

CHAPTER 3

THE SCHOOL ADMINISTRATOR SURVEY

3.1 Introduction

With a few exceptions, there is a one-to-one correspondence between the SASS samples of schools and school administrators. The goal of the School Administrator Survey is to collect information from the principal, headmaster or headmistress of each school selected for the School Survey. School administrators are asked to complete their own questionnaires, whereas for the school questionnaires it is acceptable for a principal to delegate all or part of the job to a staff member.

This chapter is organized in the same way as the preceding chapter on the School Survey. It has four sections covering the main phases of the survey operations: frame development and sampling (3.2); data collection procedures and associated errors (3.3); data processing and estimation (3.4); and evaluation of estimates (3.5). However, the chapter will be much shorter than Chapter 2, because many details of the relevant design features and procedures have already been described in Chapter 2 and will not be repeated in this chapter.

In Round 1 of SASS a single questionnaire, SASS-2, was used for both public and private school administrators; however, there were minor differences in the public-use data files produced for the two sectors. For example, the class interval codes assigned to administrators' salaries represented different ranges for the public and private schools. In Round 2, separate questionnaires, the SASS-2A and SASS-2B, were used for the public and private sectors. Most of the data items on the two versions were the same.

The content of the School Administrator questionnaires was similar for Rounds 1 and 2. The majority of the items are about the administrators' demographic characteristics, training, experience, salary and benefits. The remaining items request the administrators' views on such topics as: the relative seriousness of different kinds of problems affecting the school; the relative influence of the administrator and others, including teachers, parents and school boards, on their schools' policies and activities; and, in Round 2 only, the quality of the teaching staff and the relative importance of different educational goals.

A few changes in content occurred between Rounds 1 and 2. Round 1 questions that were dropped covered a breakdown of time spent by the administrator on different kinds of school-related activities, programs for teacher evaluation and assistance to beginning teachers, and problems encountered in filling vacancies. New questions in Round 2 dealt with educational goals and the quality of the teaching staff. In addition, several new items were added to the list of school problems whose relative seriousness the administrators were asked to evaluate.

3.2 Frame development and sampling

The target population for the School Administrator Survey consists of the principals or head administrators of all public and private schools eligible for inclusion in the School Survey. A

few of these schools do not have administrators. Recipients of the School Administrator Survey questionnaire for such schools are asked to check a box for "School has no administrator" and return the questionnaire to the Census Bureau. In Round 1, according to published survey estimates (Choy, Medrich, Henke and Bobbitt, 1992, Tables 2.1 and 3.1), 1 percent of the public schools and 5 percent of the private schools had no administrator. Schools with low enrollment and those in rural areas were less likely to have an administrator.

Once the sample of schools is selected, no additional sampling is needed to select the sample of school administrators. A detailed description of the frame development and sampling procedures for schools is provided in Chapter 2, Section 2.2.

3.3 Data collection procedures and associated errors

Data collection procedures for Round 2 As described for the School Survey in Chapter 2, Section 2.3, the data collection procedure for SASS began with advance mailings to LEAs and school principals to explain the nature of the SASS data collection activities and, in the case of the principals, to ask them to submit a list of teachers for use in selecting the sample of teachers for the Teacher Survey. The questionnaires for the School and School Administrator Surveys were mailed to the principals in December 1990. Nonrespondents were followed up by mail in January 1991 and those who did not respond to the second mailing were followed up by telephone during the second quarter of 1991. Because of the content of the School Administrator Questionnaire, it was important that the questionnaire be completed by the administrators themselves. An instruction at the beginning of the questionnaire reads:

It is important that this questionnaire be completed by the school administrator (i.e., the principal or head), not by anyone else at the school.

Supervision and quality assurance As in the case of the School Survey, the two primary methods of controlling the quality of the data collection operations were *regional office reviews* of the questionnaires completed by Census Bureau field representatives in their telephone followups of nonrespondents and *reinterviews* of both mail and telephone respondents for a sample of completed questionnaires. The procedures for the regional office reviews were identical to those used for the School Survey, as described in Chapter 2, Section 2.3.

For both rounds of SASS, reinterviews were attempted for about 10 percent of the school administrators. They were successfully completed for 87 percent of eligible cases in Round 1 and for 94 percent in Round 2. All reinterviews of school administrators in both rounds were conducted by telephone. For Round 1, a single reinterview questionnaire was used to re-ask selected items from both the school and administrator questionnaires. For Round 2, separate reinterviews of school administrators were conducted covering a subset of items from the School Administrator Questionnaire only. Results are presented below, under the heading

"Measurement error, findings from reinterviews".

