

NAEP 2010 NONRESPONSE BIAS ANALYSIS REPORT

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1. NONRESPONSE BIAS ANALYSIS IN THE 2010 NAEP

NCES statistical standards call for a nonresponse bias analysis to be conducted for a sample with a response rate below 85 percent at any stage of sampling. Weighted school response rates for 2010 NAEP indicate a need for school nonresponse bias analyses for private school samples for grades 4, 8, and 12. Also, a student nonresponse bias analysis is necessary for the grade 12 public school student sample. This report provides nonresponse bias analysis results for private schools at all three grade levels (by session) and for grade 12 public school students (by session). Response rates for schools and students are shown in tables 1 and 2, with the groups of interest shaded in grey. Public response rate calculations included a small number of Bureau of Indian Education (BIE) and Department of Defense (DOD) schools/students. As a result, the grade 12 public school student-level analysis includes a small number of BIE/DOD students.

Table 1. Weighted school response rates by session, before substitution

Grade	Session	Subjects in Session	Public	Private
4	CW	Civics, Mathematics*, Writing*	98.54	65.06
	HG	Geography, U.S. History	98.53	67.73
8	CM	Civics, Mathematics*	98.53	79.59
	HG	Geography, U.S. History	98.36	73.62
12	CV	Civics	91.62	62.18
	HG	Geography, U.S. History	91.20	66.85

*Denotes pilot study

Table 2. Weighted student response rates by subject

Grade	Session	Subject	Public	Private
4	CW	Civics	94.56	94.33
	HG	Geography	94.80	95.87
	HG	U.S. History	94.59	95.35
8	CM	Civics	92.37	95.86
	HG	Geography	92.75	94.79
	HG	U.S. History	92.52	95.87
12	CV	Civics	82.58	90.44
	HG	Geography	82.55	89.66
	HG	U.S. History	82.29	91.34

The analyses conducted in this report consider only certain characteristics of schools and students. They do not directly consider the effects of the nonresponse on student achievement; the

primary focus of NAEP. Thus these analyses cannot be conclusive of either the existence or absence of nonresponse bias for student achievement (see Peytcheva and Groves, 2009).

2. SCHOOL NONRESPONSE BIAS ANALYSIS

The school analysis, required for private school samples in grades 4, 8, and 12 was conducted in three parts.

1. The distribution of the responding original school sample was compared with that of the entire eligible original school sample. Schools were weighted by their school base weights and their enrollment, referred to as a size-adjusted weight. The original sample is the sample before substitution.
2. The distribution of the responding sample, including participating substitutes was compared to the full sample (but in this case, substitutes were included in place of those nonrespondents that they replaced). Again, the size-adjusted school base weights were used for both the full sample and the respondents.
3. The same sets of schools were compared as in the second analysis, but this time when analyzing the responding schools alone, school nonresponse adjustments were applied to the size adjusted weights.

The first part of the analysis indicates the potential for nonresponse bias that was introduced through school nonresponse. The second part of the analysis suggests the remaining potential for nonresponse bias after the mitigating effects of substitution have been accounted for. The third part indicates the potential for bias after accounting for the mitigating effects of both substitution and nonresponse weight adjustments. Both the second and third parts, however, may provide an overly optimistic scenario, since even though substitution and nonresponse adjustments may correct somewhat for deficiencies in the few characteristics examined here, there is no guarantee that they are equally as effective for other characteristics, and in particular for student achievement.

In each analysis, chi-square tests of association were conducted between school response status and each of the following four categorical variables:

- Census region;
- Reporting subgroup for private schools (Catholic/ Non-Catholic);
- Urban-centric locale; and
- Estimated grade enrollment, divided into three equally sized categories.

The chi-square tests were carried out using procedures that appropriately account for the complex sample design used in NAEP, and the weighting procedures. The Rao-Scott chi-square test (Rao and Scott, 1984) was computed using WesVar (Westat 2002), where this test is referred to as 'RS3'.

In addition, mean values of race/ethnicity percentages and enrollment for responding and nonresponding schools were compared. Two measures of the mean size of enrollment in the respective grades were considered, one using the size adjusted school weight (mean size of school attended by an average student), and the other using the school weight without the size adjustment (mean estimated grade enrollment). Differences between the means for the respondents and full sample were tested using t-tests. These tests also took account of the complex sample design, as well as the fact that the respondents are a subset of the full sample (thus in that sense the first two sets of comparisons, using only school base weights, are equivalent to testing whether the mean for respondents is significantly different from the mean for nonrespondents).

Analysis results for grades 4, 8, and 12 private schools (by session) are presented in the tables in appendix A, and summarized in tables 3, 4, 5, 6, 7, and 8, respectively.

Table 3. Characteristics with p-values less than 0.05, CW session, grade 4 private schools

Analysis	Characteristics with p-values less than 0.05
Original sample	Private school reporting subgroup
Sample with substitutes	Census region, private school reporting subgroup, urban-centric locale, race/ethnicity
Nonresponse adjusted	Size of school attended by average student

Table 4. Characteristics with p-values less than 0.05, HG session, grade 4 private schools

Analysis	Characteristics with p-values less than 0.05
Original sample	Census region, private school reporting subgroup
Sample with substitutes	Census region, private school reporting subgroup
Nonresponse adjusted	None

Table 5. Characteristics with p-values less than 0.05, CM session, grade 8 private schools

Analysis	Characteristics with p-values less than 0.05
Original sample	Census region, private school reporting subgroup, estimated grade enrollment, race/ethnicity
Sample with substitutes	Census region, private school reporting subgroup, estimated grade enrollment, race/ethnicity
Nonresponse adjusted	Census region

Table 6. Characteristics with p-values less than 0.05, HG session, grade 8 private schools

Analysis	Characteristics with p-values less than 0.05
Original sample	Census region, private school reporting subgroup, school size, size of school attended by average student, estimated grade enrollment
Sample with substitutes	Census region, private school reporting subgroup, estimated grade enrollment, race/ethnicity
Nonresponse adjusted	Census region

Table 7. Characteristics with p-values less than 0.05, CV session, grade 12 private schools

Analysis	Characteristics with p-values less than 0.05
Original sample	Private school reporting subgroup
Sample with substitutes	Private school reporting subgroup, race/ethnicity
Nonresponse adjusted	Census region, estimated grade enrollment

Table 8. Characteristics with p-values less than 0.05, HG session, grade 12 private schools

Analysis	Characteristics with p-values less than 0.05
Original sample	Private school reporting subgroup, race/ethnicity
Sample with substitutes	Private school reporting subgroup
Nonresponse adjusted	School size, size of school attended by average student, estimated grade enrollment

In general (except for grade 12), nonresponse adjustments decreased the number of variables with significant differences. For all grades, substitution and nonresponse adjustments appear to have been at least partially effective in reducing the nonresponse bias, as the important variable “private school reporting subgroup” changed to non-significant after nonresponse adjustments.

