exclusion from reports. Refer to your *Administration Summary* reports.

Engagement Indicators (EIs) represent the average student responses to a set of related survey questions. The Academic Challenge theme contains four EIs as well as several important individual items. See pages 10-12 for detailed statistics. For more information, including the items that make up each EI, refer to your *Engagement Indicators* report.

Academic Challenge: First-year students



Academic Challenge (additional items): First-year students



a. Values for Course Reading and Assigned Writing are estimates calculated from two or more survey questions.

b. Extent to which courses challenged students to do their best work (1 = "Not at all" to 7 = "Very much").

c. How much students said the institution emphasizes spending significant time studying and on academic work (1 = "Very little," 2 = "Some," 3 = "Quite a bit," and 4 = "Very much").

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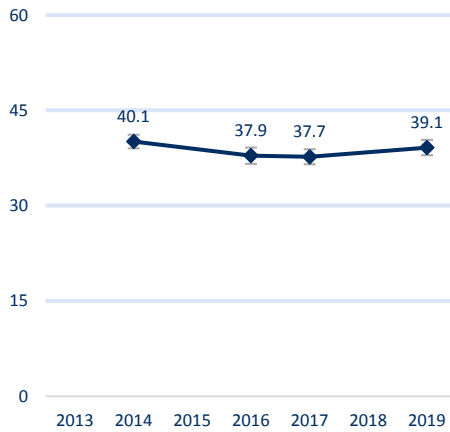
Engagement Results by Theme

Tennessee Technological University

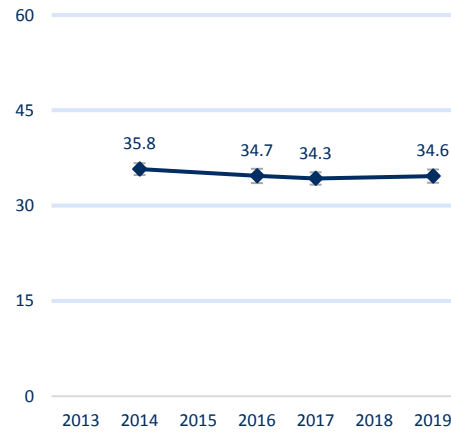
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Academic Challenge: Seniors

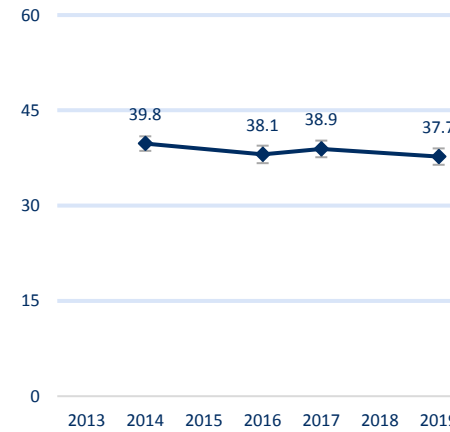
Higher-Order Learning



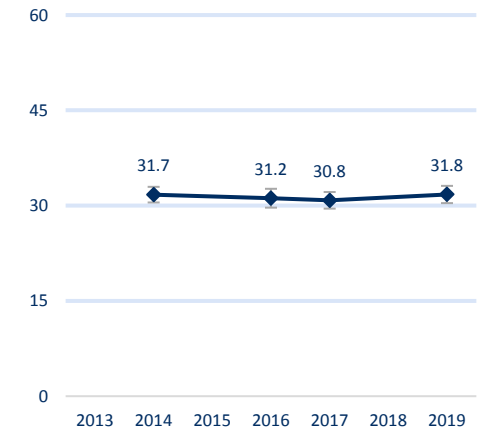
Reflective & Integrative Learning



Learning Strategies

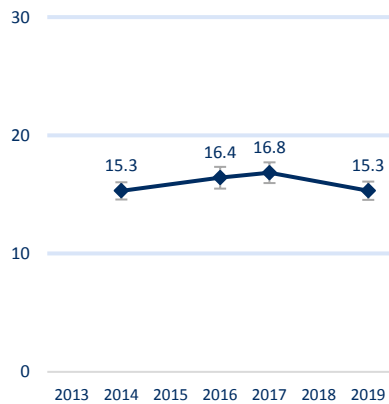


Quantitative Reasoning

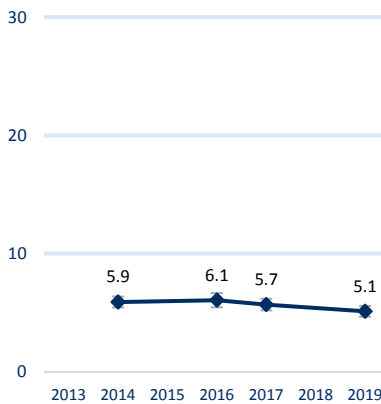


Academic Challenge (additional items): Seniors

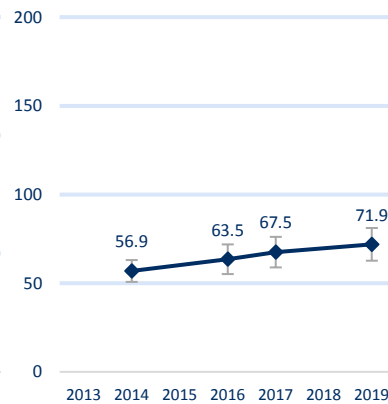
Preparing for Class (hrs/wk)



