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ABSTRACT

In 1984, Congress reauthorized its mandate for the National Center for Education Statistics to collect data on vocational education students, programs, and teachers. This report is based on the Public School Survey, 1985 (PSS-85), in which teachers were asked to provide information about themselves and to specify the subject-matter classes they taught. The PSS-85 obtained responses from 8,568 teachers and 2,301 administrators from an initial sample of 2,801 schools selected from the Common Core of Data universe. Key findings showed that: (1) the percentage of females was similar for vocational and non-vocational teachers at 45% and 49%, respectively; (2) the percentages of minority vocational and non-vocational teachers were similar, at about 10%; (3) non-vocational teachers were more likely to have master's degrees than were vocational teachers; (4) overall, non-vocational teachers had about 1 year more full-time teaching experience than did vocational teachers; and (5) non-vocational and vocational teachers had taught an average of about 1 year part time, or less. Within group comparisons showed that: large schools had a higher percentage of minority non-vocational teachers than did small or medium schools; the percentage of females did not vary significantly by size of school; vocational teachers were about as likely to have bachelor's degrees as they were to have master's degrees; non-vocational teachers were more likely to have master's degrees than bachelor's degrees only; teaching experience of vocational and non-vocational teachers was greatest in large schools; there were three levels of teaching concentration among vocational teachers; about two-thirds of business teachers were female; and most business teachers held at least master's degrees. Overall, vocational and non-vocational teachers were more alike than different. Eight bar graphs and 10 tables summarize findings. The PSS-85 Teacher Questionnaire is included. (SLD)

NATIONAL CENTER FOR EDUCATION STATISTICS

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U.S. Department of Education
Office of Educational Research and Improvement NCES 90-048

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Elementary and Secondary Education Statistics Division

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U.S. Department of Education
Office of Educational Research and Improvement

NCES 90-048

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June 1990

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Highlights

The National Center for Education Statistics' Public School Survey, 1985, asked teachers to specify the subject-matter classes that they taught. The key findings are listed below.

Vocational versus Nonvocational

o For vocational education teachers, the percentage that is female (45 percent) is similar to the percentage female for nonvocational education teachers (49 percent).

o Among vocational education teachers, the percentage that represents members of a minority race or ethnic group is similar to the percentage minority among nonvocational education teachers (10 percent).

o Nonvocational teachers, as a group, were more likely to have master's degrees than were vocational teachers.

o Overall, nonvocational teachers had about 1 more year of full-time teaching experience than did vocational teachers; in the North Central and Northeast regions, the difference was 2 years.

o Nonvocational and vocational teachers in all regions had taught an average of about 1 year part time, or less.

Within-Group Comparisons

o Large schools contained a higher percentage minority nonvocational teachers than did small or medium schools.

o Percentage female did not vary significantly by size of school for either vocational or nonvocational teachers.

o Vocational teachers were about as likely to have bachelor's as master's degrees. Nonvocational teachers were more likely to have master's degrees than only bachelor's degrees.

o Teaching experience of vocational and nonvocational teachers was greatest in large schools.

o Three levels of concentration occurred among teachers of vocational education classes. About one-third taught 1 vocational class; another one-third, 2-4 classes; and one-third, 5 or more vocational classes.

o About two-thirds of the business teachers were female.

o The majority of business teachers held at least master's degrees.

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Background

Under the Carl D. Perkins Vocational Education Act of 1984 (Public Law 98-524), section 421, Congress reauthorized its mandate for the National Center for Education Statistics (NCES) to collect data on vocational education students, programs, and teachers. The Data on Vocational Education Plan (DOVE) was developed by NCES and adopted by the U.S. Department of Education to address current data needs in vocational education. DOVE provides for the collection and analysis of vocational education data through existing NCES surveys. This report is based on the Public School Survey, 1985.

Public secondary vocational education is offered in approximately 17,000 high schools, enrolling over 10 million students in vocational classes in this country. Vocational education programs operate within a broad context, which is greatly influenced by social, economic, and technological forces. Although secondary vocational teachers constitute a small fraction of the Nation's teaching force, the role they perform is a vital one. This role should be viewed in the context of the whole of education, as well as the current and projected labor market. New production industries in high-technology fields will contribute to major shifts in employment from traditional manufacturing and blue-collar jobs to the service sectors, white-collar occupations, and new manufacturing areas. Services account for 70 percent of the jobs in the United States today; by the year 2000 services will account for 92 percent of U.S. jobs.1/

This instructional role is changing in response to higher standards for teacher preparation and certification, and the need to attract and retain minority teachers. Who are the vocational teachers of our Nation's youth? How are they similar and how are they different from nonvocational teachers? Research suggests that they may be more alike than different.

National data comparing vocational and nonvocational high school teachers are very scarce, historically. A statewide 1973 study in California found that most vocational education teachers (81 percent) were employed by senior high schools and community colleges; few vocational teachers were members of minority groups (8.4 percent).2/

A small 1975 sample survey (Kazanas and Gregor) examining job satisfaction and demographic variables of vocational (including Office Occupations) and nonvocational (academic) teachers revealed that they did not differ in job satisfaction, meaning of work, or value of work; however, community size and income were significantly related to job satisfaction regardless

of teaching assignment. In addition, no significant difference was found among the vocational teachers in various vocational service areas (program fields). Similar percentages of vocational and nonvocational teachers were married (about 80 percent), and female (34 percent); and they had similar family incomes in 1975 (about $14,230 and $14,830, respectively).3/

With the advent of the current education reform movement, high school graduation requirements in academic subjects have been increased, as well as teacher certification requirements and teacher competency testing. What effect have these changes had on vocational education? Most of these changes are geared toward preparing students for college attendance, making it more difficult for them to take vocational classes--at a time when only one-fifth of the employment slots in this country require a bachelor's degree or above.4/ New research is needed on who is currently taking vocational education, who is presently teaching it, and whether or not they are different from those who are not involved in the vocational education enterprise.

In a 1984 augmentation to NCES's 1982 High School and Beyond longitudinal survey (HS&B), a national sample survey of 10,000 teachers from 473 public schools found that 17 percent of public secondary teachers taught vocational education (including business) courses. A log-linear analysis indicated no statistically significant differences in the percentages of vocational versus nonvocational teachers by sex, race/ethnicity, or tenure. However, small but significant differences occurred in State certification and years of teaching experience, wherein nonvocational teachers exceeded vocational education teachers.5/

The National Center for Research in Vocational Education at the Ohio State University (James Weber, et al) sampled 2,251 vocational and nonvocational teachers from 120 high schools in fall 1987.6/ The vocational teachers were distributed as follows:

Service Area	Percent
Total	100
Trade and Industrial (Technical)	46
Business and Office	19
Occupational Home Economics	6
Industrial Arts	6
Health	6
Agriculture	6
Marketing and Distributive Education	5
Consumer and Homemaking	5
Other	1

Technical classes constituted nearly half of the secondary vocational education enterprise. Business classes made up about one-fifth of secondary vocational education. The remaining 35 percent was split among the smaller vocational service areas.

Do business teachers differ from technical teachers in amount of education, gender, or minority status, since a blue-collar versus white-collar distinction exists between the two types of occupations? To shed some light on this question, analyzing business teachers separately might be fruitful. Therefore, this report presents and discusses national data on a small but recent sample of secondary public school teachers from another study conducted by NCES.

These data are from the Public School Survey, 1985. (They should be considered as a baseline to be compared with forthcoming time-series data from NCES's Schools and Staffing Survey, which involves a much larger sample.) In this report, teachers of vocational classes, not including their possible business classes (see "Definitions"), are compared and contrasted with nonvocational teachers on the following variables: average number of years of teaching experience (part time or full time); highest degree obtained (bachelor's versus master's, and bachelor's or below versus master's or above); percentage female; and percentage minority. These variables are examined by geographic region, as well as by size of school enrollment. Somewhat supportive of previous research, fewer between-group differences (i.e., vocational versus nonvocational teachers) were found than within-group differences (e.g., vocational education teachers, by region or size of school).

Some desirable comparisons between vocational and nonvocational teachers were not possible in this report because of sample size restrictions. For example, the sample size was too small to examine vocational teachers in the Northeast having no degree, compared with nonvocational teachers in the same region with no degree. The cell size for the vocational teachers in this example was too small to test for significance. Cell size restrictions are stated where they apply. Even where some comparisons were made, they may have been lacking in statistical power. Real differences may exist that are large enough to be interesting but fail to reach statistical significance because of the small sample size. Unless otherwise noted, all comparisons stated are statistically significant.

Other desirable comparisons, such as certification in vocational versus nonvocational education, were not possible because of the questionnaire construction. Although two items

on the teacher questionnaire refer to certification, the items do not specify whether or not the teacher is certified in vocational education. No item on this survey asked about a teacher's possible handicapping condition. More importantly, no individual vocational service area program data were collected in this survey, except data on business teachers. As stated above, NCES is Congressionally mandated to report these data. Consequently, because these program data on business teachers currently exist, they are presented separately here by gender, minority status, and degree level. (See "Definitions.")

Many within-group comparisons (i.e., within vocational or within nonvocational education) are contained in this report. It should be viewed as a baseline reference document providing national secondary vocational education teacher estimates.

This report is organized into three sections. The first section focuses on descriptions of vocational and nonvocational teachers by geographic region; the second, focuses on teachers by size of school; and the third, on business teachers. In the first two sections, gender, minority status, level of highest degree, and years of teaching experience are examined separately for vocational and nonvocational teachers, as well as comparisons between vocational and nonvocational teachers. In the third section, business teachers are discussed by gender, minority status, and level of highest degree. Following that discussion are a summary of findings and a description of plans for future vocational education data collection and analysis. Next is a technical discussion of the survey and estimates. Graphs and reference tables with standard errors follow the text.

The appendix contains a table of unweighted sample sizes for each variable discussed. Caution should be exercised in the interpretation of these findings where cell sizes are small; i.e., around 30. Next in the appendix is a list of States in the four U.S. geographic regions, designated by the Census Bureau, and used by NCES in this report. A copy of the teacher questionnaire used in this survey is last.

Geographic Region

About one-tenth of secondary public school teachers taught at least one vocational education class during school year 1984-85 (figure 1). The proportion that vocational education teachers represented of all these teachers ranged from a high of 12.0 percent in the South, to a low of 7.6 percent in the

Northeast, with 11.7 percent in the West and 10.1 percent in the North Central region (derived from table 1). Among vocational teachers, the largest share was teaching in the South (40 percent); the smallest, in the Northeast (15 percent).

Gender. In general, a higher proportion of vocational teachers was male (55 percent) than female. This pattern occurred in the West and North Central regions but not in the South where a higher proportion was female (59 percent). (The Northeast had a sample size too small to produce a reliable numerical estimate for females.) Similar to vocational teachers, a higher proportion of female (60 percent) than male nonvocational teachers was in the South. In the other three regions, a significantly higher proportion of nonvocational teachers was male than female. Overall, the percentage of female nonvocational teachers compared with female vocational teachers was similar (table 2). In the West and North Central regions, however, a higher proportion of nonvocational compared with vocational teachers was female.

Minority Status. The overall percentage minority was about equal for vocational and nonvocational teachers (10 percent). The South had a significantly higher percentage minority vocational teachers than did the North Central region or the Northeast. Comparing vocational minority teachers with nonvocational minority teachers by region resulted in no significant differences. However, within nonvocational teachers, a significantly higher proportion of those in the South than in the other regions was a member of a racial or ethnic minority group; in the West, a higher proportion minority than in the North Central and the Northeast (table 2).

Level of Highest Degree. National and regional estimates of vocational and nonvocational education teachers are presented by collapsing categories for level of highest degree obtained, either bachelor's or below, or master's or above (table 3).

