

Analysis of School Nonresponse Bias in the 2005 NAEP – Grade 12

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Weighted school response rates for 2005 NAEP indicate that response rates for private schools fall below 85 percent at all three grades. Public school response rates, at all grades, prior to substitution, were above 85 percent for the nation, all states (grades 4 and 8), and the districts participating in the Trial Urban District Assessment (grades 4 and 8). Thus NCES statistical standards call for nonresponse bias analyses to be conducted for private schools at all three grades, but not for any other school types. This report provides nonresponse bias analysis results for grade 12, with the corresponding analyses for grades 4 and 8 having been provided in an earlier document.

The school response rate for private schools at grade 12 was 47 percent prior to substitution (59 percent after substitution). For public schools the rate was 85 percent (90 percent after substitution), yielding an overall rate of 82 percent before substitution (87 percent after substitution).

The analysis of private school nonresponse bias for the grade 12 operational assessments in reading, mathematics, and science in the 2005 NAEP was conducted in three parts. First, the distribution of the responding original school sample was compared with that of the entire eligible original school sample. In each case schools were weighted by their school base weights and their enrollment. The original sample is the sample before substitution. Various characteristics of the schools were considered. Second, 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, school base weights were used for both the full sample and the respondents. Third, 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 weights. Thus the first analysis indicates the potential for nonresponse bias that was introduced through school nonresponse. The second analysis suggests that the remaining potential for nonresponse bias after the mitigating effects of substitution have been accounted for. The third analysis indicates the potential for bias after accounting for the mitigating effects of both substitution and nonresponse weight adjustments. Both the second and third analyses, 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.

Each of these analyses compared schools on the distributions of schools by Census region, type of private school, type of location, and school size, where size was treated as three categories. The size category boundaries were set so as to place about one-third of the population for the grade in each category. For these analyses chi-square tests of the association between school response status and the particular variable under consideration were conducted. These tests were carried out using procedures that

appropriately account for the complex sample design used in NAEP, and the weighting procedures. The p-values for these chi-square tests are presented in the tables. In addition we considered weighted mean values of race/ethnicity enrollment percentages for responding and nonresponding schools, as well as mean size of enrollment in the respective grades. 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 of course 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). The p-values of these t-tests are reported in the tables.

The results of these analyses are presented and summarized in the table below.

Analysis	Characteristics with p-values less than 0.05
Original Sample	None
Sample with Substitutes	Private School Type
Nonresponse Adjusted	None

The statistically significant result for Private School Type, when respondents including substitutes are compared with the original sample, involves one group with a relative bias of 0.505. In the original sample 2.0 percent are Lutheran, but after substitution this percentage is 3.1 percent for the responding schools. Once nonresponse adjustments have been applied, however, the percentage Lutheran is 2.0 percent (since private school type was a factor used in creating the nonresponse adjustments), and there is no association between response status and private school type.

These statistical analyses were also carried out within each private school type. However, since the sample was not designed for reporting out separate school types other than Catholic, these results should be treated with caution as they are based on small samples. For Catholic schools there are no significant differences between the respondents and the full sample prior to substitution, after substitution, or after the application of school nonresponse adjustments.

Table 61. 2005 NAEP Grade 12 original sample - Percentages of full sample and responding schools by various subgroups weighted by school base weight - All Private Schools (sample size = 385)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.169
Northeast	27.8	21.6	-6.1	-0.221	
Midwest	24.4	28.5	4.1	0.170	
South	29.6	30.0	0.4	0.012	
West	18.2	19.9	1.7	0.091	
Private School Type					0.174
Conservative Christian	12.7	14.1	1.4	0.110	
Roman Catholic	51.7	55.3	3.6	0.070	
Lutheran	2.1	3.0	0.9	0.405	
Other Private	33.5	27.7	-5.8	-0.174	
Type of Location					0.283
Central City	48.1	52.7	4.6	0.096	
Urban Fringe/Large City	38.1	33.3	-4.8	-0.125	
Small Town/Rural	13.8	14.0	0.1	0.010	
Estimated Grade Enrollment					0.206
Large (>53)	70.7	67.3	-3.4	-0.048	
Medium (20-53)	19.7	21.3	1.6	0.080	
Small (<20)	9.7	11.5	1.8	0.188	

Table 62. 2005 NAEP 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
Estimated Grade Enrollment	132.8	121.1	-11.8	-0.088	0.186
Race/Ethnicity					
Percentage American Indian	0.5	0.4	0.0*	-0.044	0.813
Percentage Asian	6.8	8.1	1.3	0.184	0.176
Percentage Black	7.8	6.9	-1.0	-0.123	0.387
Percentage Hispanic	8.0	6.3	-1.7	-0.213	0.155
Percentage White	76.9	78.3	1.4	0.019	0.430

*Estimate rounds to zero.

