

Does high school engagement or attitude towards engagement predict whether first-year students will participate in NSSE?

Purpose

Like all voluntary surveys, some students who are asked to participate in NSSE choose not to respond. If those students differ significantly from the students who do respond, the data collected by NSSE may be biased. In the broad survey literature, there is general agreement about some demographic factors (gender, age, SES, etc.) that influence response rates (Goyder, Warriner, & Miller, 2002; Groves, Cialdini, & Couper, 1992; Groves & Couper, 1998). To account for these and other known differences, NSSE weights responses by student gender and enrollment status (full- and part-time). This analysis further explores non-response bias by asking whether first-year students are more likely to respond based on (a) the amount they were engaged in high school and (b) their attitudes toward engagement.

Data

This analysis examined responses from 35,332 entering college students from 89 institutions that (a) completed the Beginning College Survey of Student Engagement (BCSSE) before the start of classes in the fall of 2007 and (b) were still enrolled at the same institution with a deliverable mailing or e-mail address during the following spring semester when the institution participated in NSSE in 2008. As shown in Table 1, both the institutions and students were diverse in most respects. However, these students were overwhelmingly “traditional” students: young (95% graduated high school within the same year) and full-time.

Table 1: Respondent and Institution Characteristics

Respondents	Gender	59%	Female
	Race/ethnicity	11%	African American
		5%	Asian American or Pacific Islander
		5%	Hispanic
		4%	Other
		75%	White
Enrollment status	99%	Full-time	
First-generation status	37%	First-generation college student	
Institutions	Simplified Carnegie Classification	16%	Doctoral
		48%	Master’s

This report is part of NSSE’s *Psychometric Portfolio*, a framework for presenting our studies of the validity, reliability, and other indicators of quality of NSSE data, available online at nsse.iub.edu/links/psychometric_portfolio.

Nonresponse Bias - Do previously-engaged first-year students respond more?

	33% Baccalaureate
	3% Other
Governance	37% Public
(Barron's) Selectivity	16% Non- or less competitive
	43% Competitive or competitive plus
	28% Very competitive or very competitive-plus
	13% Highly or most competitive

Methods

Data were analyzed using logistic regression, with independent variables entered in a blocked, hierarchical scheme to see how the effects of certain characteristics changed when additional control variables were entered. As described in Table 2, blocks of variables were entered in four models in the following order: (a) personal demographics, (b) high school engagement and high school grades, (c) college attitudes about the importance of their engagement and the campus environment, as well as the expected difficulty items, and (d) institutional selectivity and enrollment size. All non-dichotomous variables were standardized.

Table 2: Independent Variables

<u>Independent Variables</u>	<u>Description</u>	<u>Block</u>
Female	Institution-reported gender	1
First Generation	First generation status	1
In-state	In-state student status	1
Hispanic	Hispanic ethnicity	1
African American	African American race	1
Other	Other race	1
Asian American	Asian American race	1
HS Academic Experience	Scale of six questions focused on h.s. experiences	2
HS Grades	High school grades	2
Supportive Campus Environment	Scale of five questions focused on the importance of the college campus environment	3
Openness to New Ideas	Scale of five questions focused on openness to new ideas at college	3
Active Academic Engagement	Scale of five questions focused on active academic behaviors	3
Exp. Difficulty: School Work	Question focusing on expected difficulty of school work	3
Exp. Difficulty: Time Mgmt	Question focusing on expected difficulty of time management	3
Exp. Difficulty: Pay. Expenses	Question focusing on expected difficulty of paying expenses	3
Exp. Difficulty: Help w/ School Work	Question focusing on expected difficulty of getting academic help	3
Exp. Difficulty: Making Friends	Question focusing on expected difficulty of making new friends	3
Institution Size (Enrollment)	Total undergraduate enrollment were coded into four categories	4
Barron's Selectivity Index	Barron's Selectivity Index	4

Results

The results of the four multiple logistic regression models are shown in Table 3. These results lead us to two conclusions. First, the amount students are engaged in high school has no effect on whether or not they respond to a NSSE, even after controlling for student and institutional characteristics. Students who were highly engaged before college are not responding to the NSSE survey any more than their less engaged peers. Second, student's attitudes toward engagement and the campus environment and the importance they place on academic engagement in their first year of college have no effect on their choice to respond to a student engagement survey. Students who are predisposed toward more engagement are no more likely to respond to NSSE than other students. In summary, neither the amount in which first-year students were engaged in high school nor their attitudes toward engagement influence whether they respond to NSSE.

