
Tennessee Technological University

NSSE 2020 Major Field Report, Part II

Comparisons to Other Institutions

Natural-Math Science

*Comparing your students majoring in the fields shown below to those
in the same fields at your comparison group institutions*

The Major Field Report group 'Natural-Math Science' includes the following majors: Allied health; Astronomy; Atmospheric science (including meteorology); Biochemistry or biophysics; Biology (general); Biomedical science; Botany; Cell and molecular biology; Chemistry; Dentistry; Earth science (including geology); Geography; Marine science; Mathematics; Medicine; Microbiology or bacteriology; Natural science; Neuroscience; Other biological sciences; Other health professions; Other physical sciences; Pharmacy; Physical sciences (general); Physics; Physiology and developmental biology; Statistics; Zoology.

Note:

The Major Field Report was formatted for printing. When viewing on screen in Excel, some content may appear truncated or oddly formatted. This is normal. Increasing the zoom level or viewing the report in Print Preview will improve on-screen display.

About Your Major Field Report, Part II

NSSE data serve to identify institutional strengths and weaknesses in reference to selected comparison institutions, yet institution-level comparisons may not capture important variation in student engagement that can be found within key subpopulations such as major. This report displays selected results for students at your institution and at your selected comparison institutions in the major category: Natural-Math Science.

NSSE results included in MFR, Part II

- Engagement Indicators
- High-Impact Practices
- Frequencies and Statistical Comparisons
- Respondent Profile

Related-Major Groups

Self-reported first and second (if applicable) majors were identified from the survey. Your institution had the option to customize how these majors were grouped, using up to ten related-major groups. Institutions choosing not to customize their major categories receive NSSE's ten default groups. The majors used in this report are listed on the cover page of this report.

Sample

This report is based on information from all randomly selected or census-administered students in the indicated group of majors for both your institution and your comparison institutions. Targeted and locally administered oversamples and other non-randomly selected students are not included. Report Sample (if applicable) respondents are also excluded.

Class

Results are presented separately by institution-reported class level. Keep in mind that majors are student-reported. First-year students may report *intended* majors that have not yet been *declared*. Also, much of the first-year experience may take place outside of the major field. For these reasons, first-year results should be interpreted with caution.

Technical Requirements

Frequencies will be reported for related-major groups that have at least 5 respondents, but NSSE requires a group to have at least 20 respondents for statistical comparisons (e.g., means and t-tests). Comparison groups must contain at least 20 respondents in the major category, or they remain blank. Although 20 is a minimum requirement for all other statistics (Engagement Indicators, means, etc.), keep in mind that any statistical result requires a sufficient number of respondents per group to produce a reliable estimate. Due to the disaggregation of results by student-reported major, *Major Field Report* results are unweighted.

Report Sections (Those marked with an asterisk are included if at least one related-major group includes 20 or more respondents.)

Engagement Indicators*	Results on NSSE's ten Engagement Indicators (EIs) organized into four themes. See your <i>Engagement Indicators</i> report for more details.
High-Impact Practices*	Results on student participation in six High-Impact Practices (HIPs). See your <i>High-Impact Practices</i> report for more details.
Frequencies and Statistical Comparisons*	Response frequencies and statistical comparisons (including tests of significance and effect sizes) for all survey items except the demographics for your institution and your three core comparison groups.
Respondent Profile	Response frequencies for all demographic questions for your institution and your three core comparison groups.

Engagement Indicators: Overview

Engagement Indicators are summary measures based on sets of NSSE questions examining key dimensions of student engagement. The ten indicators are organized within four themes: Academic Challenge, Learning with Peers, Experiences with Faculty, and Campus Environment. The tables below compare average scores^a for your students in this related-major category with students in your comparison groups within the same category.

Use the following key:

- ▲ **Your students' average** was significantly higher ($p < .05$) with an effect size at least .3 in magnitude.
- △ **Your students' average** was significantly higher ($p < .05$) with an effect size less than .3 in magnitude.
- No significant difference.
- ▼ **Your students' average** was significantly lower ($p < .05$) with an effect size less than .3 in magnitude.
- ▽ **Your students' average** was significantly lower ($p < .05$) with an effect size at least .3 in magnitude.

Theme	Engagement Indicator	First-Year Students in Natural-Math Science			Seniors in Natural-Math Science		
		Your first-year students compared with Southeast Public	Your first-year students compared with Carnegie Class	Your first-year students compared with NSSE 2019 & 2020	Your seniors compared with Southeast Public	Your seniors compared with Carnegie Class	Your seniors compared with NSSE 2019 & 2020
Academic Challenge	Higher-Order Learning	--	--	--	--	--	--
	Reflective & Integrative Learning	--	--	--	--	--	--
	Learning Strategies	--	--	--	--	--	--
	Quantitative Reasoning	--	--	--	--	--	--
Learning with Peers	Collaborative Learning	--	--	--	--	--	--
	Discussions with Diverse Others	--	--	--	▽	--	--
Experiences with Faculty	Student-Faculty Interaction	--	--	--	--	▲	▲
	Effective Teaching Practices	--	△	--	--	--	--
Campus Environment	Quality of Interactions	--	--	--	--	--	--
	Supportive Environment	--	--	--	▽	▽	▽

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Natural-Math Science

Tennessee Technological University

First-year students^a in Natural-Math Science

	Mean statistics			Percentile ^d scores					Comparison results			
	Mean	SD ^b	SEM ^c	5th	25th	50th	75th	95th	Deg. of freedom ^e	Mean diff.	Sig. ^f	Effect size ^g
Academic Challenge												
Higher-Order Learning												
Tennessee Tech (N = 47)	40.2	13.1	1.92	20	30	40	50	60				
Southeast Public	39.5	13.5	.18	20	30	40	50	60	5,565	.8		.056
Carnegie Class	39.4	12.9	.17	20	30	40	50	60	5,514	.8		.064
NSSE 2019 & 2020	39.7	12.9	.07	20	30	40	50	60	32,184	.5		.041
Reflective & Integrative Learning												
Tennessee Tech (N = 47)	33.4	12.0	1.75	20	23	31	40	57				
Southeast Public	35.4	12.0	.16	17	26	34	43	57	5,642	-2.0		-.168
Carnegie Class	35.4	11.5	.15	17	29	34	43	57	5,578	-2.0		-.173
NSSE 2019 & 2020	35.5	11.6	.06	17	29	34	43	57	32,520	-2.1		-.184
Learning Strategies												
Tennessee Tech (N = 47)	40.0	14.1	2.06	20	27	40	53	60				
Southeast Public	40.3	13.8	.19	20	33	40	53	60	5,580	-.3		-.024
Carnegie Class	39.3	13.6	.18	20	27	40	53	60	5,518	.7		.052
NSSE 2019 & 2020	39.9	13.6	.08	20	33	40	53	60	32,202	.1		.010
Quantitative Reasoning												
Tennessee Tech (N = 47)	31.2	14.4	2.10	7	20	27	40	60				
Southeast Public	30.8	15.6	.21	7	20	27	40	60	5,554	.4		.025
Carnegie Class	30.8	14.6	.20	7	20	33	40	60	5,502	.4		.027
NSSE 2019 & 2020	31.0	14.9	.08	7	20	33	40	60	32,101	.2		.016
Learning with Peers												
Collaborative Learning												
Tennessee Tech (N = 47)	37.9	15.1	2.21	15	25	40	55	60				
Southeast Public	35.4	14.3	.19	10	25	35	45	60	5,634	2.5		.174
Carnegie Class	36.0	14.0	.19	15	25	35	45	60	5,547	1.9		.136
NSSE 2019 & 2020	35.9	13.9	.08	15	25	35	45	60	32,409	1.9		.140
Discussions with Diverse Others												
Tennessee Tech (N = 45)	43.2	15.4	2.30	10	35	45	60	60				
Southeast Public	41.8	15.4	.21	15	30	40	60	60	5,571	1.4		.093
Carnegie Class	40.0	15.2	.20	15	30	40	55	60	5,516	3.2		.211
NSSE 2019 & 2020	40.7	15.1	.08	15	30	40	55	60	32,165	2.6		.169

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Natural-Math Science

Tennessee Technological University

First-year students^a in Natural-Math Science

	Mean statistics			Percentile ^d scores					Comparison results			
	Mean	SD ^b	SEM ^c	5th	25th	50th	75th	95th	Deg. of freedom ^e	Mean diff.	Sig. ^f	Effect size ^g
Experiences with Faculty												
Student-Faculty Interaction												
Tennessee Tech (N = 47)	24.7	14.3	2.09	5	15	25	35	50				
Southeast Public	22.7	15.0	.20	0	10	20	30	50	5,583	2.0		.131
Carnegie Class	21.8	14.6	.20	0	10	20	30	50	5,505	2.9		.199
NSSE 2019 & 2020	22.6	14.6	.08	0	10	20	30	50	32,159	2.1		.143
Effective Teaching Practices												
Tennessee Tech (N = 47)	41.5	13.9	2.02	20	32	40	60	60				
Southeast Public	38.4	13.4	.18	16	28	40	48	60	5,615	3.1		.235
Carnegie Class	37.8	12.6	.17	16	28	40	48	60	5,557	3.7	*	.295
NSSE 2019 & 2020	39.0	12.8	.07	20	32	40	48	60	32,432	2.5		.198
Campus Environment												
Quality of Interactions												
Tennessee Tech (N = 47)	45.9	10.4	1.51	28	38	48	54	60				
Southeast Public	43.2	11.6	.16	22	36	44	52	60	5,387	2.7		.231
Carnegie Class	42.8	11.2	.15	22	36	44	50	60	5,306	3.1		.278
NSSE 2019 & 2020	43.4	11.3	.06	22	38	44	52	60	31,142	2.4		.217
Supportive Environment												
Tennessee Tech (N = 47)	36.6	13.9	2.02	18	28	35	43	60				
Southeast Public	38.2	13.2	.18	18	30	40	48	60	5,591	-1.6		-.120
Carnegie Class	36.5	13.0	.18	15	28	38	45	60	5,529	.2		.015
NSSE 2019 & 2020	37.3	13.1	.07	15	28	38	48	60	32,275	-.6		-.047

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

	Mean statistics			Percentile ^d scores					Comparison results			
	Mean	SD ^b	SEM ^c	5th	25th	50th	75th	95th	Deg. of freedom ^e	Mean diff.	Sig. ^f	Effect size ^g
Academic Challenge												
Higher-Order Learning												
Tennessee Tech (N = 35)	38.3	12.7	2.14	20	30	40	50	60				
Southeast Public	40.1	13.7	.18	20	30	40	50	60	5,708	-1.9		-.136
Carnegie Class	39.3	13.3	.18	20	30	40	50	60	5,344	-1.0		-.076
NSSE 2019 & 2020	40.3	13.3	.07	20	30	40	50	60	33,613	-2.0		-.149
Reflective & Integrative Learning												
Tennessee Tech (N = 36)	33.3	11.3	1.88	20	24	31	40	51				
Southeast Public	37.0	12.4	.16	17	29	37	46	60	5,772	-3.7		-.299
Carnegie Class	36.9	11.9	.16	17	29	37	46	57	5,400	-3.6		-.303
NSSE 2019 & 2020	37.1	12.0	.07	17	29	37	46	60	33,958	-3.8		-.313
Learning Strategies												
Tennessee Tech (N = 35)	42.1	14.4	2.44	13	27	47	53	60				
Southeast Public	40.8	14.1	.19	20	33	40	53	60	5,726	1.3		.092
Carnegie Class	38.9	14.4	.20	13	27	40	53	60	5,357	3.2		.226
NSSE 2019 & 2020	39.7	14.1	.08	20	27	40	53	60	33,691	2.4		.170
Quantitative Reasoning												
Tennessee Tech (N = 35)	33.5	17.7	3.00	0	20	40	47	60				
Southeast Public	34.1	15.6	.21	7	20	33	47	60	5,697	-.6		-.037
Carnegie Class	34.0	15.5	.21	7	20	33	40	60	5,334	-.4		-.028
NSSE 2019 & 2020	34.5	15.4	.08	7	20	33	47	60	33,572	-.9		-.061
Learning with Peers												
Collaborative Learning												
Tennessee Tech (N = 36)	36.0	13.9	2.31	15	25	40	48	60				
Southeast Public	36.4	14.4	.19	15	25	35	45	60	5,743	-.4		-.029
Carnegie Class	35.2	14.7	.20	10	25	35	45	60	5,373	.7		.049
NSSE 2019 & 2020	36.2	14.4	.08	15	25	35	45	60	33,800	-.2		-.014
Discussions with Diverse Others												
Tennessee Tech (N = 35)	35.9	16.8	2.84	10	20	30	55	60				
Southeast Public	43.0	15.4	.20	20	35	45	60	60	5,713	-7.2	**	-.465
Carnegie Class	39.5	15.3	.21	15	30	40	55	60	5,345	-3.7		-.238
NSSE 2019 & 2020	40.8	15.3	.08	15	30	40	55	60	33,639	-5.0		-.327

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

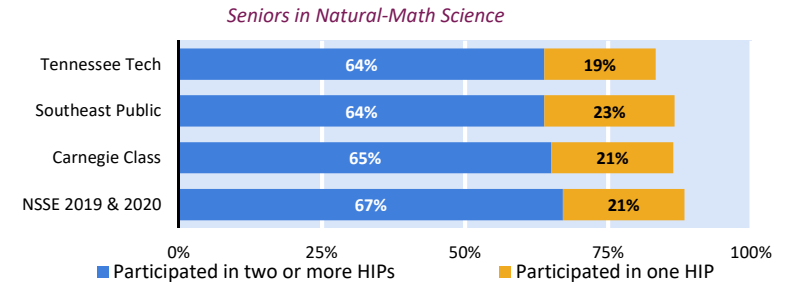
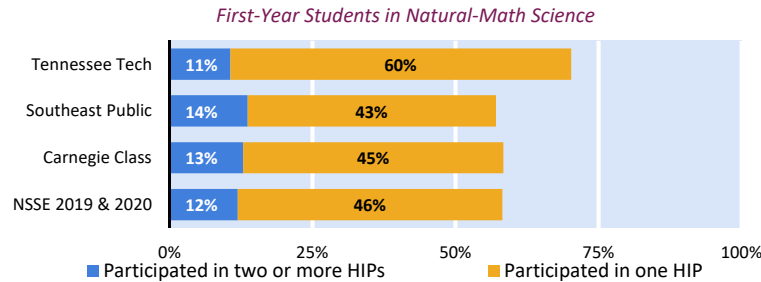
	Mean statistics			Percentile ^d scores					Comparison results			
	Mean	SD ^b	SEM ^c	5th	25th	50th	75th	95th	Deg. of freedom ^e	Mean diff.	Sig. ^f	Effect size ^g
Experiences with Faculty												
Student-Faculty Interaction												
Tennessee Tech (N = 36)	32.8	15.1	2.52	10	20	30	45	60				
Southeast Public	27.5	16.4	.22	5	15	25	40	60	5,715	5.3		.323
Carnegie Class	25.5	16.0	.22	0	15	25	35	60	5,363	7.3	**	.456
NSSE 2019 & 2020	27.4	16.1	.09	5	15	25	40	60	33,667	5.4	*	.335
Effective Teaching Practices												
Tennessee Tech (N = 36)	38.2	10.0	1.67	20	32	38	44	56				
Southeast Public	40.1	13.6	.18	16	32	40	52	60	36	-1.9		-.138
Carnegie Class	39.0	13.2	.18	16	32	40	48	60	36	-.8		-.057
NSSE 2019 & 2020	40.2	13.1	.07	20	32	40	52	60	33,917	-2.0		-.154
Campus Environment												
Quality of Interactions												
Tennessee Tech (N = 36)	42.5	10.7	1.78	23	35	41	51	60				
Southeast Public	42.1	11.6	.16	22	35	43	50	60	5,507	.4		.037
Carnegie Class	41.4	11.6	.16	20	34	42	50	60	5,135	1.0		.090
NSSE 2019 & 2020	42.4	11.5	.06	22	36	44	50	60	32,555	.0		.003
Supportive Environment												
Tennessee Tech (N = 36)	26.1	10.2	1.70	13	19	23	31	45				
Southeast Public	34.3	13.8	.18	13	25	35	43	60	36	-8.2	***	-.595
Carnegie Class	32.1	13.6	.19	10	23	33	40	58	5,359	-6.0	**	-.437
NSSE 2019 & 2020	33.3	13.7	.07	10	23	33	43	60	35	-7.1	***	-.523

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

High-Impact Practices: Natural-Math Science Tennessee Technological University

Overall HIP Participation^{a,h}

The figures below display the percentage of students who participated in High-Impact Practices. Both figures include participation in service-learning, a learning community, and research with faculty. The senior figure also includes participation in an internship or field experience, study abroad, and culminating senior experience. The first segment in each bar shows the percentage who participated in at least two HIPs, and the full bar (both colors) represents the percentage who participated in at least one.



Statistical Comparisons

The table below displays the percentage of your students who participated in a given High-Impact Practice, including the percentage who participated overall (at least one, two or more). It also graphs the difference, in percentage points, between your students and those of your comparison groups. Blue bars indicate how much higher your institution's percentage is compared to the comparison group. Dark red bars indicate how much lower your institution's percentage is compared to the comparison group.