Table 63. 2005 NAEP Grade 12 original sample - Percentages of full sample and responding schools by various subgroups weighted by school base weight - Conservative Christian (sample size = 104)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.042
Northeast	10.8	4.8	-6.0	-0.556	
Midwest	17.8	30.0	12.2	0.684	
South	45.1	37.9	-7.2	-0.159	
West	26.3	27.3	1.0	0.038	
Type of Location					0.933
Central City	31.5	33.1	1.6	0.051	
Urban Fringe/Large City	44.4	42.1	-2.3	-0.052	
Small Town/Rural	24.1	24.8	0.7	0.029	
Estimated Grade Enrollment					0.476
Large (>53)	25.3	18.0	-7.3	-0.288	
Medium (20-53)	41.6	45.6	4.0	0.097	
Small (<20)	33.1	36.4	3.3	0.099	

Table 64. 2005 NAEP Grade 12 original sample - Weighted mean values of various characteristics for full sample and responding schools - Conservative Christian

	Full Sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	51.1	46.9	-4.2	-0.083	0.749
Race/Ethnicity					
Percentage American Indian	0.7	0.9	0.2	0.233	0.495
Percentage Asian	2.5	2.6	0.0*	0.012	0.936
Percentage Black	8.4	5.4	-3.0	-0.360	0.029
Percentage Hispanic	5.8	5.0	-0.9	-0.148	0.452
Percentage White	82.6	86.2	3.7	0.044	0.113

*Estimate rounds to zero.

Table 65. 2005 NAEP Grade 12 original sample - Percentages of full sample and responding schools by various subgroups weighted by school base weight - Lutheran (sample size = 14)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.321
Northeast	11.0	16.7	5.7	0.516	
Midwest	62.2	57.9	-4.2	-0.068	
South	7.6	0.0	-7.6	-1.000	
West	19.3	25.4	6.1	0.315	
Type of Location					0.720
Central City	35.3	30.3	-5.1	-0.143	
Urban Fringe/Large City	38.7	47.2	8.5	0.220	
Small Town/Rural	26.0	22.5	-3.5	-0.134	
Estimated Grade Enrollment					0.074
Large (>53)	68.6	56.3	-12.3	-0.180	
Medium (20-53)	25.6	34.9	9.3	0.364	
Small (<20)	5.9	8.9	3.0	0.516	

Table 66. 2005 NAEP Grade 12 original sample - Weighted mean values of various characteristics for full sample and responding schools - Lutheran

	Full Sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	91.4	69.2	-22.2	-0.243	0.439
Race/Ethnicity					
Percentage American Indian	0.1	0.0*	-0.1	-0.714	0.109
Percentage Asian	2.1	2.7	0.7	0.324	0.022
Percentage Black	6.1	6.9	0.7	0.116	0.535
Percentage Hispanic	3.9	5.2	1.3	0.341	0.180
Percentage White	87.8	85.1	-2.6	-0.030	0.176

*Estimate rounds to zero.

Table 67. 2005 NAEP Grade 12 original sample - Percentages of full sample and responding schools by various subgroups weighted by school base weight - Roman Catholic (sample size = 77)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.948
Northeast	31.2	29.0	-2.3	-0.072	
Midwest	31.9	34.1	2.2	0.069	
South	20.8	21.6	0.8	0.039	
West	16.1	15.3	-0.8	-0.047	
Type of Location					0.187
Central City	56.8	66.0	9.2	0.162	
Urban Fringe/Large City	35.3	29.4	-5.9	-0.167	
Small Town/Rural	7.9	4.6	-3.3	-0.420	
Estimated Grade Enrollment					0.719
Large (>53)	92.5	91.2	-1.4	-0.015	
Medium (20-53)	6.9	8.2	1.4	0.196	
Small (<20)	0.6	0.6	0.0*	0.069	

Table 68. 2005 NAEP Grade 12 original sample - Weighted mean values of various characteristics for full sample and responding schools - Roman Catholic

	Full Sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	180.4	161.1	-19.4	-0.107	0.143
Race/Ethnicity					
Percentage American Indian	0.3	0.3	0.0*	0.036	0.860
Percentage Asian	5.8	7.2	1.5	0.257	0.159
Percentage Black	8.1	7.6	-0.5	-0.061	0.796
Percentage Hispanic	11.2	7.5	-3.6	-0.325	0.103
Percentage White	74.7	77.4	2.6	0.035	0.389

*Estimate rounds to zero.