Nonresponse error As explained in Chapter 2, a few LEAs requested NCES not to ask sample schools in their district to participate in SASS, so no questionnaires were obtained for the administrators of these schools. In Round 1, the nonresponse from this source was less than 0.5 percent of the eligible school administrators (Nash, 1988).

Most of the unit nonresponse was associated with individual school administrators. Tables 3.1 to 3.3 show unweighted and weighted response rates for Rounds 1 and 2, for public schools by state and private schools by association group. Administrators of schools not operating in the school year of reference for the survey or that failed to meet the definition for other reasons are excluded from the base of the response rates. Table 3.4 shows, for public and private schools in Round 2, the percentages of the initial sample that were excluded for such reasons.

As shown in Table 3.1, weighted response rates for public school administrators were higher than those for private school administrators in both rounds, however, the gap narrowed substantially between Rounds 1 and 2. For public school administrators the weighted response rate in Round 2 was 2.3 percentage points above the corresponding figure for Round 1. For private school administrators, the increase between Rounds 1 and 2 was 10.8 percentage points.

Within each sector there was substantial variation. In Round 1, in the public sector, 29 states had weighted response rates of 95 percent or better and only 1 (the District of Columbia) was below 80 percent (Table 3.2). In Round 2 there were 42 states with weighted response rates of 95 percent or better and the lowest response rate was 82.4 percent, for Maryland. In the private sector, the range of weighted response rates by association group in Round 1 was from 56.1 percent to 97.9 percent. Most groups were in the range from 70 to 90 percent (Table 3.3a). In Round 2, with an expanded set of association groups, the range of weighted response rates was from 72.4 to 98.9 percent and 14 of the 18 groups had rates above 90 percent (Table 3.3b).

Data on unweighted item response rates for the School Administrator Survey in Rounds 1 and 2 are shown in Table 3.5. In general, item response rates were high for both public and private school administrators in both rounds. Because of changes in content, data for the two rounds are not directly comparable, but they suggest that response to individual items was somewhat better in Round 2.

The lowest response rates in Round 1 (70.3 percent for public schools and 72.3 percent for private schools) were for a multiple-response item (mark all that apply) asking about methods of compensating for unfilled teacher vacancies. This item was not included in Round 2. The items reported as having low response rates in Round 2 were items immediately following skip instructions, i.e., they did not apply to all respondents. A review by Jenkins (1992a) indicated that these same items were answered by some respondents to whom they did not

apply, and suggests that some respondents may have misinterpreted the skip instructions.

Measurement error: findings from reinterviews (Note: For the following discussion of reinterview results, readers not familiar with the interpretation of statistical measures of response variance developed from reinterviews may wish to refer to the side bar explaining these measures, in Chapter 2, p. 2.14.) As stated earlier, reinterviews were conducted, covering selected items from the questionnaire, for about 10 percent of the school administrators in both Rounds 1 and 2. Only one topic, the administrators' college degrees and major fields of study, was included in the reinterviews for both rounds. The Round 1 reinterviews had shown unexpectedly high response variances for reports of bachelor's and master's degrees by school administrators. As a consequence, the format of the questions for this topic was substantially revised. In Round 1, a multiple-response (mark all that apply) format had been used to cover all types of degrees. In Round 2, separate sets of questions were asked about bachelor's and master's degrees.

Table 3.6 shows the reinterview measures of response variance for reports of bachelor's and master's degrees for both rounds, for public and private school administrators combined. Gross difference rates for both items were substantially lower in Round 2, as was the index of inconsistency for reports of master's degrees. There were so few principals who did not report bachelor's degrees in Round 2 that a reliable estimate of the index of inconsistency could not be obtained. In Round 2, the questions about receipt of degree and year of receipt all had low response variability (Royce, 1992, Table B), but items on major and minor fields of study exhibited response variability in the moderate to high ranges (indexes of inconsistency in the range 20 and over).

Table 3.7 shows the distribution of indexes of inconsistency for all items included in the School Administrator Survey reinterviews in Rounds 1 and 2. Response variability for most of the items included in the reinterviews has been relatively high, with only a few factual items in the low range (under 20). None of the 22 opinion items evaluated in Round 1 had low indexes of inconsistency and most were in the high range (over 50). These 22 items were of two kinds:

- A set of 13 items asking principals for their views of the relative importance in their schools, on a 4-point scale, of each of 13 different kinds of problems that occur in some schools. Three of these problem types - student pregnancy, student use of alcohol, and student drug abuse - had estimated indexes in the moderate (20 to 50) range; the rest were in the high range.
- A set of 9 items asking principals for their evaluation, on a 6-point scale, of the relative influence of teachers, principals, and governing bodies on policies for establishing curriculum, hiring new teachers, and discipline. All of these had indexes in the high range.