However, the biases of some other variables were still significant after nonresponse adjustments. For grade 4, all results were non-significant after nonresponse adjustments with the exception of “size of school attended by average student” for the CW session. For both sessions in grade 8, after nonresponse adjustments, the results for census region were still significant. The results for census region were improved as the largest absolute bias among all Census region values (HG session, Northeast) changed from 8.0 to 7.1, and its relative bias changed from 38.2 percent to 33.8 percent.

For grade 12, while “private school reporting subgroup” became non-significant, the result for census region and estimated grade enrollment became significant for the CV session. For census

region, the largest absolute bias increased from 4.8 to 6.8, and its relative bias increased from 17.1 percent to 24.3 percent. These results are related to the low response rate (62.18 percent) for the CV session in private schools. Similarly, for the HG session, the results for school size, size of school attended by average student, and estimated grade enrollment became significant. All three characteristics experienced substantial increases in absolute bias and relative bias, following nonresponse adjustments.

These analyses suggest that there remains a significant potential for nonresponse bias for grade 12 private schools. The phenomenon that nonresponse adjustments potentially increase biases related to school size appears to be explained by the fact that, among non-Catholic schools, it is the larger schools that do not respond. Thus when making adjustments to address the underrepresentation of non-Catholic schools among the respondents, the result is to over-represent smaller schools at the expense of larger ones. The limited school sample sizes involved means that it is not possible to make adjustments that account fully for all school characteristics.

3. STUDENT NONRESPONSE BIAS ANALYSIS

The student analysis, required for the grade 12 public school student sample was conducted in two parts:

1. The distribution of the responding student sample was compared with that of the entire eligible sample of students, using student base weights; and
2. The distribution of the responding student sample was compared to the entire eligible sample of students. This time, when analyzing the responding students alone, student nonresponse adjustments were applied to the weights.

The first part of the analysis indicates the potential for nonresponse bias that was introduced through student nonresponse. The second part of the analysis indicates the potential for bias after accounting for the effects of nonresponse weight adjustments. The second part, however, may provide an overly optimistic scenario, since even though nonresponse adjustments may correct somewhat for deficiencies in the few characteristics examined here, there is no guarantee that they are equally as effective for other characteristics, and in particular for student achievement.

The following student characteristics were used in the comparisons:

- Sex;
- Race/ethnicity;
- Relative age;
- Free or reduced price lunch eligibility;
- Student Disability (SD) status;
- English Language Learner (ELL) status; and
- Subject (only for the HG session)

In each analysis, chi-square tests of the association between student response status and the particular variable under consideration were conducted. These tests (RS3) were carried out using procedures that appropriately account for the complex sample design used in NAEP, and the weighting procedures.

Analysis results for students in grade 12 public schools are presented in the tables in appendix B, and summarized in tables 9 and 10, respectively.

Table 9. Characteristics with p-values less than 0.05, CV session, grade 12 public school students

Analysis	Characteristics with p-values less than 0.05
Student Base Weights	Relative age, SD
Nonresponse Adjusted Student Weights	Relative age, free lunch eligibility, SD, ELL

Table 10. Characteristics with p-values less than 0.05, HG session, grade 12 public school students

Analysis	Characteristics with p-values less than 0.05
Student Base Weights	Sex, relative age, SD, ELL
Nonresponse Adjusted Student Weights	Race, SD, ELL

The sample sizes are large for grade 12 student-level files, which makes the tests very sensitive. In general, the number of variables with significant differences increased or stayed the same after nonresponse adjustments.

For all variables in both parts of the analysis, even when the test result is significant, the absolute value of the bias is actually very small--one percent or less. Further, after nonresponse adjustments, the absolute value of the bias and relative bias were reduced in many cases. For example, for the HG session, SD status was significant before and after nonresponse adjustments, but the absolute bias was reduced from 0.5 to 0.2. The relative bias for Yes, SD was reduced from 5.4 percent to 2.2 percent, and the relative bias for No, SD was reduced from 0.5 percent to 0.2 percent.

In summary, based on the student characteristics available, there does not appear to be evidence of substantial bias resulting from student nonresponse.

REFERENCES

- Peytcheva, E., and Groves, R.M. (2009). Using Variation in Response Rates of Demographic Subgroups as Evidence of Nonresponse Bias in Survey Estimates. *Journal of Official Statistics*, **25**, 193-201.
- Rao, J.N.K., and Scott, A.J. (1984). On Chi-Squared Tests for Multiway Contingency Tables with Cell Proportions Estimated from Survey Data. *Annals of Statistics*, **12**, 46-60.
- Westat (2002). WesVar 4.2 User's Guide. Rockville, MD: Westat, Inc

Appendix A

Table A-1. 2010 NAEP CW Grade 4 original sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 133)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	23.30	18.47	-4.8	-0.207	0.127
Midwest	23.76	28.36	4.6	0.194	
South	29.54	29.67	0.1	0.004	
West	23.41	23.51	0.1	0.004	
Private School Reporting Subgroup					
Roman Catholic	48.01	60.93	12.9	0.269	0.000
Non-Catholic Private	51.99	39.07	-12.9	-0.249	
Urban-Centric Locale					
City	38.43	36.52	-1.9	-0.050	0.077
Suburban	40.02	40.68	0.7	0.017	
Town	9.55	13.41	3.9	0.404	
Rural	12.01	9.39	-2.6	-0.218	
Size					
Large (≥ 31)	43.39	44.20	0.8	0.019	0.745
Medium (14-30)	36.36	37.21	0.8	0.023	
Small (≤ 13)	20.25	18.59	-1.7	-0.082	

NOTE: Size-adjusted school weights were used.