Table 69. 2005 NAEP Grade 12 original sample - Percentages of full sample and responding schools by various subgroups weighted by school base weight - Other Private Schools (sample size = 190)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.026
Northeast	29.9	16.1	-13.9	-0.463	
Midwest	12.9	13.5	0.6	0.046	
South	38.8	45.8	7.1	0.182	
West	18.4	24.6	6.2	0.337	
Type of Location					0.152
Central City	41.8	38.6	-3.2	-0.076	
Urban Fringe/Large City	40.0	35.2	-4.8	-0.119	
Small Town/Rural	18.3	26.2	7.9	0.435	
Estimated Grade Enrollment					0.180
Large (>53)	54.3	45.9	-8.4	-0.155	
Medium (20-53)	30.8	33.5	2.7	0.087	
Small (<20)	15.0	20.7	5.7	0.382	

Table 70. 2005 NAEP Grade 12 original sample - Weighted mean values of various characteristics for full sample and responding schools - Other Private Schools

	Full Sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	93.0	84.6	-8.4	-0.090	0.638
Race/Ethnicity					
Percentage American Indian	0.6	0.5	-0.1	-0.159	0.570
Percentage Asian	10.3	12.9	2.6	0.254	0.274
Percentage Black	7.4	6.1	-1.2	-0.168	0.274
Percentage Hispanic	4.1	4.6	0.5	0.121	0.434
Percentage White	77.6	75.9	-1.8	-0.023	0.467

Table 71. 2005 NAEP Grade 12 sample with substitutes - Percentages of full sample and responding schools by various subgroups weighted by school base weight - All Private Schools (sample size = 381)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.091
Northeast	27.7	22.0	-5.7	-0.206	
Midwest	24.2	29.2	5.0	0.207	
South	29.6	29.8	0.2	0.006	
West	18.5	19.0	0.5	0.028	
Private School Type					0.037
Conservative Christian	12.8	13.7	0.9	0.071	
Roman Catholic	51.8	55.0	3.2	0.061	
Lutheran	2.0	3.1	1.0	0.505	
Other Private	33.3	28.2	-5.1	-0.154	
Type of Location					0.238
Central City	49.4	51.3	1.9	0.038	
Urban Fringe/Large City	36.8	32.9	-3.9	-0.106	
Small Town/Rural	13.8	15.9	2.0	0.146	
Estimated Grade Enrollment					0.838
Large (>53)	70.5	69.7	-0.8	-0.011	
Medium (20-53)	20.0	20.1	0.1	0.005	
Small (<20)	9.5	10.2	0.7	0.072	

Table 72. 2005 NAEP Grade 12 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - All Private Schools

	Full sample mean with substitues	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	131.9	124.8	-7.1	-0.054	0.426
Race/Ethnicity					
Percentage American Indian	0.5	0.5	0.0*	0.022	0.963
Percentage Asian	6.6	7.0	0.4	0.067	0.537
Percentage Black	7.7	6.3	-1.4	-0.181	0.139
Percentage Hispanic	7.7	6.5	-1.2	-0.155	0.248
Percentage White	77.5	79.7	2.2	0.028	0.140

*Estimate rounds to zero.