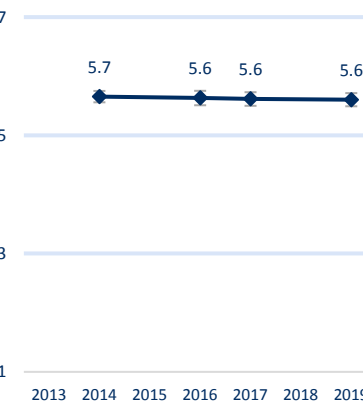
Course Reading (hrs/wk)^a



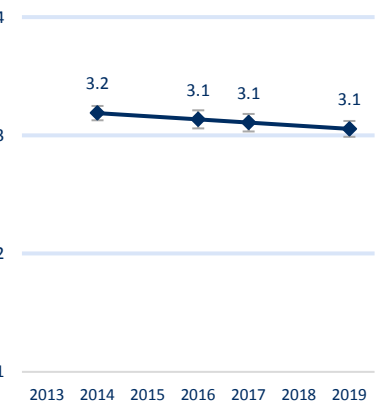
Assigned Writing (pages)^a



Course Challenge^b



Academic Emphasis^c



a. Values for Course Reading and Assigned Writing are estimates calculated from two or more survey questions.

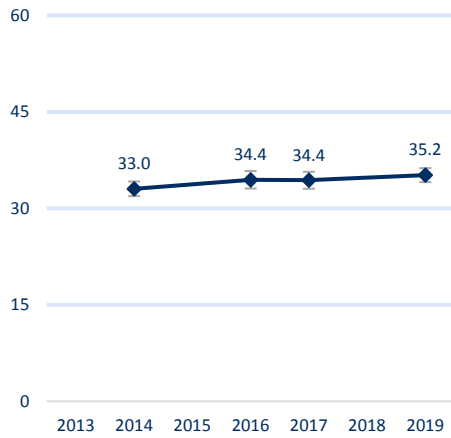
b. Extent to which courses challenged students to do their best work (1 = "Not at all" to 7 = "Very much").

c. How much students said the institution emphasizes spending significant time studying and on academic work (1 = "Very little," 2 = "Some," 3 = "Quite a bit," and 4 = "Very much").

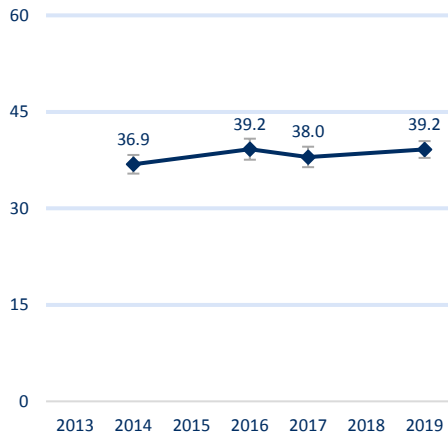
Engagement Indicators (EIs) represent the average student responses to a set of related survey questions. Each theme below is represented by two EIs. See pages 10-12 for detailed statistics. For more information, including the items that make up each EI, refer to your *Engagement Indicators* report.