These two sets of items were retained in the Round 2 School Administrator Survey (both in

expanded form), but they were not included in the Round 2 reinterviews, based on a belief that reinterview results for factual items would provide more information of value for question improvement through cognitive research and better questionnaire design (Bushery, Royce and Kasprzyk, 1992).

In general, the reinterview results do not show any significant differences in measures of response variability for public and private school administrators.

Measurement error: findings from other sources In chapter 2, we described findings from in-depth interviews, using cognitive research techniques, with school administrators who completed the School Survey questionnaire. However, this technique has not yet been used to evaluate the School Administrator Survey questionnaires.

Some changes were made in the Round 2 School Administrator questionnaires based at least in part on findings from a review of 600 questionnaires from a pretest conducted in school year 1989-90 (Jefferson-Copeland and Bynum, 1990). The format and placement of codes for major and minor fields of study at the bachelor's and master's levels were revised. A question on hours spent on school-related activities during the most recent full week was dropped. Skip patterns for a question on retirement plans were introduced because it was determined that the second part of the question was not applicable to all respondents.

During the data collection for Round 2, regional office staff reviewed a sample of the questionnaires completed by telephone followup (Pasqualucci, 1991). An analysis of the forms used to record the results of these reviews showed that the main source of errors identified was that several of the Census field representatives had failed to record codes for major and minor degree fields. Also, a separate item (Check item A) designed to skip the next item on the questionnaire when it did not apply had been left blank on several questionnaires.

Further evidence of problems with skip patterns was provided by a review of pre-edit reject rates, edit change tallies and post-edit item response rates (Jenkins, 1992a). These data showed that the check item referred to in the preceding paragraph had not been completed by about 10 percent of the respondents or follow-up interviewers. On the other hand, the edit change tallies showed that respondents had apparently failed to follow all of the skip instructions and consequently answered some items that did not apply to them.

3.4 Data processing and estimation

Data processing procedures The sequence and nature of the data processing operations for the Round 2 School Administrator Survey questionnaires were essentially the same as described for the School Survey in Chapter 2, Section 2.4. There was one significant difference in Round 1: most items missing on the School Administrator Survey questionnaire were not imputed, whereas most missing items on the School Survey were imputed. Missing items for all of the 4 basic surveys were imputed for Round 2.

Imputation in Round 2 Computer imputation of items missing from the school administrator questionnaires took place *after* completion of imputation of items missing from the school questionnaires. The purpose of this sequence was to achieve consistency between the school and school administrator data for each school. Certain items were common to both questionnaires, and the first step in computer imputation of missing items for school administrators was to carry over values for these common items, whether reported or imputed, from the school records.

Following this first step, computer imputation for the remaining missing or inconsistent items for school administrators proceeded in two stages: logical imputation based on other items reported for the same school administrator, following defined rules, and hot deck imputation based on responses for other school administrators with similar characteristics. Specific details are provided in Chapter VIII of the *Data File User's Manual* and in SASS Specifications Memoranda.

Imputation in Round 1 For Round 1 of the School Administrator Survey, there was no computer imputation following the computer edit. Some items were imputed as part of the computer edit and in preceding operations, but all of these imputations were based on other information available for the same administrator or school. There was no hot deck (donor-based) imputation of missing values. No imputation flags were included on the final data tapes.

Weighting Weighting procedures for the School Administrator Survey records were the same as those used for the School Survey records, using overall weights that were the product of four factors: a basic sampling weight; a sampling adjustment factor; a school administrator nonresponse adjustment factor; and a frame ratio adjustment factor. Details are provided in Chapter 2, Section 2.4.

School and school administrator weights were developed independently, for two reasons: there were some schools that had no administrators and there were some instances in which a questionnaire was obtained for the school administrator but not the school, or vice versa. These differences meant that nonresponse adjustment factors would not always be the same for schools and school administrators in the same cell (NCES, 1991a; Gruber, Rohr and Fondelier, 1993).

Variance estimation A balanced half-sample replication variance procedure (see Chapter 2, Section 2.4 for details) is used to estimate sampling errors for all SASS surveys. Replicate weights for use in such estimates of sampling error are included on all SASS public-use microdata files. As noted above under weighting, there were some schools for which a school questionnaire but no administrator questionnaire was obtained, and vice versa. For this reason, in Round 1 the replicates and replicate weights were developed independently for schools and school administrators, using the same general rules (Kaufman, 1991). However, in Round 2 the replicates for school administrators are the same as those used for their schools (Kaufman and Huang, 1993).