Table A-2. 2010 NAEP CW Grade 4 original sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	31.58	30.33	-1.2	-0.039	0.465
Estimated Grade Enrollment	17.71	18.78	1.1	0.060	0.335
Race/Ethnicity					
Percentage White, not Hispanic	75.23	73.52	-1.7	-0.023	0.185
Percentage Black, not Hispanic	8.60	8.92	0.3	0.037	0.739
Percentage Hispanic Heritage	10.64	12.77	2.1	0.199	0.078
Percentage Asian/Pacific Islander	5.20	4.46	-0.7	-0.143	0.255
Percentage American Indian/Alaskan Native	0.33	0.35	0.0*	0.057	0.649

*Estimate rounds to zero

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school based weights were used. For the mean of enrollment, school weights were used.

Table A-3. 2010 NAEP CW Grade 4 sample with substitutes - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 133)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	23.30	18.08	-5.2	-0.224	0.003
Midwest	23.76	26.31	2.6	0.108	
South	29.54	29.62	0.1	0.003	
West	23.41	25.98	2.6	0.110	
Private School Reporting Subgroup					
Roman Catholic	48.01	55.90	7.9	0.164	0.000
Non-Catholic Private	51.99	44.10	-7.9	-0.152	
Urban-Centric Locale					
City	38.43	40.31	1.9	0.049	0.029
Suburban	40.02	38.66	-1.4	-0.034	
Town	9.55	11.54	2.0	0.208	
Rural	12.01	9.50	-2.5	-0.209	
Size					
Large (≥31)	43.39	44.90	1.5	0.035	0.546
Medium (14-30)	36.36	36.37	0.0*	0.000	
Small (≤13)	20.25	18.74	-1.5	-0.075	

*Estimate rounds to zero.

NOTE: Size-adjusted school weights were used.

Table A-4. 2010 NAEP CW Grade 4 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	31.58	30.55	-1.0	-0.032	0.377
Estimated Grade Enrollment	17.71	18.97	1.3	0.071	0.092
Race/Ethnicity					
Percentage White, not Hispanic	75.23	71.64	-3.6	-0.048	0.028
Percentage Black, not Hispanic	8.60	10.60	2.0	0.232	0.190
Percentage Hispanic Heritage	10.64	12.10	1.5	0.137	0.010
Percentage Asian/Pacific Islander	5.20	5.33	0.1	0.024	0.779
Percentage American Indian/Alaskan Native	0.33	0.33	0.0*	0.009	0.938

*Estimate rounds to zero.

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-5. 2010 NAEP CW Grade 4 nonresponse-adjusted sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 133)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	23.30	26.08	2.8	0.119	0.596
Midwest	23.76	21.85	-1.9	-0.080	
South	29.54	27.54	-2.0	-0.068	
West	23.41	24.53	1.1	0.048	
Private School Reporting Subgroup					
Roman Catholic	48.01	44.01	-4.0	-0.083	0.069
Non-Catholic Private	51.99	56.00	4.0	0.077	
Urban-Centric Locale					
City	38.43	34.86	-3.6	-0.093	0.548
Suburban	40.02	40.60	0.6	0.015	
Town	9.55	10.40	0.9	0.089	
Rural	12.01	14.14	2.1	0.177	
Size					
Large (≥ 31)	43.39	38.49	-4.9	-0.113	0.116
Medium (14-30)	36.36	35.57	-0.8	-0.022	
Small (≤ 13)	20.25	25.94	5.7	0.281	

NOTE: Size-adjusted school weights were used.

Table A-6. 2010 NAEP CW Grade 4 nonresponse-adjusted sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	31.58	27.57	-4.0	-0.127	0.011
Estimated Grade Enrollment	17.71	15.57	-2.1	-0.121	0.173
Race/Ethnicity					
Percentage White, not Hispanic	75.23	72.48	-2.8	-0.037	0.120
Percentage Black, not Hispanic	8.60	11.21	2.6	0.303	0.114
Percentage Hispanic Heritage	10.64	11.14	0.5	0.047	0.464
Percentage Asian/Pacific Islander	5.20	4.88	-0.3	-0.062	0.496
Percentage American Indian/Alaskan Native	0.33	0.30	0.0*	-0.086	0.547

*Estimate rounds to zero.

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-7. 2010 NAEP HG Grade 4 original sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 108)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	21.60	15.86	-5.7	-0.266	0.039
Midwest	33.41	40.16	6.7	0.202	
South	24.52	24.35	-0.2	-0.007	
West	20.48	19.64	-0.8	-0.041	
Private School Reporting Subgroup					
Roman Catholic	50.01	61.11	11.1	0.222	0.000
Non-Catholic Private	49.99	38.89	-11.1	-0.222	
Urban-Centric Locale					
City	39.65	37.75	-1.9	-0.048	0.355
Suburban	36.22	36.65	0.4	0.012	
Town	7.30	9.85	2.6	0.350	
Rural	16.84	15.75	-1.1	-0.065	
Size					
Large (≥ 31)	47.91	48.10	0.2	0.004	0.943
Medium (14-30)	29.37	29.89	0.5	0.018	
Small (≤ 13)	22.72	22.02	-0.7	-0.031	

NOTE: Size-adjusted school weights were used.

Table A-8. 2010 NAEP HG Grade 4 original sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	31.64	30.05	-1.6	-0.050	0.303
Estimated Grade Enrollment	17.08	17.74	0.7	0.039	0.427
Race/Ethnicity					
Percentage White, not Hispanic	79.88	79.63	-0.3	-0.003	0.874
Percentage Black, not Hispanic	6.40	6.59	0.2	0.029	0.766
Percentage Hispanic Heritage	8.10	8.80	0.7	0.087	0.487
Percentage Asian/Pacific Islander	5.39	4.79	-0.6	-0.111	0.550
Percentage American Indian/Alaskan Native	0.23	0.19	0.0*	-0.177	0.215

*Estimate rounds to zero.