Learning with Peers: First-year students

Collaborative Learning

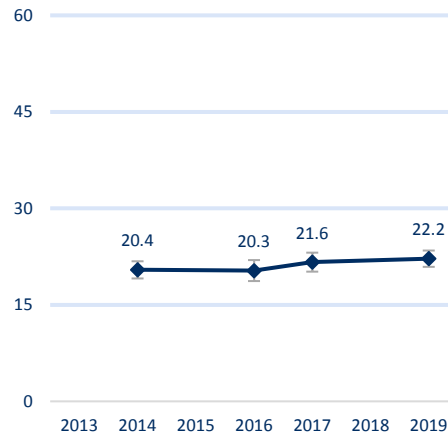


Discussions with Diverse Others

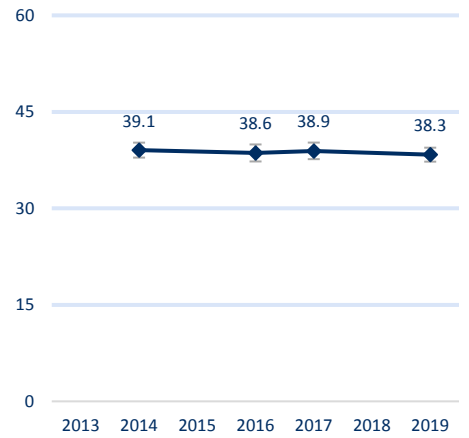


Experiences with Faculty: First-year students

Student-Faculty Interaction

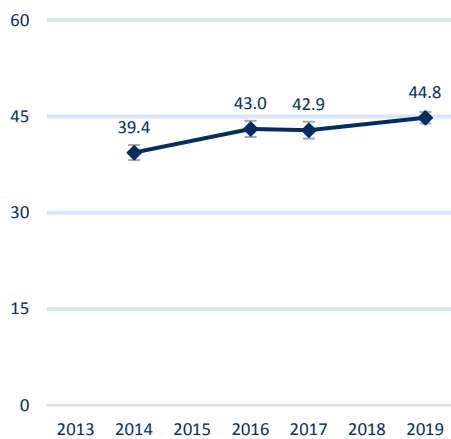


Effective Teaching Practices

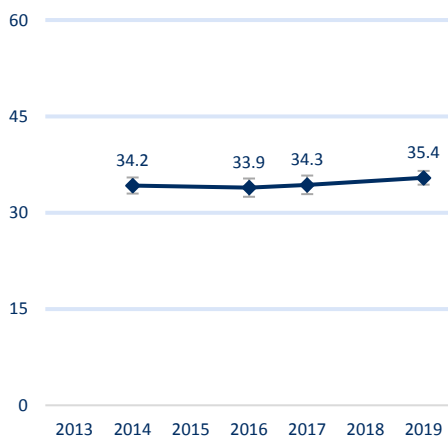


Campus Environment: First-year students

Quality of Interactions



Supportive Environment



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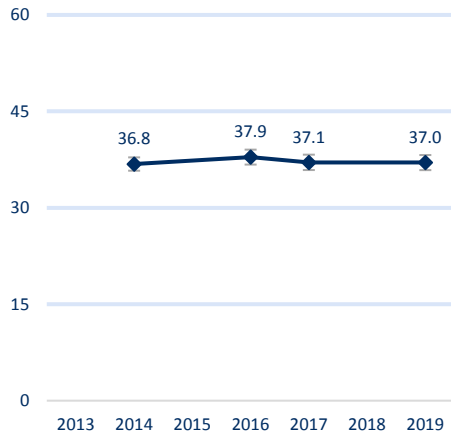
Engagement Results by Theme

Tennessee Technological University

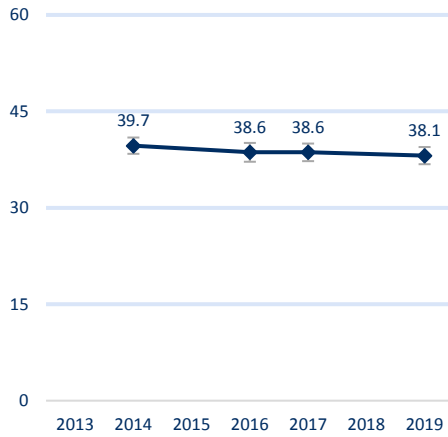
Engagement Indicators (EIs) represent the average student responses to a set of related survey questions. Each theme below is represented by two EIs. See pages 10-12 for detailed statistics. For more information, including the items that make up each EI, refer to your *Engagement Indicators* report.