Table 73. 2005 NAEP Grade 12 sample with substitutes - Percentages of full sample and responding schools by various subgroups weighted by school base weight - Conservative Christian (sample size = 103)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.058
Northeast	10.9	6.1	-4.9	-0.445	
Midwest	17.7	26.7	9.0	0.510	
South	45.4	41.4	-4.0	-0.088	
West	25.9	25.8	-0.2	-0.007	
Type of Location					0.551
Central City	31.4	35.0	3.6	0.115	
Urban Fringe/Large City	45.3	40.1	-5.2	-0.114	
Small Town/Rural	23.3	24.9	1.5	0.066	
Estimated Grade Enrollment					0.722
Large (>53)	25.7	21.6	-4.0	-0.157	
Medium (20-53)	41.3	43.9	2.6	0.062	
Small (<20)	33.0	34.5	1.5	0.044	

Table 74. 2005 NAEP Grade 12 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - Conservative Christian

	Full sample mean with substitues	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	51.5	45.9	-5.6	-0.108	0.648
Race/Ethnicity					
Percentage American Indian	0.7	0.8	0.1	0.136	0.567
Percentage Asian	2.8	2.6	-0.2	-0.062	0.473
Percentage Black	7.1	5.1	-2.0	-0.279	0.088
Percentage Hispanic	5.2	4.6	-0.6	-0.119	0.418
Percentage White	84.4	87.0	2.7	0.032	0.148

Table 75. 2005 NAEP Grade 12 sample with substitutes - Percentages of full sample and responding schools by various subgroups weighted by school base weight - Lutheran (sample size = 14)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.286
Northeast	11.4	12.7	1.3	0.117	
Midwest	48.5	54.2	5.7	0.117	
South	7.8	0.0	-7.8	-1.000	
West	32.3	33.1	0.8	0.025	
Type of Location					0.560
Central City	33.0	36.8	3.9	0.117	
Urban Fringe/Large City	49.0	46.0	-3.0	-0.061	
Small Town/Rural	18.0	17.1	-0.9	-0.048	
Estimated Grade Enrollment					0.833
Large (>53)	67.5	66.7	-0.8	-0.012	
Medium (20-53)	26.5	26.6	0.1	0.005	
Small (<20)	6.1	6.8	0.7	0.117	

Table 76. 2005 NAEP Grade 12 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - Lutheran

	Full sample mean with substitues	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	80.3	83.9	3.6	0.045	0.068
Race/Ethnicity					
Percentage American Indian	0.1	0.1	0.0*	0.125	0.175
Percentage Asian	2.5	2.7	0.2	0.063	0.006
Percentage Black	5.9	5.5	-0.3	-0.055	0.515
Percentage Hispanic	4.4	4.8	0.4	0.093	0.080
Percentage White	87.1	86.9	-0.3	-0.003	0.651

*Estimate rounds to zero.

Table 77. 2005 NAEP Grade 12 sample with substitutes - Percentages of full sample and responding schools by various subgroups weighted by school base weight - Roman Catholic (sample size = 77)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.680
Northeast	31.2	27.4	-3.8	-0.121	
Midwest	32.0	36.7	4.6	0.145	
South	20.7	21.1	0.4	0.020	
West	16.1	14.8	-1.3	-0.081	
Type of Location					0.431
Central City	59.1	64.6	5.5	0.094	
Urban Fringe/Large City	32.4	29.2	-3.3	-0.101	
Small Town/Rural	8.5	6.2	-2.3	-0.267	
Estimated Grade Enrollment					0.794
Large (>53)	92.5	92.4	0.0*	-0.001	
Medium (20-53)	7.2	7.1	-0.1	-0.018	
Small (<20)	0.3	0.5	0.2	0.581	

Table 78. 2005 NAEP Grade 12 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - Roman Catholic

	Full sample mean with substitues	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	180.2	165.2	-15.0	-0.083	0.214
Race/Ethnicity					
Percentage American Indian	0.4	0.5	0.1	0.250	0.110
Percentage Asian	5.6	6.4	0.8	0.142	0.357
Percentage Black	8.3	7.2	-1.1	-0.133	0.456
Percentage Hispanic	10.7	8.4	-2.4	-0.219	0.181
Percentage White	75.1	77.7	2.6	0.034	0.263

Table 79. 2005 NAEP Grade 12 sample with substitutes - Percentages of full sample and responding schools by various subgroups weighted by school base weight - Other Private Schools (sample size = 187)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.155
Northeast	29.7	20.2	-9.6	-0.322	
Midwest	13.1	13.2	0.1	0.010	
South	38.7	44.2	5.6	0.144	
West	18.6	22.4	3.9	0.207	
Type of Location					0.001
Central City	42.2	34.7	-7.5	-0.177	
Urban Fringe/Large City	39.6	35.2	-4.4	-0.111	
Small Town/Rural	18.2	30.1	11.9	0.650	
Estimated Grade Enrollment					0.459
Large (>53)	53.7	49.1	-4.6	-0.085	
Medium (20-53)	31.2	33.1	1.9	0.060	
Small (<20)	15.1	17.8	2.7	0.179	