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-9. 2010 NAEP HG Grade 4 sample with substitutes - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 108)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	21.60	16.42	-5.2	-0.240	0.001
Midwest	33.41	37.97	4.6	0.137	
South	24.52	23.59	-0.9	-0.038	
West	20.48	22.02	1.5	0.075	
Private School Reporting Subgroup					
Roman Catholic	50.01	59.57	9.6	0.191	0.000
Non-Catholic Private	49.99	40.43	-9.6	-0.191	
Urban-Centric Locale					
City	39.65	41.92	2.3	0.057	0.164
Suburban	36.22	34.34	-1.9	-0.052	
Town	7.30	8.92	1.6	0.222	
Rural	16.84	14.82	-2.0	-0.120	
Size					
Large (≥ 31)	47.91	50.13	2.2	0.046	0.335
Medium (14-30)	29.37	29.37	0.0	0.000	
Small (≤ 13)	22.72	20.49	-2.2	-0.098	

NOTE: Size-adjusted school weights were used.

Table A-10. 2010 NAEP HG Grade 4 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full Sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	31.64	30.87	-0.8	-0.025	0.457
Estimated Grade Enrollment	17.08	17.98	0.9	0.053	0.301
Race/Ethnicity					
Percentage White, not Hispanic	79.88	78.46	-1.4	-0.018	0.224
Percentage Black, not Hispanic	6.40	6.68	0.3	0.043	0.695
Percentage Hispanic Heritage	8.10	9.00	0.9	0.112	0.106
Percentage Asian/Pacific Islander	5.39	5.66	0.3	0.050	0.656
Percentage American Indian/Alaskan Native	0.23	0.21	0.0*	-0.088	0.634

*Estimate rounds to zero.

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-11. 2010 NAEP HG Grade 4 nonresponse-adjusted sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 108)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	21.60	19.82	-1.8	-0.082	0.636
Midwest	33.41	35.87	2.5	0.074	
South	24.52	22.92	-1.6	-0.065	
West	20.48	21.39	0.9	0.045	
Private School Reporting Subgroup					
Roman Catholic	50.01	46.68	-3.3	-0.067	0.216
Non-Catholic Private	49.99	53.32	3.3	0.067	
Urban-Centric Locale					
City	39.65	42.07	2.4	0.061	0.633
Suburban	36.22	33.74	-2.5	-0.068	
Town	7.30	8.39	1.1	0.150	
Rural	16.84	15.80	-1.0	-0.062	
Size					
Large (≥ 31)	47.91	46.32	-1.6	-0.033	0.577
Medium (14-30)	29.37	28.26	-1.1	-0.037	
Small (≤ 13)	22.72	25.41	2.7	0.118	

NOTE: Size-adjusted school weights were used.

Table A-12. 2010 NAEP HG Grade 4 nonresponse-adjusted sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	31.64	29.27	-2.4	-0.075	0.065
Estimated Grade Enrollment	17.08	16.34	-0.7	-0.044	0.481
Race/Ethnicity					
Percentage White, not Hispanic	79.88	79.66	-0.2	-0.003	0.884
Percentage Black, not Hispanic	6.40	6.83	0.4	0.066	0.680
Percentage Hispanic Heritage	8.10	7.88	-0.2	-0.027	0.641
Percentage Asian/Pacific Islander	5.39	5.43	0.0*	0.009	0.950
Percentage American Indian/Alaskan Native	0.23	0.20	0.0*	-0.142	0.470

*Estimate rounds to zero.

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-13. 2010 NAEP CM Grade 8 original sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 108)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	20.53	13.04	-7.5	-0.365	0.001
Midwest	28.69	33.83	5.1	0.179	
South	34.44	36.03	1.6	0.046	
West	16.34	17.11	0.8	0.047	
Private School Reporting Subgroup					
Roman Catholic	52.24	61.08	8.8	0.169	0.000
Non-Catholic Private	47.77	38.92	-8.8	-0.185	
Urban-Centric Locale					
City	43.92	44.74	0.8	0.019	0.766
Suburban	34.85	33.50	-1.4	-0.039	
Town	12.46	13.43	1.0	0.078	
Rural	8.77	8.33	-0.4	-0.051	
Size					
Large (≥ 36)	47.44	50.92	3.5	0.073	0.261
Medium (18-35)	30.38	28.33	-2.1	-0.067	
Small (≤ 17)	22.18	20.76	-1.4	-0.064	

NOTE: Size-adjusted school weights were used.

Table A-14. 2010 NAEP CM Grade 8 original sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	41.79	43.69	1.9	0.045	0.219
Estimated Grade Enrollment	21.96	25.41	3.4	0.157	0.038
Race/Ethnicity					
Percentage White, not Hispanic	78.51	77.31	-1.2	-0.015	0.310
Percentage Black, not Hispanic	7.23	6.47	-0.8	-0.105	0.378
Percentage Hispanic Heritage	9.49	10.90	1.4	0.149	0.043
Percentage Asian/Pacific Islander	4.49	4.99	0.5	0.112	0.018
Percentage American Indian/Alaskan Native	0.28	0.32	0.0*	0.148	0.131

*Estimate rounds to zero.

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-15. 2010 NAEP CM Grade 8 sample with substitutes - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 108)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	20.53	12.90	-7.6	-0.372	0.000
Midwest	28.69	32.35	3.7	0.128	
South	34.44	37.88	3.4	0.100	
West	16.34	16.87	0.5	0.032	
Private School Reporting Subgroup					
Roman Catholic	52.24	57.56	5.3	0.102	0.002
Non-Catholic Private	47.77	42.44	-5.3	-0.111	
Urban-Centric Locale					
City	43.92	43.38	-0.5	-0.012	0.395
Suburban	34.85	34.58	-0.3	-0.008	
Town	12.46	14.20	1.7	0.139	
Rural	8.77	7.85	-0.9	-0.106	
Size					
Large (≥ 36)	47.44	49.67	2.2	0.047	0.343
Medium (18-35)	30.38	28.02	-2.4	-0.078	
Small (≤ 17)	22.18	22.32	0.1	0.006	

NOTE: Size-adjusted school weights were used.