3.5 Evaluation of estimates

For Round 1, SASS estimates of public and private school administrators were compared, prior to publication, with administrator and school counts from other sources, including the 1985-86 Private School Survey, the 1987-88 Common Core of Data, the Quality Education Data File (which served as the frame for the Round 1 School Survey), and a figure on the number of public school principals from a list compiled by a commercial market data firm (Hammer, 1989b). Differences among the estimates were relatively small and were deemed to be accounted for by differences in definition and time reference among the estimates examined. Differences between SASS estimates of number of schools and number of administrators in both sectors were accounted for primarily by the existence of schools with no administrators.

To check on the quality of SASS estimates of public school principals' salaries, state education agencies in several states were asked to provide independent information on average principals' salaries in their states (Hammer, 1989a). Four states, Alabama, Illinois, Kansas and Maryland, provided information, but in general it was either not directly comparable with SASS estimates or there was not enough supporting documentation to determine the extent of comparability. Kansas, for example, provided figures that included the value of fringe benefits.

A pre-publication review of estimates based on a set of items about hours spent by administrators on school related activities led to a recommendation, which was followed, that these estimates not be included in publications (Hammer, 1990). Three factors were cited as possibly leading to under-reporting of hours: there was no imputation for individual items for which there was no response; there was no "other" category in which to report hours not covered by the named activity categories; and the set of items did not ask for any distinction between time spent during school hours and time spent after school hours.

The Round 2 tabulations for school administrators were inspected and compared with corresponding data from Round 1. No unusual differences were noted (Hammer, 1992).

Table 3.1 School Administrator Survey Response Rates

	Round 1 (1988)		Round 2 (1991)	
	Unweighted	Weighted	Unweighted	Weighted
Public	94.2	94.4	96.9	96.7
Private	81.2	79.3	91.1	90.1

Sources:

Round 1 Unweighted: Kindel (1989).

Round 1 Weighted: (NCES 1991c).

Round 2: Gruber, Rohr and Fondelier (1993).

Table 3.2 School Administrator Survey Weighted Response Rates for Public Schools by State

State	Response Rate		State	Response Rate	
	Round 1	Round 2		Round 1	Round 2
Alabama	98.3	98.9	Montana	98.1	99.8
Alaska	99.0	96.6	Nebraska	95.8	98.2
Arizona	99.2	97.1	Nevada	96.8	97.8
Arkansas	97.0	96.6	New Hampshire	98.6	98.8
California	92.0	95.7	New Jersey	95.2	92.4
Colorado	99.2	98.4	New Mexico	96.9	99.2
Connecticut	92.0	97.0	New York	89.1	89.5
Delaware	89.7	94.4	North Carolina	94.2	95.6
District of Columbia	68.8	88.9	North Dakota	95.2	99.1
Florida	99.1	94.4	Ohio	97.1	97.0
Georgia	95.4	94.8	Oklahoma	90.3	99.1
Hawaii	84.8	98.7	Oregon	97.7	97.3
Idaho	97.2	100.0	Pennsylvania	91.5	97.2
Illinois	97.2	99.8	Rhode Island	98.8	97.1
Indiana	98.4	100.0	South Carolina	90.9	98.6
Iowa	95.8	99.0	South Dakota	100.0	98.6
Kansas	93.9	98.0	Tennessee	94.9	97.5
Kentucky	91.7	99.0	Texas	92.4	98.1
Louisiana	91.9	93.7	Utah	100.0	99.4
Maine	98.7	98.2	Vermont	97.5	98.6
Maryland	81.1	82.4	Virginia	93.7	95.3
Massachusetts	92.9	96.5	Washington	98.5	93.7
Michigan	99.1	98.8	West Virginia	95.7	99.6
Minnesota	94.6	98.8	Wisconsin	94.4	97.2
Mississippi	97.6	97.6	Wyoming	88.8	96.1
Missouri	89.5	98.9	TOTAL	94.4	96.7

Sources: NCES (1991c) and Gruber, Rohr and Fondelier (1993).

Table 3.3a School Administrator Survey Weighted Response Rates for Private Schools by Association Group: Round 1

Association Group	Response Rate (Percent)
Total	79.3
Area Sample	66.4
Association of Military Colleges and Schools - US	91.7
Catholic	90.6
Friends	84.9
Episcopal	88.1
Jewish	71.8
Lutheran	88.4
Seventh-day Adventists	88.8
Christian Schools International	97.9
American Association of Christian Schools	56.1
National Association of Private Schools for Exceptional Children	84.6
American Montessori Society	78.7
National Association of Independent Schools	76.4
Other	72.6

Source: NCES (1991c).