	Tennessee Tech	Your students' participation compared with:						
		Southeast Public		Carnegie Class		NSSE 2019 & 2020		
	%	Difference ⁱ	ES ^j	Difference ⁱ	ES ^j	Difference ⁱ	ES ^j	
<i>First-Year Students in Natural-Math Science</i>								
12. Service-Learning	62	+14	*	+14	.29	+12	.24	
11c. Learning Community	13	-4		-5	-.14	-2	-.06	
11e. Research with Faculty	9	+0		+1	.02	+1	.04	
Participated in at least one	70	+13		+12	.25	+12	.25	
Participated in two or more	11	-3		-2	-.07	-1	-.04	
<i>Seniors in Natural-Math Science</i>								
12. Service-Learning	39	-16		-13	-.27	-18	* -0.36	
11c. Learning Community	6	-20	**	-21	-.60	-20	** -0.59	
11e. Research with Faculty	54	+10		+8	.15	+9	.18	
11a. Internship or Field Exp.	47	-1		-2	-.04	-3	-.05	
11d. Study Abroad	6	-11		-11	-.37	-12	-.39	
11f. Culminating Senior Exp.	33	-8		-7	-.14	-13	-.27	
Participated in at least one	83	-3		-3	-.09	-5	-.14	
Participated in two or more	64	+0		-1	-.02	-3	-.07	

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k													
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020							
Item wording or description	Variable name ^l	Values ^m	Response options	Count		Count		Count		Count		Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ							
					%		%		%		%														
1. During the current school year, about how often have you done the following?																									
a. Asked questions or contributed to course discussions in other ways	askquest	1 2 3 4	Never Sometimes Often Very often	2 18 15 10	4 40 33 22	227 2,131 1,883 1,379	4 38 34 25	210 2,210 1,886 1,228	4 40 34 22	1,032 11,724 11,575 8,192	3 36 36 25	2.7	2.8	-.06	2.7	-.02	2.8	-.11							
Total				45	100	5,620	100	5,534	100	32,523	100														
b. Come to class without completing readings or assignments	unpreparedr <i>(Reverse-coded version of unprepared created by NSSE.)</i>	1 2 3 4	Very often Often Sometimes Never	2 2 25 18	4 4 53 38	268 653 3,005 1,686	5 12 54 30	249 619 3,096 1,568	5 11 56 28	1,424 3,363 17,637 10,092	4 10 54 31								3.3	3.1	.22	3.1	.23	3.1	.18
Total				47	100	5,612	100	5,532	100	32,516	100														
c. Attended an art exhibit, play, or other arts performance (dance, music, etc.)	attendart	1 2 3 4	Never Sometimes Often Very often	2 32 9 4	4 68 19 9	2,411 2,134 727 347	43 38 13 6	2,339 2,206 715 279	42 40 13 5	13,315 12,839 4,413 1,975	41 39 14 6														
Total				47	100	5,619	100	5,539	100	32,542	100														
d. Asked another student to help you understand course material	CLaskhelp	1 2 3 4	Never Sometimes Often Very often	4 14 15 14	9 30 32 30	380 1,935 2,048 1,257	7 34 36 22	316 1,808 2,069 1,339	6 33 37 24	1,952 10,907 12,142 7,552	6 34 37 23	2.8	2.7	.10	2.8	.03	2.8	.06							
Total				47	100	5,620	100	5,532	100	32,553	100														
e. Explained course material to one or more students	CLexplain	1 2 3 4	Never Sometimes Often Very often	0 17 15 15	0 36 32 32	187 1,705 2,265 1,467	3 30 40 26	150 1,597 2,353 1,442	3 29 42 26	973 9,627 13,646 8,314	3 30 42 26								3.0	2.9	.08	2.9	.05	2.9	.07
Total				47	100	5,624	100	5,542	100	32,560	100														

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
												Your first-year students compared with							
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
f. Prepared for exams by discussing or working through course material with other students	CLstudy	1	Never	4	9	660	12	595	11	3,399	10	2.8	2.7	.11	2.7	.10	2.7	.10	
		2	Sometimes	16	34	1,758	31	1,749	32	10,219	31								
		3	Often	11	23	1,717	31	1,750	32	10,541	32								
		4	Very often	16	34	1,490	26	1,443	26	8,407	26								
		Total		47	100	5,625	100	5,537	100	32,566	100								
g. Worked with other students on course projects or assignments	CLproject	1	Never	3	6	411	7	323	6	1,822	6	3.0	2.7	.27	2.7	.25	2.8	.22	
		2	Sometimes	12	26	1,968	35	1,947	35	11,017	34								
		3	Often	16	34	2,010	36	2,088	38	12,455	38								
		4	Very often	16	34	1,230	22	1,182	21	7,255	22								
		Total		47	100	5,619	100	5,540	100	32,549	100								
h. Given a course presentation	present	1	Never	6	13	1,468	26	1,234	22	6,461	20	2.4	2.1 *	.33	2.2 *	.31	2.2	.24	
		2	Sometimes	22	47	2,443	43	2,621	47	15,271	47								
		3	Often	11	23	1,164	21	1,191	21	7,610	23								
		4	Very often	8	17	549	10	496	9	3,228	10								
		Total		47	100	5,624	100	5,542	100	32,570	100								
2. During the current school year, about how often have you done the following?																			
a. Combined ideas from different courses when completing assignments	RIintegrate	1	Never	5	11	487	9	400	7	2,431	7	2.5	2.6	-.13	2.6	-.14	2.6	-.14	
		2	Sometimes	21	45	2,188	39	2,196	40	12,983	40								
		3	Often	14	30	2,018	36	2,115	38	12,201	38								
		4	Very often	7	15	922	16	823	15	4,893	15								
		Total		47	100	5,615	100	5,534	100	32,508	100								
b. Connected your learning to societal problems or issues	RIsocietal	1	Never	5	11	618	11	573	10	3,091	10	2.4	2.5	-.18	2.5	-.19	2.6	-.21	
		2	Sometimes	24	52	2,250	40	2,247	41	13,170	41								
		3	Often	12	26	1,879	34	1,920	35	11,404	35								
		4	Very often	5	11	861	15	793	14	4,840	15								
		Total		46	100	5,608	100	5,533	100	32,505	100								
c. Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	RIDiverse	1	Never	7	15	664	12	656	12	3,450	11	2.4	2.6	-.18	2.5	-.16	2.6	-.19	
		2	Sometimes	21	45	2,150	38	2,161	39	12,771	39								
		3	Often	13	28	1,840	33	1,876	34	11,089	34								
		4	Very often	6	13	955	17	840	15	5,196	16								
		Total		47	100	5,609	100	5,533	100	32,506	100								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
												<i>Your first-year students compared with</i>							
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
d. Examined the strengths and weaknesses of your own views on a topic or issue	RIownview	1	Never	1	2	268	5	266	5	1,520	5	2.7	2.8	-.17	2.8	-.15	2.8	-.16	
		2	Sometimes	23	50	1,768	32	1,733	31	10,173	31								
		3	Often	13	28	2,425	43	2,500	45	14,681	45								
		4	Very often	9	20	1,146	20	1,029	19	6,134	19								
		Total		46	100	5,607	100	5,528	100	32,508	100								
e. Tried to better understand someone else's views by imagining how an issue looks from their perspective	RIPerspect	1	Never	1	2	154	3	135	2	803	2	2.8	2.9	-.15	2.9	-.14	2.9	-.15	
		2	Sometimes	19	40	1,449	26	1,439	26	8,324	26								
		3	Often	14	30	2,531	45	2,586	47	15,264	47								
		4	Very often	13	28	1,462	26	1,365	25	8,090	25								
		Total		47	100	5,596	100	5,525	100	32,481	100								
f. Learned something that changed the way you understand an issue or concept	RInewview	1	Never	2	4	156	3	141	3	806	2	2.9	2.9	-.01	2.9	-.04	2.9	-.04	
		2	Sometimes	15	32	1,657	30	1,555	28	9,155	28								
		3	Often	17	36	2,486	45	2,532	46	14,888	46								
		4	Very often	13	28	1,284	23	1,295	23	7,587	23								
		Total		47	100	5,583	100	5,523	100	32,436	100								
g. Connected ideas from your courses to your prior experiences and knowledge	RIconnect	1	Never	0	0	59	1	47	1	350	1	3.1	3.1	-.01	3.1	-.03	3.1	-.02	
		2	Sometimes	12	26	1,089	20	971	18	5,931	18								
		3	Often	19	40	2,717	49	2,827	51	16,324	50								
		4	Very often	16	34	1,712	31	1,671	30	9,791	30								
		Total		47	100	5,577	100	5,516	100	32,396	100								
3. During the current school year, about how often have you done the following?																			
a. Talked about career plans with a faculty member	SFCareer	1	Never	2	4	830	15	934	17	5,064	16	2.7	2.5	.27	2.4 *	.35	2.4 *	.32	
		2	Sometimes	21	45	2,329	42	2,364	43	13,942	43								
		3	Often	13	28	1,498	27	1,419	26	8,488	26								
		4	Very often	11	23	931	17	800	15	4,933	15								
		Total		47	100	5,588	100	5,517	100	32,427	100								
b. Worked with a faculty member on activities other than coursework (committees, student groups, etc.)	SFotherwork	1	Never	18	38	2,642	47	2,583	47	14,633	45	2.0	1.8	.13	1.8	.14	1.8	.12	
		2	Sometimes	18	38	1,694	30	1,727	31	10,590	33								
		3	Often	6	13	808	14	786	14	4,760	15								
		4	Very often	5	11	450	8	419	8	2,435	8								
		Total		47	100	5,594	100	5,515	100	32,418	100								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

Item wording or description				Variable name ^l				Frequency Distributions				Statistical Comparisons ^k												
								Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		
								Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
c. Discussed course topics, ideas, or concepts with a faculty member outside of class				SFdiscuss				1	Never	10	21	1,705	31	1,664	30	2.1	2.1	.08	2.1	.11	2.1	.05		
								2	Sometimes	25	53	2,266	41	2,355	43								13,904	43
								3	Often	7	15	1,091	20	1,029	19								6,651	21
								4	Very often	5	11	509	9	460	8								2,858	9
								Total		47	100	5,571	100	5,508	100								32,364	100
d. Discussed your academic performance with a faculty member				SFperform				1	Never	11	23	1,305	23	1,459	26	2.1	2.2	-.07	2.1	.02	2.2	-.04		
								2	Sometimes	22	47	2,442	44	2,492	45								14,631	45
								3	Often	11	23	1,280	23	1,078	20								7,044	22
								4	Very often	3	6	557	10	486	9								3,013	9
								Total		47	100	5,584	100	5,515	100								32,421	100
4. During the current school year, how much has your coursework emphasized the following?																								
a. Memorizing course material				memorize				1	Very little	0	0	137	2	150	3	3.1	3.1	.08	3.1	.11	3.0	.13		
								2	Some	9	19	1,100	20	1,148	21								6,937	21
								3	Quite a bit	22	47	2,503	45	2,433	44								14,722	45
								4	Very much	16	34	1,842	33	1,783	32								9,954	31
								Total		47	100	5,582	100	5,514	100								32,419	100
b. Applying facts, theories, or methods to practical problems or new situations				HOapply				1	Very little	1	2	145	3	125	2	3.2	3.1	.16	3.1	.13	3.1	.14		
								2	Some	6	13	1,156	21	1,051	19								6,177	19
								3	Quite a bit	23	49	2,489	45	2,539	46								15,012	46
								4	Very much	17	36	1,785	32	1,796	33								10,459	32
								Total		47	100	5,575	100	5,511	100								32,400	100
c. Analyzing an idea, experience, or line of reasoning in depth by examining its parts				HOanalyze				1	Very little	1	2	182	3	144	3	3.1	3.0	.11	3.0	.09	3.0	.09		
								2	Some	8	17	1,327	24	1,279	23								7,297	23
								3	Quite a bit	24	51	2,392	43	2,468	45								14,548	45
								4	Very much	14	30	1,670	30	1,626	29								9,591	30
								Total		47	100	5,571	100	5,517	100								32,382	100
d. Evaluating a point of view, decision, or information source				HOevaluate				1	Very little	2	4	258	5	264	5	2.9	2.9	-.04	2.9	.01	2.9	-.04		
								2	Some	14	30	1,477	27	1,546	28								8,617	27
								3	Quite a bit	19	40	2,363	42	2,388	43								14,244	44
								4	Very much	12	26	1,471	26	1,310	24								8,162	25
								Total		47	100	5,569	100	5,508	100								32,369	100

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
				Count		Count		Count		Count		Mean		Mean		Mean		Mean	
				%		%		%		%		Effect size ⁿ		Effect size ⁿ		Effect size ⁿ		Effect size ⁿ	
Item wording or description	Variable name ^l	Values ^m	Response options																
e. Forming a new idea or understanding from various pieces of information	HOform	1	Very little	1	2	223	4	212	4	1,119	3	2.9	2.9	-.04	2.9	-.02	2.9	-.05	
		2	Some	16	34	1,437	26	1,433	26	8,172	25								
		3	Quite a bit	17	36	2,437	44	2,486	45	14,782	46								
		4	Very much	13	28	1,474	26	1,374	25	8,302	26								
		Total		47	100	5,571	100	5,505	100	32,375	100								
5. During the current school year, to what extent have your instructors done the following?																			
a. Clearly explained course goals and requirements	ETgoals	1	Very little	0	0	122	2	122	2	592	2	3.4	3.1 *	.37	3.1 **	.40	3.1 *	.35	
		2	Some	7	15	1,133	20	1,132	21	6,200	19								
		3	Quite a bit	16	34	2,510	45	2,599	47	15,150	47								
		4	Very much	24	51	1,802	32	1,657	30	10,428	32								
		Total		47	100	5,567	100	5,510	100	32,370	100								
b. Taught course sessions in an organized way	ETorganize	1	Very little	1	2	233	4	207	4	1,122	3	3.2	3.0	.24	3.0	.25	3.0	.21	
		2	Some	8	17	1,229	22	1,169	21	6,659	21								
		3	Quite a bit	19	40	2,429	44	2,583	47	14,819	46								
		4	Very much	19	40	1,663	30	1,540	28	9,722	30								
		Total		47	100	5,554	100	5,499	100	32,322	100								
c. Used examples or illustrations to explain difficult points	ETexample	1	Very little	0	0	171	3	137	2	825	3	3.4	3.1 **	.39	3.1 **	.40	3.1 *	.38	
		2	Some	7	15	1,134	20	1,078	20	6,221	19								
		3	Quite a bit	13	28	2,281	41	2,388	43	13,790	43								
		4	Very much	26	57	1,977	36	1,898	35	11,486	36								
		Total		46	100	5,563	100	5,501	100	32,322	100								
d. Provided feedback on a draft or work in progress	ETdraftfb	1	Very little	5	11	520	9	555	10	2,585	8	2.7	2.8	-.01	2.7	.06	2.8	-.05	
		2	Some	17	36	1,727	31	1,773	32	9,689	30								
		3	Quite a bit	10	21	1,919	34	2,031	37	12,050	37								
		4	Very much	15	32	1,398	25	1,150	21	8,006	25								
		Total		47	100	5,564	100	5,509	100	32,330	100								
e. Provided prompt and detailed feedback on tests or completed assignments	ETfeedback	1	Very little	5	11	602	11	597	11	2,795	9	2.7	2.7	.00	2.6	.07	2.7	-.05	
		2	Some	18	38	1,808	32	1,890	34	10,271	32								
		3	Quite a bit	11	23	1,927	35	2,035	37	12,290	38								
		4	Very much	13	28	1,229	22	980	18	6,997	22								
		Total		47	100	5,566	100	5,502	100	32,353	100								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k																							
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020			
				Count				Count				Count				Count				Mean				Mean				Mean				Mean			
				%				%				%				%				Effect size ⁿ				Effect size ⁿ				Effect size ⁿ				Effect size ⁿ			
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
6. During the current school year, about how often have you done the following?																																			
a. Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	QRconclude	1	Never	0	0	330	6	304	6	1,874	6	2.8	2.8	.04	2.8	.02	2.8	.03																	
		2	Sometimes	21	45	1,769	32	1,702	31	10,032	31																								
		3	Often	14	30	2,260	41	2,309	42	13,505	42																								
		4	Very often	12	26	1,199	22	1,181	21	6,888	21																								
			Total	47	100	5,558	100	5,496	100	32,299	100																								
b. Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	QRproblem	1	Never	6	13	1,077	19	1,002	18	5,767	18	2.4	2.4	.01	2.4	.02	2.4	.01																	
		2	Sometimes	22	47	2,053	37	2,113	38	12,334	38																								
		3	Often	13	28	1,573	28	1,646	30	9,682	30																								
		4	Very often	6	13	841	15	731	13	4,490	14																								
			Total	47	100	5,544	100	5,492	100	32,273	100																								
c. Evaluated what others have concluded from numerical information	QRevaluate	1	Never	4	9	856	15	745	14	4,410	14	2.5	2.5	.02	2.4	.03	2.5	.01																	
		2	Sometimes	23	49	2,119	38	2,234	41	12,881	40																								
		3	Often	14	30	1,785	32	1,837	33	10,744	33																								
		4	Very often	6	13	790	14	674	12	4,217	13																								
			Total	47	100	5,550	100	5,490	100	32,252	100																								
7. During the current school year, about how many papers, reports, or other writing tasks of the following lengths have you been assigned? (Include those not yet completed.)																																			
a. Up to 5 pages	wrshortnum	0	None	9	19	475	9	391	7	2,017	6	4.0	5.8 **	-0.35	6.5 ***	-0.44	6.5 ***	-0.44																	
		1.5	1-2	12	26	1,285	23	1,103	20	6,613	20																								
	(Recorded version of wrshort created by NSSE. Values are estimated number of papers, reports, etc.)	4	3-5	15	32	1,793	32	1,735	32	10,386	32																								
		8	6-10	8	17	1,127	20	1,226	22	7,207	22																								
		13	11-15	2	4	497	9	534	10	3,215	10																								
		18	16-20	1	2	168	3	243	4	1,302	4																								
		23	More than 20	0	0	211	4	268	5	1,566	5																								
			Total	47	100	5,556	100	5,500	100	32,306	100																								
b. Between 6 and 10 pages	wrmednum	0	None	34	72	2,343	42	1,997	36	11,552	36	2.8	2.1 ***	-0.38	2.2 ***	-0.43	2.2 ***	-0.43																	
		1.5	1-2	9	19	1,851	33	2,048	37	12,182	38																								
	(Recorded version of wrmed created by NSSE. Values are estimated number of papers, reports, etc.)	4	3-5	3	6	839	15	966	18	5,506	17																								
		8	6-10	0	0	337	6	319	6	2,020	6																								
		13	11-15	1	2	104	2	104	2	619	2																								
		18	16-20	0	0	39	1	26	0	182	1																								
		23	More than 20	0	0	31	1	27	0	196	1																								
			Total	47	100	5,544	100	5,487	100	32,257	100																								