For the total group, though, before collapsing degree categories, 45 percent of all these public secondary teachers terminated their formal higher education with bachelor's degrees; 53 percent, terminal master's degrees (see text table below). In general, the majority of nonvocational teachers held master's degrees (54 percent); only in the West were they not more likely to have master's degrees. For vocational teachers, the percent that obtained terminal bachelor's degrees was not statistically significant. By region, as well, vocational teachers were not statistically more likely to have terminal bachelor's degrees. Rather, in the South, vocational teachers were significantly less likely to have earned terminal bachelor's degrees (41 percent).

	Terminal Degree			
	(Percent)			
	Bachelor's	Standard error	Master's	Standard error
Total secondary teachers	45	.9	53	1.0
Vocational teachers				
Total	49	3.1	44	3.1
West	60	6.9	40	6.9
North Central	50	5.9	50	5.8
Northeast	53	8.9	39	8.9
South	41	4.8	44	4.9
Nonvocational teachers				
Total	44	1.0	54	1.0
West	54	2.3	45	2.3
North central	45	1.9	54	1.9
Northeast	33	2.2	64	2.3
South	46	1.6	52	1.6

For nonvocational teachers, in general, the proportion with terminal master's degrees was larger than that for vocational teachers. Within vocational education terminal bachelor's or master's degree holders, no region had significantly more or less than any other. Nonvocational teachers, however, demonstrated strong regional differences for terminal bachelor's and master's degrees. The West had the highest proportion with bachelor's degrees and the lowest proportion with master's degrees. The South, as well as the North Central region, had a higher proportion with terminal bachelor's degrees than did the Northeast, and a lower proportion with terminal master's degrees. The Northeast had fewer bachelor's degrees than did the South, and more master's degrees (see text table above).

Combining degree categories and contrasting teachers having bachelor's degrees or lower with those having master's degrees

or higher, appears to create different patterns for vocational compared with nonvocational teachers. While not statistically significant, vocational teachers tended to have bachelor's degrees or lower (55 percent). In contrast, a significantly higher proportion of nonvocational teachers had obtained master's degrees or above (55 percent) (table 4) (figure 2). The regional percentage distribution of vocational teachers with bachelor's degrees or less is presented in figure 3. Nonvocational teachers were significantly more likely to have earned master's degrees or higher except in the West and South (figure 4).

Years of Teaching Experience. Combined vocational and nonvocational teachers had about 14.5 years of full-time, and about 1 year of part-time, teaching experience. The greatest differences between vocational versus nonvocational teachers in years of full-time teaching experience occurred in the North Central States and the Northeast. Nonvocational teachers tended to have taught about 2 more years (figure 5).

By region, vocational teachers had a mean full-time teaching experience of 12.5 to 15 years. Those in the North Central region had the least (12.5 years); those in the West had the most (15 years); and those in the Northeast (14.3) had more than the South (13.1). The vocational teachers had taught an average of about 1 year part time (table 5). Vocational teachers in the West had the most part-time experience in vocational education; but those in the South had more than those in the North Central or Northeast regions.

Among nonvocational teachers, those in the Northeast had significantly more full-time teaching experience (16.3 years) than any other region; those in the South, the least (13.5 years). In addition, nonvocational teachers in the South had the least part-time teaching experience.

Size of School

Vocational education teachers were most likely to be teaching in large schools (table 6). However, the ratio of vocational to nonvocational teachers was greatest in small schools.

Gender. More secondary teachers were male (52 percent) than female. The percentage female vocational teachers varied by school size, with medium-sized schools having a significantly lower percentage female than male vocational teachers (40 percent). However, in small or large schools, percentage female

vocational teachers was not significantly less than percentage male. Unlike vocational teachers, the percentage female nonvocational teachers was not significantly different from the percentage male by size of school (table 7). In addition, regardless of school size, percentage female was similar when comparing vocational to nonvocational teachers.

Minority Status. Although among vocational education teachers, percentage minority did not differ by size of school, the percentage minority among nonvocational teachers was significantly greater in large schools compared to small or medium schools (table 7). Between total vocational and total nonvocational education, no difference was found in percentage minority.

Level of Highest Degree. Those vocational education teachers without a degree were too few to analyze (5 percent), as were those with associate's (1 percent) or doctoral degrees (less than 1 percent). National estimates of bachelor's degree holders teaching vocational education were not related to size of school. Vocational teachers were about as likely to have bachelor's or master's degrees regardless of school size (see text table below).

	Terminal Degree (Percent)			
	Bachelor's	Standard error	Master's	Standard error
Total secondary teachers	45	1.0	53	1.0
Vocational teachers				
Total	49	3.1	44	3.1
Small	58	5.7	38	5.6
Medium	50	6.3	48	6.3
Large	44	5.2	45	5.2
Nonvocational teachers				
Total	44	1.0	54	1.0
Small	59	2.0	40	2.0
Medium	44	2.0	55	2.0
Large	39	1.5	59	1.5

Combining degree categories and contrasting teachers having bachelor's degrees or lower with those having master's degrees or higher, by school size (national estimates in table 8), yielded the following results. The majority of vocational education teachers (60 percent) had bachelor's degrees or lower in small schools (table 9). No significant difference was found in medium or large schools (figure 6). The majority of nonvocational teachers had master's degrees or higher in medium or large schools. However, significantly more nonvocational teachers in small schools (59 percent) had bachelor's or below (figure 7).

Years of Teaching Experience. Before considering size of school, vocational education teachers overall had less full-time, but more part-time, teaching experience than did nonvocational teachers. For vocational, as well as nonvocational teachers, those in small schools tended to have less full-time teaching experience (about 12.5 years).

Vocational education teachers had an average full-time teaching experience between about 12.5 to 14.5 years. Those in small schools had the least (12.5 years), and those in large schools had the most (14.5 years). Vocational teachers in large schools also had significantly greater average full-time teaching experience than did those in medium schools. Part-time vocational teachers' experience ranged from .39 years (medium schools) to 1.04 years (large schools), with small schools reporting significantly greater part-time vocational teachers' experience than did medium schools; but large schools reported more than did small or medium schools (table 10).

Nonvocational education teachers in medium and large schools reported significantly more full-time teaching experience than did those in small schools. On average, however, nonvocational teachers in these large schools tended to have significantly more (about one-half year longer) full-time teaching experience than did vocational teachers in these same schools (figure 8). Nonvocational teachers in medium schools also had more full-time experience than did vocational teachers in medium schools. In small schools, however, this pattern was reversed. Vocational education teachers had more full-time experience than did nonvocational teachers.

Business Teachers

Regionally the business teachers were distributed as follows: 19 percent in the West; 29 percent, North Central; 21 percent, Northeast; and 31 percent in the South.

Gender. The proportion of female business teachers (64 percent) was highly significant (alpha less than .01), as shown in the table below.

Business teachers	Total	Female	Male
Total number	47,557	30,436	17,121
Percent	100	64	36
Standard error	--	3.7	3.7
Sample size	246	157	89

This finding contrasts sharply with the overall proportion of female vocational teachers (45 percent), which was discussed earlier in this report (table 2).

Minority Status. The table below contains national estimates of the minority representation among business teachers in the public schools.

Business teachers	Total	Nonminority	Minority
Total number	47,557	43,096	4,461
Percent	100	90.6	9.4
Standard error	--	1.96	1.96
Sample size	246	223	23

About 10 percent of business teachers, like other vocational and nonvocational teachers, was minority.

Level of Highest Degree. National estimates of business teachers by level of highest degree attained are shown in the table below.

Business teachers	Total	Bachelor's or below	Master's or above
Total number	47,557	18,785	28,772
Percent	100	40	60
Standard error	--	3.66	3.66
Sample size	246	97	149

The majority of business teachers (60 percent) attained master's degrees or above (alpha level .05).

While vocational teachers generally tended to have earned bachelor's degrees or lower, business teachers, as well as nonvocational teachers, earned master's degrees or above.

Summary of Findings

The obvious conclusion from these data is that vocational and nonvocational teachers are indeed more alike than different. On the following variables examined, these two curriculum groups were quite similar in direction, but with some differences in extent:

- Both were more likely to be male than female except in the South, where they were more likely to be female.
- Overall minority representation did not differ by type of curriculum; but for nonvocational teachers, it varied by region and by school size.
- Gender did not vary by size of school for either type of curriculum, except that medium-sized schools had fewer female than male vocational education teachers.
- Only in small schools, regardless of type of curriculum taught, were secondary public school teachers more likely to have bachelor's degrees.
- Finally, teaching experience for these teachers was greatest in large schools, regardless of curriculum.

In general, the differences between the curriculum groups were few:

- Although the great majority of secondary public school teachers did not teach vocational education, they were more likely to have master's degrees; and they had more full-time, but less part-time, teaching experience than did vocational teachers.
- In addition, representation of the sexes along traditional lines still holds in this study. Although in general, vocational teachers were more likely to be male, business teachers were more likely to be female.

Plans for Future Vocational Education Data Collection

NCES has recently fielded a seven-questionnaire survey of public and private elementary and secondary schools; namely, the Schools and Staffing Survey (SASS). Data tapes will be available during 1990. A series of topical reports is planned, as well as tabulations of data including vocational items, which will report data from a much larger sample of teachers of vocational education classes. For future tabulations, an attempt should be made to distinguish between those teachers who teach predominantly vocational education and teachers who teach predominantly nonvocational courses during a full week.

Ideally, data would be collected by the vocational service area program categories (see Weber, above). Comparisons among the vocational education programs would then be possible. This is an ultimate goal for future data collections through SASS.

Definitions

A vocational education teacher was defined here as any teacher who taught one or more vocational education subject-matter classes (about 10.5 percent of teachers), not counting their possible business classes, during the previous full week. The survey form contained separate codes for vocational education (code 10) and business (code 03) classes. Although some studies include data on business classes as part of vocational education, teachers in the Public School Survey, 1985, were asked to distinguish between the two. That is, teachers in this survey were self-defined as teaching vocational education classes, or business classes, for each of nine class periods. Thus, the decision was made to maintain the survey design categories, rather than to combine vocational education and business for this analysis. However, the reader is reminded that definitions of vocational education frequently differ across studies, and that care should be exercised when comparing data between studies.

These findings are based on the following distribution of 9 class periods per day during the previous full week: 32 percent of the vocational education teachers taught 1 vocational class period; 16 percent taught 2; 9 percent taught 3; 12 percent taught 4; 20 percent taught 5; 9 percent taught 6; and 2 percent taught 7. That is, roughly three levels of concentration of vocational teaching occurred. About one-third taught only 1 class; another one-third taught 2-4 classes; and close to one-third of these teachers in all regions taught 5 or more vocational education classes, ranging from 29 percent in the North Central States to 38 percent in the West. In addition, about 7 percent of the sampled vocational education teachers

also taught 1 or more business classes. A few of the vocational teachers who taught only 1 or 2 vocational classes taught nothing else at their sampled schools; that is, they were teaching part time at that school. Other vocational teachers taught a variety of other subject-matter classes, as well.

A business teacher was defined here as any teacher who taught one or more business (code 03) subject-matter classes during the previous full week. This sample contained 246 business teachers, 30 of whom also taught one or more vocational education (code 10) classes. The number of business classes taught was distributed as follows: 27 percent of the business teachers taught 1 business class period; 13 percent taught 2; 7 percent taught 3; 12 percent taught 4; 30 percent taught 5; 10 percent taught 6; and less than 1 percent taught each of 7, 8, or 9 class periods. That is, roughly one-fourth taught 1 business class; one-third taught 2-4 classes; one-third taught 5; and about 10 percent taught 6 or more business class periods.