Learning with Peers: Seniors

Collaborative Learning

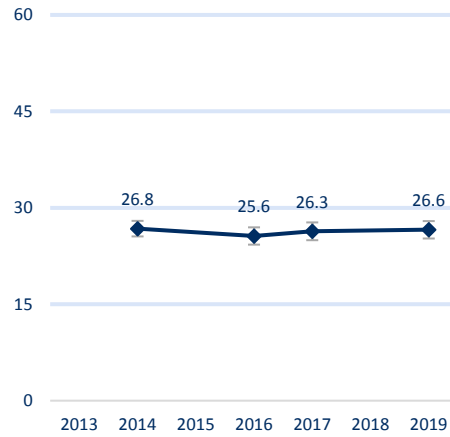


Discussions with Diverse Others

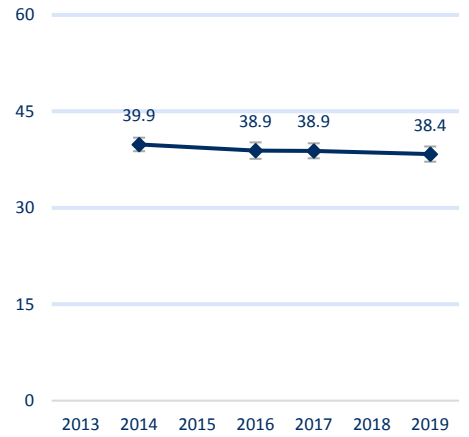


Experiences with Faculty: Seniors

Student-Faculty Interaction

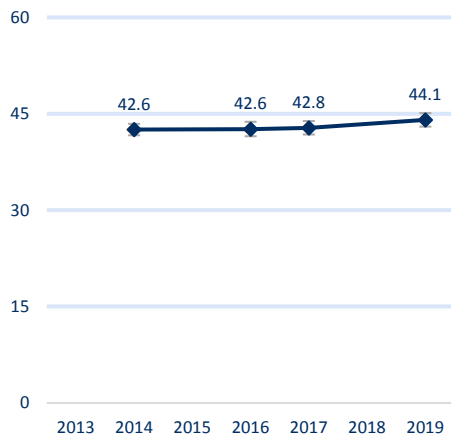


Effective Teaching Practices

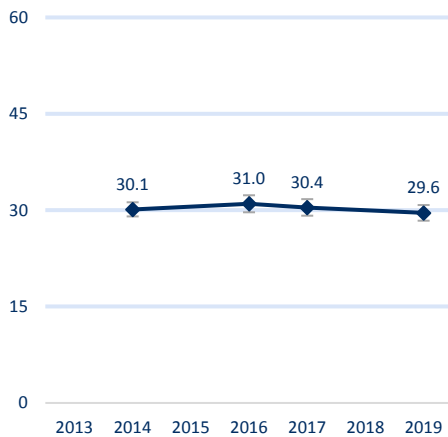


Campus Environment: Seniors

Quality of Interactions



Supportive Environment

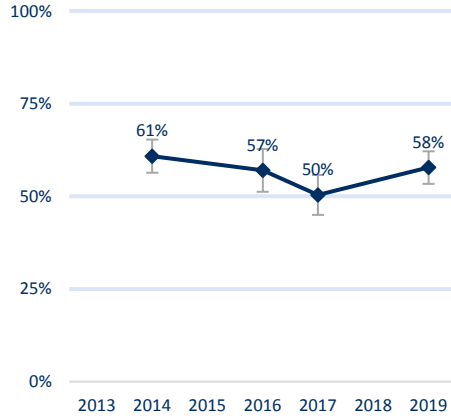


Due to their positive associations with student learning and retention, special undergraduate opportunities are designated "high-impact." The figures below display first-year students' participation, or intent to participate, in High-Impact Practices (HIPs) by year. See page 13 for detailed statistics. For more information, refer to your *High-Impact Practices* report.

High-Impact Practices: First-year students

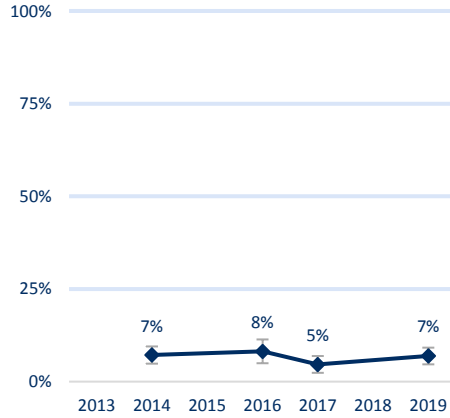
Service-Learning

(Some, most, or all courses)



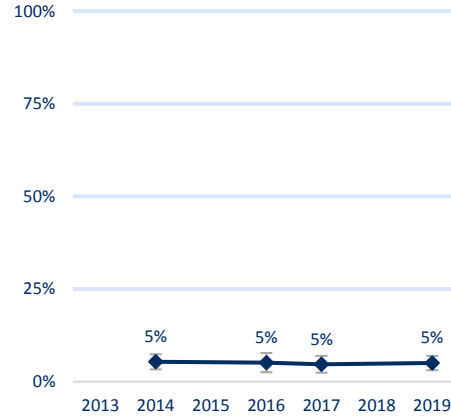
Learning Community

(Done or in progress)



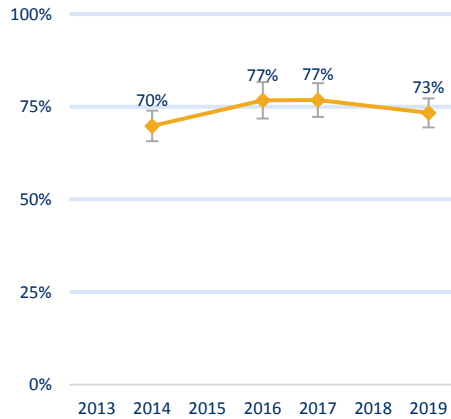
Research with Faculty

(Done or in progress)



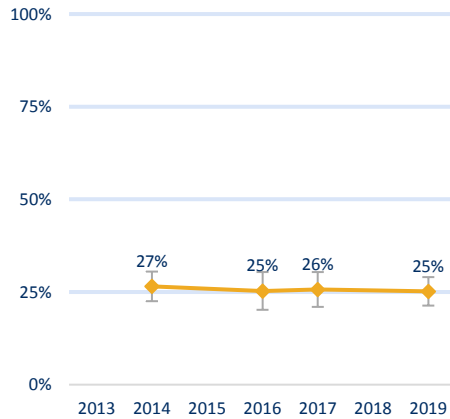
Internship/Field Experience

(Plan to do)



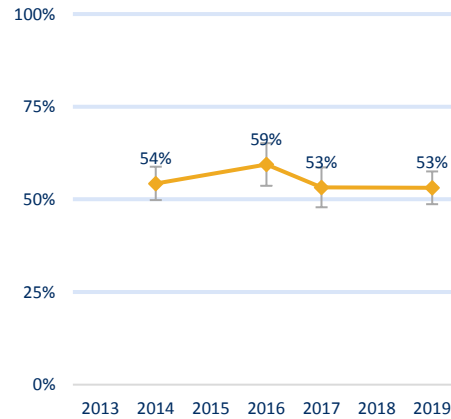
Study Abroad

(Plan to do)



Culminating Senior Experience

(Plan to do)



Overall first-year HIP participation

The figure below displays the percentages of first-year students who participated in at least one high-impact practice. The figure is limited to participation in service-learning, a learning community, and research with faculty.