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				Frequency Distributions						Statistical Comparisons ^k									
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
Item wording or description	Variable name ^l	Values ^m	Response options	Your first-year students compared with															
c. 11 pages or more	wrlongnum	0	None	44	94	4,332	78	4,229	77	24,600	76	.4	.9	-.18	.8	-.16	.9	-.18	
	(Recoded version of wrlong created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2	1	2	787	14	884	16	5,249	16								
	4	3-5	1	2	198	4	195	4	1,163	4									
	8	6-10	0	0	111	2	82	1	582	2									
	13	11-15	1	2	89	2	71	1	428	1									
	18	16-20	0	0	21	0	14	0	103	0									
	23	More than 20	0	0	23	0	16	0	156	0									
	Total			47	100	5,561	100	5,491	100	32,281	100								
Estimated number of assigned pages of student writing.	wpages											24.3	47.3 **	-.33	48.3 **	-.38	50.3 **	-.38	
			(Continuous variable, recoded and summed by NSSE from wrshort, wrmed, and wrlong. Values are estimated pages of assigned writing.)										▼		▼		▼		
8. During the current school year, about how often have you had discussions with people from the following groups?																			
a. People of a race or ethnicity other than your own	DDrace	1	Never	4	9	219	4	252	5	1,300	4	3.0	3.2	-.15	3.1	-.04	3.1	-.09	
		2	Sometimes	11	24	1,146	21	1,379	25	7,458	23								
		3	Often	11	24	1,745	31	1,663	30	10,122	31								
		4	Very often	20	43	2,454	44	2,206	40	13,454	42								
			Total	46	100	5,564	100	5,500	100	32,334	100								
b. People from an economic background other than your own	DDeconomic	1	Never	1	2	219	4	204	4	1,258	4	3.2	3.1	.05	3.1	.11	3.1	.09	
		2	Sometimes	10	21	1,125	20	1,263	23	7,081	22								
		3	Often	16	34	1,941	35	1,962	36	11,496	36								
		4	Very often	20	43	2,275	41	2,066	38	12,456	39								
			Total	47	100	5,560	100	5,495	100	32,291	100								
c. People with religious beliefs other than your own	DDreligion	1	Never	2	4	297	5	448	8	1,934	6	3.3	3.1	.23	2.9 *	.36	3.0 *	.29	
		2	Sometimes	4	9	1,285	23	1,431	26	7,976	25								
		3	Often	20	43	1,736	31	1,681	31	10,282	32								
		4	Very often	21	45	2,236	40	1,940	35	12,121	38								
			Total	47	100	5,554	100	5,500	100	32,313	100								
d. People with political views other than your own	DDpolitical	1	Never	0	0	323	6	321	6	2,107	7	3.2	3.0	.23	2.9 *	.30	2.9 *	.31	
		2	Sometimes	12	26	1,387	25	1,542	28	9,041	28								
		3	Often	12	26	1,781	32	1,776	32	10,270	32								
		4	Very often	22	48	2,072	37	1,863	34	10,914	34								
			Total	46	100	5,563	100	5,502	100	32,332	100								

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Item wording or description				Frequency Distributions								Statistical Comparisons ^k																							
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020			
				Count		%		Count		%		Count		%		Count		%		Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ							
Variable name ^l		Values ^m		Response options		Your first-year students compared with																													
9. During the current school year, about how often have you done the following?																																			
a. Identified key information from reading assignments				LSreading		1 Never		1 2		127 2		93 2		567 2		3.0		3.0		-.07		3.0		-.06		3.1		-.10							
				2 Sometimes		11 23		1,221 22		1,238 23		6,769 21																							
				3 Often		23 49		2,540 46		2,588 47		15,426 48																							
				4 Very often		12 26		1,671 30		1,575 29		9,545 30																							
				Total		47 100		5,559 100		5,494 100		32,307 100																							
b. Reviewed your notes after class				LSnotes		1 Never		2 4		178 3		216 4		1,188 4		3.1		3.1		.04		3.0		.12		3.0		.09							
				2 Sometimes		12 26		1,338 24		1,487 27		8,253 26																							
				3 Often		12 26		1,955 35		1,890 34		11,372 35																							
				4 Very often		21 45		2,083 38		1,899 35		11,465 36																							
				Total		47 100		5,554 100		5,492 100		32,278 100																							
c. Summarized what you learned in class or from course materials				LSsummary		1 Never		2 4		288 5		328 6		1,677 5		2.9		2.9		-.04		2.9		.05		2.9		.01							
				2 Sometimes		15 32		1,447 26		1,572 29		9,124 28																							
				3 Often		15 32		2,103 38		2,078 38		12,177 38																							
				4 Very often		15 32		1,724 31		1,521 28		9,339 29																							
				Total		47 100		5,562 100		5,499 100		32,317 100																							
10. During the current school year, to what extent have your courses challenged you to do your best work?																																			
				challenge		1 Not at all		0 0		38 1		41 1		220 1		5.8		5.5		.21		5.6		.20		5.6		.21							
				2		0 0		70 1		52 1		315 1																							
				3		1 2		246 4		203 4		1,172 4																							
				4		2 4		568 10		516 9		3,181 10																							
				5		18 39		1,693 30		1,711 31		10,256 32																							
				6		9 20		1,415 25		1,568 29		8,892 28																							
				7 Very much		16 35		1,528 27		1,402 26		8,248 26																							
				Total		46 100		5,558 100		5,493 100		32,284 100																							
11. Which of the following have you done or do you plan to do before you graduate?^o																																			
a. Participate in an internship, co-op, field experience, student teaching, or clinical placement				intern		Have not decided		7 15		568 10		533 10		3,251 10		2%		8%		-.29		7%		-.25		7%		-.26							
				(Means indicate the percentage who responded "Done or in progress.")		Do not plan to do		3 6		172 3		169 3		1,120 3																					
						Plan to do		36 77		4,363 78		4,406 80		25,552 79																					
						Done or in progress		1 2		456 8		391 7		2,384 7																					
						Total		47 100		5,559 100		5,499 100		32,307 100																					

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

			Frequency Distributions								Statistical Comparisons ^k							
			Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Your first-year students compared with					
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ
b. Hold a formal leadership role in a student organization or group	leader	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	10	21	1,328	24	1,397	25	8,200	25	26%	12% **	.35	12% **	.36	11% **	.37
			Do not plan to do	11	23	1,113	20	1,103	20	6,348	20							
			Plan to do	14	30	2,450	44	2,352	43	14,067	44							
			Done or in progress	12	26	663	12	644	12	3,659	11							
			Total	47	100	5,554	100	5,496	100	32,274	100							
c. Participate in a learning community or some other formal program where groups of students take two or more classes together	learncom	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	18	38	1,610	29	1,621	30	10,049	31	13%	17%	-.13	18%	-.14	15%	-.06
			Do not plan to do	13	28	1,424	26	1,438	26	8,163	25							
			Plan to do	10	21	1,560	28	1,467	27	9,250	29							
			Done or in progress	6	13	958	17	967	18	4,786	15							
			Total	47	100	5,552	100	5,493	100	32,248	100							
d. Participate in a study abroad program	abroad	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	11	23	1,516	27	1,460	27	8,728	27	0%	3%	-.36	2%	-.29	3%	-.33
			Do not plan to do	16	34	1,323	24	1,437	26	7,918	25							
			Plan to do	20	43	2,526	46	2,470	45	14,752	46							
			Done or in progress	0	0	181	3	117	2	853	3							
			Total	47	100	5,546	100	5,484	100	32,251	100							
e. Work with a faculty member on a research project	research	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	11	23	1,477	27	1,414	26	8,864	27	9%	8%	.00	8%	.02	7%	.04
			Do not plan to do	9	19	691	12	622	11	3,811	12							
			Plan to do	23	49	2,917	53	3,026	55	17,231	53							
			Done or in progress	4	9	470	8	431	8	2,376	7							
			Total	47	100	5,555	100	5,493	100	32,282	100							
f. Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)	capstone	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	17	36	1,750	31	1,685	31	9,526	30	0%	3%	-.32	2%	-.26	2%	-.27
			Do not plan to do	8	17	515	9	524	10	2,724	8							
			Plan to do	22	47	3,154	57	3,188	58	19,461	60							
			Done or in progress	0	0	140	3	93	2	580	2							
			Total	47	100	5,559	100	5,490	100	32,291	100							

12. About how many of your courses at this institution have included a community-based project (service-learning)?

servcourse	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ
	1 None	18	38	2,923	53	2,882	53	16,192	50	1.7	1.6	.25	1.6	.25	1.6	.19
	2 Some	24	51	2,230	40	2,217	40	13,453	42							
	3 Most	5	11	314	6	319	6	2,132	7							
	4 All	0	0	80	1	65	1	454	1							
	Total	47	100	5,547	100	5,483	100	32,231	100							

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Your first-year students compared with				
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ		Effect size ⁿ		
														Mean	Effect size ⁿ	Mean	Effect size ⁿ	
13. Indicate the quality of your interactions with the following people at your institution.																		
a. Students	QIstudent	1	Poor	0	0	94	2	73	1	370	1	5.6	5.5	.04	5.5	.04	5.5	.03
		2		1	2	70	1	92	2	523	2							
		3		1	2	224	4	223	4	1,359	4							
		4		7	15	691	12	589	11	3,575	11							
		5		13	28	1,507	27	1,509	27	8,709	27							
		6		12	26	1,432	26	1,628	30	9,215	29							
		7	Excellent	13	28	1,512	27	1,357	25	8,374	26							
		—	Not applicable	0	0	32	1	27	0	191	1							
			Total	47	100	5,562	100	5,498	100	32,316	100							
b. Academic advisors	QIadvisor	1	Poor	0	0	152	3	152	3	777	2	5.8	5.4	.24	5.3 *	.32	5.4	.27
		2		0	0	195	4	209	4	1,165	4							
		3		5	11	357	6	377	7	2,184	7							
		4		2	4	697	13	745	14	4,073	13							
		5		10	21	1,110	20	1,148	21	6,710	21							
		6		11	23	1,163	21	1,212	22	7,217	22							
		7	Excellent	19	40	1,818	33	1,522	28	9,606	30							
		—	Not applicable	0	0	71	1	129	2	562	2							
			Total	47	100	5,563	100	5,494	100	32,294	100							
c. Faculty	QIfaculty	1	Poor	1	2	75	1	67	1	391	1	5.7	5.4	.20	5.3	.24	5.4	.16
		2		0	0	112	2	123	2	656	2							
		3		2	4	277	5	289	5	1,547	5							
		4		3	6	784	14	757	14	3,908	12							
		5		12	26	1,472	26	1,517	28	8,448	26							
		6		15	32	1,484	27	1,596	29	9,524	30							
		7	Excellent	13	28	1,307	24	1,112	20	7,548	23							
		—	Not applicable	1	2	49	1	34	1	262	1							
			Total	47	100	5,560	100	5,495	100	32,284	100							

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
												Your first-year students compared with							
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
d. Student services staff (career services, student activities, housing, etc.)	QIstaff	1	Poor	0	0	164	3	151	3	866	3	5.5	5.2	.19	5.2	.23	5.2	.19	
		2		0	0	174	3	191	3	1,002	3								
		3		3	6	336	6	349	6	1,976	6								
		4		7	15	707	13	737	13	4,123	13								
		5		9	19	1,237	22	1,206	22	7,309	23								
		6		11	23	1,179	21	1,305	24	7,379	23								
		7	Excellent	12	26	1,254	23	1,084	20	6,989	22								
		—	Not applicable	5	11	506	9	469	9	2,639	8								
Total				47	100	5,557	100	5,492	100	32,283	100								
e. Other administrative staff and offices (registrar, financial aid, etc.)	QIadmin	1	Poor	2	4	207	4	164	3	941	3	5.3	5.1	.16	5.1	.17	5.2	.12	
		2		0	0	205	4	239	4	1,193	4								
		3		3	7	387	7	388	7	2,136	7								
		4		6	13	786	14	796	14	4,465	14								
		5		11	24	1,243	22	1,224	22	7,261	22								
		6		11	24	1,110	20	1,176	21	7,106	22								
		7	Excellent	12	26	1,159	21	1,058	19	6,784	21								
		—	Not applicable	1	2	467	8	454	8	2,413	7								
Total				46	100	5,564	100	5,499	100	32,299	100								
14. How much does your institution emphasize the following?																			
a. Spending significant amounts of time studying and on academic work	empstudy	1	Very little	0	0	70	1	67	1	387	1	3.2	3.2	.02	3.2	.00	3.2	.00	
		2	Some	5	11	837	15	827	15	4,730	15								
		3	Quite a bit	27	57	2,560	46	2,442	45	14,733	46								
		4	Very much	15	32	2,087	38	2,148	39	12,415	38								
		Total				47	100	5,554	100	5,484	100								32,265
b. Providing support to help students succeed academically	SEacademic	1	Very little	1	2	146	3	154	3	828	3	3.1	3.2	-.09	3.1	-.03	3.1	-.07	
		2	Some	10	21	966	17	1,014	19	5,797	18								
		3	Quite a bit	20	43	2,328	42	2,393	44	13,636	42								
		4	Very much	16	34	2,111	38	1,920	35	11,974	37								
		Total				47	100	5,551	100	5,481	100								32,235
c. Using learning support services (tutoring services, writing center, etc.)	SElearnsup	1	Very little	1	2	222	4	197	4	1,203	4	3.4	3.2	.13	3.2	.18	3.2	.16	
		2	Some	6	13	761	14	828	15	4,753	15								
		3	Quite a bit	15	32	1,977	36	2,057	38	11,861	37								
		4	Very much	25	53	2,586	47	2,396	44	14,408	45								
		Total				47	100	5,546	100	5,478	100								32,225

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
												Your first-year students compared with							
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
d. Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)	SEdiverse	1	Very little	3	6	542	10	670	12	3,297	10	2.7	2.8	-.09	2.7	.05	2.8	-.05	
		2	Some	17	36	1,498	27	1,667	30	8,861	27								
		3	Quite a bit	16	34	1,875	34	1,811	33	11,266	35								
		4	Very much	11	23	1,642	30	1,337	24	8,831	27								
		Total		47	100	5,557	100	5,485	100	32,255	100								
e. Providing opportunities to be involved socially	SEsocial	1	Very little	1	2	251	5	262	5	1,539	5	3.0	3.1	-.05	3.0	.05	3.0	.03	
		2	Some	12	26	1,083	20	1,215	22	6,911	21								
		3	Quite a bit	18	38	2,161	39	2,254	41	13,164	41								
		4	Very much	16	34	2,054	37	1,739	32	10,585	33								
		Total		47	100	5,549	100	5,470	100	32,199	100								
f. Providing support for your overall well-being (recreation, health care, counseling, etc.)	SEwellness	1	Very little	1	2	293	5	350	6	1,863	6	3.0	3.1	-.02	3.0	.09	3.0	.06	
		2	Some	13	28	1,105	20	1,239	23	7,085	22								
		3	Quite a bit	16	34	2,136	38	2,171	40	12,831	40								
		4	Very much	17	36	2,017	36	1,719	31	10,446	32								
		Total		47	100	5,551	100	5,479	100	32,225	100								
g. Helping you manage your non-academic responsibilities (work, family, etc.)	SEnonacad	1	Very little	12	26	1,183	21	1,276	23	6,894	21	2.2	2.4	-.22	2.3	-.12	2.3	-.18	
		2	Some	20	43	1,946	35	2,090	38	11,958	37								
		3	Quite a bit	10	21	1,516	27	1,393	25	8,646	27								
		4	Very much	5	11	900	16	724	13	4,715	15								
		Total		47	100	5,545	100	5,483	100	32,213	100								
h. Attending campus activities and events (performing arts, athletic events, etc.)	SEactivities	1	Very little	3	6	367	7	407	7	2,490	8	2.9	3.0	-.11	2.9	.02	2.9	.00	
		2	Some	14	30	1,213	22	1,427	26	8,198	25								
		3	Quite a bit	16	34	2,152	39	2,201	40	12,559	39								
		4	Very much	14	30	1,811	33	1,443	26	8,964	28								
		Total		47	100	5,543	100	5,478	100	32,211	100								
i. Attending events that address important social, economic, or political issues	SEevents	1	Very little	10	21	825	15	877	16	4,791	15	2.3	2.6	-.22	2.5	-.13	2.5	-.19	
		2	Some	19	40	1,907	34	2,068	38	11,527	36								
		3	Quite a bit	10	21	1,744	31	1,682	31	10,270	32								
		4	Very much	8	17	1,069	19	860	16	5,648	18								
		Total		47	100	5,545	100	5,487	100	32,236	100								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Your first-year students compared with		Mean	Effect size ⁿ	Mean	Effect size ⁿ
														Effect size ⁿ	Effect size ⁿ				
15. To what extent do you agree or disagree with the following statements?																			
a. I feel comfortable being myself at this institution.	SBmyself	1	Strongly disagree	0	0	80	2	57	2	376	2	3.4	3.3	.06	3.3	.12	3.3	.12	
		2	Disagree	1	2	245	6	214	8	1,456	7								
		3	Agree	28	60	2,021	50	1,441	51	10,230	52								
		4	Strongly agree	18	38	1,719	42	1,122	40	7,677	39								
			Total	47	100	4,065	100	2,834	100	19,739	100								
b. I feel valued by this institution.	SBvalued	1	Strongly disagree	0	0	149	4	108	4	645	3	3.1	3.0	.14	3.0	.21	3.0	.17	
		2	Disagree	5	11	599	15	465	16	3,128	16								
		3	Agree	30	64	2,244	55	1,600	56	11,092	56								
		4	Strongly agree	12	26	1,069	26	659	23	4,850	25								
			Total	47	100	4,061	100	2,832	100	19,715	100								
c. I feel like part of the community at this institution.	SBcommunity	1	Strongly disagree	0	0	153	4	96	3	687	3	3.2	3.1	.16	3.0	.22	3.0	.19	
		2	Disagree	6	13	608	15	469	17	3,161	16								
		3	Agree	26	55	2,106	52	1,522	54	10,458	53								
		4	Strongly agree	15	32	1,202	30	745	26	5,435	28								
			Total	47	100	4,069	100	2,832	100	19,741	100								
16. About how many hours do you spend in a typical 7-day week doing the following?																			
a. Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)	tmprephrs	0	0 hrs	0	0	18	0	8	0	83	0	15.6	15.6	-.01	16.8	-.14	16.4	-.10	
		3	1-5 hrs	4	9	600	11	418	8	2,831	9								
		8	6-10 hrs	10	21	1,093	20	965	18	5,788	18								
		13	11-15 hrs	11	23	1,232	22	1,186	22	6,925	21								
		18	16-20 hrs	9	19	1,112	20	1,216	22	6,993	22								
		23	21-25 hrs	8	17	731	13	788	14	4,616	14								
		28	26-30 hrs	3	6	378	7	434	8	2,435	8								
		33	More than 30 hrs	2	4	383	7	462	8	2,549	8								
			Total	47	100	5,547	100	5,477	100	32,220	100								
b. Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)	tmcocurrhrs	0	0 hrs	10	21	1,726	31	1,605	29	8,957	28								6.0
		3	1-5 hrs	18	38	1,911	35	2,050	37	11,581	36								
		8	6-10 hrs	11	23	902	16	906	17	5,379	17								
		13	11-15 hrs	4	9	501	9	479	9	2,984	9								
		18	16-20 hrs	2	4	241	4	237	4	1,720	5								
		23	21-25 hrs	1	2	131	2	110	2	824	3								
		28	26-30 hrs	1	2	49	1	39	1	316	1								
		33	More than 30 hrs	0	0	77	1	60	1	414	1								
			Total	47	100	5,538	100	5,486	100	32,175	100								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