A secondary teacher was defined by teaching level, as follows: The schools' teaching levels were coded as "elementary" if the highest grade in the school was less than grade nine; "secondary" if the lowest grade was higher than grade eight; and other schools' teaching levels were coded as "other." If a teacher was linked to a school with teaching levels defined as "elementary" or "secondary" by that method, the teacher was likewise defined as teaching at the "elementary level" or "secondary level" by Public Administrator questionnaire item 9, "Check each grade in which instruction is offered in this school, whether or not there are any students in that grade." (This approach defined the teaching level of 7,076, or 94 percent, of the sample of 7,500 public school teachers who could be linked to school-level data.) For teachers whose school's teaching level was defined as "other," or who could not be linked to a school, their teaching level is based on Public Teacher questionnaire item 14, which asks for the grade levels of the students taught. If the highest grade of the students taught was less than grade nine, and the lowest grade was kindergarten or higher, teaching level was defined as "elementary"; if the lowest grade was at or above grade nine, teaching level was "secondary." Teachers of prekindergarten or ungraded classes, where no grade-level boundaries could be established by inspecting the data, were defined as missing for this analysis. As a result of both steps, 8,392 of the total public school teacher sample of 8,568 were defined as "elementary" or "secondary" teachers. In the analysis of the data, a full-time-equivalent number of teachers was derived by using a conversion formula to equate two part-time teachers to one full-time teacher and summing them together with the appropriate weights.

Size of school was either small (less than 500 students), medium (500 to 999 students), or large (1000 or more students).

Technical Notes

The Survey

The Public School Survey, 1985, obtained responses from 8,568 teachers and 2,301 administrators from an initial sample of 2,801 schools. The schools were selected from the Common Core of Data universe (which includes area vocational centers) maintained by the National Center for Education Statistics (NCES).

As the first step in the sampling procedure, nine strata of schools were defined, based on three school types (elementary, secondary, and other) and three categories of district size (1-5 schools, 6-50 schools, and over 50 schools). Sample schools were selected independently within each stratum with probability proportional to the square root of each school's full-time-equivalent number of teachers.

Samples of teachers were selected from lists supplied by the schools and were stratified by elementary teachers, teachers of science or mathematics, and others. All teachers employed at sample schools with four or fewer teachers were in the sample. A sample of four teachers was selected from each of the remaining sample schools. The selection of four teachers per school achieved the desired overall sampling rates for the teacher strata, through a two-stage, within-school sampling process. First, for each of the four sample teachers for a given school, a random choice was made of the stratum from which the teacher was to be selected. A teacher was then randomly selected from the stratum selection. The selections of strata were made separately, within each sample school, with probability proportional to size.

The sample design did not specifically target vocational education teachers. Therefore, in an effort to avoid a serious undercount of vocational teachers, a liberal definition was applied to maximize the number of responding vocational teachers--any teacher who taught one or more vocational education subject-matter classes during the previous full week.

School-level data were collected on enrollment, student characteristics, staffing levels, use of aides and unpaid volunteers, computer usage, incentive pay programs, and other areas. Teacher-level data were collected on demographic characteristics, subject-matter classes taught, educational background, training experiences, time usage, use of aides and unpaid volunteers, compensation, and other employment, as well as other topics.

Data collection occurred within the first few months of 1985. Actual response rates that produced the numbers of teachers and schools indicated above were 85 percent for schools and 80 percent for teachers.

Precision of Estimates

The computer programming software package known as Statistical Analysis System (SAS) was used to produce the computer runs. Specifically to compute the variances, Proc RTIfreqs (a derivative of SESUDAAN), October 24, 1982, version was used, copyrighted by Research Triangle Institute of Research Triangle Park, North Carolina, the contractor for this survey.

The estimates presented in the tables are based on samples and are subject to sampling variability. Responses from 4,158 secondary teachers who could be linked to school-level data were weighted up to provide national estimates, following the full-time-equivalent conversion described in the "Definitions" section of this report. The weights reflect the sampling probability associated with each observation. Caution should be exercised in interpreting statistics based on relatively small numbers of cases, as well as in interpreting relatively small differences between estimates. If the questionnaires had been sent to different samples, the responses would not have been identical--some numbers might have been higher; others, lower. The standard errors in the tables provide indications of the accuracy of each estimate. If all possible samples of the same size were surveyed under similar conditions, a range of plus or minus two standard errors would include the population value about 95 percent of the time.

These standard errors were used in computing difference of means t-tests with appropriate Bonferroni adjustments for multiple comparisons. The general t-test formula applied when the means were independent (comparisons between rows in the tables) was

$$(A-B) / \sqrt{(S.E._A)^2 + (S.E._B)^2}$$

To test that of those persons with a specific characteristic (e.g., vocational education, or nonvocational education), the proportion of males differed from the proportion of females, or that the proportion of bachelor's degree recipients differed from master's, required a different test because the data were correlated at the school level. For these comparisons of two

mutually exclusive categories (between columns in the tables), the formula used was

$$(P_x - .50) / S.E. P_x$$

With either formula, the answer obtained is a z statistic. The z statistic can be used to judge significance; if the absolute value of the z statistic is greater than 1.645, significance is at the 90 percent level; and a z greater than 1.96 is significant at the 95 percent level. This report involves numerous comparisons, which makes it particularly important to use caution in interpreting small differences. The level of significance used in this report as the minimum accepted level of significance is .10, or 90 percent confidence, for comparisons within vocational education teachers and between vocational and nonvocational teachers. In some instances in this report, the findings are merely suggestive, indicating a direction that should be further researched with a larger sample of vocational education teachers. This significance level was chosen because the vocational teacher group was small; with a larger group, significance would probably be more easily obtained. Thus, the minimum accepted level of significance chosen for comparisons within nonvocational teachers was .05, or 95 percent confidence.

The Bonferroni adjustments used were as follows: For all pairwise comparisons between regions within vocational education teachers, dividing the significance level of .10 by 6 possible pairwise comparisons for the 4 regions results in an adjusted significance level of .01667; and between school sizes within vocational teachers, dividing .10 by 3 possible pairwise comparisons for the 3 school sizes results in an adjusted level of .03333. For all pairwise comparisons between regions within nonvocational teachers, dividing the significance level of .05 by 6 possible pairwise comparisons for the 4 regions results in an adjusted significance level of .00833; and between school sizes within nonvocational teachers, dividing .05 by 3 possible pairwise comparisons for the 3 school sizes results in an adjusted level of .01667.

When doing several t-tests, the likelihood increases that at least one of them may yield a misleading result. When no difference between the means or percentages being compared really exists, still a 5 percent chance of getting a t-value of 1.96 occurs from sampling error. Although this 5 percent risk seems acceptable for a single t-test, the risk of getting at least one t-value of 1.96 increases in a series of t-tests. For

five t-tests, the risk of obtaining one misleading t-score is 23 percent; for ten t-tests, it is 40 percent; and for 20 t-tests, the risk of getting one t-value of 1.96 from sampling error increases to 64 percent. The risk of finding a significant t-score as a result of sampling error decreases for t-scores over 1.96.

A balance should be maintained between making multiple tests, one of which can then give misleading results, and making few tests under stringent control of error rates, a strategy likely to fail to find differences when they exist. No simple solution to this dilemma exists for a descriptive, exploratory report.

Standard errors also cannot take the effects of nonsampling biases into account. Several nonsampling factors could bias or limit the findings presented here. First, the Public School Survey, 1985, data are from school year 1984-85. While substantial changes during the past two or three years are unlikely for the variables analyzed here, such changes cannot be ruled out completely. Second, the survey was not designed with the specific types of analyses presented here in mind; consequently, some desirable information (e.g., distribution of each racial/ethnic group in vocational or nonvocational education by region and school size) was not requested. Third, errors in interpreting items by respondents, coding and entering responses, and nonresponse biases are all possible. When identified, a few cases of obvious coding errors have been corrected or defined as missing. Also, the items analyzed in this report appear straightforward enough to keep to a minimum the potential problem of respondents' errors of misinterpretation.

Size of school enrollment was not reported for approximately 442 secondary teachers in the sample (as shown in table A in the Appendix). However, information on gender, race, and level of highest degree was available for these teachers and is shown in tables 6-10 and figures 6-7 in a category labelled, "Not reported." No significance tests were conducted on this category.

For More Information

For further information about this report, please contact Janice S. Ancarrow, National Center for Education Statistics (NCES), 555 New Jersey Avenue NW, Washington, DC 20208, telephone number (202) 357-6576. For more information about the Public School Survey, 1985, contact Charles Hammer at NCES, telephone number (202) 357-6330.

Acknowledgments

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Bibliography

1/ Budke, Wesley E. 1988. Trends and Issues in Vocational Education, p. 14. ERIC Clearinghouse on Education and Training for Employment, The Ohio State University, Columbus, OH.

2/ Halcromb, Vern. 1973. A Profile of Vocational Educators: Preliminary Report, 1974, California State Department of Education, Sacramento, Division of Vocational Education; California University, Los Angeles Division of Vocational Education.

3/ Kazanas, H. C., and Gregor, Tom G. Spring 1975. "Relationship of the Meaning of Work, Value of Work, Job Satisfaction, and Selected Demographic Variables of Vocational and Nonvocational Teachers," Journal of Industrial Teacher Education 12 (3).

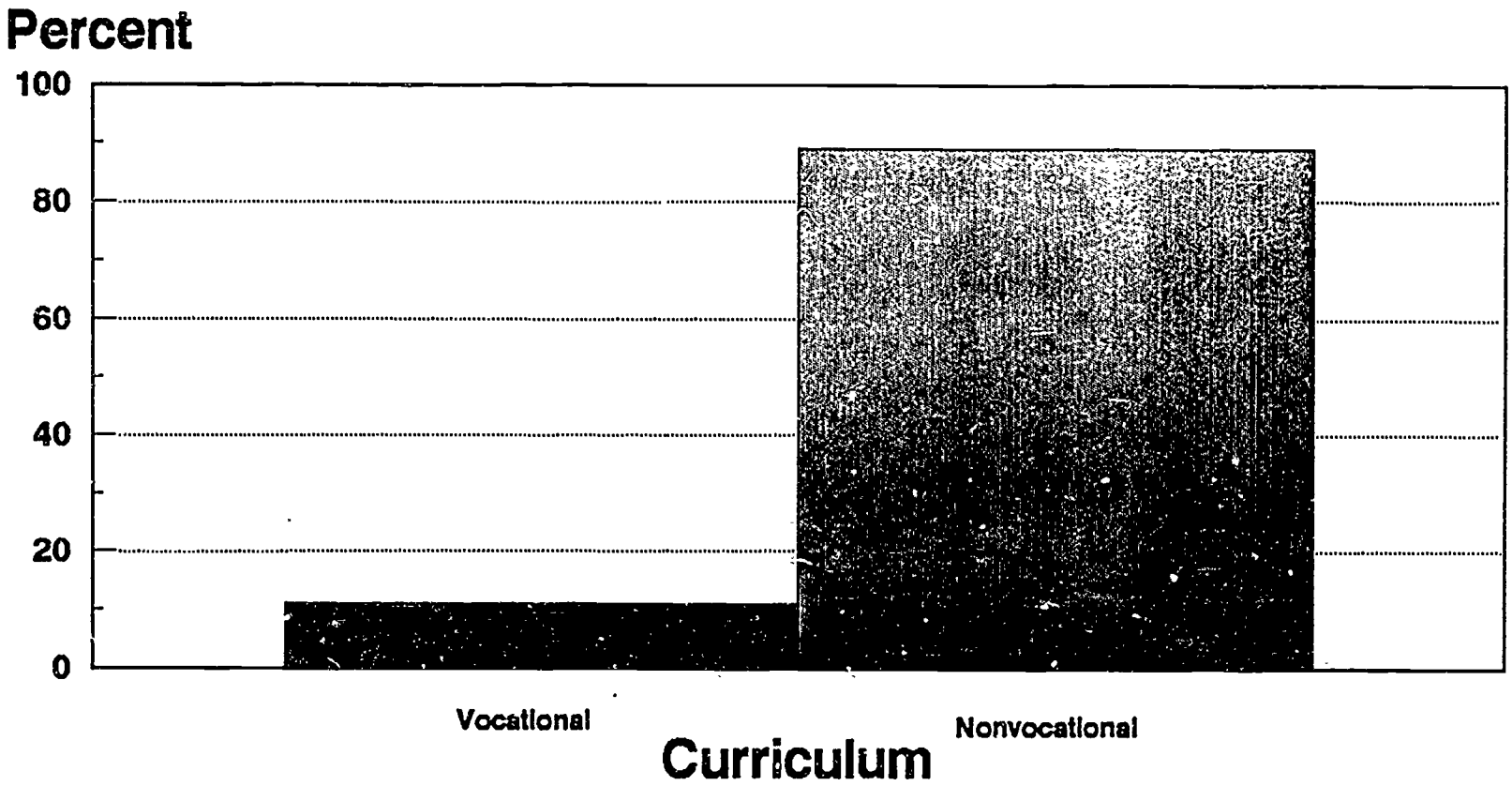
4/ Op. cit., Budke, p. 16.