References

Goyder, J., Warriner, K. & Miller, S. (2002). Evaluating socio-economic (SES) bias in survey nonresponse. *Journal of Official Statistics*, 18, 1-11.

Groves, R. M., Cialdini, R. B., & Couper, M. P. (1992). Understanding the decision to participate in a survey. *Public Opinion Quarterly*, 56, 475-495.

Groves, R. M., & Couper, M. P. (1998). *Nonresponse in household interview surveys*. New York, NY: John Wiley.

Additional Details

Korkmaz, A. & Gonyea, R.M., (2008). *National Survey of Student Engagement: Analysis of student-level response rates based on precollege engagement*. Presented at the 48th Annual Forum of the Association for Institutional Research, Seattle, WA, May 25, 2008.

Table 3: Block Hierarchical Logistic Regression Models Predicting Response to NSSE

Independent Variables	Model 1		Model 2		Model 3		Model 4	
	B (S.E.)	Exp(B)						
Constant	-.43 (.034)***	.65	-.42 (.035) ***	.66	-.41 (.035) ***	.67	-.02 (.089)	.98
Female	.60 (.025) ***	1.83	.53 (.026) ***	1.70	.50 (.026) ***	1.65	.57 (.027) ***	1.77
First Generation	-.05 (.026) *	.95	-.02 (.026)	.98	-.02 (.027)	.98	-.01 (.027)	.99
In-state	-.25 (.027) ***	.78	-.19 (.027) ***	.83	-.18 (.027) ***	.83	-.05 (.029)	.96
Hispanic	-.48 (.062) ***	.62	-.41 (.063) ***	.67	-.42 (.063) ***	.66	-.41 (.064) ***	.66
African American	-.47 (.053) ***	.62	-.32 (.054) ***	.73	-.31 (.055) ***	.74	-.34 (.055) ***	.72
Other	-.06 (.076)	.95	.02 (.077)	1.02	.00 (.077)	1.00	-.01 (.079)	.99
Asian American	-.18 (.054) ***	.84	-.19 (.055) ***	.83	-.23 (.055) ***	.80	-.28 (.056) ***	.76
HS Academic Experience			-.02 (.013)	.98	.01 (.015)	1.01	.03 (.015)	1.03
HS Grades			.30 (.013) ***	1.36	.29 (.013) ***	1.34	.25 (.014) ***	1.28
Importance: Support. Campus					.01 (.015)	1.01	.02 (.015)	1.02
Importance: Open to New Ideas					.04 (.016) **	1.04	.03 (.017)	1.03
Importance: Active Engagemt					-.06 (.016) ***	.95	-.07 (.017) ***	.94
Exp. Difficulty: School Work					.02 (.016)	1.02	-.01 (.016)	.99
Exp. Difficulty: Time Mgmt					-.03 (.016) *	.97	-.04 (.016) **	.97
Exp. Difficulty: Pay. Expenses					.03 (.013) *	1.03	.02 (.013)	1.02
Exp. Difficulty: Help w/ School Work					-.07 (.014) ***	.93	-.03 (.015)	.97
Exp. Difficulty: Making Friends					.19 (.013) ***	1.21	.18 (.014) ***	1.19
Institution Size (Enrollment)							-.35 (.015) ***	.71
Barron's Selectivity Index							.16 (.016) ***	1.18
Cox & Snell Pseudo R-Squared	.03		.05		.06		.08	
Nagelkerke Pseudo R-Squared	.04		.06		.07		.10	

* p <.05, ** p <.01, *** p<.00