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				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Your first-year students compared with				
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ		Mean	Effect size ⁿ	
														Mean	Effect size ⁿ		Mean	Effect size ⁿ
c. Working for pay on campus	tmworkonhrs	0	0 hrs	34	74	4,685	84	4,305	79	25,004	78	2.4	1.9	.09	2.5	-.02	2.4	.01
	(Recoded version of tmworkon created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	1	2	146	3	194	4	1,617	5							
	8	6-10 hrs	9	20	229	4	370	7	2,525	8								
	13	11-15 hrs	1	2	233	4	292	5	1,547	5								
	18	16-20 hrs	0	0	148	3	227	4	949	3								
	23	21-25 hrs	1	2	61	1	53	1	303	1								
	28	26-30 hrs	0	0	22	0	18	0	96	0								
	33	More than 30 hrs	0	0	23	0	18	0	142	0								
	Total		46	100	5,547	100	5,477	100	32,183	100								
d. Working for pay off campus	tmworkoffhrs	0	0 hrs	28	61	3,998	72	3,968	72	23,332	72	4.8	4.6	.02	4.2	.06	4.3	.06
	(Recoded version of tmworkoff created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	4	9	199	4	239	4	1,406	4							
	8	6-10 hrs	4	9	251	5	295	5	1,599	5								
	13	11-15 hrs	4	9	305	5	268	5	1,673	5								
	18	16-20 hrs	4	9	300	5	299	5	1,734	5								
	23	21-25 hrs	1	2	222	4	220	4	1,133	4								
	28	26-30 hrs	1	2	142	3	98	2	597	2								
	33	More than 30 hrs	0	0	137	2	106	2	745	2								
	Total		46	100	5,554	100	5,493	100	32,219	100								
Estimated number of hours working for pay	tmworkhrs		(Continuous variable created by NSSE)									7.0	6.5	.04	6.7	.03	6.6	.04
e. Doing community service or volunteer work	tmservicehrs	0	0 hrs	25	53	2,924	53	2,987	54	17,942	56	2.5	2.7	-.06	2.5	-.01	2.4	.00
	(Recoded version of tmservice created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	17	36	1,834	33	1,846	34	10,503	33							
	8	6-10 hrs	2	4	447	8	367	7	2,060	6								
	13	11-15 hrs	2	4	172	3	130	2	841	3								
	18	16-20 hrs	0	0	80	1	84	2	456	1								
	23	21-25 hrs	1	2	46	1	31	1	197	1								
	28	26-30 hrs	0	0	17	0	15	0	74	0								
	33	More than 30 hrs	0	0	28	1	29	1	156	0								
	Total		47	100	5,548	100	5,489	100	32,229	100								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Your first-year students compared with				
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ		Effect size ⁿ		
														Mean	Effect size ⁿ	Mean	Effect size ⁿ	
f. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)	tmrelaxhrs	0	0 hrs	0	0	105	2	81	1	553	2	14.0	12.2	.21	11.9	.25	11.8	.26
	(Recorded version of tmrelax created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	6	13	1,188	21	1,199	22	7,159	22							
	8	6-10 hrs	14	30	1,539	28	1,588	29	9,200	29								
	13	11-15 hrs	11	23	1,134	20	1,141	21	6,670	21								
	18	16-20 hrs	5	11	756	14	732	13	4,315	13								
	23	21-25 hrs	7	15	335	6	313	6	1,823	6								
	28	26-30 hrs	0	0	129	2	146	3	797	2								
	33	More than 30 hrs	4	9	366	7	293	5	1,716	5								
	Total		47	100	5,552	100	5,493	100	32,233	100								
	g. Providing care for dependents (children, parents, etc.)	tmcarehrs	0	0 hrs	37	79	4,541	82	4,519	82	26,024							
(Recorded version of tmcare created by NSSE. Values are estimated number of hours per week.)		3	1-5 hrs	8	17	438	8	460	8	2,920	9							
8		6-10 hrs	1	2	201	4	190	3	1,147	4								
13		11-15 hrs	0	0	143	3	125	2	771	2								
18		16-20 hrs	0	0	79	1	77	1	471	1								
23		21-25 hrs	1	2	53	1	42	1	256	1								
28		26-30 hrs	0	0	18	0	15	0	110	0								
33		More than 30 hrs	0	0	70	1	57	1	485	2								
Total			47	100	5,543	100	5,485	100	32,184	100								
h. Commuting to campus (driving, walking, etc.)		tmcommutehrs	0	0 hrs	15	32	2,098	38	2,261	41	14,619	45	4.1	4.4	-.06	3.8	.05	3.8
	(Recorded version of tmcommute created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	20	43	2,032	37	2,088	38	10,740	33							
	8	6-10 hrs	7	15	782	14	636	12	3,711	12								
	13	11-15 hrs	4	9	303	5	249	5	1,544	5								
	18	16-20 hrs	0	0	134	2	109	2	654	2								
	23	21-25 hrs	1	2	77	1	50	1	363	1								
	28	26-30 hrs	0	0	30	1	28	1	158	0								
	33	More than 30 hrs	0	0	101	2	72	1	461	1								
	Total		47	100	5,557	100	5,493	100	32,250	100								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k																							
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020			
Item wording or description	Variable name ^l	Values ^m	Response options	Count		%		Count		%		Count		%		Count		%		Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ									
				Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%																
17. Of the time you spend preparing for class in a typical 7-day week, about how much is on assigned reading?																																			
	reading	1	Very little	9	19	1,102	20	826	15	4,269	13	2.2	2.4	-.16	2.5 *	-.28	2.6 **	-.35																	
		2	Some	24	51	2,171	39	2,157	39	12,330	38																								
		3	About half	9	19	1,424	26	1,499	27	9,063	28																								
		4	Most	4	9	647	12	778	14	5,012	16																								
		5	Almost all	1	2	203	4	224	4	1,555	5																								
			Total	47	100	5,547	100	5,484	100	32,229	100																								
	tmreadinghrs	<i>(Continuous variable created by NSSE. Calculated as a proportion of tmprephrs based on reading, where Very little=.10; Some=.25; About half=.50; Most=.75; Almost all=.90)</i>																																	
												5.3	5.9	-.12	6.7	-.25	6.9	-.28																	
	tmreadinghrscol	1	0 hrs	0	0	18	0	8	0	82	0																								
	<i>(Collapsed version of tmreadinghrs created by NSSE.)</i>	2	More than zero, up to 5 hrs	33	70	3,132	57	2,789	51	15,677	49																								
		3	More than 5, up to 10 hrs	9	19	1,511	27	1,598	29	9,715	30																								
		4	More than 10, up to 15 hrs	2	4	437	8	544	10	3,397	11																								
		5	More than 15, up to 20 hrs	1	2	220	4	272	5	1,747	5																								
		6	More than 20, up to 25 hrs	1	2	160	3	171	3	1,105	3																								
		7	More than 25 hrs	1	2	49	1	74	1	398	1																								
			Total	47	100	5,527	100	5,456	100	32,121	100																								
18. How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?																																			
a. Writing clearly and effectively	pgwrite	1	Very little	8	17	472	8	513	9	2,515	8	2.4	2.8 **	-.43	2.7 *	-.34	2.8 **	-.43																	
		2	Some	18	38	1,625	29	1,767	32	9,614	30																								
		3	Quite a bit	16	34	2,187	39	2,159	39	13,374	42																								
		4	Very much	5	11	1,271	23	1,044	19	6,695	21																								
			Total	47	100	5,555	100	5,483	100	32,198	100																								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Your first-year students compared with				
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ		Mean	Effect size ⁿ	
														Mean	Effect size ⁿ		Mean	Effect size ⁿ
b. Speaking clearly and effectively	pgspeak	1	Very little	4	9	727	13	779	14	3,980	12	2.8	2.6	.14	2.5	.24	2.6	.17
		2	Some	13	28	1,773	32	1,918	35	10,651	33							
		3	Quite a bit	20	43	1,883	34	1,813	33	11,553	36							
		4	Very much	10	21	1,170	21	971	18	6,037	19							
		Total		47	100	5,553	100	5,481	100	32,221	100							
c. Thinking critically and analytically	pgthink	1	Very little	0	0	168	3	175	3	870	3	3.2	3.1	.12	3.1	.14	3.1	.11
		2	Some	9	19	986	18	1,020	19	5,633	17							
		3	Quite a bit	19	40	2,407	43	2,384	43	14,213	44							
		4	Very much	19	40	1,991	36	1,910	35	11,508	36							
		Total		47	100	5,552	100	5,489	100	32,224	100							
d. Analyzing numerical and statistical information	pganalyze	1	Very little	1	2	362	7	353	6	2,040	6	3.2	2.9 *	.29	2.9 *	.29	2.9 *	.29
		2	Some	7	15	1,368	25	1,350	25	7,989	25							
		3	Quite a bit	22	47	2,229	40	2,191	40	12,919	40							
		4	Very much	17	36	1,594	29	1,593	29	9,292	29							
		Total		47	100	5,553	100	5,487	100	32,240	100							
e. Acquiring job- or work-related knowledge and skills	pgwork	1	Very little	4	9	849	15	845	15	4,776	15	2.6	2.6	.04	2.5	.09	2.5	.06
		2	Some	18	38	1,842	33	1,913	35	11,079	34							
		3	Quite a bit	18	38	1,782	32	1,794	33	10,576	33							
		4	Very much	7	15	1,081	19	934	17	5,784	18							
		Total		47	100	5,554	100	5,486	100	32,215	100							
f. Working effectively with others	pgothers	1	Very little	0	0	392	7	411	7	2,009	6	3.0	2.9	.16	2.8	.24	2.9	.16
		2	Some	14	30	1,439	26	1,574	29	8,570	27							
		3	Quite a bit	18	39	2,266	41	2,252	41	13,415	42							
		4	Very much	14	30	1,456	26	1,252	23	8,241	26							
		Total		46	100	5,553	100	5,489	100	32,235	100							
g. Developing or clarifying a personal code of values and ethics	pgvalues	1	Very little	4	9	701	13	726	13	3,768	12	2.6	2.7	-.06	2.6	.00	2.7	-.06
		2	Some	20	43	1,571	28	1,676	31	9,523	30							
		3	Quite a bit	12	26	1,999	36	1,945	35	11,802	37							
		4	Very much	11	23	1,284	23	1,139	21	7,134	22							
		Total		47	100	5,555	100	5,486	100	32,227	100							

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

First-Year Students^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
												Your first-year students compared with							
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
h. Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	pgdiverse	1	Very little	1	2	527	9	646	12	3,076	10	2.7	2.8	-.11	2.7	.00	2.8	-.08	
		2	Some	22	47	1,530	28	1,644	30	9,170	28								
		3	Quite a bit	14	30	1,983	36	1,902	35	11,730	36								
		4	Very much	10	21	1,517	27	1,299	24	8,265	26								
		Total		47	100	5,557	100	5,491	100	32,241	100								
i. Solving complex real-world problems	pgprobsolve	1	Very little	1	2	629	11	624	11	3,587	11	2.9	2.7	.17	2.6	.24	2.7	.21	
		2	Some	16	34	1,730	31	1,873	34	10,510	33								
		3	Quite a bit	19	40	1,929	35	1,913	35	11,468	36								
		4	Very much	11	23	1,278	23	1,075	20	6,678	21								
		Total		47	100	5,566	100	5,485	100	32,243	100								
j. Being an informed and active citizen	pgcitizen	1	Very little	5	11	703	13	746	14	4,029	12	2.5	2.7	-.14	2.6	-.05	2.6	-.10	
		2	Some	19	40	1,720	31	1,892	34	10,567	33								
		3	Quite a bit	16	34	1,877	34	1,779	32	11,044	34								
		4	Very much	7	15	1,265	23	1,078	20	6,640	21								
		Total		47	100	5,565	100	5,495	100	32,280	100								
19. How would you evaluate your entire educational experience at this institution?																			
	evalexp	1	Poor	0	0	96	2	97	2	531	2	3.4	3.2	.24	3.2 *	.29	3.2	.26	
		2	Fair	4	9	685	12	725	13	4,141	13								
		3	Good	21	45	2,759	49	2,816	51	16,183	50								
		4	Excellent	22	47	2,035	37	1,870	34	11,471	35								
		Total		47	100	5,575	100	5,508	100	32,326	100								
20. If you could start over again, would you go to the same institution you are now attending?																			
	sameinst	1	Definitely no	0	0	221	4	196	4	1,126	3	3.4	3.2	.20	3.2	.25	3.2	.25	
		2	Probably no	3	6	666	12	710	13	4,178	13								
		3	Probably yes	22	47	2,265	40	2,377	43	14,132	44								
		4	Definitely yes	22	47	2,450	44	2,240	41	12,996	40								
		Total		47	100	5,602	100	5,523	100	32,432	100								
21. Do you intend to return to this institution next year?^f																			
	returnexp		No	0	0	200	4	179	3	1,131	3	96%	91%	.20	90%	.22	90%	.24	
			Yes	45	96	5,080	91	4,975	90	29,019	90								
			Not sure	2	4	321	6	368	7	2,247	7								
			Total	47	100	5,601	100	5,522	100	32,397	100								
<i>(Means indicate the percentage who responded "Yes.")</i>																			

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k											
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Your seniors compared with			
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech	Southeast Public	Carnegie Class	NSSE 2019 & 2020	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ				
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean				
1. During the current school year, about how often have you done the following?																							
a. Asked questions or contributed to course discussions in other ways	askquest	1	Never	3	8	205	4	172	3	994	3	2.8	3.0	-.17	3.0	-.15	3.0	-.22					
		2	Sometimes	10	28	1,680	29	1,647	31	9,576	28												
		3	Often	13	36	1,866	33	1,749	33	10,943	32												
		4	Very often	10	28	1,986	35	1,795	33	12,405	37												
		Total		36	100	5,737	100	5,363	100	33,918	100												
b. Come to class without completing readings or assignments	unpreparedr <i>(Reverse-coded version of unprepared created by NSSE.)</i>	1	Very often	5	14	366	6	364	7	2,009	6	3.1	3.0	.16	3.0	.18	3.0	.14					
		2	Often	1	3	797	14	745	14	4,584	14												
		3	Sometimes	15	42	3,142	55	2,956	55	18,692	55												
		4	Never	15	42	1,434	25	1,293	24	8,650	25												
		Total		36	100	5,739	100	5,358	100	33,935	100												
c. Attended an art exhibit, play, or other arts performance (dance, music, etc.)	attendant	1	Never	22	61	2,760	48	2,444	46	15,090	44	1.5	1.7	-.23	1.8	-.27	1.8	-.29					
		2	Sometimes	10	28	2,123	37	2,072	39	13,232	39												
		3	Often	3	8	575	10	562	10	3,785	11												
		4	Very often	1	3	281	5	285	5	1,837	5												
		Total		36	100	5,739	100	5,363	100	33,944	100												
d. Asked another student to help you understand course material	CLaskhelp	1	Never	4	11	455	8	485	9	2,796	8	2.7	2.7	.02	2.6	.06	2.7	.03					
		2	Sometimes	11	31	2,182	38	2,055	38	12,695	37												
		3	Often	13	36	1,870	33	1,713	32	11,337	33												
		4	Very often	8	22	1,230	21	1,113	21	7,111	21												
		Total		36	100	5,737	100	5,366	100	33,939	100												
e. Explained course material to one or more students	CLexplain	1	Never	0	0	172	3	192	4	1,068	3	3.1	3.0	.08	2.9	.13	3.0	.11					
		2	Sometimes	8	22	1,525	27	1,514	28	9,204	27												
		3	Often	18	50	2,263	39	2,056	38	13,484	40												
		4	Very often	10	28	1,785	31	1,608	30	10,212	30												
		Total		36	100	5,745	100	5,370	100	33,968	100												