Table A-16. 2010 NAEP CM Grade 8 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	41.79	42.75	1.0	0.023	0.466
Estimated Grade Enrollment	21.96	25.07	3.1	0.141	0.029
Race/Ethnicity					
Percentage White, not Hispanic	78.51	77.16	-1.4	-0.017	0.271
Percentage Black, not Hispanic	7.23	6.82	-0.4	-0.057	0.666
Percentage Hispanic Heritage	9.49	10.38	0.9	0.094	0.091
Percentage Asian/Pacific Islander	4.49	4.98	0.5	0.110	0.034
Percentage American Indian/Alaskan Native	0.28	0.67	0.4	1.414	0.284

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-17. 2010 NAEP CM Grade 8 nonresponse-adjusted sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 108)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	20.53	15.78	-4.7	-0.231	0.006
Midwest	28.69	32.42	3.7	0.130	
South	34.44	34.44	0.0	0.000	
West	16.34	17.36	1.0	0.062	
Private School Reporting Subgroup					
Roman Catholic	52.24	51.01	-1.2	-0.023	0.171
Non-Catholic Private	47.77	48.99	1.2	0.026	
Urban-Centric Locale					
City	43.92	42.75	-1.2	-0.026	0.924
Suburban	34.85	35.20	0.3	0.010	
Town	12.46	13.18	0.7	0.058	
Rural	8.77	8.86	0.1	0.010	
Size					
Large (≥ 36)	47.44	47.82	0.4	0.008	0.106
Medium (18-35)	30.38	26.80	-3.6	-0.118	
Small (≤ 17)	22.18	25.38	3.2	0.144	

NOTE: Size-adjusted school weights were used.

Table A-18. 2010 NAEP CM Grade 8 nonresponse-adjusted sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	41.79	40.84	-1.0	-0.023	0.518
Estimated Grade Enrollment	21.96	23.25	1.3	0.059	0.412
Race/Ethnicity					
Percentage White, not Hispanic	78.51	77.37	-1.1	-0.015	0.473
Percentage Black, not Hispanic	7.23	6.79	-0.4	-0.061	0.699
Percentage Hispanic Heritage	9.49	9.88	0.4	0.041	0.494
Percentage Asian/Pacific Islander	4.49	5.24	0.7	0.166	0.061
Percentage American Indian/Alaskan Native	0.28	0.73	0.5	1.638	0.312

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-19. 2010 NAEP HG Grade 8 original sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 118)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	21.02	12.99	-8.0	-0.382	0.001
Midwest	28.69	34.90	6.2	0.217	
South	33.21	33.48	0.3	0.008	
West	17.08	18.63	1.6	0.091	
Private School Reporting Subgroup					
Roman Catholic	53.82	66.67	12.8	0.239	0.000
Non-Catholic Private	46.18	33.33	-12.8	-0.278	
Urban-Centric Locale					
City	40.41	42.47	2.1	0.051	0.348
Suburban	40.11	37.07	-3.0	-0.076	
Town	11.15	12.99	1.8	0.166	
Rural	8.34	7.46	-0.9	-0.105	
Size					
Large (≥ 36)	51.86	59.94	8.1	0.156	0.005
Medium (18-35)	31.63	27.45	-4.2	-0.132	
Small (≤ 17)	16.50	12.61	-3.9	-0.236	

NOTE: Size-adjusted school weights were used.

Table A-20. 2010 NAEP HG Grade 8 original sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	44.26	48.45	4.2	0.095	0.024
Estimated Grade Enrollment	22.84	29.02	6.2	0.271	0.008
Race/Ethnicity					
Percentage White, not Hispanic	75.55	75.30	-0.3	-0.003	0.897
Percentage Black, not Hispanic	6.99	4.70	-2.3	-0.328	0.056
Percentage Hispanic Heritage	11.96	13.92	2.0	0.164	0.179
Percentage Asian/Pacific Islander	3.96	4.29	0.3	0.082	0.276
Percentage American Indian/Alaskan Native	1.54	1.79	0.2	0.161	0.507

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-21. 2010 NAEP HG Grade 8 sample with substitutes - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 118)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	21.02	12.22	-8.8	-0.418	0.000
Midwest	28.69	33.11	4.4	0.154	
South	33.21	36.37	3.2	0.095	
West	17.08	18.29	1.2	0.071	
Private School Reporting Subgroup					
Roman Catholic	53.82	60.93	7.1	0.132	0.000
Non-Catholic Private	46.18	39.07	-7.1	-0.154	
Urban-Centric Locale					
City	40.41	39.70	-0.7	-0.018	0.845
Suburban	40.11	40.12	0.0*	0.000	
Town	11.15	12.13	1.0	0.089	
Rural	8.34	8.04	-0.3	-0.035	
Size					
Large (≥36)	51.86	55.86	4.0	0.077	0.156
Medium (18-35)	31.63	29.79	-1.8	-0.058	
Small (≤17)	16.50	14.36	-2.1	-0.130	

*Estimate rounds to zero.

NOTE: Size-adjusted school weights were used.