Table 3.3b School Administrator Survey Weighted Response Rates for Private Schools by Association Group: Round 2

Association Group	Response Rate (Percent)
Total, area frame and list frame	90.1
Area frame	83.4
Association list frame	
Association of Military Colleges and Schools	95.5
National Catholic Education Association, Jesuit Secondary Education Association	96.2
Friends Council on Education	93.8
National Association of Episcopal Schools	93.7
Hebrew Day Schools	86.1
Solomon Schechter Day Schools	97.9
Other Jewish	72.4
Lutheran Church--Missouri Synod	97.3
Evangelical Lutheran Church--Wisconsin Synod	97.5
Evangelical Lutheran Church in America	98.9
Other Lutheran	97.3
General Council of Seventh-day Adventists	94.9
Christian Schools International	94.3
American Association of Christian Schools International	73.4
National Association of Private Schools for Exceptional Children	94.7
American Montessori Society Schools	92.2
National Association of Independent Schools	93.7
All else	85.0

Source: Gruber, Rohr and Fondelier (1993).

Table 3.4 School Administrator Survey Losses from Initial Sample Selected: Round 2 (Unweighted)

Type of School	Initial Sample	Percent Out of Scope	Percent In Scope	In Scope					
				Interview			Noninterview		
				Frequency	Percent of Sample	Percent of In Scope	Frequency	Percent of Sample	Percent of In Scope
Public	9,907	4.9	95.1	9,134	92.2	96.9	288	2.9	3.1
Private	3,280	7.3	92.1	2,769	84.4	91.0	273	8.3	9.0

Source: Gruber (1992).

Table 3.5 School Administrator Survey Unweighted Item Response Rates

Sector	Range of Item Response Rates (Percent)	Percent of Items with Response Rates:	
		≥ 90%	< 75%
Round 1			
Public	70 - 100	86	2
Private	72 - 100	89	2
Round 2			
Public	90 - 100	100	0
Private	80 - 100	98	0

Sources:

NCES (1991c).

Gruber, Rohr and Fondelier (1993).

Table 3.6 School Administrator Survey Extent of Consistency Between Survey Interview and Reinterview

Topic (Text of questions is presented below)	Percent Mention (Survey Interview)		Gross Difference Rate		Index of Inconsistency	
	Round 1 (1988)	Round 2 (1991)	Round 1 (1988)	Round 2 (1991)	Round 1 (1988)	Round 2 (1991)
Bachelor's Degree Point Estimate 90% Confidence Interval	95.8	98.6	20.3*	1.3*	98.5	Too Few Cases Did Not Mention
Master's Degree Point Estimate 90% Confidence Interval	91.1	91.8	9.9*	1.7*	49.4*	11.3*
			18.4-22.4	0.8-2.0	89.4-100+	7.5-17.0
			8.4-11.6	1.1-2.6	42.2-57.9	

*Statistically significant difference between Round 1 and Round 2 (at 90% confidence).

Source: Bushery, Royce, and Kasprzyk (1992).

Round 1 Question for Bachelor's and Master's Degrees was a "mark all that apply question":

Which of the following college degrees have you earned? (Mark (X) all that apply)

- Associate degree or vocational certificate
- Bachelor's degree
- 2nd Bachelor's degree
- Master's degree
- Professional diploma or education specialist (At least one year beyond M.A. level)
- Doctorate (e.g., Ph.D., Ed.D.)
- First professional degree (e.g., M.D., L.L.B., J.D., D.D.S.)
- No degree or diploma

Round 2 Questions for Bachelor's and Master's Degrees:

Do you have a bachelor's degree?

- Yes
- No

Do you have a master's degree?

- Yes
- No

Table 3.7 School Administrator Survey Indexes of Inconsistency^{1/} Estimated from Reinterviews

Round and Type of Item	Number of Items	Index of Inconsistency			
		High >50	Medium 20-50	Low <20	NA ^{2/}
Round 1					
Factual	11	4	4	1	2
Opinion	22	19	3	--	--
Round 2^{3/}					
Factual	26	10	10	5	1

Notes:

1. Each item either had closed multiple-response categories or was converted to the equivalent by assigning class intervals to open-end responses. For items with more than 2 response categories, the L-fold index of inconsistency was estimated.
2. Did not meet the minimum requirements to compute a reliable estimate of the index of inconsistency.
3. No opinion items were included in the Round 2 School Administrator Survey Reinterviews.

Sources: Newbrough (1989), Royce (1992).