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
f. Prepared for exams by discussing or working through course material with other students	CLstudy	1	Never	5	14	632	11	740	14	4,028	12	2.7	2.7	-.07	2.6	.04	2.7	-.03	
		2	Sometimes	10	28	1,847	32	1,818	34	10,948	32								
		3	Often	13	36	1,699	30	1,527	28	10,254	30								
		4	Very often	8	22	1,564	27	1,283	24	8,729	26								
		Total		36	100	5,742	100	5,368	100	33,959	100								
g. Worked with other students on course projects or assignments	CLproject	1	Never	3	8	304	5	320	6	1,709	5	2.8	2.9	-.12	2.8	-.06	2.9	-.14	
		2	Sometimes	10	28	1,687	29	1,694	32	9,657	28								
		3	Often	15	42	2,116	37	1,906	36	12,945	38								
		4	Very often	8	22	1,638	29	1,445	27	9,654	28								
		Total		36	100	5,745	100	5,365	100	33,965	100								
h. Given a course presentation	present	1	Never	4	11	701	12	669	12	3,462	10	2.6	2.6	-.02	2.6	.03	2.7	-.09	
		2	Sometimes	12	33	2,114	37	2,066	38	11,973	35								
		3	Often	15	42	1,716	30	1,603	30	10,992	32								
		4	Very often	5	14	1,213	21	1,034	19	7,543	22								
		Total		36	100	5,744	100	5,372	100	33,970	100								
2. During the current school year, about how often have you done the following?																			
a. Combined ideas from different courses when completing assignments	RIintegrate	1	Never	0	0	199	3	183	3	1,119	3	2.8	3.0	-.24	2.9	-.24	2.9	-.22	
		2	Sometimes	16	44	1,553	27	1,395	26	9,382	28								
		3	Often	13	36	2,299	40	2,305	43	14,127	42								
		4	Very often	7	19	1,688	29	1,486	28	9,295	27								
		Total		36	100	5,739	100	5,369	100	33,923	100								
b. Connected your learning to societal problems or issues	RIsocietal	1	Never	7	19	533	9	425	8	2,657	8	2.3	2.7 *	-.42	2.7 **	-.45	2.7 **	-.46	
		2	Sometimes	16	44	2,092	36	1,997	37	12,431	37								
		3	Often	9	25	1,915	33	1,849	34	11,877	35								
		4	Very often	4	11	1,193	21	1,095	20	6,960	21								
		Total		36	100	5,733	100	5,366	100	33,925	100								
c. Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	RIDiverse	1	Never	13	36	1,046	18	877	16	4,934	15	1.9	2.4 ***	-.53	2.4 ***	-.57	2.5 ***	-.62	
		2	Sometimes	15	42	2,256	39	2,179	41	13,661	40								
		3	Often	7	19	1,536	27	1,473	28	9,849	29								
		4	Very often	1	3	903	16	827	15	5,479	16								
		Total		36	100	5,741	100	5,356	100	33,923	100								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k											
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Your seniors compared with			
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech	Southeast Public	Carnegie Class	NSSE 2019 & 2020	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ				
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean				
d. Examined the strengths and weaknesses of your own views on a topic or issue	RIownview	1	Never	2	6	358	6	327	6	1,898	6	2.8	2.8	.01	2.8	.05	2.8	.03					
		2	Sometimes	11	31	1,722	30	1,682	31	10,679	31												
		3	Often	15	42	2,377	41	2,288	43	14,421	43												
		4	Very often	8	22	1,286	22	1,068	20	6,925	20												
		Total		36	100	5,743	100	5,365	100	33,923	100												
e. Tried to better understand someone else's views by imagining how an issue looks from their perspective	RIderspect	1	Never	2	6	226	4	175	3	1,140	3	2.9	2.9	-.03	2.9	-.01	2.9	-.02					
		2	Sometimes	10	28	1,470	26	1,437	27	8,790	26												
		3	Often	13	36	2,438	43	2,354	44	15,069	44												
		4	Very often	11	31	1,600	28	1,384	26	8,905	26												
		Total		36	100	5,734	100	5,350	100	33,904	100												
f. Learned something that changed the way you understand an issue or concept	RInewview	1	Never	0	0	114	2	105	2	656	2	2.9	3.0	-.07	3.0	-.06	3.0	-.06					
		2	Sometimes	13	36	1,451	25	1,324	25	8,474	25												
		3	Often	12	33	2,492	43	2,461	46	15,318	45												
		4	Very often	11	31	1,672	29	1,465	27	9,416	28												
		Total		36	100	5,729	100	5,355	100	33,864	100												
g. Connected ideas from your courses to your prior experiences and knowledge	RIconnect	1	Never	0	0	42	1	48	1	274	1	3.1	3.2	-.17	3.2	-.18	3.2	-.17					
		2	Sometimes	8	22	916	16	761	14	5,080	15												
		3	Often	17	47	2,584	45	2,544	47	16,061	47												
		4	Very often	11	31	2,190	38	2,004	37	12,464	37												
		Total		36	100	5,732	100	5,357	100	33,879	100												
3. During the current school year, about how often have you done the following?																							
a. Talked about career plans with a faculty member	SFcareer	1	Never	2	6	680	12	752	14	4,006	12	2.9	2.6	.28	2.5 *	.39	2.6	.29					
		2	Sometimes	11	31	2,195	38	2,193	41	12,929	38												
		3	Often	12	33	1,516	26	1,327	25	9,162	27												
		4	Very often	11	31	1,345	23	1,087	20	7,810	23												
		Total		36	100	5,736	100	5,359	100	33,907	100												
b. Worked with a faculty member on activities other than coursework (committees, student groups, etc.)	SFotherwork	1	Never	7	19	1,898	33	1,866	35	10,844	32	2.5	2.2	.30	2.1 *	.36	2.2	.31					
		2	Sometimes	12	33	1,754	31	1,658	31	10,826	32												
		3	Often	8	22	1,080	19	1,013	19	6,761	20												
		4	Very often	9	25	998	17	824	15	5,459	16												
		Total		36	100	5,730	100	5,361	100	33,890	100												

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k													
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Your seniors compared with					
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech	Southeast Public	Carnegie Class	NSSE 2019 & 2020	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ			
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ							
c. Discussed course topics, ideas, or concepts with a faculty member outside of class	SFdiscuss	1	Never	3	8	1,178	21	1,195	22	6,387	19	2.5	2.3	.19	2.3	.29	2.4	.17							
		2	Sometimes	17	47	2,310	40	2,285	43	13,912	41														
		3	Often	10	28	1,306	23	1,196	22	8,424	25														
		4	Very often	6	17	918	16	685	13	5,115	15														
		Total		36	100	5,712	100	5,361	100	33,838	100														
d. Discussed your academic performance with a faculty member	SFperform	1	Never	3	8	1,055	18	1,271	24	6,600	19	2.6	2.3	.29	2.2 **	.46	2.3 *	.33							
		2	Sometimes	15	42	2,494	44	2,407	45	14,870	44														
		3	Often	11	31	1,351	24	1,094	20	7,899	23														
		4	Very often	7	19	830	14	588	11	4,522	13														
		Total		36	100	5,730	100	5,360	100	33,891	100														
4. During the current school year, how much has your coursework emphasized the following?																									
a. Memorizing course material	memorize	1	Very little	0	0	198	3	207	4	1,357	4	3.5	3.1 **	.49	3.0 **	.53	3.0 **	.54							
		2	Some	3	8	1,221	21	1,178	22	7,684	23														
		3	Quite a bit	13	36	2,315	40	2,223	42	13,957	41														
		4	Very much	20	56	1,996	35	1,741	33	10,883	32														
		Total		36	100	5,730	100	5,349	100	33,881	100														
b. Applying facts, theories, or methods to practical problems or new situations	HOapply	1	Very little	0	0	140	2	119	2	688	2	3.2	3.2	.06	3.1	.10	3.2	.05							
		2	Some	6	17	972	17	979	18	5,636	17														
		3	Quite a bit	16	46	2,494	44	2,399	45	15,073	45														
		4	Very much	13	37	2,119	37	1,859	35	12,474	37														
		Total		35	100	5,725	100	5,356	100	33,871	100														
c. Analyzing an idea, experience, or line of reasoning in depth by examining its parts	HOanalyze	1	Very little	0	0	187	3	197	4	1,009	3	3.0	3.1	-.09	3.0	-.04	3.1	-.09							
		2	Some	9	25	1,138	20	1,145	21	6,852	20														
		3	Quite a bit	18	50	2,458	43	2,297	43	14,546	43														
		4	Very much	9	25	1,939	34	1,708	32	11,423	34														
		Total		36	100	5,722	100	5,347	100	33,830	100														
d. Evaluating a point of view, decision, or information source	HOevaluate	1	Very little	5	14	407	7	417	8	2,159	6	2.7	2.9	-.15	2.8	-.08	2.9	-.16							
		2	Some	10	28	1,539	27	1,533	29	9,181	27														
		3	Quite a bit	11	31	2,233	39	2,113	40	13,713	41														
		4	Very much	10	28	1,537	27	1,282	24	8,786	26														
		Total		36	100	5,716	100	5,345	100	33,839	100														

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k													
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Your seniors compared with					
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Effect size ⁿ					
				Count	%	Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ				
e. Forming a new idea or understanding from various pieces of information	HOform	1	Very little	4	11	295	5	276	5	1,451	4	2.7	2.9	-.26	2.9	-.23	3.0	-.28							
		2	Some	9	25	1,371	24	1,302	24	8,116	24														
		3	Quite a bit	16	44	2,391	42	2,379	44	14,857	44														
		4	Very much	7	19	1,661	29	1,398	26	9,418	28														
		Total		36	100	5,718	100	5,355	100	33,842	100														
5. During the current school year, to what extent have your instructors done the following?																									
a. Clearly explained course goals and requirements	ETgoals	1	Very little	1	3	119	2	113	2	608	2	3.0	3.2	-.27	3.1	-.21	3.2	-.28							
		2	Some	9	25	926	16	951	18	5,437	16														
		3	Quite a bit	16	44	2,467	43	2,393	45	15,000	44														
		4	Very much	10	28	2,215	39	1,889	35	12,804	38														
		Total		36	100	5,727	100	5,346	100	33,849	100														
b. Taught course sessions in an organized way	ETorganize	1	Very little	1	3	205	4	170	3	1,079	3	2.9	3.1	-.20	3.1	-.17	3.1	-.22							
		2	Some	9	25	1,074	19	1,038	19	6,152	18														
		3	Quite a bit	18	50	2,491	44	2,480	46	15,295	45														
		4	Very much	8	22	1,952	34	1,659	31	11,303	33														
		Total		36	100	5,722	100	5,347	100	33,829	100														
c. Used examples or illustrations to explain difficult points	ETexample	1	Very little	0	0	150	3	115	2	759	2	3.1	3.2	-.11	3.2	-.09	3.2	-.13							
		2	Some	6	17	910	16	885	17	5,230	15														
		3	Quite a bit	20	56	2,323	41	2,258	42	14,038	41														
		4	Very much	10	28	2,335	41	2,095	39	13,817	41														
		Total		36	100	5,718	100	5,353	100	33,844	100														
d. Provided feedback on a draft or work in progress	ETdraftfb	1	Very little	2	6	626	11	658	12	3,316	10	2.8	2.8	.05	2.6	.16	2.8	.05							
		2	Some	11	31	1,657	29	1,755	33	10,055	30														
		3	Quite a bit	15	42	1,927	34	1,735	32	11,783	35														
		4	Very much	8	22	1,502	26	1,195	22	8,661	26														
		Total		36	100	5,712	100	5,343	100	33,815	100														
e. Provided prompt and detailed feedback on tests or completed assignments	ETfeedback	1	Very little	3	8	476	8	463	9	2,450	7	2.8	2.8	-.07	2.7	.03	2.8	-.08							
		2	Some	9	25	1,623	28	1,727	32	9,636	28														
		3	Quite a bit	18	50	2,134	37	1,966	37	13,304	39														
		4	Very much	6	17	1,491	26	1,190	22	8,454	25														
		Total		36	100	5,724	100	5,346	100	33,844	100														

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k											
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Your seniors compared with			
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech	Southeast Public	Carnegie Class	NSSE 2019 & 2020	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ				
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean				
6. During the current school year, about how often have you done the following?																							
a. Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	QRconclude	1	Never	4	11	296	5	288	5	1,587	5	2.9	2.9	.01	2.9	.04	2.9	.00					
		2	Sometimes	7	19	1,531	27	1,462	27	9,106	27												
		3	Often	13	36	2,284	40	2,160	40	13,587	40												
		4	Very often	12	33	1,605	28	1,429	27	9,506	28												
			Total	36	100	5,716	100	5,339	100	33,786	100												
b. Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	QRproblem	1	Never	7	19	875	15	782	15	4,735	14	2.5	2.6	-.09	2.6	-.10	2.6	-.12					
		2	Sometimes	11	31	1,915	34	1,816	34	11,490	34												
		3	Often	12	33	1,746	31	1,655	31	10,564	31												
		4	Very often	6	17	1,172	21	1,082	20	6,980	21												
			Total	36	100	5,708	100	5,335	100	33,769	100												
c. Evaluated what others have concluded from numerical information	QRevaluate	1	Never	5	14	617	11	550	10	3,316	10	2.7	2.6	.02	2.6	.02	2.7	-.01					
		2	Sometimes	11	31	1,947	34	1,874	35	11,471	34												
		3	Often	10	29	1,992	35	1,869	35	12,121	36												
		4	Very often	9	26	1,141	20	1,039	19	6,837	20												
			Total	35	100	5,697	100	5,332	100	33,745	100												
7. During the current school year, about how many papers, reports, or other writing tasks of the following lengths have you been assigned? (Include those not yet completed.)																							
a. Up to 5 pages	wrshortnum	0	None	10	28	576	10	435	8	2,517	7	4.4	6.5 *	-.34	7.1 **	-.42	7.1 **	-.43					
	(Recoded version of wrshort created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2	7	19	1,283	23	1,083	20	6,660	20												
		4	3-5	10	28	1,608	28	1,485	28	9,677	29												
		8	6-10	6	17	1,067	19	1,115	21	7,108	21												
		13	11-15	1	3	546	10	531	10	3,496	10												
		18	16-20	0	0	240	4	278	5	1,680	5												
		23	More than 20	2	6	378	7	407	8	2,604	8												
			Total	36	100	5,698	100	5,334	100	33,742	100												
b. Between 6 and 10 pages	wrmednum	0	None	19	53	1,840	32	1,549	29	9,114	27	1.5	3.1 ***	-.37	3.0 ***	-.37	3.2 ***	-.41					
	(Recoded version of wrmed created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2	11	31	1,875	33	1,936	36	11,808	35												
		4	3-5	3	8	1,092	19	1,075	20	7,410	22												
		8	6-10	3	8	506	9	466	9	3,259	10												
		13	11-15	0	0	199	3	183	3	1,145	3												
		18	16-20	0	0	81	1	63	1	464	1												
		23	More than 20	0	0	102	2	59	1	501	1												
			Total	36	100	5,695	100	5,331	100	33,701	100												

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

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				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
Item wording or description	Variable name ^l	Values ^m	Response options	Your seniors compared with															
c. 11 pages or more	wrlongnum	0	None	29	81	3,192	56	2,973	56	17,360	51	.9	1.7	-.23	1.5	-.19	1.7	-.24	
	(Recoded version of wrlong created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2	4	11	1,658	29	1,633	31	11,205	33								
	4	3-5	1	3	439	8	428	8	2,917	9									
	8	6-10	1	3	181	3	158	3	1,078	3									
	13	11-15	1	3	121	2	80	1	614	2									
	18	16-20	0	0	44	1	24	0	244	1									
	23	More than 20	0	0	70	1	41	1	360	1									
	Total			36	100	5,705	100	5,337	100	33,778	100								
Estimated number of assigned pages of student writing.	wpages											37.7	68.9 *	-.33	66.6 *	-.35	72.3 *	-.38	
			(Continuous variable, recoded and summed by NSSE from wrshort, wrmed, and wrlong. Values are estimated pages of assigned writing.)										▼		▼		▼		
8. During the current school year, about how often have you had discussions with people from the following groups?																			
a. People of a race or ethnicity other than your own	DDrace	1	Never	4	11	215	4	258	5	1,458	4	2.6	3.2 ***	-.69	3.0 **	-.45	3.1 **	-.55	
		2	Sometimes	15	42	1,066	19	1,448	27	7,816	23								
		3	Often	8	22	1,693	30	1,532	29	10,223	30								
		4	Very often	9	25	2,740	48	2,104	39	14,315	42								
			Total	36	100	5,714	100	5,342	100	33,812	100								
b. People from an economic background other than your own	DDeconomic	1	Never	1	3	180	3	201	4	1,216	4	2.9	3.2 *	-.33	3.1	-.16	3.1	-.22	
		2	Sometimes	11	31	1,077	19	1,256	24	7,265	22								
		3	Often	14	39	1,885	33	1,918	36	11,903	35								
		4	Very often	10	28	2,572	45	1,965	37	13,392	40								
			Total	36	100	5,714	100	5,340	100	33,776	100								
c. People with religious beliefs other than your own	DDreligion	1	Never	4	11	272	5	461	9	1,901	6	2.8	3.1 *	-.40	2.9	-.12	3.0	-.27	
		2	Sometimes	11	31	1,170	21	1,444	27	8,246	24								
		3	Often	10	28	1,758	31	1,611	30	10,705	32								
		4	Very often	11	31	2,505	44	1,824	34	12,946	38								
			Total	36	100	5,705	100	5,340	100	33,798	100								
d. People with political views other than your own	DDpolitical	1	Never	2	6	320	6	306	6	2,080	6	2.9	3.0	-.18	2.9	-.04	2.9	-.04	
		2	Sometimes	11	31	1,371	24	1,561	29	9,784	29								
		3	Often	11	31	1,738	30	1,734	32	10,566	31								
		4	Very often	11	31	2,292	40	1,739	33	11,383	34								
			Total	35	100	5,721	100	5,340	100	33,813	100								

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Seniors^a in Natural-Math Science

			Frequency Distributions								Statistical Comparisons ^k							
			Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
Item wording or description	Variable name ^l	Values ^m	Response options	Count		Count		Count		Count		Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ
				%	%	%	%	%	%	%	%							
b. Hold a formal leadership role in a student organization or group	leader	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	2	6	552	10	465	9	3,206	9	61%	43% *	.36	45% *	.33	45%	.32
			Do not plan to do	10	28	2,173	38	2,098	39	12,636	37							
			Plan to do	2	6	505	9	385	7	2,680	8							
			Done or in progress	22	61	2,480	43	2,386	45	15,258	45							
			Total	36	100	5,710	100	5,334	100	33,780	100							
c. Participate in a learning community or some other formal program where groups of students take two or more classes together	learncom	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	6	17	736	13	644	12	4,401	13	6%	26% **	-.59	26% **	-.60	26% **	-.59
			Do not plan to do	25	69	2,933	51	2,850	54	17,417	52							
			Plan to do	3	8	574	10	429	8	3,232	10							
			Done or in progress	2	6	1,460	26	1,397	26	8,684	26							
			Total	36	100	5,703	100	5,320	100	33,734	100							
d. Participate in a study abroad program	abroad	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	2	6	682	12	553	10	3,689	11	6%	17%	-.37	17%	-.37	18%	-.39
			Do not plan to do	30	83	3,570	63	3,534	66	21,630	64							
			Plan to do	2	6	501	9	360	7	2,501	7							
			Done or in progress	2	6	958	17	892	17	5,955	18							
			Total	36	100	5,711	100	5,339	100	33,775	100							
e. Work with a faculty member on a research project	research	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	4	11	694	12	606	11	3,800	11	54%	44%	.20	47%	.15	45%	.18
			Do not plan to do	8	23	1,547	27	1,514	28	9,741	29							
			Plan to do	4	11	954	17	724	14	4,916	15							
			Done or in progress	19	54	2,520	44	2,493	47	15,322	45							
			Total	35	100	5,715	100	5,337	100	33,779	100							
f. Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)	capstone	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	3	8	575	10	562	11	3,197	9	33%	41%	-.17	40%	-.14	46%	-.27
			Do not plan to do	11	31	1,419	25	1,403	26	7,709	23							
			Plan to do	10	28	1,348	24	1,220	23	7,243	21							
			Done or in progress	12	33	2,369	41	2,150	40	15,645	46							
			Total	36	100	5,711	100	5,335	100	33,794	100							