Table A-22. 2010 NAEP HG Grade 8 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	44.26	46.17	1.9	0.043	0.204
Estimated Grade Enrollment	22.84	26.95	4.1	0.180	0.020
Race/Ethnicity					
Percentage White, not Hispanic	75.55	73.55	-2.0	-0.027	0.190
Percentage Black, not Hispanic	6.99	6.05	-0.9	-0.134	0.452
Percentage Hispanic Heritage	11.96	13.58	1.6	0.135	0.040
Percentage Asian/Pacific Islander	3.96	5.20	1.2	0.313	0.099
Percentage American Indian/Alaskan Native	1.54	1.62	0.1	0.050	0.767

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-23. 2010 NAEP HG Grade 8 nonresponse-adjusted sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 118)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	21.02	13.91	-7.1	-0.338	0.000
Midwest	28.69	34.72	6.0	0.210	
South	33.21	32.70	-0.5	-0.016	
West	17.08	18.68	1.6	0.093	
Private School Reporting Subgroup					
Roman Catholic	53.82	52.82	-1.0	-0.019	0.366
Non-Catholic Private	46.18	47.19	1.0	0.022	
Urban-Centric Locale					
City	40.41	38.99	-1.4	-0.035	0.868
Suburban	40.11	40.92	0.8	0.020	
Town	11.15	11.93	0.8	0.071	
Rural	8.34	8.16	-0.2	-0.021	
Size					
Large (≥ 36)	51.86	53.60	1.7	0.033	0.684
Medium (18-35)	31.63	29.55	-2.1	-0.066	
Small (≤ 17)	16.50	16.85	0.3	0.021	

NOTE: Size-adjusted school weights were used.

Table A-24. 2010 NAEP HG Grade 8 nonresponse-adjusted sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	44.26	43.87	-0.4	-0.009	0.803
Estimated Grade Enrollment	22.84	25.16	2.3	0.102	0.192
Race/Ethnicity					
Percentage White, not Hispanic	75.55	74.33	-1.2	-0.016	0.427
Percentage Black, not Hispanic	6.99	6.71	-0.3	-0.039	0.847
Percentage Hispanic Heritage	11.96	12.48	0.5	0.044	0.280
Percentage Asian/Pacific Islander	3.96	5.02	1.1	0.269	0.154
Percentage American Indian/Alaskan Native	1.54	1.45	-0.1	-0.058	0.612

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-25. 2010 NAEP CV Grade 12 original sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 90)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	28.20	23.38	-4.8	-0.171	0.427
Midwest	23.12	20.24	-2.9	-0.125	
South	32.14	37.37	5.2	0.163	
West	16.55	19.01	2.5	0.149	
Private School Reporting Subgroup					
Roman Catholic	56.87	73.25	16.4	0.288	0.000
Non-Catholic Private	43.13	26.75	-16.4	-0.380	
Urban-Centric Locale					
City	43.52	42.04	-1.5	-0.034	0.553
Suburban	39.40	35.43	-4.0	-0.101	
Town	6.16	8.88	2.7	0.442	
Rural	10.93	13.65	2.7	0.249	
Size					
Large (≥ 68)	68.91	66.97	-1.9	-0.028	0.453
Medium (25-67)	22.15	25.70	3.5	0.160	
Small (≤ 24)	8.94	7.33	-1.6	-0.180	

NOTE: Size-adjusted school weights were used.

Table A-26. 2010 NAEP CV Grade 12 original sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	137.49	130.67	-6.8	-0.050	0.654
Estimated Grade Enrollment	52.29	60.31	8.0	0.153	0.330
Race/Ethnicity					
Percentage White, not Hispanic	75.27	71.94	-3.3	-0.044	0.186
Percentage Black, not Hispanic	7.83	8.74	0.9	0.116	0.394
Percentage Hispanic Heritage	11.72	15.14	3.4	0.292	0.100
Percentage Asian/Pacific Islander	4.79	3.98	-0.8	-0.170	0.398
Percentage American Indian/Alaskan Native	0.39	0.20	-0.2	-0.478	0.201

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-27. 2010 NAEP CV Grade 12 sample with substitutes - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 90)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	28.20	23.51	-4.7	-0.166	0.243
Midwest	23.12	21.47	-1.7	-0.072	
South	32.14	35.28	3.1	0.098	
West	16.55	19.74	3.2	0.193	
Private School Reporting Subgroup					
Roman Catholic	56.87	67.77	10.9	0.192	0.001
Non-Catholic Private	43.13	32.23	-10.9	-0.253	
Urban-Centric Locale					
City	43.52	44.12	0.6	0.014	0.748
Suburban	39.40	36.63	-2.8	-0.070	
Town	6.16	7.59	1.4	0.232	
Rural	10.93	11.66	0.7	0.067	
Size					
Large (≥68)	68.91	66.31	-2.6	-0.038	0.537
Medium (25-67)	22.15	24.76	2.6	0.118	
Small (≤24)	8.94	8.93	0.0*	0.000	

*Estimate rounds to zero.

NOTE: Size-adjusted school weights were used.

Table A-28. 2010 NAEP CV Grade 12 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	137.49	128.82	-8.7	-0.063	0.392
Estimated Grade Enrollment	52.29	53.20	0.9	0.017	0.853
Race/Ethnicity					
Percentage White, not Hispanic	75.27	72.65	-2.6	-0.035	0.118
Percentage Black, not Hispanic	7.83	8.38	0.6	0.071	0.481
Percentage Hispanic Heritage	11.72	14.44	2.7	0.232	0.027
Percentage Asian/Pacific Islander	4.79	4.22	-0.6	-0.120	0.552
Percentage American Indian/Alaskan Native	0.39	0.30	-0.1	-0.223	0.607

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-29. 2010 NAEP CV Grade 12 nonresponse-adjusted sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 90)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	28.20	21.35	-6.8	-0.243	0.002
Midwest	23.12	26.27	3.2	0.136	
South	32.14	34.64	2.5	0.078	
West	16.55	17.74	1.2	0.072	
Private School Reporting Subgroup					
Roman Catholic	56.87	59.01	2.1	0.038	0.298
Non-Catholic Private	43.13	40.99	-2.1	-0.050	
Urban-Centric Locale					
City	43.52	44.73	1.2	0.028	0.395
Suburban	39.40	35.44	-4.0	-0.100	
Town	6.16	8.97	2.8	0.457	
Rural	10.93	10.87	-0.1	-0.005	
Size					
Large (≥ 68)	68.91	60.85	-8.1	-0.117	0.051
Medium (25-67)	22.15	26.84	4.7	0.212	
Small (≤ 24)	8.94	12.31	3.4	0.377	

NOTE: Size-adjusted school weights were used.

