

Frequencies and Statistical Comparisons

California State University, East Bay

First-Year Students

			Frequency Distributions								Statistical Comparisons										
			All Students				First-Generation ^a		Self-Reported HS Grades				First-Generation		Self-Reported HS Grades						
Item wording or description	Values ^c	Response options	All Students			Yes		No		A- or higher		B+ or lower		Yes	No	ES	A- or higher		B+ or lower		ES
			Count	%	Mean	Count	%	Count	%	Count	%	Count	%	Mean	Mean		Mean	Mean			
10. During your <i>last year</i> of high school, about how often did you do the following?																					
c. Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	1	Never	114	9		88	9	26	8	37	8	72	10								
	2	Sometimes	455	35		358	38	97	29	141	30	280	37								
	3	Often	524	41	2.6	378	40	144	44	204	44	295	39	2.6	2.7 **	-.19	2.7	2.6 **	.18		
	4	Very often	192	15		128	13	62	19	84	18	101	14								
		Total	1,285	100		952	100	329	100	466	100	748	100								
d. Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	1	Never	196	15		156	16	39	12	69	15	112	15								
	2	Sometimes	541	42		412	43	127	39	181	39	324	43								
	3	Often	384	30	2.4	277	29	107	33	136	29	231	31	2.4	2.5 **	-.21	2.5	2.4	.11		
	4	Very often	168	13		111	12	56	17	78	17	85	11								
		Total	1,289	100		956	100	329	100	464	100	752	100								
e. Evaluated what others have concluded from numerical information	1	Never	246	19		197	21	48	15	78	17	149	20								
	2	Sometimes	554	43		423	44	131	40	202	44	327	44								
	3	Often	370	29	2.3	257	27	111	34	130	28	215	29	2.2	2.4 ****	-.22	2.3	2.2	.11		
	4	Very often	115	9		77	8	37	11	53	11	58	8								
		Total	1,285	100		954	100	327	100	463	100	749	100								
20. How prepared are you to do the following in your academic work at this institution?																					
c. Think critically and analytically	1	Not at all prepared	12	1		10	1	2	1	5	1	5	1								
	2		30	2		24	3	6	2	9	2	17	2								
	3		180	14		144	15	36	11	57	12	107	14								
	4		431	33	4.4	336	35	94	29	164	35	245	33	4.4	4.6 ****	-.23	4.5	4.5	-.01		
	5		421	33		295	31	123	38	154	33	249	33								
	6	Very prepared	214	17		147	15	67	20	75	16	129	17								
		Total	1,288	100		956	100	328	100	464	100	752	100								
d. Analyze numerical and statistical information	1	Not at all prepared	33	3		26	3	7	2	8	2	22	3								
	2		74	6		56	6	18	6	23	5	44	6								
	3		291	23		248	26	43	13	92	20	185	25								
	4		444	35	4.0	315	33	125	38	165	36	253	34	4.0	4.3 ****	-.24	4.2	4.0 *	.14		
	5		296	23		210	22	86	26	116	25	166	22								
	6	Very prepared	147	11		99	10	48	15	59	13	82	11								
		Total	1,285	100		954	100	327	100	463	100	752	100								

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Transfer Students

Item wording or description	Variable name	Values ^c	Response options	Frequency Distributions								Statistical Comparisons							
				All Students			First-Generation		No		Self-Reported Previous Grades		First-Generation		Self-Reported Previous Grades				
				Count	%	Mean	Count	%	Count	%	Count	%	Count	%	Mean	Mean	ES	Mean	Mean
20. How prepared are you to do the following in your academic work at this institution?																			
c. Think critically and analytically	cSGthink	1	Not at all prepared	1	0			1	0	0	0	1	1						
		2		8	1			6	2	2	1	0	0						
		3		36	7			28	7	7	5	12	7						
		4		131	24	4.9		101	25	27	19	35	19	4.9	5.1 *	-.23	5.1	4.9	.17
		5		173	32			127	32	45	31	59	33						
		6	Very prepared	199	36			134	34	63	44	73	41						
		Total		548	100			397	100	144	100	180	100						
d. Analyze numerical and statistical information	cSGanalyze	1	Not at all prepared	1	0			1	0	0	0	0	0						
		2		20	4			14	4	4	3	4	2						
		3		75	14			55	14	18	13	20	11						
		4		159	29	4.6		120	30	38	26	48	27	4.5	4.7	-.11	4.7	4.5	* .22
		5		158	29			112	28	46	32	58	32						
		6	Very prepared	135	25			95	24	38	26	50	28						
		Total		548	100			397	100	144	100	180	100						



Frequencies and Statistical Comparisons

About This Report

The Frequencies and Statistical Comparisons report presents item-by-item student responses and mean comparisons that allow you to examine patterns of similarity and difference between groups students at your institution. The display below highlights important details in the report to keep in mind when interpreting your results. For more information please visit our website (bcse.indiana.edu) or contact a member of the BCSSE team.