12. About how many of your courses at this institution have included a community-based project (service-learning)?

			Frequency Distributions								Statistical Comparisons ^k							
			Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
Item wording or description	Variable name ^l	Values ^m	Count		Count		Count		Count		Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
			%	%	%	%	%	%	%	%								
	servcourse		1 None	22	61	2,568	45	2,547	48	14,616	43	1.4	1.6 *	-.38	1.6 *	-.33	1.7 *	-.41
			2 Some	14	39	2,684	47	2,396	45	16,346	48							
			3 Most	0	0	357	6	308	6	2,252	7							
			4 All	0	0	94	2	85	2	540	2							
			Total	36	100	5,703	100	5,336	100	33,754	100							

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				Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Your seniors compared with				
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ		Effect size ⁿ		
														Mean	Effect size ⁿ	Mean	Effect size ⁿ	
13. Indicate the quality of your interactions with the following people at your institution.																		
a. Students	QIstudent	1	Poor	0	0	56	1	55	1	364	1	5.7	5.6	.03	5.5	.11	5.6	.05
		2		0	0	77	1	85	2	472	1							
		3		2	6	201	4	231	4	1,241	4							
		4		4	11	568	10	582	11	3,350	10							
		5		9	25	1,471	26	1,445	27	8,891	26							
		6		10	28	1,579	28	1,450	27	9,696	29							
		7	Excellent	11	31	1,720	30	1,426	27	9,519	28							
		—	Not applicable	0	0	40	1	66	1	285	1							
			Total	36	100	5,712	100	5,340	100	33,818	100							
b. Academic advisors	QIadvisor	1	Poor	0	0	298	5	297	6	1,505	4	5.6	5.1	.31	5.0 *	.33	5.2	.22
		2		2	6	352	6	319	6	1,708	5							
		3		2	6	464	8	491	9	2,560	8							
		4		4	11	791	14	686	13	4,230	13							
		5		8	22	1,067	19	1,030	19	6,112	18							
		6		4	11	1,078	19	1,008	19	6,798	20							
		7	Excellent	16	44	1,615	28	1,457	27	10,545	31							
		—	Not applicable	0	0	50	1	53	1	341	1							
			Total	36	100	5,715	100	5,341	100	33,799	100							
c. Faculty	QIfaculty	1	Poor	0	0	78	1	57	1	433	1	5.7	5.5	.19	5.5	.20	5.5	.14
		2		0	0	114	2	107	2	642	2							
		3		0	0	294	5	275	5	1,499	4							
		4		2	6	710	12	657	12	3,741	11							
		5		15	42	1,399	24	1,352	25	8,083	24							
		6		10	28	1,583	28	1,568	29	10,043	30							
		7	Excellent	9	25	1,501	26	1,301	24	9,205	27							
		—	Not applicable	0	0	34	1	24	0	162	0							
			Total	36	100	5,713	100	5,341	100	33,808	100							

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k								
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		
				Count		Count		Count		Count		Mean		Mean		Mean		Mean		
				%		%		%		%		Effect size ⁿ		Effect size ⁿ		Effect size ⁿ		Effect size ⁿ		
Item wording or description	Variable name ^l	Values ^m	Response options																	
d. Student services staff (career services, student activities, housing, etc.)	QIstaff	1	Poor	1	3	228	4	220	4	1,412	4	4.8	5.0	-.11	4.8	-.01	4.9	-.07		
		2		3	8	231	4	275	5	1,510	4									
		3		4	11	369	6	457	9	2,530	7									
		4		4	11	833	15	791	15	4,845	14									
		5		7	19	1,183	21	1,091	20	7,064	21									
		6		5	14	1,006	18	913	17	6,173	18									
		7	Excellent	7	19	1,058	19	832	16	5,881	17									
		—	Not applicable	5	14	808	14	758	14	4,383	13									
	Total	36	100	5,716	100	5,337	100	33,798	100											
e. Other administrative staff and offices (registrar, financial aid, etc.)	QIadmin	1	Poor	5	14	304	5	277	5	1,689	5	4.4	4.8	-.28	4.8	-.28	4.9	-.32		
		2		3	8	309	5	279	5	1,726	5									
		3		5	14	475	8	459	9	2,793	8									
		4		4	11	899	16	884	17	5,262	16									
		5		5	14	1,289	23	1,116	21	7,447	22									
		6		8	22	1,100	19	1,037	19	6,875	20									
		7	Excellent	6	17	1,016	18	952	18	6,207	18									
		—	Not applicable	0	0	326	6	337	6	1,823	5									
	Total	36	100	5,718	100	5,341	100	33,822	100											
14. How much does your institution emphasize the following?																				
a. Spending significant amounts of time studying and on academic work	empstudy	1	Very little	0	0	80	1	77	1	470	1	3.2	3.2	-.08	3.2	-.10	3.2	-.09		
		2	Some	6	17	849	15	754	14	4,890	14									
		3	Quite a bit	18	50	2,494	44	2,296	43	14,784	44									
		4	Very much	12	33	2,289	40	2,206	41	13,634	40									
			Total	36	100	5,712	100	5,333	100	33,778	100									
b. Providing support to help students succeed academically	SEacademic	1	Very little	0	0	255	4	242	5	1,470	4	2.7	3.0 *	-.38	2.9	-.31	3.0 *	-.39		
		2	Some	16	44	1,295	23	1,358	25	7,651	23									
		3	Quite a bit	16	44	2,396	42	2,257	42	14,370	43									
		4	Very much	4	11	1,755	31	1,473	28	10,261	30									
			Total	36	100	5,701	100	5,330	100	33,752	100									
c. Using learning support services (tutoring services, writing center, etc.)	SElearnsup	1	Very little	4	11	385	7	347	7	2,188	6	2.4	3.0 ***	-.59	2.9 **	-.54	3.0 ***	-.59		
		2	Some	16	44	1,235	22	1,280	24	7,532	22									
		3	Quite a bit	12	33	2,195	39	2,120	40	13,129	39									
		4	Very much	4	11	1,884	33	1,586	30	10,877	32									
			Total	36	100	5,699	100	5,333	100	33,726	100									

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k													
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Your seniors compared with					
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech	Southeast Public	Carnegie Class	NSSE 2019 & 2020	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ						
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean				
d. Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)	SEdiverse	1	Very little	6	17	809	14	1,004	19	4,989	15	2.4	2.7	-0.30	2.5	-0.13	2.6	-0.26							
		2	Some	15	42	1,695	30	1,742	33	10,578	31														
		3	Quite a bit	11	31	1,835	32	1,523	29	10,588	31														
		4	Very much	4	11	1,361	24	1,054	20	7,570	22														
		Total		36	100	5,700	100	5,323	100	33,725	100														
e. Providing opportunities to be involved socially	SEsocial	1	Very little	3	8	341	6	440	8	2,426	7	2.5	3.0 **	-0.49	2.8 *	-0.33	2.9 *	-0.39	▼						
		2	Some	15	42	1,301	23	1,441	27	8,683	26														
		3	Quite a bit	14	39	2,294	40	2,046	38	13,371	40														
		4	Very much	4	11	1,763	31	1,403	26	9,245	27														
		Total		36	100	5,699	100	5,330	100	33,725	100														
f. Providing support for your overall well-being (recreation, health care, counseling, etc.)	SEwellness	1	Very little	4	11	481	8	576	11	3,414	10	2.4	2.9 ***	-0.57	2.8 *	-0.41	2.8 **	-0.45	▼						
		2	Some	18	50	1,346	24	1,493	28	9,150	27														
		3	Quite a bit	11	31	2,199	39	1,946	37	12,443	37														
		4	Very much	3	8	1,674	29	1,315	25	8,699	26														
		Total		36	100	5,700	100	5,330	100	33,706	100														
g. Helping you manage your non-academic responsibilities (work, family, etc.)	SEnonacad	1	Very little	19	53	1,887	33	1,922	36	11,289	34	1.6	2.1 **	-0.47	2.0 *	-0.38	2.1 **	-0.45	▼						
		2	Some	11	31	1,977	35	1,967	37	12,178	36														
		3	Quite a bit	6	17	1,170	21	928	17	6,717	20														
		4	Very much	0	0	663	12	500	9	3,500	10														
		Total		36	100	5,697	100	5,317	100	33,684	100														
h. Attending campus activities and events (performing arts, athletic events, etc.)	SEactivities	1	Very little	4	11	587	10	695	13	4,342	13	2.5	2.8	-0.29	2.6	-0.13	2.6	-0.15							
		2	Some	14	39	1,575	28	1,706	32	10,341	31														
		3	Quite a bit	14	39	2,082	37	1,853	35	11,888	35														
		4	Very much	4	11	1,453	26	1,072	20	7,124	21														
		Total		36	100	5,697	100	5,326	100	33,695	100														
i. Attending events that address important social, economic, or political issues	SEevents	1	Very little	11	31	1,129	20	1,176	22	6,689	20	1.9	2.4 **	-0.44	2.3 *	-0.36	2.4 **	-0.43	▼						
		2	Some	17	47	2,168	38	2,137	40	12,945	38														
		3	Quite a bit	7	19	1,558	27	1,381	26	9,550	28														
		4	Very much	1	3	842	15	638	12	4,537	13														
		Total		36	100	5,697	100	5,332	100	33,721	100														

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k											
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Your seniors compared with			
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech	Southeast Public	Carnegie Class	NSSE 2019 & 2020	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ				
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Mean	Mean	Mean	Mean						
15. To what extent do you agree or disagree with the following statements?																							
a. I feel comfortable being myself at this institution.	SBmyself	1	Strongly disagree	2	6	86	2	83	3	505	2	3.1	3.4	-.31	3.3	-.22	3.3	-.24					
		2	Disagree	5	14	270	6	211	7	1,441	7												
	(Comparison data are limited to NSSE 2020.)	3	Agree	15	42	1,918	46	1,335	47	9,738	47												
		4	Strongly agree	14	39	1,929	46	1,227	43	8,853	43												
			Total	36	100	4,203	100	2,856	100	20,537	100												
b. I feel valued by this institution.	SBvalued	1	Strongly disagree	4	11	307	7	221	8	1,412	7	2.8	2.9	-.16	2.9	-.12	2.9	-.17					
		2	Disagree	8	22	853	20	632	22	4,160	20												
	(Comparison data are limited to NSSE 2020.)	3	Agree	17	47	2,041	49	1,362	48	10,126	49												
		4	Strongly agree	7	19	997	24	645	23	4,832	24												
			Total	36	100	4,198	100	2,860	100	20,530	100												
c. I feel like part of the community at this institution.	SBcommunity	1	Strongly disagree	4	11	227	5	191	7	1,141	6	2.8	3.0	-.27	2.9	-.16	3.0	-.24					
		2	Disagree	8	22	724	17	567	20	3,718	18												
	(Comparison data are limited to NSSE 2020.)	3	Agree	16	44	2,079	49	1,397	49	10,240	50												
		4	Strongly agree	8	22	1,173	28	707	25	5,446	27												
			Total	36	100	4,203	100	2,862	100	20,545	100												
16. About how many hours do you spend in a typical 7-day week doing the following?																							
a. Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)	tmprephrs	0	0 hrs	0	0	14	0	17	0	96	0	15.4	16.2	-.09	17.1	-.19	16.9	-.17					
		3	1-5 hrs	6	17	599	11	503	9	3,012	9												
	(Recorded version of tmprep created by NSSE. Values are estimated number of hours per week.)	8	6-10 hrs	5	14	1,137	20	947	18	6,311	19												
		13	11-15 hrs	6	17	1,188	21	1,020	19	6,742	20												
		18	16-20 hrs	8	22	1,082	19	1,059	20	6,638	20												
		23	21-25 hrs	7	19	730	13	678	13	4,425	13												
		28	26-30 hrs	4	11	387	7	475	9	2,786	8												
		33	More than 30 hrs	0	0	566	10	635	12	3,757	11												
			Total	36	100	5,703	100	5,334	100	33,767	100												
b. Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)	tmcocurrhrs	0	0 hrs	11	31	1,965	34	1,869	35	10,974	33	6.9	5.5	.21	5.2	.25	5.9	.14					
		3	1-5 hrs	8	22	1,821	32	1,770	33	10,744	32												
	(Recorded version of tmcocurr created by NSSE. Values are estimated number of hours per week.)	8	6-10 hrs	10	28	889	16	820	15	5,313	16												
		13	11-15 hrs	2	6	502	9	389	7	2,908	9												
		18	16-20 hrs	2	6	239	4	251	5	1,796	5												
		23	21-25 hrs	1	3	133	2	110	2	977	3												
		28	26-30 hrs	1	3	62	1	45	1	401	1												
		33	More than 30 hrs	1	3	87	2	80	1	605	2												
			Total	36	100	5,698	100	5,334	100	33,718	100												

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
c. Working for pay on campus	tmworkonhrs	0	0 hrs	20	56	3,897	68	3,102	58	20,024	59	4.5	4.2	.05	5.4	-.11	4.8	-.03	
	(Recorded version of tmworkon created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	7	19	246	4	311	6	2,596	8								
	8	6-10 hrs	2	6	507	9	634	12	4,276	13									
	13	11-15 hrs	3	8	443	8	491	9	3,034	9									
	18	16-20 hrs	3	8	369	6	569	11	2,514	7									
	23	21-25 hrs	0	0	115	2	117	2	673	2									
	28	26-30 hrs	0	0	52	1	52	1	254	1									
	33	More than 30 hrs	1	3	72	1	56	1	356	1									
	Total		36	100	5,701	100	5,332	100	33,727	100									
d. Working for pay off campus	tmworkoffhrs	0	0 hrs	20	56	2,756	48	2,703	51	16,968	50	7.4	10.3	-.23	9.4	-.16	9.3	-.16	
	(Recorded version of tmworkoff created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	4	11	268	5	258	5	1,790	5								
	8	6-10 hrs	1	3	364	6	373	7	2,398	7									
	13	11-15 hrs	1	3	394	7	391	7	2,481	7									
	18	16-20 hrs	4	11	506	9	475	9	3,114	9									
	23	21-25 hrs	2	6	415	7	329	6	2,286	7									
	28	26-30 hrs	3	8	345	6	258	5	1,518	4									
	33	More than 30 hrs	1	3	649	11	540	10	3,179	9									
	Total		36	100	5,697	100	5,327	100	33,734	100									
Estimated number of hours working for pay	tmworkhrs		(Continuous variable created by NSSE)								12.0	14.4	-.19	14.8	-.23	14.0	-.17		
e. Doing community service or volunteer work	tmservicehrs	0	0 hrs	19	53	2,383	42	2,304	43	15,170	45	2.5	3.8	-.22	3.3	-.16	3.4	-.16	
	(Recorded version of tmservice created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	11	31	2,132	37	2,086	39	12,581	37								
	8	6-10 hrs	4	11	626	11	546	10	3,260	10									
	13	11-15 hrs	2	6	270	5	204	4	1,283	4									
	18	16-20 hrs	0	0	134	2	103	2	682	2									
	23	21-25 hrs	0	0	54	1	41	1	316	1									
	28	26-30 hrs	0	0	27	0	13	0	127	0									
	33	More than 30 hrs	0	0	77	1	37	1	323	1									
	Total		36	100	5,703	100	5,334	100	33,742	100									

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

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				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Your seniors compared with				
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ		Effect size ⁿ		
														Mean	Effect size ⁿ	Mean	Effect size ⁿ	
f. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)	tmrelaxhrs	0	0 hrs	1	3	141	2	115	2	824	2	10.2	10.9	-.09	10.9	-.09	10.8	-.07
	(Recorded version of tmrelax created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	8	23	1,514	27	1,413	26	8,894	26							
	8	6-10 hrs	14	40	1,643	29	1,558	29	9,917	29								
	13	11-15 hrs	3	9	1,112	19	1,019	19	6,511	19								
	18	16-20 hrs	6	17	635	11	635	12	3,928	12								
	23	21-25 hrs	2	6	266	5	237	4	1,552	5								
	28	26-30 hrs	1	3	125	2	120	2	686	2								
	33	More than 30 hrs	0	0	274	5	238	4	1,432	4								
	Total		35	100	5,710	100	5,335	100	33,744	100								
g. Providing care for dependents (children, parents, etc.)	tmcarehrs	0	0 hrs	27	75	4,210	74	3,996	75	24,889	74	3.1	3.7	-.07	3.4	-.03	3.6	-.06
	(Recorded version of tmcare created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	2	6	520	9	523	10	3,343	10							
	8	6-10 hrs	3	8	266	5	224	4	1,509	4								
	13	11-15 hrs	2	6	182	3	138	3	922	3								
	18	16-20 hrs	0	0	89	2	79	1	602	2								
	23	21-25 hrs	1	3	55	1	51	1	365	1								
	28	26-30 hrs	0	0	32	1	34	1	206	1								
	33	More than 30 hrs	1	3	342	6	286	5	1,881	6								
	Total		36	100	5,696	100	5,331	100	33,717	100								
h. Commuting to campus (driving, walking, etc.)	tmcommutehrs	0	0 hrs	4	11	755	13	882	17	6,770	20	4.5	5.8	-.21	5.1	-.11	5.1	-.11
	(Recorded version of tmcommute created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	27	75	3,023	53	2,927	55	17,055	50							
	8	6-10 hrs	2	6	1,119	20	946	18	5,862	17								
	13	11-15 hrs	1	3	447	8	292	5	2,168	6								
	18	16-20 hrs	1	3	143	3	118	2	772	2								
	23	21-25 hrs	0	0	56	1	41	1	356	1								
	28	26-30 hrs	0	0	33	1	39	1	182	1								
	33	More than 30 hrs	1	3	131	2	95	2	618	2								
	Total		36	100	5,707	100	5,340	100	33,783	100								