5/ Unpublished tabulations from High School and Beyond Study, U.S. Department of Education, NCES, 1984.

6/ Weber, James, et al. August 1988. "The Dynamics of Secondary Vocational Classrooms," National Center for Research in Vocational Education, Ohio State University, in Vocational Education Journal, 44.

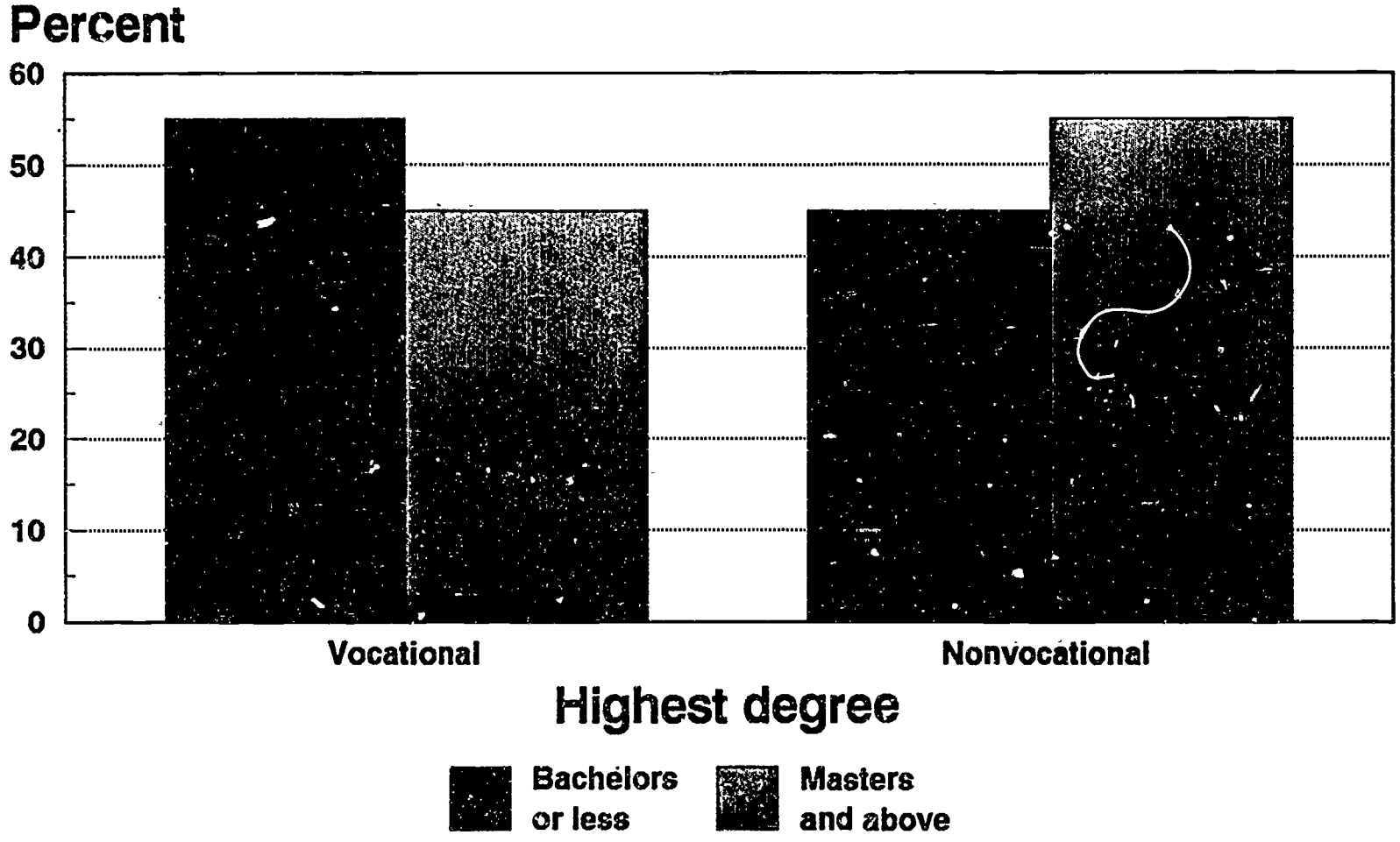
FIGURES

Figure 1.--Secondary public school teachers of vocational or nonvocational classes



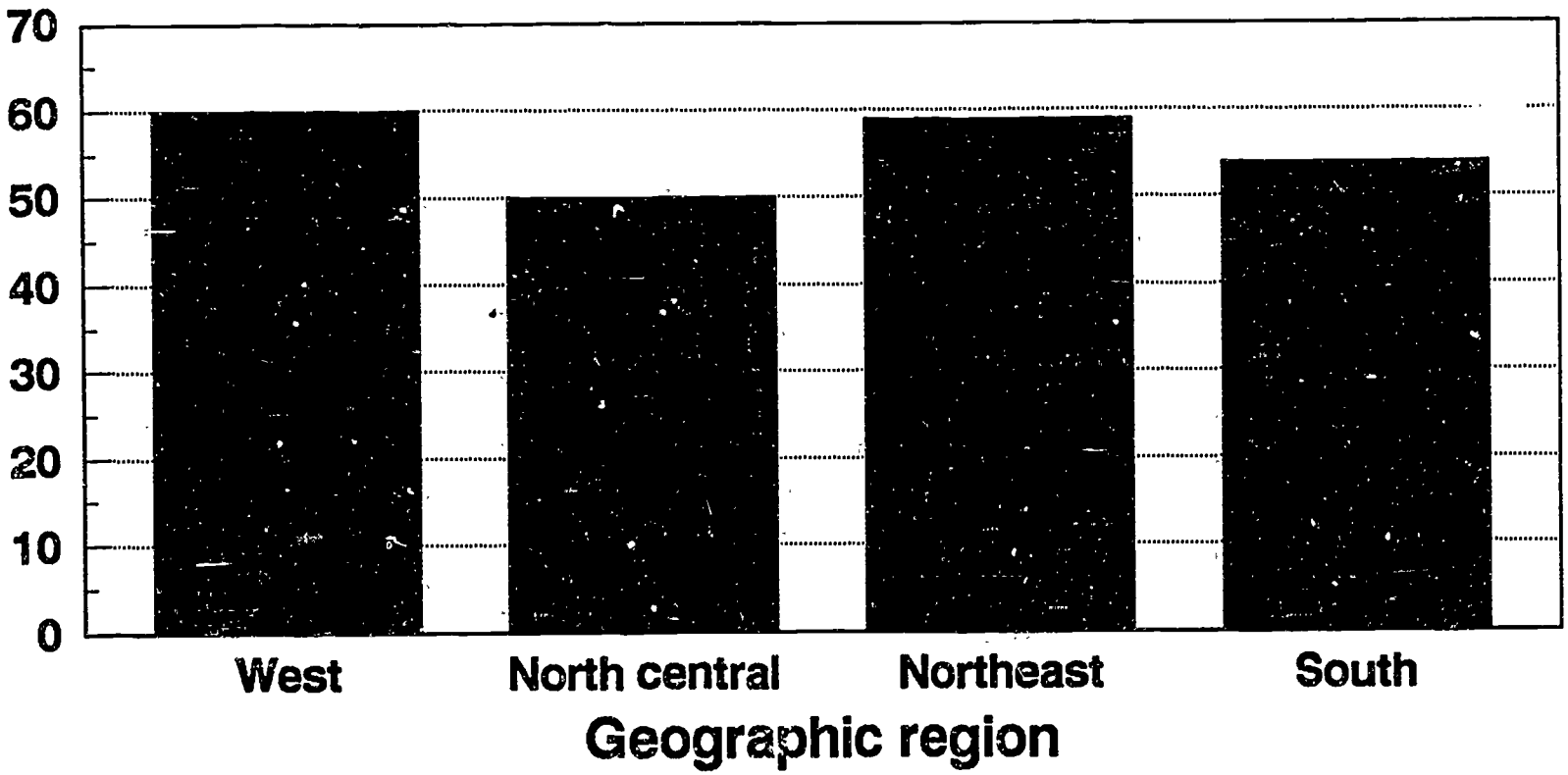
SOURCE: US Department of Education, NCES, Public School Survey, 1985.

Figure 2.--Secondary public school teachers' highest degree, by type of curriculum



SOURCE: US Department of Education, NCES, Public School Survey, 1985.