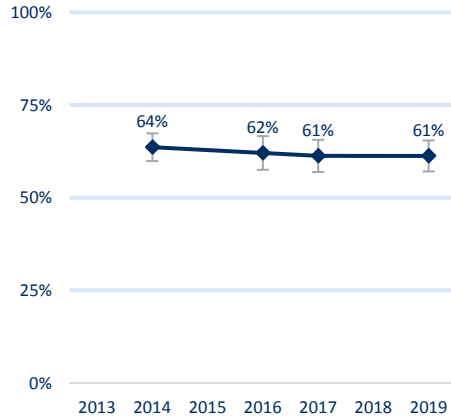
NSSE founding director George Kuh recommends that institutions aspire for all students to participate in at least two HIPs over the course of their undergraduate experience—one during the first year and one in the context of their major.

Due to their positive associations with student learning and retention, special undergraduate opportunities are designated "high-impact." Participation in High-Impact Practices (HIPs) by year is displayed in the figures below. See page 13 for detailed statistics. For more information, refer to your *High-Impact Practices* report.

High-Impact Practices: Seniors

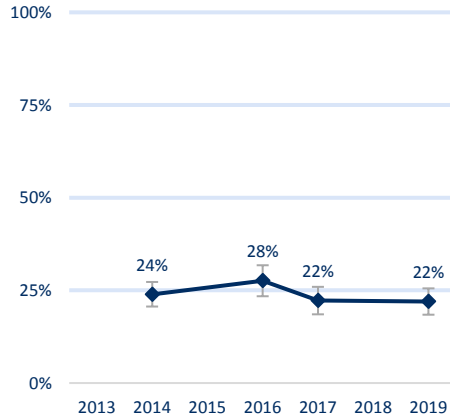
Service-Learning

(Some, most, or all courses)



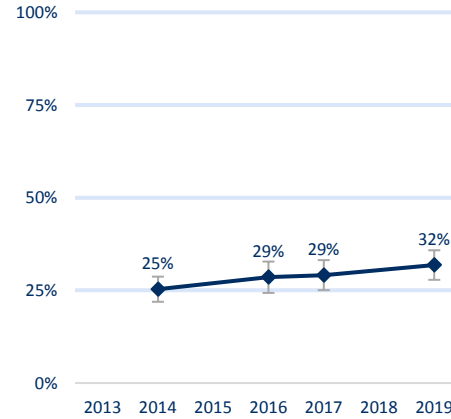
Learning Community

(Done or in progress)



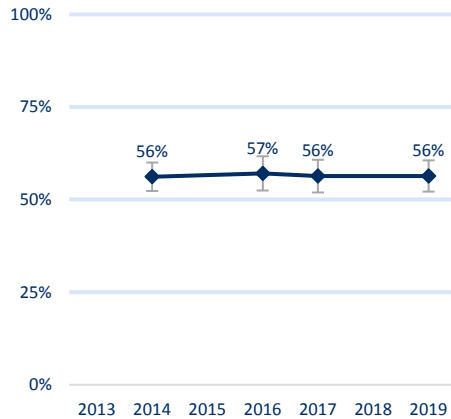
Research with Faculty

(Done or in progress)



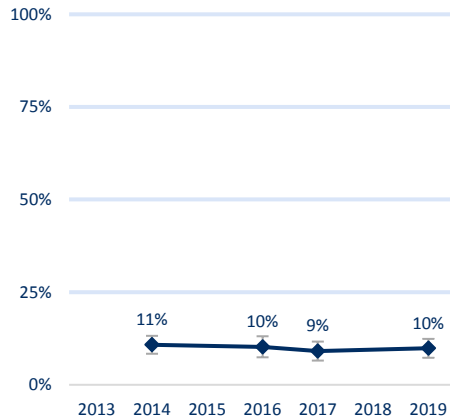
Internship/Field Experience

(Done or in progress)



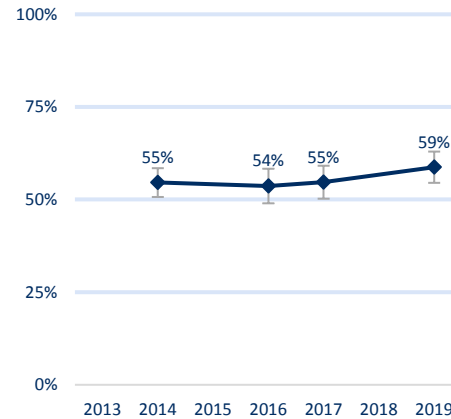
Study Abroad

(Done or in progress)



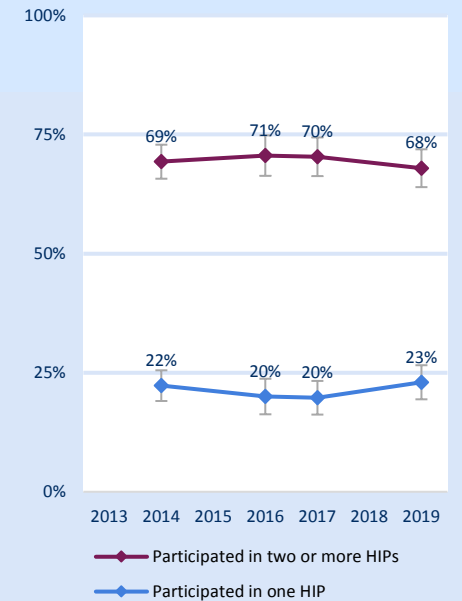
Culminating Senior Experience

(Done or in progress)



Overall senior HIP participation

The figure below displays the percentages of seniors who participated in one, and two or more, high-impact practices. The figure includes all six HIPs.