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

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				Frequency Distributions						Statistical Comparisons ^k									
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ		Mean	Mean	Effect size ⁿ	
														Effect size ⁿ	Effect size ⁿ			Effect size ⁿ	Effect size ⁿ
17. Of the time you spend preparing for class in a typical 7-day week, about how much is on assigned reading?																			
	reading	1	Very little	13	36	1,184	21	969	18	5,764	17	2.0	2.4 *	-.37	2.5 **	-.46	2.6 **	-.49	
		2	Some	14	39	2,153	38	1,931	36	12,058	36		▼		▼		▼		
		3	About half	5	14	1,298	23	1,325	25	8,722	26								
		4	Most	3	8	774	14	829	16	5,409	16								
		5	Almost all	1	3	290	5	282	5	1,801	5								
			Total	36	100	5,699	100	5,336	100	33,754	100								
	tmreadinghrs											4.5	6.3 *	-.31	7.0 **	-.40	7.0 **	-.41	
	(Continuous variable created by NSSE. Calculated as a proportion of tmprphrs based on reading, where Very little=.10; Some=.25; About half=.50; Most=.75; Almost all=.90)																		
	tmreadinghrscol	1	0 hrs	0	0	14	0	16	0	92	0								
	(Collapsed version of tmreadinghrs created by NSSE.)	2	More than zero, up to 5 hrs	22	61	3,141	55	2,629	49	16,614	49								
		3	More than 5, up to 10 hrs	11	31	1,508	27	1,545	29	9,728	29								
		4	More than 10, up to 15 hrs	2	6	467	8	516	10	3,336	10								
		5	More than 15, up to 20 hrs	0	0	285	5	282	5	1,973	6								
		6	More than 20, up to 25 hrs	1	3	187	3	250	5	1,413	4								
		7	More than 25 hrs	0	0	83	1	84	2	515	2								
			Total	36	100	5,685	100	5,322	100	33,671	100								
18. How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?																			
a.	Writing clearly and effectively	pgwrite	1	Very little	5	14	379	7	394	7	1,980	6	2.9	3.0	-.10	2.9	-.04	3.0	-.11
			2	Some	8	22	1,320	23	1,306	24	7,682	23							
			3	Quite a bit	10	28	2,199	39	2,112	40	13,737	41							
			4	Very much	13	36	1,806	32	1,524	29	10,349	31							
				Total	36	100	5,704	100	5,336	100	33,748	100							

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k													
				Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020				Your seniors compared with					
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech	Southeast Public	Carnegie Class	NSSE 2019 & 2020	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ			
				Count	%	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ			
b. Speaking clearly and effectively	pgspeak	1	Very little	4	11	442	8	524	10	2,561	8	2.9	2.9	.01	2.8	.14	2.9	.03							
		2	Some	8	22	1,410	25	1,544	29	8,577	25														
		3	Quite a bit	11	31	2,056	36	1,848	35	12,611	37														
		4	Very much	13	36	1,788	31	1,416	27	9,991	30														
		Total		36	100	5,696	100	5,332	100	33,740	100														
c. Thinking critically and analytically	pgthink	1	Very little	0	0	115	2	130	2	611	2	3.5	3.3	.17	3.3	.19	3.4	.16							
		2	Some	1	3	638	11	637	12	3,711	11														
		3	Quite a bit	17	47	2,127	37	1,960	37	12,507	37														
		4	Very much	18	50	2,828	50	2,611	49	16,936	50														
		Total		36	100	5,708	100	5,338	100	33,765	100														
d. Analyzing numerical and statistical information	pganalyze	1	Very little	2	6	184	3	228	4	1,112	3	3.2	3.2	.02	3.2	.07	3.2	.02							
		2	Some	5	14	935	16	921	17	5,581	17														
		3	Quite a bit	12	33	2,090	37	1,934	36	12,244	36														
		4	Very much	17	47	2,497	44	2,248	42	14,828	44														
		Total		36	100	5,706	100	5,331	100	33,765	100														
e. Acquiring job- or work-related knowledge and skills	pgwork	1	Very little	1	3	604	11	592	11	3,414	10	2.9	2.8	.07	2.8	.09	2.8	.05							
		2	Some	12	33	1,587	28	1,519	28	9,179	27														
		3	Quite a bit	14	39	1,893	33	1,748	33	11,467	34														
		4	Very much	9	25	1,623	28	1,477	28	9,706	29														
		Total		36	100	5,707	100	5,336	100	33,766	100														
f. Working effectively with others	pgothers	1	Very little	3	8	253	4	307	6	1,497	4	2.9	3.0	-.11	2.9	.00	3.0	-.10							
		2	Some	8	22	1,231	22	1,295	24	7,316	22														
		3	Quite a bit	13	36	2,246	39	2,111	40	13,641	40														
		4	Very much	12	33	1,975	35	1,626	30	11,310	33														
		Total		36	100	5,705	100	5,339	100	33,764	100														
g. Developing or clarifying a personal code of values and ethics	pgvalues	1	Very little	9	25	742	13	716	13	4,045	12	2.6	2.8	-.20	2.7	-.15	2.8	-.22							
		2	Some	7	19	1,501	26	1,509	28	8,932	26														
		3	Quite a bit	11	31	1,894	33	1,725	32	11,430	34														
		4	Very much	9	25	1,569	27	1,383	26	9,333	28														
		Total		36	100	5,706	100	5,333	100	33,740	100														

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Natural-Math Science

Tennessee Technological University

Seniors^a in Natural-Math Science

				Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Your seniors compared with				
Item wording or description	Variable name ^l	Values ^m	Response options	Count		Count		Count		Count		Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ
				%	%	%	%	%	%									
h. Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	pgdiverse	1	Very little	7	20	624	11	712	13	3,543	10	2.6	2.8	-.25	2.7	-.11	2.8	-.23
		2	Some	9	26	1,479	26	1,593	30	9,343	28							
		3	Quite a bit	11	31	1,913	34	1,733	33	11,443	34							
		4	Very much	8	23	1,693	30	1,293	24	9,437	28							
		Total		35	100	5,709	100	5,331	100	33,766	100							
i. Solving complex real-world problems	pgprobsolve	1	Very little	6	17	525	9	509	10	3,010	9	2.8	2.8	-.08	2.8	-.03	2.8	-.07
		2	Some	7	19	1,552	27	1,546	29	9,392	28							
		3	Quite a bit	13	36	2,025	35	1,892	35	12,118	36							
		4	Very much	10	28	1,604	28	1,385	26	9,247	27							
		Total		36	100	5,706	100	5,332	100	33,767	100							
j. Being an informed and active citizen	pgcitizen	1	Very little	5	14	793	14	848	16	4,647	14	2.7	2.7	.01	2.6	.10	2.6	.02
		2	Some	11	31	1,764	31	1,775	33	10,619	31							
		3	Quite a bit	11	31	1,740	30	1,574	29	10,575	31							
		4	Very much	9	25	1,412	25	1,149	21	7,952	24							
		Total		36	100	5,709	100	5,346	100	33,793	100							
19. How would you evaluate your entire educational experience at this institution?																		
	evalexp	1	Poor	1	3	140	2	133	2	821	2	3.1	3.2	-.17	3.2	-.14	3.2	-.18
		2	Fair	5	14	736	13	689	13	4,232	13							
		3	Good	20	56	2,599	45	2,562	48	15,446	46							
		4	Excellent	10	28	2,240	39	1,964	37	13,344	39							
		Total		36	100	5,715	100	5,348	100	33,843	100							
20. If you could start over again, would you go to the same institution you are now attending?																		
	sameinst	1	Definitely no	3	8	261	5	274	5	1,724	5	2.9	3.2 *	-.36	3.2	-.28	3.2	-.29
		2	Probably no	10	28	743	13	766	14	4,624	14							
		3	Probably yes	10	28	2,193	38	2,199	41	13,833	41							
		4	Definitely yes	13	36	2,539	44	2,122	40	13,711	40							
		Total		36	100	5,736	100	5,361	100	33,892	100							

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Natural-Math Science

Tennessee Technological University

Natural-Math Science

First-Year Students^a

Seniors^a

Item wording or description	Variable name	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
22a. How many majors do you plan to complete? (Do not count minors.)	MAJnum	One	37	79	4,688	84	4,512	82	26,028	80	32	89	4,579	80	4,281	80	26,764	79
		More than one	10	21	914	16	1,005	18	6,425	20	4	11	1,147	20	1,071	20	7,118	21
		Total	47	100	5,602	100	5,517	100	32,453	100	36	100	5,726	100	5,352	100	33,882	100
First major or expected first major, in NSSE's default related-major categories. (This does not reflect any customization made for the Major Field Report.)	MAJfirstcol <i>(Recoded from MAJfirst.)</i>	Arts & Humanities	0	0	34	1	32	1	214	1	0	0	24	0	21	0	177	1
		Biological Sci., Agriculture, & Natural Resources	26	55	3,788	67	3,531	64	20,615	63	26	72	3,342	58	2,898	54	19,149	56
		Physical Sci., Mathematics, & Computer Science	14	30	916	16	1,038	19	6,124	19	7	19	1,239	21	1,229	23	7,753	23
		Social Sciences	1	2	76	1	104	2	575	2	1	3	127	2	174	3	807	2
		Business	0	0	19	0	18	0	147	0	0	0	22	0	36	1	165	0
		Communications, Media, & Public Relations	0	0	2	0	3	0	18	0	0	0	1	0	2	0	17	0
		Education	0	0	12	0	12	0	127	0	0	0	12	0	21	0	153	0
		Engineering	0	0	52	1	61	1	246	1	0	0	80	1	91	2	360	1
		Health Professions	6	13	720	13	737	13	4,431	14	1	3	881	15	894	17	5,296	16
		Social Service Professions	0	0	18	0	11	0	98	0	0	0	22	0	6	0	96	0
		All Other	0	0	5	0	7	0	59	0	1	3	13	0	9	0	73	0
		Undecided, Undeclared	0	0	1	0	1	0	10	0	0	0	0	0	0	0	2	0
		Total	47	100	5,643	100	5,555	100	32,664	100	36	100	5,763	100	5,381	100	34,048	100
Second major or expected second major, in NSSE's default related-major categories. (This does not reflect any customization made for the Major Field Report.)	MAJsecondcol <i>(Recoded from MAJsecond.)</i>	Arts & Humanities	2	20	72	8	105	11	758	12	1	25	96	9	145	14	822	12
		Biological Sci., Agriculture, & Natural Resources	5	50	216	24	215	22	1,304	21	1	25	227	20	234	22	1,383	20
		Physical Sci., Mathematics, & Computer Science	1	10	239	27	279	28	1,810	29	1	25	315	28	302	29	2,005	29
		Social Sciences	0	0	125	14	121	12	808	13	0	0	159	14	124	12	912	13
		Business	1	10	44	5	45	5	236	4	0	0	44	4	29	3	198	3
		Communications, Media, & Public Relations	0	0	4	0	3	0	31	0	0	0	5	0	6	1	42	1
		Education	0	0	14	2	18	2	160	3	0	0	21	2	33	3	213	3
		Engineering	0	0	22	2	17	2	142	2	0	0	26	2	19	2	104	1
		Health Professions	1	10	118	13	148	15	826	13	1	25	176	16	131	12	1,057	15
		Social Service Professions	0	0	30	3	18	2	112	2	0	0	15	1	14	1	87	1
		All Other	0	0	7	1	14	1	75	1	0	0	34	3	21	2	138	2
		Undecided, Undeclared	0	0	6	1	10	1	59	1	0	0	9	1	1	0	50	1
		Total	10	100	897	100	993	100	6,321	100	4	100	1,127	100	1,059	100	7,011	100
23. What is your class level?	class	Freshman/First-year	44	94	4,613	83	4,885	89	28,931	90	0	0	19	0	12	0	80	0
		Sophomore	3	6	730	13	487	9	2,582	8	0	0	68	1	50	1	367	1
		Junior	0	0	141	3	89	2	449	1	3	9	506	9	553	10	3,323	10
		Senior	0	0	19	0	5	0	64	0	30	86	4,972	87	4,601	86	29,261	87
		Unclassified	0	0	27	0	9	0	101	0	2	6	121	2	115	2	679	2
		Total	47	100	5,530	100	5,475	100	32,127	100	35	100	5,686	100	5,331	100	33,710	100

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Natural-Math Science

Tennessee Technological University

Natural-Math Science

First-Year Students^a

Seniors^a

Item wording or description	Variable name	Response options	NSSE 2019 & 2020								NSSE 2019 & 2020							
			Tennessee Tech		Southeast Public		Carnegie Class		2020		Tennessee Tech		Southeast Public		Carnegie Class		2020	
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
24a. How many courses are you taking for credit this current academic term?	coursenum	0	0	0	16	0	12	0	86	0	1	3	132	2	65	1	610	2
		1	0	0	16	0	16	0	107	0	3	9	153	3	115	2	861	3
		2	0	0	49	1	40	1	257	1	2	6	317	6	256	5	1,792	5
		3	0	0	110	2	119	2	1,041	3	3	9	536	9	428	8	3,543	10
		4	16	34	1,116	20	1,144	21	8,966	28	13	37	1,481	26	1,438	27	9,903	29
		5	16	34	2,022	36	1,992	36	11,063	34	11	31	1,599	28	1,565	29	9,101	27
		6	8	17	1,289	23	1,301	24	6,075	19	1	3	755	13	814	15	4,111	12
		7 or more	7	15	935	17	866	16	4,603	14	1	3	714	13	658	12	3,825	11
		Total	47	100	5,553	100	5,490	100	32,198	100	35	100	5,687	100	5,339	100	33,746	100
b. Of these, how many are taught mostly or entirely online (most or all interactions with instructors and students take place online)?	onlinenum20	0	30	64	2,218	55	1,907	68	13,458	69	23	66	2,307	55	1,636	57	12,826	63
		1	9	19	992	25	502	18	3,295	17	7	20	948	23	581	20	3,866	19
		2	5	11	415	10	180	6	1,135	6	3	9	411	10	231	8	1,562	8
		3	1	2	126	3	59	2	455	2	1	3	192	5	125	4	766	4
		4	1	2	95	2	57	2	531	3	0	0	140	3	133	5	640	3
		5	0	0	108	3	58	2	384	2	1	3	77	2	59	2	312	2
		6	0	0	49	1	32	1	174	1	0	0	38	1	39	1	186	1
		7 or more	1	2	38	1	21	1	154	1	0	0	52	1	46	2	253	1
		Total	47	100	4,041	100	2,816	100	19,586	100	35	100	4,165	100	2,850	100	20,411	100
Collapsed recode of courses taken online (Based on responses to coursenum and onlinenum20.)	onlinecscol20	No courses taken online	30	64	2,218	55	1,907	68	13,457	69	23	66	2,306	55	1,635	57	12,817	63
		Some courses taken online	15	32	1,559	39	737	26	4,886	25	11	31	1,429	34	833	29	5,614	28
		All courses taken online	2	4	264	7	172	6	1,242	6	1	3	427	10	381	13	1,968	10
		Total	47	100	4,041	100	2,816	100	19,585	100	35	100	4,162	100	2,849	100	20,399	100
25. What have most of your grades been up to now at this institution?	grades	C- or lower	2	4	85	2	80	1	486	2	0	0	35	1	17	0	148	0
		C	0	0	133	2	108	2	687	2	1	3	163	3	131	2	677	2
		C+	0	0	226	4	196	4	1,206	4	2	6	283	5	218	4	1,419	4
		B-	3	6	303	5	320	6	1,858	6	3	8	374	7	317	6	2,039	6
		B	10	21	754	14	830	15	4,669	15	7	19	972	17	895	17	5,623	17
		B+	3	6	876	16	848	15	5,290	16	5	14	949	17	847	16	5,785	17
		A-	6	13	1,150	21	1,138	21	7,096	22	8	22	942	17	1,057	20	6,756	20
		A	23	49	2,007	36	1,962	36	10,830	34	10	28	1,960	35	1,844	35	11,223	33
		Total	47	100	5,534	100	5,482	100	32,122	100	36	100	5,678	100	5,326	100	33,670	100
26. Did you begin college at this institution or elsewhere?	begincol	Started here	39	83	4,958	90	5,044	92	29,768	93	20	56	3,465	61	3,508	66	21,913	65
		Started elsewhere	8	17	547	10	419	8	2,265	7	16	44	2,193	39	1,810	34	11,685	35
		Total	47	100	5,505	100	5,463	100	32,033	100	36	100	5,658	100	5,318	100	33,598	100

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Natural-Math Science

Tennessee Technological University

Natural-Math Science

First-Year Students^a

Seniors^a

Item wording or description	Variable name	Response options	Tennessee Tech				Southeast Public				Carnegie Class				NSSE 2019 & 2020			
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%		
27. Since graduating from high school, which of the following types of schools have you attended <i>other than</i> the one you are now attending? (Select all that apply.)	attend_voc	Vocational or technical school	2	4	143	3	120	2	759	2	0	0	295	5	258	5	1,665	5
	attend_com	Community or junior college	9	19	568	10	505	9	2,619	8	10	28	1,908	34	1,712	32	11,169	33
	attend_col	4-year college or university other than this one	5	11	468	9	397	7	2,484	8	8	22	1,503	27	1,323	25	7,937	24
	attend_none	None	34	72	4,268	78	4,387	81	25,923	81	17	47	2,610	46	2,667	50	16,543	49
	attend_other	Other	1	2	140	3	139	3	792	2	1	3	168	3	135	3	948	3
28. What is the highest level of education you ever expect to complete?	edaspire	Some college but less than a bachelor's degree	5	11	360	7	319	6	1,944	6	3	8	312	5	289	5	1,818	5
		Bachelor's degree (B.A., B.S., etc.)	11	23	849	15	852	16	5,246	16	8	22	1,036	18	958	18	6,547	19
		Master's degree (M.A., M.S., etc.)	10	21	1,113	20	1,275	23	7,571	24	13	36	1,455	26	1,606	30	9,555	28
		Doctoral or professional degree (Ph.D., J.D., M.D., etc.)	21	45	3,179	58	3,016	55	17,257	54	12	33	2,870	51	2,470	46	15,723	47
		Total	47	100	5,501	100	5,462	100	32,018	100	36	100	5,673	100	5,323	100	33,643	100
29. What is the highest level of education completed by either of your parents (or those who raised you)?	parented	Did not finish high school	0	0	213	4	243	4	1,641	5	2	6	188	3	207	4	1,771	5
		High school diploma or G.E.D.	9	19	749	14	705	13	4,653	15	5	14	934	17	759	14	5,140	15
		Attended college, but did not complete degree	10	21	556	10	510	9	2,938	9	3	8	514	9	476	9	2,996	9
		Associate's degree (A.A., A.S., etc.)	5	11	513	9	440	8	2,722	9	2	6	530	9	413	8	2,967	9
		Bachelor's degree (B.A., B.S., etc.)	13	28	1,574	29	1,617	30	9,130	29	13	36	1,639	29	1,625	31	9,802	29
		Master's degree (M.A., M.S., etc.)	8	17	1,296	24	1,270	23	7,290	23	9	25	1,229	22	1,194	22	7,213	21
		Doctoral or professional degree (Ph.D., J.D., M.D., etc.)	2	4	594	11	666	12	3,557	11	2	6	626	11	634	12	3,669	11
		Total	47	100	5,495	100	5,451	100	31,931	100	36	100	5,660	100	5,308	100	33,558	100
First-generation status (Neither parent holds a bachelor's degree.)	firstgen (Recoded from parented.)	Not first-generation	23	49	3,464	63	3,553	65	19,977	63	24	67	3,494	62	3,453	65	20,684	62
		First-generation	24	51	2,031	37	1,898	35	11,954	37	12	33	2,166	38	1,855	35	12,874	38
		Total	47	100	5,495	100	5,451	100	31,931	100	36	100	5,660	100	5,308	100	33,558	100
30. What is your gender identity?	genderid	Man	12	26	1,440	26	1,593	29	9,127	28	13	36	1,720	30	1,766	33	10,630	32
		Woman	33	70	3,955	72	3,766	69	22,307	70	20	56	3,821	67	3,411	64	22,150	66
		Another gender identity	1	2	53	1	43	1	252	1	1	3	54	1	58	1	336	1
		I prefer not to respond	1	2	62	1	61	1	339	1	2	6	69	1	79	1	491	1
		Total	47	100	5,510	100	5,463	100	32,025	100	36	100	5,664	100	5,314	100	33,607	100
31. Enter your year of birth (e.g., 1994):	agecat (Recoded from the information entered in birthyear.)	19 or younger	44	94	5,137	94	5,024	93	29,784	94	0	0	134	2	80	2	498	1
		20-23	2	4	259	5	344	6	1,459	5	32	91	4,187	75	3,919	74	25,202	76
		24-29	0	0	40	1	28	1	273	1	1	3	771	14	809	15	4,570	14
		30-39	1	2	20	0	24	0	190	1	1	3	357	6	306	6	2,008	6
		40-55	0	0	17	0	5	0	108	0	0	0	134	2	136	3	903	3
		Over 55	0	0	2	0	0	0	9	0	1	3	29	1	28	1	148	0
		Total	47	100	5,475	100	5,425	100	31,823	100	35	100	5,612	100	5,278	100	33,329	100