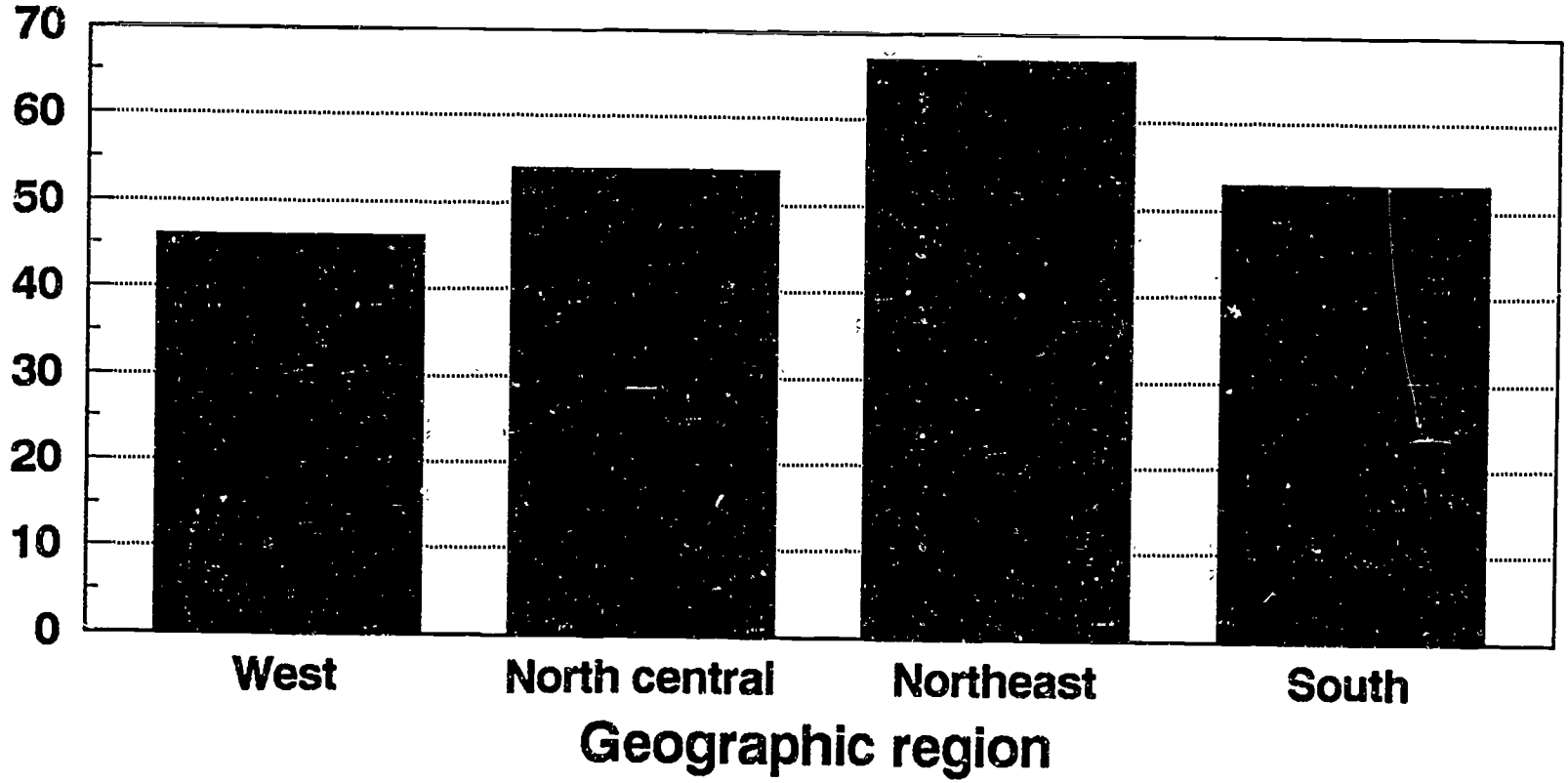
Figure 3.--Secondary public school vocational teachers with bachelors degrees or less, by region



NOTE: Masters degrees and above may be obtained by subtracting bachelors or less from 100 percent.

SOURCE: US Department of Education, NCES, Public School Survey, 1985.

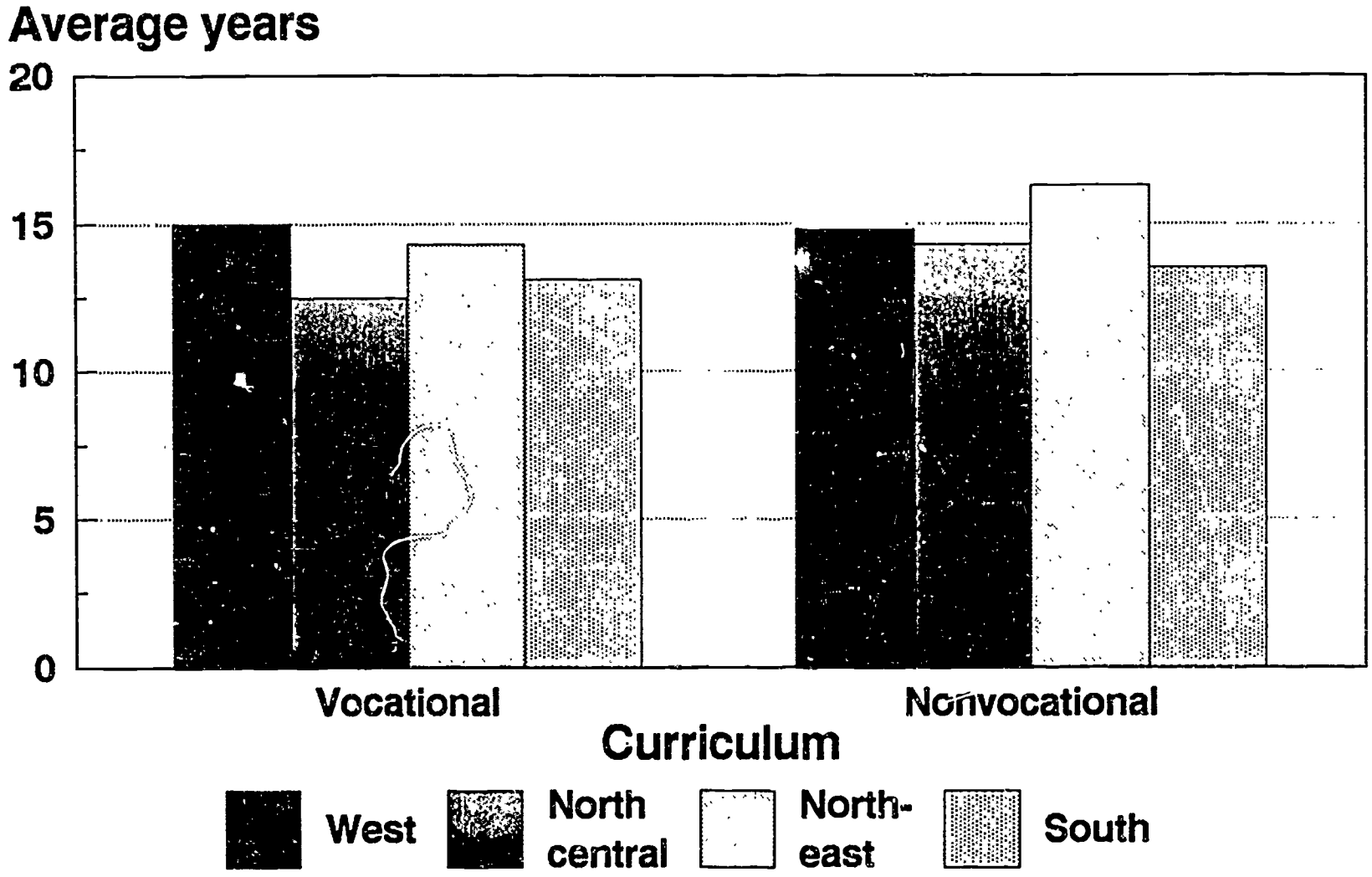
Figure 4.--Secondary public school nonvocational teachers with masters degrees and above, by region



NOTE: Bachelors degrees or less may be obtained by subtracting masters and above from 100 percent.

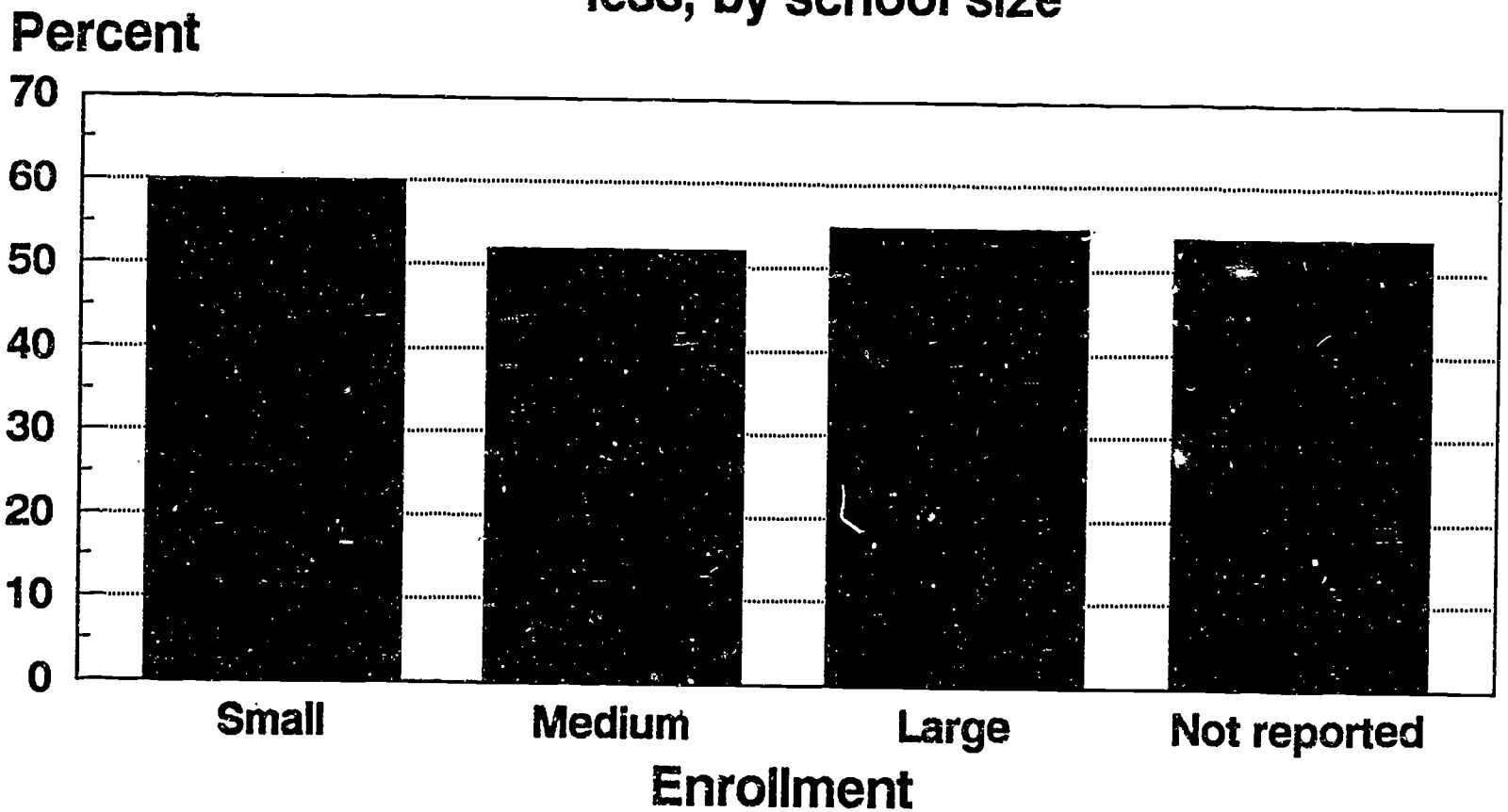
SOURCE: US Department of Education, NCES, Public School Survey, 1985.

Figure 5.--Secondary public school teachers' years of full-time teaching experience, by region and type of curriculum taught



SOURCE: US Department of Education, NCES, Public School Survey, 1985.