NSSE founding director George Kuh recommends that institutions aspire for all students to participate in at least two HIPs over the course of their undergraduate experience—one during the first year and one in the context of their major.

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Detailed Statistics: Engagement Indicators and Additional Items Tennessee Technological University

		First-year students							Seniors								
		2013	2014	2015	2016	2017	2018	2019	2020	2013	2014	2015	2016	2017	2018	2019	2020
<i>Academic Challenge</i>																	
Higher-Order Learning	Mean		36.9		36.6	35.6		36.6			40.1		37.9	37.7		39.1	
	n		512		321	384		515			666		480	538		550	
	SD		14.9		13.3	14.1		13.7			14.2		14.4	14.0		14.5	
	SE		.66		.74	.72		.60			.55		.66	.60		.62	
	CI upper bound		38.1		38.1	37.0		37.8			41.2		39.1	38.9		40.4	
	CI lower bound		35.6		35.2	34.2		35.5			39.0		36.6	36.5		37.9	
Reflective & Integrative Learning	Mean		32.4		32.6	32.1		32.7			35.8		34.7	34.3		34.6	
	n		531		329	395		549			689		492	554		576	
	SD		12.4		11.1	11.2		11.3			12.4		12.7	11.7		12.8	
	SE		.54		.61	.56		.48			.47		.57	.50		.53	
	CI upper bound		33.5		33.9	33.2		33.7			36.7		35.8	35.2		35.7	
	CI lower bound		31.4		31.4	30.9		31.8			34.8		33.6	33.3		33.6	
Learning Strategies	Mean		38.8		39.8	38.2		38.7			39.8		38.1	38.9		37.7	
	n		464		278	333		490			632		437	489		529	
	SD		14.0		13.3	13.0		13.5			14.7		14.7	14.8		15.1	
	SE		.65		.80	.71		.61			.58		.70	.67		.66	
	CI upper bound		40.1		41.4	39.6		39.9			40.9		39.4	40.2		39.0	
	CI lower bound		37.5		38.2	36.8		37.5			38.6		36.7	37.6		36.4	
Quantitative Reasoning	Mean		27.7		27.8	26.4		28.7			31.7		31.2	30.8		31.8	
	n		520		324	372		490			676		487	537		535	
	SD		15.3		14.9	15.3		14.7			16.3		16.7	15.5		16.0	
	SE		.67		.83	.79		.66			.63		.76	.67		.69	
	CI upper bound		29.0		29.5	28.0		30.0			33.0		32.7	32.1		33.1	
	CI lower bound		26.4		26.2	24.9		27.4			30.5		29.7	29.5		30.4	
<i>Academic Challenge (additional items)</i>																	
Preparing for Class (hours/week)	Mean		14.0		14.3	14.3		14.5			15.3		16.4	16.8		15.3	
	n		432		266	311		483			583		409	456		513	
	SD		8.3		8.6	7.9		8.3			9.0		9.5	9.5		8.9	
	SE		.40		.53	.45		.38			.37		.47	.45		.39	
	CI upper bound		14.8		15.4	15.2		15.3			16.0		17.3	17.7		16.1	
	CI lower bound		13.2		13.3	13.4		13.8			14.6		15.5	16.0		14.5	
Course Reading Estimated hours per week calculated from two survey questions.	Mean		5.6		5.6	5.3		5.6			5.9		6.1	5.7		5.1	
	n		419		261	308		482			574		404	455		511	
	SD		5.1		5.2	5.2		5.3			5.6		6.2	5.3		5.2	
	SE		.25		.32	.29		.24			.23		.31	.25		.23	
	CI upper bound		6.1		6.3	5.9		6.1			6.4		6.7	6.2		5.6	
	CI lower bound		5.1		5.0	4.8		5.2			5.4		5.5	5.2		4.7	

Notes: n = Number of respondents; SD = Standard deviation; SE = Standard error of the mean; upper and lower bounds represent the 95% confidence interval (mean +/- 1.96 * SE).

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Detailed Statistics: Engagement Indicators and Additional Items