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Natural-Math Science

Tennessee Technological University

Natural-Math Science

First-Year Students^a

Seniors^a

Item wording or description	Variable name	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
32a. Are you an international student? [If answered "yes"] Country of citizenship, collapsed into regions by NSSE. Responses to country are in the data file.	internat	No	46	98	5,336	97	5,265	97	30,490	95	35	97	5,469	97	5,150	97	32,239	96	
		Yes	1	2	164	3	190	3	1,469	5	1	3	181	3	154	3	1,316	4	
		Total	47	100	5,500	100	5,455	100	31,959	100	36	100	5,650	100	5,304	100	33,555	100	
	countrycol (Recoded from country.)	Africa Sub-Saharan	0	0	13	9	13	8	126	10	0	0	23	14	7	5	113	10	
		Asia	0	0	59	42	78	46	658	51	0	0	71	43	62	47	593	52	
		Canada	0	0	6	4	7	4	52	4	0	0	7	4	8	6	46	4	
		Europe	0	0	25	18	21	13	173	13	0	0	14	8	13	10	104	9	
		Latin America and Caribbean	0	0	24	17	34	20	202	16	1	100	40	24	30	23	196	17	
		Middle East and North Africa	0	0	9	6	10	6	60	5	0	0	10	6	10	8	62	5	
Oceania		0	0	3	2	4	2	17	1	0	0	0	0	2	2	20	2		
Unknown region/uncoded		0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0		
Total	0	0	139	100	168	100	1,290	100	1	100	165	100	132	100	1,134	100			
33. How would you describe yourself? (Select all that apply.)	re_amind	American Indian or Alaska Native	0	0	118	2	103	2	704	2	0	0	102	2	116	2	684	2	
	re_asian	Asian	3	7	591	11	670	12	4,450	14	0	0	571	10	476	9	4,330	13	
	re_black	Black or African American	4	9	1,095	20	620	11	3,525	11	2	6	883	16	445	8	2,873	9	
	re_latino	Hispanic or Latina/o	4	9	629	11	830	15	4,962	16	0	0	634	11	736	14	4,664	14	
	re_mena	Middle Eastern or N. African	0	0	125	2	112	2	635	2	0	0	104	2	91	2	613	2	
	re_pacific	Native Hawaiian/Other Pac. Islander	1	2	40	1	62	1	374	1	0	0	38	1	51	1	372	1	
	re_white	White	39	85	3,466	63	3,578	66	20,366	64	33	94	3,726	66	3,729	70	22,295	67	
	re_another	Another race or ethnicity	1	2	85	2	65	1	417	1	1	3	92	2	89	2	515	2	
	re_pnr	I prefer not to respond	1	2	98	2	113	2	683	2	1	3	137	2	171	3	996	3	
	Racial or ethnic identification	re_all19	American Indian or Alaska Native	0	0	20	0	21	0	144	0	0	0	30	1	24	0	163	0
		(Items re_amind to re_pnr recoded where each student is represented only once)	Asian	2	4	432	8	485	9	3,444	11	0	0	442	8	359	7	3,388	10
		re_pnr	Black or African American	3	7	896	16	482	9	2,654	8	1	3	751	13	345	7	2,258	7
		re_pnr	Hispanic or Latina/o	1	2	309	6	539	10	3,184	10	0	0	352	6	474	9	3,154	9
re_pnr		Middle Eastern or N. African	0	0	80	1	73	1	374	1	0	0	68	1	59	1	381	1	
re_pnr		Native Hawaiian/Other Pac. Islander	0	0	8	0	11	0	80	0	0	0	7	0	12	0	93	0	
re_pnr		White	35	76	2,944	54	3,086	57	17,439	55	31	89	3,262	58	3,301	62	19,575	58	
re_pnr		Another race or ethnicity	0	0	34	1	27	0	191	1	0	0	43	1	38	1	221	1	
re_pnr		Multiracial	4	9	664	12	609	11	3,678	12	2	6	559	10	521	10	3,288	10	
Total	I prefer not to respond	1	2	98	2	113	2	683	2	1	3	137	2	171	3	996	3		
Total		46	100	5,485	100	5,446	100	31,871	100	35	100	5,651	100	5,304	100	33,517	100		
34. Are you a member of a social fraternity or sorority?	greek	No	46	98	4,926	90	4,983	91	29,364	92	33	92	4,906	87	4,755	90	30,100	90	
		Yes	1	2	561	10	471	9	2,587	8	3	8	754	13	555	10	3,467	10	
		Total	47	100	5,487	100	5,454	100	31,951	100	36	100	5,660	100	5,310	100	33,567	100	

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Natural-Math Science

Tennessee Technological University

Natural-Math Science

			First-Year Students ^a								Seniors ^a							
			Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
Item wording or description	Variable name	Response options	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
35. Which of the following best describes where you are living while attending college?	living18	Campus housing (other than a fraternity or sorority house)	31	66	3,702	68	3,822	70	22,438	70	4	11	818	14	739	14	7,084	21
		Fraternity or sorority house	0	0	26	0	23	0	152	0	0	0	73	1	74	1	376	1
		House, apartment, or other residence within walking distance to campus	2	4	351	6	365	7	1,675	5	13	37	1,365	24	1,655	31	8,517	25
		House, apartment, or other residence farther than walk. dist. to campus	14	30	1,340	24	1,160	21	7,176	23	18	51	3,258	58	2,598	49	16,446	49
		Not applicable: No campus, entirely online program, etc.	0	0	43	1	56	1	343	1	0	0	122	2	227	4	963	3
		Not applicable: Homeless or in transition	0	0	15	0	8	0	75	0	0	0	11	0	11	0	92	0
		Total	47	100	5,477	100	5,434	100	31,859	100	35	100	5,647	100	5,304	100	33,478	100
36. Are you a student-athlete on a team sponsored by your institution's athletics department?	athlete	No	45	96	5,219	95	5,148	95	28,497	89	31	86	5,481	97	5,115	97	31,119	93
		Yes	2	4	253	5	297	5	3,389	11	5	14	167	3	177	3	2,376	7
		Total	47	100	5,472	100	5,445	100	31,886	100	36	100	5,648	100	5,292	100	33,495	100
37. Are you a current or former member of the U.S. Armed Forces, Reserves, or National Guard?	veteran	No	45	96	5,414	99	5,380	99	31,413	99	35	100	5,430	96	5,117	96	32,321	96
		Yes	2	4	66	1	58	1	478	1	0	0	228	4	186	4	1,187	4
		Total	47	100	5,480	100	5,438	100	31,891	100	35	100	5,658	100	5,303	100	33,508	100
38a. Have you been diagnosed with any disability or impairment?	disability	No	40	85	4,613	84	4,607	84	26,982	84	32	91	4,676	83	4,330	81	27,713	83
		Yes	5	11	674	12	669	12	3,814	12	3	9	777	14	811	15	4,688	14
		I prefer not to respond	2	4	207	4	184	3	1,156	4	0	0	212	4	174	3	1,181	4
		Total	47	100	5,494	100	5,460	100	31,952	100	35	100	5,665	100	5,315	100	33,582	100
b. [If answered "yes"] Which of the following has been diagnosed? (Select all that apply.)	dis_sense	A sensory impairment (vision or hearing)	0	0	88	13	102	15	536	14	1	33	85	11	98	12	525	11
		A mobility impairment	0	0	37	6	32	5	199	5	0	0	70	9	61	8	341	7
		A learning disability (e.g., ADHD, dyslexia)	2	40	259	39	238	36	1,383	36	2	67	337	43	308	38	1,855	40
		A mental health disorder	1	20	355	53	360	54	2,113	56	0	0	394	51	480	59	2,595	56
		A disability or impairment not listed above	2	40	124	18	125	19	704	19	0	0	168	22	126	16	839	18
		Disability or impairment	disability_all	A sensory impairment	0	0	56	1	66	1	336	1	1	3	34	1	57	1
	(Items dis_sense to dis_other recoded where each student is represented only once.)	A mobility impairment	0	0	16	0	12	0	87	0	0	0	38	1	28	1	155	0
		A learning disability	2	4	150	3	128	2	717	2	2	6	177	3	148	3	1,003	3
		A mental health disorder	1	2	224	4	228	4	1,293	4	0	0	216	4	285	5	1,568	5
		A disability or impairment not listed	2	4	73	1	77	1	416	1	0	0	94	2	62	1	444	1
		More than one disability or impairment	0	0	153	3	158	3	951	3	0	0	216	4	227	4	1,231	4
		No disability or impairment	40	85	4,613	84	4,607	84	26,982	84	32	91	4,676	83	4,330	82	27,713	83
		Prefer not to respond	2	4	207	4	184	3	1,156	4	0	0	212	4	174	3	1,181	4
		Total	47	100	5,492	100	5,460	100	31,938	100	35	100	5,663	100	5,311	100	33,557	100

NSSE 2020 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Natural-Math Science

Tennessee Technological University

Natural-Math Science

First-Year Students^a

Seniors^a

Item wording or description	Variable name	Response options	Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020		Tennessee Tech		Southeast Public		Carnegie Class		NSSE 2019 & 2020	
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
39. Which of the following best describes your sexual orientation?	sexorient17	Straight (heterosexual)	38	83	4,435	81	4,453	82	26,056	82	27	77	4,549	80	4,271	81	27,160	81
		Bisexual	5	11	455	8	446	8	2,511	8	4	11	455	8	384	7	2,423	7
		Gay	0	0	74	1	90	2	452	1	0	0	109	2	117	2	680	2
		Lesbian	0	0	82	1	67	1	376	1	1	3	67	1	51	1	369	1
		Queer	0	0	49	1	35	1	279	1	1	3	53	1	69	1	413	1
		Questioning or unsure	1	2	82	1	93	2	542	2	0	0	85	2	77	1	441	1
		Another sexual orientation	0	0	100	2	93	2	485	2	0	0	81	1	92	2	511	2
		I prefer not to respond	2	4	212	4	178	3	1,231	4	2	6	253	4	244	5	1,551	5
Total			46	100	5,489	100	5,455	100	31,932	100	35	100	5,652	100	5,305	100	33,548	100
Institution-reported information (Variables provided by your institution in your NSSE population file.)																		
Institution-reported: Sex	IRsex19	Female	34	72	4,132	73	3,906	70	23,168	71	21	58	3,969	69	3,545	66	22,960	67
		Male	13	28	1,508	27	1,649	30	9,478	29	15	42	1,792	31	1,835	34	11,072	33
		Another	0	0	0	0	0	0	1	0	0	0	1	0	1	0	6	0
		Unknown	0	0	3	0	0	0	19	0	0	0	1	0	1	0	16	0
		Total			47	100	5,643	100	5,555	100	32,666	100	36	100	5,763	100	5,382	100
Institution-reported: Race or ethnicity	IRrace	American Indian or Alaska Native	0	0	20	0	16	0	154	1	0	0	24	0	25	1	178	1
		Asian	2	4	338	7	357	7	2,796	9	1	3	317	6	289	6	2,736	9
		Black or African American	4	9	860	17	460	9	2,510	8	2	6	737	14	354	7	2,171	7
		Hispanic or Latino	0	0	568	11	748	15	4,375	15	0	0	579	11	645	13	3,959	13
		Native Hawaiian/Other Pac. Islander	0	0	3	0	62	1	138	0	0	0	4	0	36	1	119	0
		White	32	68	2,820	56	2,846	57	16,642	55	32	89	3,031	59	3,045	63	18,582	60
		Other	0	0	0	0	7	0	13	0	0	0	0	0	3	0	9	0
		Foreign or nonresident	0	0	102	2	142	3	1,164	4	0	0	133	3	132	3	1,087	3
		Two or more races/ethnicities	6	13	232	5	232	5	1,378	5	1	3	199	4	167	3	1,341	4
Total			47	100	5,061	100	4,990	100	30,008	100	36	100	5,117	100	4,837	100	31,194	100
Institution-reported: Class level	IRclass	Freshman/First-year	47	100	5,643	100	5,555	100	32,666	100	0	0	0	0	0	0	0	0
		Sophomore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Junior	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Senior	0	0	0	0	0	0	0	0	36	100	5,763	100	5,382	100	34,054	100
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total			47	100	5,643	100	5,555	100	32,666	100	36	100	5,763	100	5,382	100
Institution-reported: First-time first-year (FTFY) student	IRftfy	Not first-time first-year	3	6	951	17	251	5	2,619	8	35	97	5,740	100	5,263	98	33,591	99
		First-time first-year	44	94	4,692	83	5,304	95	30,047	92	1	3	23	0	119	2	463	1
		Total	47	100	5,643	100	5,555	100	32,666	100	36	100	5,763	100	5,382	100	34,054	100
Institution-reported: Enrollment status	IRenrollment	Not full-time	1	2	178	3	94	2	685	2	4	11	858	15	597	11	4,019	12
		Full-time	46	98	5,465	97	5,461	98	31,981	98	32	89	4,905	85	4,785	89	30,035	88
		Total	47	100	5,643	100	5,555	100	32,666	100	36	100	5,763	100	5,382	100	34,054	100

Endnotes

- a. All results are unweighted.
- b. Standard deviation is a measure of the amount the individual scores deviate from the mean of all the scores in the distribution.
- c. Standard error of the mean, used to compute a confidence interval (CI) around the sample mean. For example, the 95% CI is the range of values that is 95% likely to contain the true population mean, equal to the sample mean $\pm 1.96 * SEM$.
- d. A percentile is the point in the distribution of student-level EI scores at or below which a given percentage of EI scores fall.
- e. Degrees of freedom used to compute the t -tests. Values differ from Ns due to whether equal variances were assumed.
- f. Statistical significance represents the probability that the difference between the mean of your institution and that of the comparison group occurred by chance: $*p < .05$, $**p < .01$, $***p < .001$ (2-tailed).
- g. Cohen's d : The mean difference divided by the pooled standard deviation. Effect size indicates the practical importance of an observed difference. For EI comparisons, NSSE research has concluded that an effect size of about .1 may be considered small, .3 medium, and .5 large (Rocconi & Gonyea, 2015). Comparisons with an effect size of at least .3 in magnitude (before rounding) are highlighted in the Overview.
- h. Percentage of students who responded "Done or in progress" except for service-learning which is the percentage who responded that at least "Some" courses included a community-based project.
- i. Percentage point differences (institution – comp. group) rounded to whole numbers. Values less than one may not display a bar and may be shown as +0 or -0.
 $*p < .05$, $**p < .01$, $***p < .001$ (z -test comparing participation rates).
- j. Cohen's h : The standardized difference between two proportions. Effect size indicates the practical importance of an observed difference. NSSE research has found that interpretations vary by HIP: For service-learning, internships, study abroad, and culminating senior experiences, an effect size of about .2 may be considered small, .5 medium, and .8 large. For learning community and research with faculty, an effect size of about .1 may be considered small, .3 medium, and .5 large (Rocconi & Gonyea, 2015).
- k. Means calculated from ordered response options (e.g., Very Often, Often, Sometimes, Never) assume equal intervals and should be interpreted with caution. Unless otherwise noted, statistical comparisons are two-tailed independent t -tests. Exceptions are the dichotomous high-impact practice items (11a to 11f) which are compared using a z -test.
- l. Items that make up the Engagement Indicators include the following two-letter prefixes: CL = Collaborative Learning, DD = Discussions with Diverse Others, ET = Effective Teaching Practices, HO = Higher-Order Learning, LS = Learning Strategies, QI = Quality of Interactions, QR = Quantitative Reasoning, RI = Reflective and Integrative Learning, SE = Supportive Environment, and SF = Student-Faculty Interaction.
- m. These are the values used to calculate means. For the majority of items, these values match the codes in the data file and codebook. For items estimating number of papers and hours per week, the values represent actual units using the midpoints of response option ranges and an estimate for unbounded options.
- n. Effect size for independent t -tests uses Cohen's d ; z -tests use Cohen's h .
- o. Statistical comparison uses z -test to compare the percentage who responded "Done or in progress."

Key to symbols:

- ▲ Your students' average was significantly higher ($p < .05$) with an effect size at least .3 in magnitude.
- △ Your students' average was significantly higher ($p < .05$) with an effect size less than .3 in magnitude.
- ▽ Your students' average was significantly lower ($p < .05$) with an effect size less than .3 in magnitude.
- ▼ Your students' average was significantly lower ($p < .05$) with an effect size at least .3 in magnitude.

Note: It is important to interpret the direction of differences relative to item wording and your institutional context.

Reference: Rocconi, L.M., & Gonyea, R.M. (2018). Contextualizing effect sizes in the National Survey of Student Engagement: An empirical analysis. *Research & Practice in Assessment*, 13 (Summer/Fall), pp. 22-38.