Table 80. 2005 NAEP Grade 12 sample with substitutes - Weighted mean values of various characteristics for full sample and responding schools - Other Private Schools

	Full sample mean with substitues	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	90.8	88.7	-2.1	-0.023	0.887
Race/Ethnicity					
Percentage American Indian	0.6	0.4	-0.2	-0.276	0.179
Percentage Asian	9.7	10.8	1.0	0.104	0.552
Percentage Black	7.1	5.2	-1.9	-0.263	0.085
Percentage Hispanic	4.1	4.1	0.0*	-0.010	0.932
Percentage White	78.5	79.5	1.1	0.014	0.591

*Estimate rounds to zero.

Table 81. 2005 NAEP Grade 12 nonresponse adjusted sample - Percentages of full sample and responding schools with substitutes by various subgroups - All Private schools with substitutes (sample size = 381)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.067
Northeast	27.7	26.4	-1.3	-0.046	
Midwest	24.2	24.9	0.7	0.027	
South	29.6	29.7	0.1	0.002	
West	18.5	19.1	0.6	0.031	
Private School Type					0.131
Conservative Christian	12.8	13.3	0.5	0.041	
Roman Catholic	51.8	52.3	0.5	0.009	
Lutheran	2.0	2.0	0.0*	-0.010	
Other Private	33.3	32.3	-1.0	-0.030	
Type of Location					0.651
Central City	49.4	49.6	0.3	0.005	
Urban Fringe/Large City	36.8	35.0	-1.8	-0.048	
Small Town/Rural	13.8	15.3	1.5	0.108	
Estimated Grade Enrollment					0.645
Large (>53)	70.5	69.9	-0.6	-0.009	
Medium (20-53)	20.0	19.4	-0.5	-0.027	
Small (<20)	9.5	10.7	1.1	0.119	

Table 82. 2005 NAEP Grade 12 nonresponse adjusted sample - Weighted mean values of various characteristics for full sample and responding schools with substitutes - All Private Schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	131.9	126.5	-5.4	-0.041	0.555
Race/Ethnicity					
Percentage American Indian	0.5	0.5	0.0*	0.022	0.899
Percentage Asian	6.6	7.4	0.8	0.122	0.390
Percentage Black	7.7	6.3	-1.4	-0.187	0.088
Percentage Hispanic	7.7	6.6	-1.2	-0.154	0.229
Percentage White	77.5	79.4	1.8	0.024	0.160

*Estimate rounds to zero.

Table 83. 2005 NAEP Grade 12 nonresponse adjusted sample - Percentages of full sample and responding schools with substitutes by various subgroups - Conservative Christian (sample size = 103)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.059
Northeast	10.9	4.8	-6.1	-0.559	
Midwest	17.7	21.3	3.6	0.202	
South	45.4	45.1	-0.3	-0.007	
West	25.9	28.8	2.9	0.110	
Type of Location					0.587
Central City	31.4	34.3	2.9	0.094	
Urban Fringe/Large City	45.3	41.1	-4.2	-0.094	
Small Town/Rural	23.3	24.6	1.3	0.056	
Estimated Grade Enrollment					0.891
Large (>53)	25.7	22.9	-2.8	-0.108	
Medium (20-53)	41.3	42.1	0.7	0.018	
Small (<20)	33.0	35.1	2.0	0.061	

Table 84. 2005 NAEP Grade 12 nonresponse adjusted sample - Weighted mean values of various characteristics for full sample and responding schools with substitutes - Conservative Christian

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	51.5	47.8	-3.6	-0.071	0.792
Race/Ethnicity					
Percentage American Indian	0.7	0.8	0.1	0.136	0.610
Percentage Asian	2.8	2.7	-0.1	-0.029	0.771
Percentage Black	7.1	4.9	-2.1	-0.302	0.095
Percentage Hispanic	5.2	4.5	-0.7	-0.125	0.484
Percentage White	84.4	87.1	2.8	0.033	0.202