Tennessee Technological University

		First-year students							Seniors									
		2013	2014	2015	2016	2017	2018	2019	2020	2013	2014	2015	2016	2017	2018	2019	2020	
<i>Academic Challenge (additional items, continued)</i>																		
Assigned Writing	<i>Mean</i>		36.2		37.2	28.2		32.1			56.9		63.5	67.5		71.9		
	<i>n</i>		443		277	335		497			593		426	485		530		
	Estimated number of pages calculated from three survey questions.	<i>SD</i>		63.6		75.4	40.3		66.4			76.4		88.0	96.7		108.4	
		<i>SE</i>		3.02		4.53	2.20		2.98			3.14		4.27	4.39		4.71	
		<i>CI upper bound</i>		42.2		46.1	32.5		38.0			63.0		71.9	76.1		81.1	
		<i>CI lower bound</i>		30.3		28.3	23.9		26.3			50.7		55.1	58.9		62.7	
Course Challenge	<i>Mean</i>		5.6		5.7	5.5		5.5			5.7		5.6	5.6		5.6		
	Extent to which courses challenged students to do their best work (1 = "Not at all" to 7 = "Very much").	<i>n</i>		477		285	334		495			636		441	487		531	
		<i>SD</i>		1.1		1.1	1.2		1.2			1.2		1.3	1.3		1.3	
		<i>SE</i>		.05		.06	.06		.05			.05		.06	.06		.06	
		<i>CI upper bound</i>		5.7		5.8	5.6		5.6			5.8		5.8	5.7		5.7	
		<i>CI lower bound</i>		5.5		5.5	5.4		5.4			5.6		5.5	5.5		5.5	
Academic Emphasis	<i>Mean</i>		3.2		3.1	3.1		3.2			3.2		3.1	3.1		3.1		
	Perceived institutional emphasis on spending significant time studying and on academic work (1 = "Very little," 2 = "Some," 3 = "Quite a bit," and 4 = "Very much").	<i>n</i>		437		268	315		487			593		414	463		516	
		<i>SD</i>		0.7		0.8	0.7		0.7			0.8		0.8	0.8		0.8	
		<i>SE</i>		.04		.05	.04		.03			.03		.04	.04		.03	
		<i>CI upper bound</i>		3.3		3.2	3.2		3.2			3.2		3.2	3.2		3.1	
		<i>CI lower bound</i>		3.1		3.0	3.0		3.1			3.1		3.1	3.0		3.0	
<i>Learning with Peers</i>																		
Collaborative Learning	<i>Mean</i>		33.0		34.4	34.4		35.2			36.8		37.9	37.1		37.0		
	Extent to which students collaborated with peers in class (1 = "Not at all" to 7 = "Very much").	<i>n</i>		529		342	410		570			705		499	563		595	
		<i>SD</i>		13.3		12.8	13.6		13.3			14.0		13.2	14.5		14.6	
		<i>SE</i>		.58		.69	.67		.56			.53		.59	.61		.60	
		<i>CI upper bound</i>		34.2		35.8	35.7		36.3			37.8		39.0	38.3		38.2	
		<i>CI lower bound</i>		31.9		33.1	33.1		34.1			35.8		36.7	35.9		35.9	
Discussions with Diverse Others	<i>Mean</i>		36.9		39.2	38.0		39.2			39.7		38.6	38.6		38.1		
	Extent to which students discussed with diverse others (1 = "Not at all" to 7 = "Very much").	<i>n</i>		482		286	336		491			636		445	490		533	
		<i>SD</i>		16.2		14.1	14.9		14.7			16.3		15.7	15.4		15.7	
		<i>SE</i>		.74		.83	.81		.67			.65		.75	.70		.68	
		<i>CI upper bound</i>		38.3		40.8	39.6		40.5			40.9		40.1	40.0		39.5	
		<i>CI lower bound</i>		35.4		37.6	36.4		37.8			38.4		37.2	37.3		36.8	

Notes: n = Number of respondents; SD = Standard deviation; SE = Standard error of the mean; upper and lower bounds represent the 95% confidence interval (mean +/- 1.96 * SE).

NSSE 2019 Multi-Year Report

Detailed Statistics: Engagement Indicators and Additional Items

Tennessee Technological University

		First-year students							Seniors								
		2013	2014	2015	2016	2017	2018	2019	2020	2013	2014	2015	2016	2017	2018	2019	2020
<i>Experiences with Faculty</i>																	
Student-Faculty Interaction	<i>Mean</i>		20.4		20.3	21.6		22.2			26.8		25.6	26.3		26.6	
	<i>n</i>		522		323	386		521			681		481	544		558	
	<i>SD</i>		15.6		14.9	14.8		14.8			16.1		15.0	16.5		16.3	
	<i>SE</i>		.68		.83	.75		.65			.62		.69	.71		.69	
	<i>CI upper bound</i>		21.8		22.0	23.1		23.4			28.0		27.0	27.7		27.9	
	<i>CI lower bound</i>		19.1		18.7	20.2		20.9			25.5		24.3	25.0		25.2	
Effective Teaching Practices	<i>Mean</i>		39.1		38.6	38.9		38.3			39.9		38.9	38.9		38.4	
	<i>n</i>		527		325	383		512			682		488	544		546	
	<i>SD</i>		13.6		12.2	12.9		12.5			14.0		14.4	13.9		14.1	
	<i>SE</i>		.59		.67	.66		.55			.54		.65	.59		.60	
	<i>CI upper bound</i>		40.2		39.9	40.2		39.4			40.9		40.2	40.0		39.5	
	<i>CI lower bound</i>		37.9		37.3	37.6		37.3			38.8		37.6	37.7		37.2	
<i>Campus Environment</i>																	
Quality of Interactions	<i>Mean</i>		39.4		43.0	42.9		44.8			42.6		42.6	42.8		44.1	
	<i>n</i>		465		275	325		476			621		432	464		495	
	<i>SD</i>		13.0		10.7	12.0		10.0			11.3		12.0	11.5		12.0	
	<i>SE</i>		.60		.64	.67		.46			.45		.58	.53		.54	
	<i>CI upper bound</i>		40.5		44.3	44.2		45.7			43.4		43.8	43.9		45.1	
	<i>CI lower bound</i>		38.2		41.8	41.5		43.9			41.7		41.5	41.8		43.0	
Supportive Environment	<i>Mean</i>		34.2		33.9	34.3		35.4			30.1		31.0	30.4		29.6	
	<i>n</i>		433		266	311		483			588		405	459		515	
	<i>SD</i>		13.3		11.8	13.0		12.0			13.6		13.6	14.1		14.1	
	<i>SE</i>		.64		.73	.74		.55			.56		.68	.66		.62	
	<i>CI upper bound</i>		35.5		35.3	35.8		36.5			31.2		32.3	31.7		30.8	
	<i>CI lower bound</i>		33.0		32.5	32.9		34.4			29.0		29.7	29.1		28.4	