- Student status:** As reported by your students.
- Item numbers:** Numbering corresponds to the survey facsimile and codenook available on the BCSSE website.
- Item wording and variable names:** Survey items are in the same order and wording as they appear on the instrument. Variable names are included for easy reference to your data file and codebook.
- Values and response options:** Values are used to calculate means. Response options are worded as they appear on the instrument.
- Count and column percentage (%):** The Count column contains the number of students who selected the corresponding response option. The column percentage is the percentage of students selecting the corresponding response option. Percentages may not sum to 100 due to rounding.
- Overall mean:** Mean scores for each item. Mean item scores by within-campus comparison groups are presented on the right side. Mean calculated from ordered response options (e.g., Very often, Often, Sometimes, Never) assume equal intervals and should be interpreted with caution.
- Statistical comparisons:** Items with mean differences that are larger than would be expected by chance are noted with asterisks referring to three significance levels ($*p < .05$, $**p < .01$, $***p < .001$). Significance levels indicate the probability that an observed difference is due to chance. Statistical significance does not guarantee the result is substantive or important. Large sample sizes tend to generate more statistically significant results even though the magnitude of mean differences may be inconsequential. Consult effect sizes (see #8) to judge the practical meaning of differences. Unless otherwise noted, statistical comparisons are two-tailed independent t -tests.

		Frequencies and Statistical Comparisons BCSSEville State University														
		Frequency Distributions						Statistical Comparisons								
		All Students		First-Generation*		Self-Reported HS Grades		First-Generation		Self-Reported HS Grades						
Item wording or description	Variable name	Values	Response options	Count	%	Count	%	A- or higher	B+ or lower	Yes	No	ES	A- or higher	B+ or lower	ES	
6. During high school, how many of the following types of classes did you complete?																
a. Advanced Placement (AP) classes	hapc13num	0	0	420	35	261	39	158	30	187	26	230	48			
		1.5	1-2	382	32	225	34	156	30	238	34	142	29			
		3.5	3-4	269	22	131	20	138	26	194	27	75	15			
		5.5	5-6	88	7	30	5	56	11	62	9	26	5	1.6	2.2 ***	-.30
		7.5	7-8	24	2	9	1	15	3	19	3	5	1			
		9.5	9-10	10	1	6	1	4	1	7	1	3	1			
		11.5	11 or more	4	0	3	0	1	0	1	0	3	1			
			Total	1,187	100	655	100	528	100	708	100	484	100			
b. College or university courses for credit	hd:17num	0	0	503	43	317	49	183	35	208	30	292	61			
		1.5	1-2	352	30	178	27	173	33	228	33	123	26			
		3.5	3-4	195	17	94	14	101	19	151	22	44	9			
		5.5	5-6	69	6	33	5	36	7	58	8	11	2	1.6	2.1 ***	-.23
		7.5	7-8	29	2	17	3	12	2	26	4	2	0			
		9.5	9-10	14	1	3	0	11	2	13	2	1	0			
		11.5	11 or more	19	2	9	1	10	2	14	2	5	1			
			Total	1,181	100	651	100	526	100	698	100	478	100			
c. International Baccalaureate (IB)	hb17num	0	0	1,115	99	615	90	496	98	655	98	455	99			
		1.5	1-2	7	1	3	0	4	1	5	1	2	0			
		3.5	3-4	4	0	3	0	1	0	3	0	1	0			
		5.5	5-6	4	0	2	0	2	0	1	0	3	1	0	.1	-.04
		7.5	7-8	0	0	0	0	0	0	0	0	0	0			
		9.5	9-10	1	0	0	0	1	0	1	0	0	0			
		11.5	11 or more	0	0	0	0	0	0	0	0	0	0			
			Total	1,131	100	623	100	504	100	665	100	461	100			
7. During your last year of high school, about how many papers, reports, or other writing tasks of the following length did you complete?																
a. Up to 5 pages	lvw:stnum	0	None	154	13	102	15	52	10	81	11	72	14			
		1.5	1-2	382	31	206	30	175	32	220	31	160	32			
		4	3-5	375	31	213	31	160	29	212	29	162	32			
		8	6-10	186	15	97	14	89	16	116	16	69	14	4.3	5.0 *	-.14
		13	11-15	71	6	33	5	38	7	53	7	18	4			
		18	16-20	25	2	15	2	10	2	17	2	8	2			
		23	More than 20	36	3	17	2	19	3	21	3	15	3			
			Total	1,229	100	682	100	543	100	720	100	504	100			

- Effect size:** Effect size indicates practical significance. An effect size of .2 is often considered small, .5 moderate, and .8 large. Effect sizes for independent t -tests use Cohen's d ; z -tests use Cohen's h . Cohen's d is calculated by dividing the mean difference by the pooled standard deviation. Cohen's h is calculated by taking the difference in the proportion of students who selected the item after the proportion has been transformed using a non-linear (arcsine) transformation. See: Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd edition)*. New York: Psychology Press.