Table A-30. 2010 NAEP CV Grade 12 nonresponse-adjusted sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	137.49	118.14	-19.3	-0.141	0.080
Estimated Grade Enrollment	52.29	43.85	-8.4	-0.161	0.049
Race/Ethnicity					
Percentage White, not Hispanic	75.27	73.96	-1.3	-0.017	0.383
Percentage Black, not Hispanic	7.83	8.97	1.1	0.145	0.298
Percentage Hispanic Heritage	11.72	12.65	0.9	0.080	0.143
Percentage Asian/Pacific Islander	4.79	4.11	-0.7	-0.143	0.470
Percentage American Indian/Alaskan Native	0.39	0.32	-0.1	-0.191	0.674

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-31. 2010 NAEP HG Grade 12 original sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 120)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	27.60	25.00	-2.6	-0.094	0.301
Midwest	21.60	16.57	-5.0	-0.233	
South	34.56	38.45	3.9	0.113	
West	16.23	19.98	3.7	0.231	
Private School Reporting Subgroup					
Roman Catholic	55.97	67.12	11.1	0.199	0.002
Non-Catholic Private	44.03	32.88	-11.1	-0.253	
Urban-Centric Locale					
City	43.77	38.76	-5.0	-0.114	0.334
Suburban	34.09	32.97	-1.1	-0.033	
Town	7.62	10.46	2.8	0.372	
Rural	14.52	17.82	3.3	0.227	
Size					
Large (≥ 68)	64.85	60.79	-4.1	-0.063	0.341
Medium (25-67)	21.89	25.26	3.4	0.154	
Small (≤ 24)	13.26	13.96	0.7	0.053	

NOTE: Size-adjusted school weights were used.

Table A-32. 2010 NAEP HG Grade 12 original sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	133.49	120.36	-13.1	-0.098	0.373
Estimated Grade Enrollment	45.77	44.83	-0.9	-0.020	0.813
Race/Ethnicity					
Percentage White, not Hispanic	75.21	72.14	-3.1	-0.041	0.155
Percentage Black, not Hispanic	7.06	6.83	-0.2	-0.032	0.780
Percentage Hispanic Heritage	11.26	14.56	3.3	0.294	0.044
Percentage Asian/Pacific Islander	5.09	4.60	-0.5	-0.096	0.518
Percentage American Indian/Alaskan Native	1.38	1.87	0.5	0.349	0.403

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-33. 2010 NAEP HG Grade 12 sample with substitutes - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 120)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	27.60	24.90	-2.7	-0.098	0.477
Midwest	21.60	18.93	-2.7	-0.124	
South	34.56	37.37	2.8	0.081	
West	16.23	18.80	2.6	0.158	
Private School Reporting Subgroup					
Roman Catholic	55.97	64.46	8.5	0.152	0.005
Non-Catholic Private	44.03	35.54	-8.5	-0.193	
Urban-Centric Locale					
City	43.77	43.13	-0.6	-0.015	0.562
Suburban	34.09	31.45	-2.6	-0.077	
Town	7.62	9.28	1.7	0.218	
Rural	14.52	16.14	1.6	0.111	
Size					
Large (≥ 68)	64.85	62.51	-2.3	-0.036	0.541
Medium (25-67)	21.89	23.78	1.9	0.086	
Small (≤ 24)	13.26	13.71	0.5	0.034	

NOTE: Size-adjusted school weights were used.

Table A-34. 2010 NAEP HG Grade 12 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	133.49	122.58	-10.9	-0.082	0.278
Estimated Grade Enrollment	45.77	45.61	-0.2	-0.004	0.960
Race/Ethnicity					
Percentage White, not Hispanic	75.21	73.24	-2.0	-0.026	0.238
Percentage Black, not Hispanic	7.06	6.91	-0.2	-0.021	0.821
Percentage Hispanic Heritage	11.26	13.46	2.2	0.196	0.055
Percentage Asian/Pacific Islander	5.09	4.59	-0.5	-0.097	0.506
Percentage American Indian/Alaskan Native	1.38	1.79	0.4	0.293	0.302

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Table A-35. 2010 NAEP HG Grade 12 nonresponse-adjusted sample - Weighted percentages of full sample and responding schools by various subgroups - All Private Schools (sample size = 120)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Census Region					
Northeast	27.60	26.94	-0.7	-0.024	0.349
Midwest	21.60	20.93	-0.7	-0.031	
South	34.56	35.41	0.9	0.025	
West	16.23	16.72	0.5	0.030	
Private School Reporting Subgroup					
Roman Catholic	55.97	55.35	-0.6	-0.011	0.386
Non-Catholic Private	44.03	44.65	0.6	0.014	
Urban-Centric Locale					
City	43.77	44.72	1.0	0.022	0.163
Suburban	34.09	28.35	-5.7	-0.168	
Town	7.62	10.34	2.7	0.358	
Rural	14.52	16.59	2.1	0.142	
Size					
Large (≥ 68)	64.85	56.45	-8.4	-0.130	0.017
Medium (25-67)	21.89	25.67	3.8	0.173	
Small (≤ 24)	13.26	17.87	4.6	0.348	

NOTE: Size-adjusted school weights were used.

Table A-36. 2010 NAEP HG Grade 12 nonresponse-adjusted sample - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Size of School Attended by Average Student	133.49	111.01	-22.5	-0.168	0.044
Estimated Grade Enrollment	45.77	38.29	-7.5	-0.164	0.020
Race/Ethnicity					
Percentage White, not Hispanic	75.21	74.93	-0.3	-0.004	0.836
Percentage Black, not Hispanic	7.06	6.97	-0.1	-0.013	0.881
Percentage Hispanic Heritage	11.26	11.53	0.3	0.024	0.494
Percentage Asian/Pacific Islander	5.09	5.11	0.0*	0.005	0.983
Percentage American Indian/Alaskan Native	1.38	1.47	0.1	0.061	0.564

*Estimate rounds to zero.

NOTE: For the mean of school size attended by average student and the race/ethnicity percents, size-adjusted school weights were used. For the mean of enrollment, school weights were used.