Table 85. 2005 NAEP Grade 12 nonresponse adjusted sample - Percentages of full sample and responding schools with substitutes by various subgroups - Lutheran (sample size = 14)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.390
Northeast	11.4	13.6	2.2	0.192	
Midwest	48.5	51.8	3.3	0.068	
South	7.8	0.0	-7.8	-1.000	
West	32.3	34.6	2.4	0.073	
Type of Location					0.394
Central City	33.0	37.7	4.8	0.145	
Urban Fringe/Large City	49.0	46.0	-3.0	-0.062	
Small Town/Rural	18.0	16.3	-1.7	-0.097	
Estimated Grade Enrollment					0.749
Large (>53)	67.5	66.4	-1.1	-0.017	
Medium (20-53)	26.5	26.8	0.4	0.014	
Small (<20)	6.1	6.8	0.8	0.126	

Table 86. 2005 NAEP Grade 12 nonresponse adjusted sample - Weighted mean values of various characteristics for full sample and responding schools with substitutes - Lutheran

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	80.3	84.3	4.1	0.051	0.371
Race/Ethnicity					
Percentage American Indian	0.1	0.1	0.0*	0.125	0.481
Percentage Asian	2.5	2.8	0.2	0.091	0.015
Percentage Black	5.9	5.8	-0.1	-0.014	0.895
Percentage Hispanic	4.4	5.1	0.7	0.162	0.167
Percentage White	87.1	86.3	-0.9	-0.010	0.264

*Estimate rounds to zero.

Table 87. 2005 NAEP Grade 12 nonresponse adjusted sample - Percentages of full sample and responding schools with substitutes by various subgroups - Roman Catholic (sample size = 77)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					1.000
Northeast	31.2	30.9	-0.3	-0.009	
Midwest	32.0	32.6	0.6	0.020	
South	20.7	20.5	-0.2	-0.010	
West	16.1	16.0	-0.1	-0.008	
Type of Location					0.419
Central City	59.1	63.4	4.3	0.073	
Urban Fringe/Large City	32.4	31.0	-1.4	-0.044	
Small Town/Rural	8.5	5.6	-2.9	-0.340	
Estimated Grade Enrollment					0.831
Large (>53)	92.5	92.6	0.2	0.002	
Medium (20-53)	7.2	6.9	-0.3	-0.047	
Small (<20)	0.3	0.5	0.2	0.548	

Table 88. 2005 NAEP Grade 12 nonresponse adjusted sample - Weighted mean values of various characteristics for full sample and responding schools with substitutes - Roman Catholic

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	180.2	167.6	-12.6	-0.070	0.364
Race/Ethnicity					
Percentage American Indian	0.4	0.4	0.1	0.222	0.126
Percentage Asian	5.6	6.7	1.1	0.201	0.316
Percentage Black	8.3	7.0	-1.3	-0.154	0.350
Percentage Hispanic	10.7	8.5	-2.2	-0.204	0.225
Percentage White	75.1	77.3	2.3	0.030	0.266

Table 89. 2005 NAEP Grade 12 nonresponse adjusted sample - Percentages of full sample and responding schools with substitutes by various subgroups - Other Private schools with substitutes (sample size = 187)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi- square p-value
Census Region					0.295
Northeast	29.7	28.9	-0.9	-0.029	
Midwest	13.1	12.0	-1.1	-0.080	
South	38.7	40.0	1.3	0.034	
West	18.6	19.1	0.6	0.031	
Type of Location					0.062
Central City	42.2	34.4	-7.8	-0.185	
Urban Fringe/Large City	39.6	38.4	-1.1	-0.029	
Small Town/Rural	18.2	27.2	8.9	0.488	
Estimated Grade Enrollment					0.777
Large (>53)	53.7	52.7	-1.1	-0.020	
Medium (20-53)	31.2	29.9	-1.3	-0.040	
Small (<20)	15.1	17.4	2.3	0.152	

Table 90. 2005 NAEP Grade 12 nonresponse adjusted sample - Weighted mean values of various characteristics for full sample and responding schools with substitutes - Other Private schools

	Full sample mean	Respondent mean	Bias	Relative bias	T-test p-value
Estimated Grade Enrollment	90.8	95.0	4.2	0.047	0.799
Race/Ethnicity					
Percentage American Indian	0.6	0.4	-0.2	-0.259	0.239
Percentage Asian	9.7	10.6	0.8	0.084	0.684
Percentage Black	7.1	5.6	-1.5	-0.215	0.210
Percentage Hispanic	4.1	4.2	0.1	0.027	0.851
Percentage White	78.5	79.2	0.8	0.010	0.732