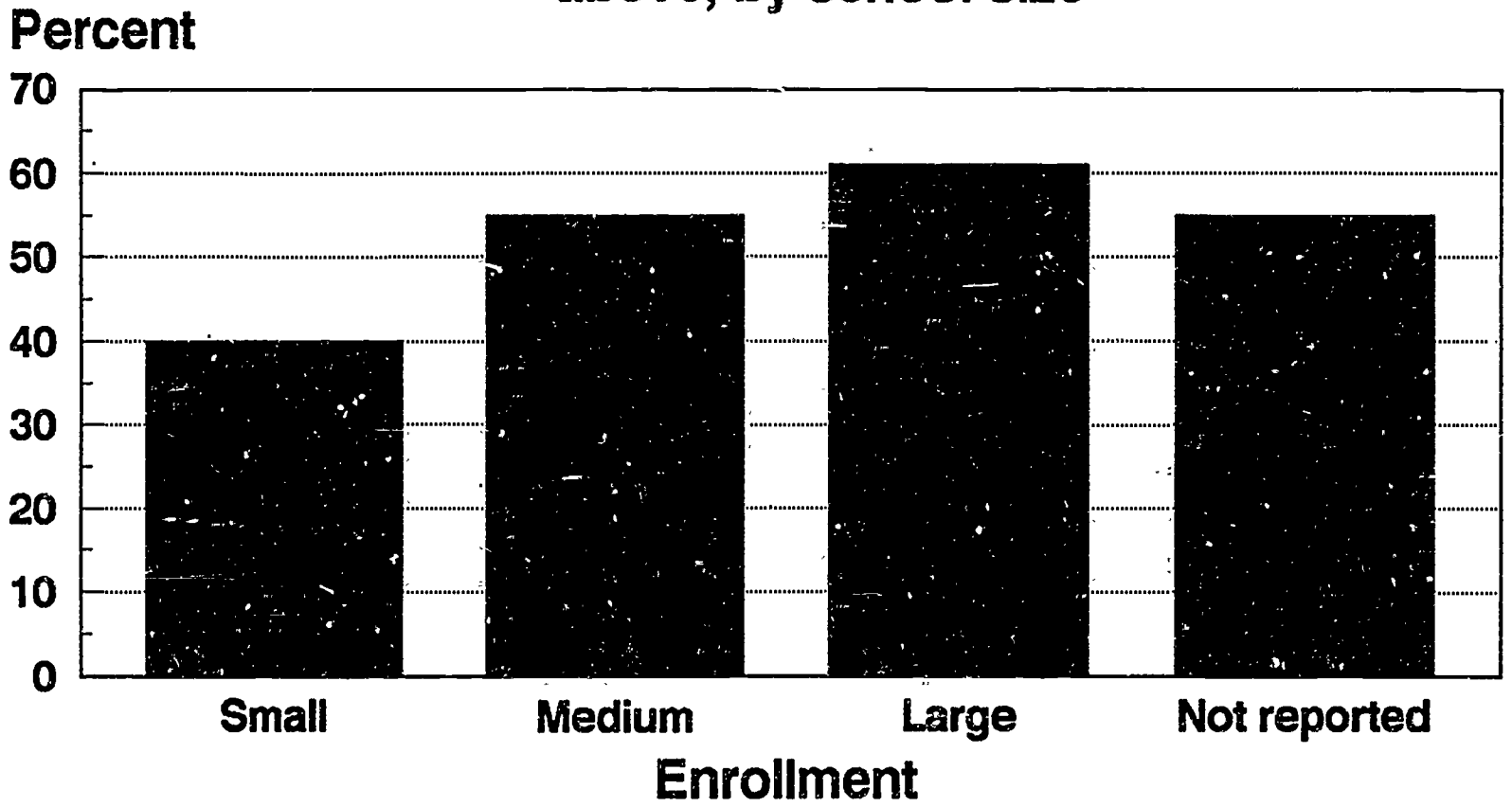
Figure 6.--Secondary public school vocational teachers with bachelors' degrees or less, by school size



NOTE: Masters' degrees and above may be obtained by subtracting bachelors' or less from 100 percent.

SOURCE: US Department of Education, NCES, Public School Survey, 1985.

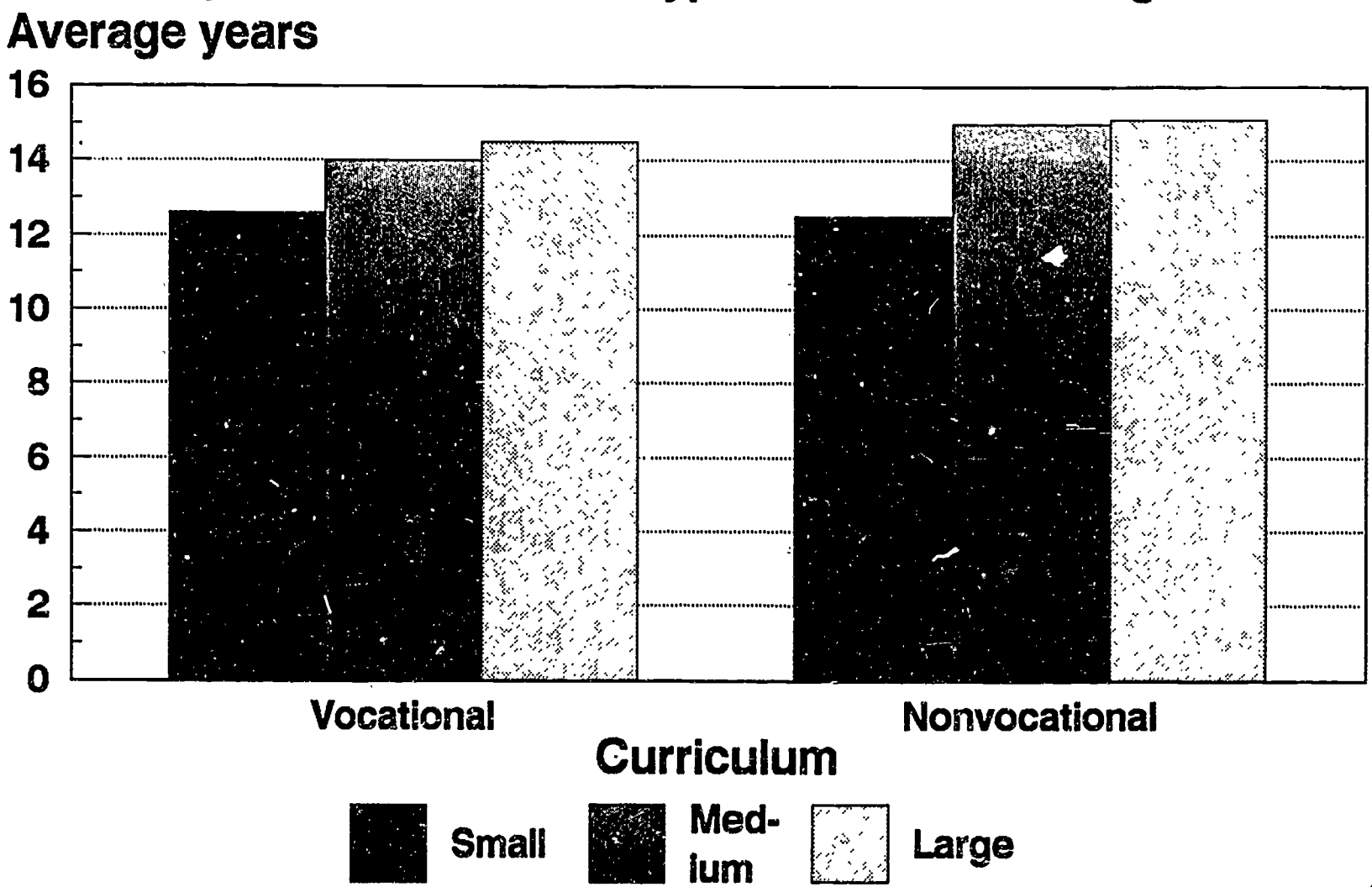
Figure 7.--Secondary public school nonvocational teachers with masters degrees and above, by school size



NOTE: Bachelors degrees or less may be obtained by subtracting masters and above from 100 percent.

SOURCE: US Department of Education, NCES, Public School Survey, 1985.

Figure 8.--Secondary public school teachers' years of full-time teaching experience, by size of school and type of curriculum taught



SOURCE: US Department of Education, NCES, Public School Survey, 1985.

TABLES

Table 1.--Number of public secondary teachers, by sex and minority status, by type of curriculum and region: School year 1984-85

Type of curriculum	Census region	Total	Standard error	Sex: Male	Standard error	Sex: Female	Standard error	Minority status: Non-minority	Standard error	Minority status: Minority	Standard error
Vocational and nonvocational	Total	686,939	6,518	356,000	7,446	330,939	7,223	616,276	6,983	70,663	3,734
Vocational education	Total	72,499	4,368	40,160	3,314	32,339	2,966	65,071	4,225	7,428	1,202
	West	14,920	2,060	10,761	1,790	4,159	1,032	13,214	1,977	+	—
	North Central	17,963	2,084	11,143	1,646	6,820	1,296	17,093	2,058	+	—
	Northeast	10,776	1,915	10,776	1,508	+	--	10,483	1,904	+	—
	South	28,840	2,797	11,739	1,765	17,101	2,195	24,281	2,633	4,559	974
Nonvocational education	Total	614,440	6,913	315,840	6,945	298,600	7,201	551,205	3,293	63,235	3,568
	West	112,361	4,858	64,486	3,707	47,875	3,397	101,582	4,668	10,779	1,525
	North Central	159,638	5,620	88,498	4,302	71,140	4,117	150,851	5,527	8,787	1,218
	Northeast	131,219	5,800	79,196	4,506	52,023	3,975	124,937	5,674	6,282	1,362
	South	211,222	5,915	83,661	4,047	127,561	4,950	173,835	5,538	37,387	2,773

NOTE: + = not computed because too few observations.
— = not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table 2.--Percent of public secondary teachers, by sex and minority status, by type of curriculum and region: School year 1984-85

Type of curriculum	Census region	Total	Sex			Minority status		
			Male	Female	Standard error	Non-minority	Minority	Standard error
		(Percent)						
Vocational and nonvocational	Total	100	52	48	1.0	90	10	0.5
Vocational education	Total	100	55	45	3.1	90	10	1.6
	West	100	72	28	6.1	89	11	3.8
	North Central	100	62	38	5.7	95	5	1.9
	Northeast	100	60	40	8.7	97	3	1.9
	South	100	41	59	4.8	84	16	3.2
Nonvocational education	Total	100	51	49	1.0	90	10	0.6
	West	100	57	43	2.3	90	10	1.3
	North Central	100	55	45	2.0	94	6	0.8
	Northeast	100	60	40	2.4	95	5	1.0
	South	100	40	60	1.6	82	18	1.2
Population		686,939	356,000	330,939		616,276	70,663	

NOTE: Population = weighted national estimates of all secondary public school teachers in each category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table 3.--Number of public secondary teachers, by level of highest degree, by type of curriculum and region: School year 1984-85

Type of curriculum	Census region	Total	Standard error	Level of highest degree: Bachelor's or less	Standard error	Master's and above	Standard error
Vocational and nonvocational	Total	686,939	6,518	315,715	7,037	371,224	7,747
Vocational education	Total	72,499	4,368	40,015	3,279	32,484	3,021
	West	14,920	2,060	8,915	1,550	6,005	1,368
	North Central	17,963	2,084	9,059	1,426	8,904	1,537
	Northeast	10,776	1,915	6,345	1,428	+	---
	South	28,840	2,797	15,696	2,129	13,144	1,852
Nonvocational education	Total	614,440	6,913	275,700	6,654	338,740	7,518
	West	112,361	4,858	60,412	3,646	51,950	3,460
	North Central	159,638	5,620	72,689	3,829	86,949	4,549
	Northeast	131,219	5,800	43,018	3,462	88,201	4,914
	South	211,222	5,915	99,581	4,384	111,640	4,701

NOTE: + = not computed because too few observations.
--- = not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table 4.--Percent of public secondary teachers, by level of highest degree, by type of curriculum and region: School year 1984-85

Type of curriculum	Census region	Total	Level of highest degree			
			Bachelor's or less	Standard error	Master's and above	Standard error
			(Percent)			
Vocational and nonvocational	Total	100	46	1.0	54	1.0
Vocational education	Total	100	55	3.6	44	3.1
	West	100	60	6.9	40	6.9
	North Central	100	50	5.9	50	5.9
	Northeast	100	59	9.6	41	9.6
	South	100	54	6.1	46	5.0
Nonvocational education	Total	100	45	1.0	55	1.0
	West	100	54	2.3	46	2.3
	North Central	100	46	1.9	54	2.0
	Northeast	100	33	2.2	67	2.5
	South	100	47	1.7	53	1.6
Population		686,939	315,715		371,224	