Notes: n = Number of respondents; SD = Standard deviation; SE = Standard error of the mean; upper and lower bounds represent the 95% confidence interval (mean +/- 1.96 * SE).

		First-year students							Seniors								
		2013	2014	2015	2016	2017	2018	2019	2020	2013	2014	2015	2016	2017	2018	2019	2020
Service-Learning^a	%		61		57	50		58			64		62	61		61	
	<i>n</i>		459		283	332		487			636		439	484		520	
	<i>SE</i>		2.3		2.9	2.7		2.2			1.9		2.3	2.2		2.1	
	<i>CI upper bound (%)</i>		65		63	56		62			67		67	66		65	
	<i>CI lower bound (%)</i>		56		51	45		53			60		58	57		57	
Learning Community^a	%		7		8	5		7			24		28	22		22	
	<i>n</i>		475		281	332		489			638		440	485		523	
	<i>SE</i>		1.2		1.6	1.2		1.1			1.7		2.1	1.9		1.8	
	<i>CI upper bound (%)</i>		9		11	7		9			27		32	26		26	
	<i>CI lower bound (%)</i>		5		5	2		5			21		23	19		18	
Research with Faculty^a	%		5		5	5		5			25		29	29		32	
	<i>n</i>		470		279	333		490			634		439	484		524	
	<i>SE</i>		1.0		1.3	1.2		1.0			1.7		2.2	2.1		2.0	
	<i>CI upper bound (%)</i>		7		8	7		7			29		33	33		36	
	<i>CI lower bound (%)</i>		3		3	2		3			22		24	25		28	
Internship or Field Experience^b (First-year results: Plan to do)	%		70		77	77		73			56		57	56		56	
	<i>n</i>		477		284	331		491			642		442	485		532	
	<i>SE</i>		2.1		2.5	2.3		2.0			2.0		2.4	2.3		2.2	
	<i>CI upper bound (%)</i>		74		82	81		77			60		62	61		61	
	<i>CI lower bound (%)</i>		66		72	72		69			52		52	52		52	
Study Abroad^b (First-year results: Plan to do)	%		27		25	26		25			11		10	9		10	
	<i>n</i>		470		281	333		491			634		440	485		525	
	<i>SE</i>		2.0		2.6	2.4		2.0			1.2		1.4	1.3		1.3	
	<i>CI upper bound (%)</i>		31		30	30		29			13		13	12		12	
	<i>CI lower bound (%)</i>		23		20	21		21			8		7	7		7	
Culminating Senior Experience^b (First-year results: Plan to do)	%		54		59	53		53			55		54	55		59	
	<i>n</i>		472		281	331		491			631		440	482		524	
	<i>SE</i>		2.3		2.9	2.7		2.3			2.0		2.4	2.3		2.2	
	<i>CI upper bound (%)</i>		59		65	59		58			58		58	59		63	
	<i>CI lower bound (%)</i>		50		54	48		49			51		49	50		55	
Overall HIP Participation^c																	
Participated in one HIP	%		55		54	48		55			22		20	20		23	
	<i>n</i>		479		284	333		492			642		442	488		532	
	<i>SE</i>		2.3		3.0	2.7		2.2			1.6		1.9	1.8		1.8	
	<i>CI upper bound (%)</i>		60		59	53		59			25		24	23		27	
	<i>CI lower bound (%)</i>		51		48	42		50			19		16	16		19	
Participated in two or more HIPs	%		7		7	6		7			69		71	70		68	
	<i>n</i>		479		284	333		492			642		442	488		532	
	<i>SE</i>		1.2		1.5	1.3		1.1			1.8		2.2	2.1		2.0	
	<i>CI upper bound (%)</i>		9		10	8		9			73		75	74		72	
	<i>CI lower bound (%)</i>		5		4	3		5			66		66	66		64	

Notes: n = Number of respondents; SE = Standard error of the proportion ($\sqrt{p * (1 - p) / (n - 1)}$) where p is the proportion; upper and lower bounds represent the 95% confidence interval ($p \pm 1.96 * SE$).

a. Results are the percentage who had done the activity.

b. First-year results are the percentage who planned to do the activity; Senior results are the percentage who had done the activity.

c. First-year results are limited to participation in a Learning Community, Service-Learning, and Research with Faculty; senior results include all six HIPs.