Appendix B

Table B-1. 2010 NAEP Public CV Grade 12 - Weighted percentages of full sample and responding students by various subgroups (sample size = 10,657)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Sex					
Male	50.34	50.64	0.3	0.006	0.217
Female	49.66	49.36	-0.3	-0.006	
Race					
White, not Hispanic	61.52	61.62	0.1	0.002	0.431
Black, not Hispanic	14.08	14.02	-0.1	-0.004	
Hispanic Heritage	16.56	16.28	-0.3	-0.017	
Asian/Pacific Islander	5.76	6.01	0.3	0.044	
American Indian/Alaskan Native	1.26	1.24	0.0*	-0.017	
Other	0.82	0.83	0.0*	0.014	
Relative Age					
Old (Born in 9/91 or earlier)	19.52	18.79	-0.7	-0.037	0.006
Not old (Born in 10/91 or later)	80.48	81.21	0.7	0.009	
Free Lunch Eligibility					
Student Not Eligible	66.60	66.23	-0.4	-0.006	0.210
Free or Reduced Lunch	32.72	33.18	0.5	0.014	
Missing	0.68	0.59	-0.1	-0.131	
SD					
Yes	9.46	8.81	-0.6	-0.068	0.000
No	90.54	91.19	0.6	0.007	
ELL					
Yes	3.63	3.76	0.1	0.035	0.120
No	96.37	96.24	-0.1	-0.001	

*Estimate rounds to zero.

Table B-2. 2010 NAEP Nonresponse-Adjusted Public CV Grade 12 - Weighted percentages of full sample and responding students by various subgroups (sample size = 10,657)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Sex					
Male	50.34	50.60	0.3	0.005	0.257
Female	49.66	49.40	-0.3	-0.005	
Race					
White, not Hispanic	61.52	61.39	-0.1	-0.002	0.120
Black, not Hispanic	14.08	14.02	-0.1	-0.005	
Hispanic Heritage	16.56	16.50	-0.1	-0.004	
Asian/Pacific Islander	5.76	6.08	0.3	0.055	
American Indian/Alaskan Native	1.26	1.19	-0.1	-0.059	
Other	0.82	0.83	0.0*	0.022	
Relative Age					
Old (Born in 9/91 or earlier)	19.52	18.99	-0.5	-0.027	0.004
Not old (Born in 10/91 or later)	80.48	81.01	0.5	0.007	
Free Lunch Eligibility					
Student Not Eligible	66.60	66.12	-0.5	-0.007	0.046
Free or Reduced Lunch	32.72	33.29	0.6	0.017	
Missing	0.68	0.59	-0.1	-0.130	
SD					
Yes	9.46	9.24	-0.2	-0.023	0.003
No	90.54	90.76	0.2	0.002	
ELL					
Yes	3.63	3.88	0.3	0.070	0.001
No	96.37	96.12	-0.3	-0.003	

*Estimate rounds to zero.

Table B-3. 2010 NAEP Public HG Grade 12 - Weighted percentages of full sample and responding students by various subgroups (sample size = 23,879)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Sex					
Male	50.29	50.89	0.6	0.012	0.001
Female	49.71	49.11	-0.6	-0.012	
Race					
White, not Hispanic	61.82	61.43	-0.4	-0.006	0.115
Black, not Hispanic	14.07	14.00	-0.1	-0.005	
Hispanic Heritage	16.64	16.75	0.1	0.007	
Asian/Pacific Islander	5.79	6.03	0.2	0.042	
American Indian/Alaskan Native	1.12	1.18	0.1	0.057	
Other	0.57	0.61	0.0*	0.069	
Relative Age					
Old (Born in 9/91 or earlier)	19.97	19.33	-0.6	-0.032	0.000
Not old (Born in 10/91 or later)	80.03	80.67	0.6	0.008	
Free Lunch Eligibility					
Student Not Eligible	66.23	66.17	-0.1	-0.001	0.193
Free or Reduced Lunch	32.98	33.12	0.1	0.004	
Missing	0.79	0.71	-0.1	-0.103	
SD					
Yes	9.07	8.58	-0.5	-0.054	0.000
No	90.93	91.42	0.5	0.005	
ELL					
Yes	3.56	3.72	0.2	0.046	0.023
No	96.44	96.28	-0.2	-0.002	
Subject					
Geography	44.72	44.78	0.1	0.001	0.651
History	55.29	55.22	-0.1	-0.001	

*Estimate rounds to zero.

Table B-4. 2010 NAEP Nonresponse-Adjusted Public HG Grade 12 - Weighted percentages of full sample and responding students by various subgroups (sample size = 23,879)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square p-value
Sex					
Male	50.29	50.40	0.1	0.002	0.187
Female	49.71	49.60	-0.1	-0.002	
Race					
White, not Hispanic	61.82	61.37	-0.5	-0.007	0.000
Black, not Hispanic	14.07	14.03	0.0*	-0.002	
Hispanic Heritage	16.64	16.77	0.1	0.008	
Asian/Pacific Islander	5.79	6.10	0.3	0.054	
American Indian/Alaskan Native	1.12	1.12	0.0	0.000	
Other	0.57	0.61	0.0*	0.072	
Relative Age					
Old (Born in 9/91 or earlier)	19.97	19.89	-0.1	-0.004	0.372
Not old (Born in 10/91 or later)	80.03	80.11	0.1	0.001	
Free Lunch Eligibility					
Student Not Eligible	66.23	66.08	-0.1	-0.002	0.087
Free or Reduced Lunch	32.98	33.19	0.2	0.006	
Missing	0.79	0.73	-0.1	-0.081	
SD					
Yes	9.07	8.87	-0.2	-0.022	0.000
No	90.93	91.13	0.2	0.002	
ELL					
Yes	3.56	3.81	0.3	0.071	0.000
No	96.44	96.19	-0.3	-0.003	
Subject					
Geography	44.72	44.67	0.0*	-0.001	0.739
History	55.29	55.33	0.0*	0.001	

*Estimate rounds to zero.