NOTE: Population = weighted national estimates of public secondary school teachers.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table 5.--Average years of teaching experience of public secondary teachers, by teaching status, and by number of teachers, by type of curriculum and region: School year 1984-85

Type of curriculum	Census region	Teachers	Years teaching			
			Full time		Part time	
			Mean	Standard error	Mean	Standard error
Vocational and nonvocational	Total	686,939	14.45	0.01	0.73	0.00
Vocational education	Total	72,499	13.50	0.03	0.80	0.01
	West	14,920	14.99	0.07	1.00	0.03
	North Central	17,963	12.48	0.06	0.62	0.01
	Northeast	10,776	14.27	0.07	0.66	0.02
	South	28,840	13.09	0.05	0.87	0.02
Nonvocational education	Total	614,440	14.56	0.01	0.72	0.00
	West	112,361	14.78	0.03	0.87	0.01
	North Central	159,638	14.34	0.02	0.85	0.01
	Northeast	131,219	16.28	0.02	0.84	0.01
	South	211,222	13.54	0.02	0.46	0.00

SOURCE: U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table 6.--Number of public secondary teachers, by sex and minority status, by type of curriculum and size of school: School year 1984-85

Type of curriculum	Size of school	Total	Standard error	Sex: Male	Standard error	Sex: Female	Standard error	Minority status: Nonminority	Standard error	Minority status: Minority	Standard error
Vocational and nonvocational	Total	686,939	6,518	356,000	7,223	330,939	7,446	616,276	6,983	70,663	3,734
Vocational education	Total	72,499	4,368	40,160	3,314	32,339	2,966	65,071	4,225	7,428	1,202
	Small (LT 500)	17,728	1,969	10,145	1,459	7,583	1,351	17,728	1,905	+	--
	Medium (500-999)	16,379	2,031	9,819	1,608	6,560	1,257	16,379	1,922	+	--
	Large (1000+)	29,300	3,015	16,155	2,275	13,145	2,011	26,310	2,913	2,990	801
	Not reported	9,092	1,699	4,041	1,171	5,051	1,236	9,092	1,670	+	--
Nonvocational education	Total	614,440	6,913	315,840	6,945	298,600	7,201	551,205	7,162	63,235	3,568
	Small (LT 500)	111,845	3,817	59,638	3,064	52,207	2,930	103,575	3,701	8,270	1,229
	Medium (500-999)	149,982	5,295	78,174	3,989	71,808	3,980	137,597	5,159	12,385	1,526
	Large (1000+)	291,367	7,225	147,202	5,694	144,165	5,824	255,769	7,026	35,598	2,864
	Not reported	61,246	3,788	30,826	2,676	30,420	2,768	54,264	3,641	6,982	1,121

NOTE: + = not computed because too few observations.
-- = not applicable.

U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table 7.—Percent of public secondary teachers, by sex and minority status, by type of curriculum and size of school: School year 1984-85

Type of curriculum	Size of school	Total	Sex			Minority status		
			Male	Female	Standard error	Non-minority	Minority	Standard error
		(Percent)						
Vocational and nonvocational	Total	100	52	48	1.0	90	10	0.5
Vocational education	Total	100	55	45	3.1	90	10	1.6
	Small (LT 500)	100	57	43	5.7	91	9	2.8
	Medium (500-999)	100	60	40	6.1	87	13	3.9
	Large (1000+)	100	55	45	5.2	90	10	2.7
	Not reported	100	44	56	9.4	92	8	3.5
Nonvocational education	Total	100	51	49	1.0	90	10	0.6
	Small (LT 500)	100	53	47	2.1	93	7	1.1
	Medium (500-999)	100	52	48	2.0	92	8	1.0
	Large (1000+)	100	51	49	1.5	88	12	1.0
	Not reported	100	50	50	3.2	89	11	1.8
Population		686,939	356,000	330,939		616,276	70,663	

NOTE: Population = weighted national estimates of all secondary public school teachers in each category.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table 8.--Number of public secondary teachers, by level of highest degree, by type of curriculum and size of school: School year 1984-85

Type of curriculum	Size of school	Total	Standard error	Level of highest degree: Bachelor's or less	Standard error	Master's and above	Standard error
Vocational and nonvocational	Total	686,939	6,518	315,715	7,037	371,224	7,747
Vocational education	Total	72,499	4,368	40,015	3,279	32,484	3,021
	Small (LT 500)	17,728	1,969	10,568	1,473	7,160	1,337
	Medium (500-999)	16,379	2,031	8,546	1,496	7,833	1,390
	Large (1000+)	29,300	3,015	15,986	2,277	13,314	2,006
	Not reported	9,092	1,699	4,915	1,126	+	--
Nonvocational education	Total	614,440	6,913	275,700	6,654	338,740	7,518
	Small (LT 500)	111,845	3,817	66,570	3,193	45,275	2,762
	Medium (500-999)	149,982	5,295	67,041	3,781	82,941	4,187
	Large (1000+)	291,367	7,225	114,419	5,121	176,948	6,331
	Not reported	61,246	3,788	27,670	2,437	33,576	2,966

NOTE: + = not computed because too few observations.
-- = not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table 9.--Percent of public secondary teachers, by level of highest degree, by type of curriculum and size of school: School year 1984-85

Type of curriculum	Size of school	Total	Level of highest degree: Bachelor's or less	Standard error	Master's and above	Standard error
			(Percent)			
Vocational and nonvocational	Total	100	46	1.0	54	1.0
Vocational education	Total	100	55	3.6	45	3.2
	Small (LT 500)	100	60	5.8	40	5.9
	Medium (500-999)	100	52	6.6	48	6.3
	Large (1000+)	100	55	6.3	45	5.2
	Not reported	100	54	10.1	46	9.5
Nonvocational education	Total	100	45	1.0	55	1.0
	Small (LT 500)	100	60	2.0	40	2.1
	Medium (500-999)	100	45	2.0	55	2.0
	Large (1000+)	100	39	1.5	61	1.6
	Not reported	100	45	3.1	55	3.3
Population		686,939	315,715		371,224	

NOTE: + = not computed because too few observations.
-- = not applicable.
Population = weighted national estimates of all secondary public school teachers in each category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table 10.--Average years of teaching experience of public secondary teachers, by teaching status, and by number of teachers, by type of curriculum and size of school: School year 1984-85

Type of curriculum	Size of school	Teachers	Years teaching			
			Full time		Part time	
			Mean	Standard error	Mean	Standard error
Vocational and nonvocational	Total	686,939	14.45	0.01	0.73	0.00
Vocational education	Total	72,499	13.50	0.03	0.80	0.01
	Small (LT 500)	17,728	12.63	0.06	0.62	0.01
	Medium (500-999)	16,379	14.04	0.06	0.39	0.01
	Large (1000+)	29,300	14.47	0.05	1.04	0.03
	Not reported	9,092	11.13	0.07	1.13	0.02
Nonvocational education	Total	614,440	14.56	0.01	0.72	0.00
	Small (LT 500)	111,845	12.51	0.02	0.67	0.01
	Medium (500-999)	149,982	15.00	0.02	0.61	0.00
	Large (1000+)	291,367	15.05	0.01	0.81	0.00
	Not reported	61,246	14.87	0.03	0.63	0.01

SOURCE: U.S. Department of Education, National Center for Education Statistics, Public School Survey, 1985.

Table A.--Unweighted sample sizes for public secondary school teachers: School year 1984-85

	Total secondary teachers	Vocational education teachers	Nonvocational education teachers
Total secondary teachers	4,158	350	3,808
Region			
West	805	73	732
North Central	1,036	96	940
Northeast	672	39	633
South	1,645	142	1,503
Enrollment			
Not reported	442	38	404
Small (LT 500)	895	97	798
Medium (500-999)	958	75	883
Large (1000+)	1,863	140	1,723
Highest degree			
No degree	29	16	13
Associate's	11	5	5
Bachelor's	1,872	174	1,698
Master's	2,189	152	2,037
Doctor's	57	3	54
Minority status			
Nonminority	3,590	297	3,293
Minority	568	53	515
Sex			
Male	2,228	198	2,035
Female	1,930	152	1,773

Geographic regions used by the U.S. Bureau of the Census

West

Montana
Idaho
Wyoming
Colorado
New Mexico
Arizona
Utah
Nevada
Washington
Oregon
California
Alaska
Hawaii

Northeast

Maine
New Hampshire
Vermont
Massachusetts
Rhode Island
Connecticut
New York
New Jersey
Pennsylvania

North Central

Ohio
Indiana
Illinois
Michigan
Wisconsin
Minnesota
Iowa
Missouri
North Dakota
South Dakota
Nebraska
Kansas

South

Delaware
Maryland
District of Columbia
Virginia
West Virginia
North Carolina
South Carolina
Georgia
Florida
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DEPARTMENT OF EDUCATION
WASHINGTON, D.C. 20202

NATIONAL CENTER FOR EDUCATION STATISTICS

PUBLIC SCHOOL SURVEY
TEACHER QUESTIONNAIRE
1985

FORM APPROVED
OMB No.: 1850-0536
Expiration Date: 12/31/85

THIS REPORT IS AUTHORIZED BY LAW (20 U.S.C. 1221e-1). WHILE YOU ARE NOT REQUIRED TO RESPOND, YOUR COOPERATION IS NEEDED TO MAKE THE RESULTS OF THIS SURVEY COMPREHENSIVE, ACCURATE, AND TIMELY.

Address Label Here

A. TRAINING AND EXPERIENCE *(Questions 1 through 13)*

1. Check the box below for the highest academic degree you have earned. *(Do not include honorary degrees.)*

1 ☐ No degree
2 ☐ Associate
(Skip to Item 3)

3 ☐ Bachelor's
4 ☐ Master's
5 ☐ Doctorate
(Continue) →

2. What was (were) your major field(s) of study for your BACHELOR'S degree(s)? *(If you had more than one major, specify all that apply.)*

1 ☐ Education *[Specify education specialty(ies)]*

_____

_____

2 ☐ Other than Education *(Specify)*

_____

_____

3. CHECK THE BOX below that best represents the number of UNDERGRADUATE AND GRADUATE credit hours (semester or quarter) you have accumulated in each of the course areas listed.

Course Area	Undergraduate and Graduate Credit Hours								
		Semester				Quarter			
	None	1-3	4-12	13-29	30 or more	1-5	6-18	19-44	45 or more
Education Courses:									
a. Special education	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
b. Vocational education	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
c. Other education	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
Subject Matter Courses:									
d. Art and Music	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
e. Biological Sciences	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
f. Business Science	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
g. Computer Science	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
h. English/Language arts	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
i. Foreign Languages	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
j. Mathematics	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
k. Physical Sciences	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
l. Social Sciences	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
m. Other	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐

4. During the 1984 calendar year (January 1, 1984–December 31, 1984), did you take any courses or other training related to elementary and/or secondary education?

1 ☐ YES *(Continue)* →
2 ☐ NO *(Skip to Item 8)*

5. What kind of training was this? *(Check all that apply.)*

1 ☐ College credit courses
2 ☐ In-service training
3 ☐ Other *(specify)* _____

6. **Check below the MAJOR purpose for which you took this training.** *(Check only one.)*

1 ☐ To maintain and/or improve abilities in current position.
2 ☐ To acquire credentials in new non-teaching areas (e.g., administration, guidance counseling)

(Skip to Item 8)

3 ☐ To retrain to teach a different subject matter area, a different type of class (e.g., handicapped students) or a different grade level. *(Continue)* ↓

7. **Check below the area(s) in which this retraining was taken.** *(Check all that apply.)*

01 ☐ Special education
02 ☐ Vocational education
03 ☐ Other education
04 ☐ Art and Music
05 ☐ Biological Sciences
06 ☐ Business Science
07 ☐ Computer Science
08 ☐ English/Language arts
09 ☐ Foreign Languages
10 ☐ Mathematics
11 ☐ Physical Sciences
12 ☐ Social Sciences
13 ☐ Other subject matter

8. **How many years of elementary/secondary school teaching experience in public and private schools will you have completed by the end of this school year?**

(Exclude practice and substitute teaching. Count each school year in which you did any part-time teaching or taught for only part of the year as one year of part-time teaching experience.)

a. Years of full-time teaching experience ..... _____

b. Years of part-time teaching experience ..... _____

9. **Of the years of elementary/secondary teaching experience reported in Item 8, how many have been . . . .**

	Years of full-time teaching	Years of part-time teaching
a. In this school?	_____	_____
b. In this school district?	_____	_____
c. In this state?	_____	_____

10. **Do you have a regular or standard State certification or endorsement for the subjects and/or classes you are currently teaching?** *(Do not consider emergency certification, waiver, etc., as regular or standard State certification or endorsement.)*

1 ☐ Yes, all of the subjects *(Skip to Item 12)*
2 ☐ Yes, some of the subjects
3 ☐ No, none of the subjects

(Continue) ↓

11. **What subjects or classes listed below are you currently teaching for which you do NOT have a regular or standard State certification or endorsement?** *(Check all that apply.)*

1 ☐ Elementary education
2 ☐ Special education
3 ☐ Chemistry
4 ☐ Computer Science
5 ☐ English
6 ☐ Foreign Language
7 ☐ Mathematics
8 ☐ Physics
9 ☐ Other subjects or classes not listed

12. **During the 1984-85 school year, are you teaching regularly in more than one public school in this school district?**

1 ☐ YES
2 ☐ NO

13. **How would you classify your position AT THIS SCHOOL?** *(Check one.)*

1 ☐ Full time
2 ☐ ¾ time
3 ☐ ½ time
4 ☐ ¼ time
5 ☐ Other *(specify)* _____

B. CURRENT ASSIGNMENT AND ACTIVITIES DURING THE MOST RECENT FULL WEEK *(Questions 14 through 17)*

Questions 14a and 14b request information on each class you taught for the most recent full week that school was in session (5 continuous days). This information includes the subject matter area, days per week the class was taught, grade, number of students enrolled, whether homework was assigned, and amount of homework assigned. Please read the INSTRUCTIONS and DEFINITIONS below before proceeding to items 14a and 14b.

INSTRUCTIONS AND DEFINITIONS:

Most Recent Full Week: The most recent full week in which school was in session for 5 continuous days. Report classes for which you are responsible even if you were absent at any time during the week.

Class: A class is a group of students with whom you meet at specified times during the week, e.g., a class in mathematics that meets three days a week, a foreign language class that meets two days a week. If you teach two or more classes in the same subject, report each class separately.

Self-Contained Class Teacher: A teacher who teaches multiple subjects to the same group of students for all or most of the daily session.

Subject-Matter Area: *Use only the areas and codes listed below. Please enter the appropriate code for each class.*

Subject-Matter Area	Code
Art and Music	01
Biological Sciences	02
Business	03
Computer Science	04
English/Language arts	05
Foreign Languages	06
Mathematics	07
Physical Sciences	08
Social Sciences	09
Vocational Education	10
Other	11

Grade: In reporting grade, use UG for ungraded, PK for prekindergarten, KG for kindergarten, 1 for first grade, 2 for second grade, etc If students from more than one grade are in the class, enter the grade that represents the majority of the students enrolled.

Amount of Homework Assigned: Estimate to the nearest half hour the time required to complete the homework assigned for the most recent full week. Exclude long-term assignments such as term papers.

14. a. Did you teach a SELF-CONTAINED CLASS during the most recent full week (5 continuous days) that school was in session? *Please note definition given above.*

1 ☐ YES *(Please enter below the information for the self-contained class you taught. Refer to INSTRUCTIONS and DEFINITIONS.)* 2 ☐ NO *(Skip to Item 14b)*

Class	Subject-matter area	Days per week	Grade	Number of students enrolled	Was homework assigned during the last full week? *(Check YES or NO)*	Amount of homework assigned for the last full week *Expressed in decimals to the nearest half-hour (1.5, etc.)*
		5			1 ☐ YES 2 ☐ NO	Hours

14. b. Did you teach one or more SUBJECT MATTER CLASS(ES) during the most recent full week (5 continuous days) school was in session?

1 ☐ YES *(Please enter below the information for the subject matter class(es) you taught. Refer to INSTRUCTIONS AND DEFINITIONS.)* 2 ☐ NO *(Skip to Item 15)*

Class	Subject-matter area *(Enter appropriate code from preceding list)*	Days per week	Grade	Number of students enrolled	Was homework assigned during last full week? *(Check YES or NO for each line)*	Amount of homework assigned for the last full week *Expressed in decimals to the nearest half-hour (1.5, etc.)*
a.					1 ☐ YES 2 ☐ NO	Hours
b.					1 ☐ YES 2 ☐ NO	Hours
c.					1 ☐ YES 2 ☐ NO	Hours
d.					1 ☐ YES 2 ☐ NO	Hours
e.					1 ☐ YES 2 ☐ NO	Hours
f.					1 ☐ YES 2 ☐ NO	Hours
g.					1 ☐ YES 2 ☐ NO	Hours
h.					1 ☐ YES 2 ☐ NO	Hours
i.					1 ☐ YES 2 ☐ NO	Hours

15. **During the week you used for completing Item 14, were you in a full-time position at the school with teaching as a primary assignment?**

1 ☐ YES *(Continue)* →
2 ☐ NO *(Skip to Item 20)*

16. **a. What was the date of Monday of the week you used in completing Item 14?** *(Enter 2 digits each for month/day/year; for example: 04/07/82.)*

Mo	Day	Year
☐☐	☐☐	☐☐

b. Was this generally a typical week?

1 ☐ YES 2 ☐ NO

17. **For the most recent full week (5 continuous days), regardless of whether or not it was a typical week, record in the appropriate spaces your best estimate of the number of hours you spent on each of the indicated school-related activities.**

Instructions: *School hours should include the time during which teachers are REQUIRED to be in school. DO NOT DUPLICATE TIME AMONG ACTIVITIES. For example, if you graded papers during the class period, report only under CLASSROOM TEACHING, if you prepared lesson plans while monitoring, put the time you spent on preparing lesson plans under MONITORING. If you were absent from school during required time, report it in item n.*

School-related activity	Number of hours spent in full week (Report to the nearest whole hour for the full week.) During required school hours	Outside of required school hours (at achool or at home), including weekends
a. Classroom teaching, including activities you performed while classes you taught were in session *(e.g., grading papers, class preparation, recordkeeping)*		
b. Tutoring of students outside of regularly scheduled classes, except private tutoring for which you were paid		
c. Student counseling and guidance, except during classroom teaching or monitoring periods		
d. Monitoring *(e.g., homeroom, study hall, lunchroom, playground, after school detention)*		
e. Reviewing and grading student papers, exams, and projects, except during classroom teaching or monitoring periods		
f. Class preparation *(preparing lesson plans, developing individualized educational programs (IEP's), gathering materials, etc., except during classroom teaching or monitoring periods)*		
g. Administrative activities *(includes staff conferences, recordkeeping)*, except during classroom teaching or monitoring periods		
h. Transporting students		
i. Parent conferences, except during classroom teaching or monitoring periods		
j. Coaching athletics		
k. Field trips		
l. Advising or directing school clubs and associations		
m. Other activity *(including free time, lunch time, etc.)*		
n. Absent for any reason during the time teachers are required to be in school.		
Total *(Sum of lines* **a.** *through* **n.)**	*	

* *The TOTAL in this column should be equal to the total number of hours you were required to be in school during the full week.*

PLEASE CHECK THE TOTAL FOR EACH COLUMN TO ASSURE THAT THE SUM OF THE TIME SPENT ON THE VARIOUS ACTIVITIES REFLECTS THE ACTUAL AMOUNT OF TIME YOU SPENT FOR THE WEEK.

C. YOUR USE OF TEACHER AIDES AND UNPAID VOLUNTEERS *(Questions 18 and 19)*

18. During the most recent full week, did you have the assistance of paid teacher aides or unpaid volunteers (including students from other schools) assisting you with routine activities associated with teaching? *(Do not include students from THIS school as unpaid volunteers.)*

1 ☐ YES *(Continue)* ↓
2 ☐ NO *(Skip to Item 20)*

19. For the most recent full week, what is your best estimate of the total number of hours for the week (to the nearest whole hour) that paid teacher aides or unpaid volunteers assisted you on the following activities? *(Do not include students from this school as unpaid volunteers.)*

Activity	Total hours spent by paid teacher aides	Total hours spent by unpaid volunteers
a. Conducting rote exercises	_____	_____
b. Grading papers	_____	_____
c. Keeping records	_____	_____
d. Monitoring	_____	_____
e. Assisting students in classroom activities	_____	_____
f. Other *(Specify)* _____	_____	_____

D. COMPENSATION AND INCENTIVES *(Questions 20 through 32)*

NOTE: Items 20-23 refer to the primary contract that covers your teaching job for school year 1984-85 (September 1984 through August 1985). Items 24-26 refer to additional or supplemental contracts, such as summer school or coaching, that are NOT included as part of your primary contract. Items 27 and 28 refer to paid outside jobs. Items 30-32 refer to incentive awards you received during the 1983-84 school year.

20. What is the number of paid working days covered by your primary contract? *(Include days when you are not working with students, e.g., inservice training days.)*

Number of paid working days: _____

21. What is the annual salary you receive for your primary contract?

Annual salary: $ _____

22. Is any compensation included in your primary contract for extracurricular activities, such as coaching, sponsorship, or for summer and/or evening school?

1 ☐ YES *(Continue)* →
2 ☐ NO *(Skip to Item 24 on next page)*

23. Check each extracurricular activity for which you were compensated under your primary contract.

1 ☐ Coaching
2 ☐ Sponsorship of other student-body activity
3 ☐ Adult or evening school
4 ☐ Department Chairperson
5 ☐ Summer school
6 ☐ Other activity *(Specify below)*

_____

24. During the school year 1984-85 (September, 1984 through August, 1985), did you have or do you expect to have any additional or supplemental contracts with this school district (separate contracts for activities for which you are compensated but were not included in Item 21, Annual salary for primary contract)?

1 ☐ YES *(Continue)* →
2 ☐ NO *(Skip to Item 27)*

25. What is the total salary you have received or expect to receive, during the 1984-85 school year, for activities under the additional or supplemental contracts?

Total salary: $_____

26. How many paid working days are covered or are expected to be covered by your additional or supplemental contracts?

Number of paid working days: _____

27. During the period from the beginning of the school year (September, 1984) to February 1, 1985, did you work on any outside job for which you earned income in ADDITION to your primary and/or supplemental contracts? *(Exclude work for which income has already been reported.)*

1 ☐ YES *(Continue)*
2 ☐ NO *(Skip to Item 29)* ↓

28. For all outside jobs for which you earned income in addition to your primary and supplemental contracts, enter below the approximate number of weeks worked, the average number of hours worked per week, and the average hourly rate for the period from the beginning of the school year (September, 1984) to February 1, 1985.

	September, 1984 to February 1, 1985
a. Number of weeks worked	_____
b. Average number of hours worked per week	_____
c. Average hourly rate *(Report as dollars and cents: e.g., $7.50)* ...	_____

29. Which category below BEST describes your work status during the period June, 1984 to August, 1984 (excluding regular school term)?

(Check one)

1 ☐ Worked in school system.
2 ☐ Worked outside the school system.
3 ☐ Did not work. Looked for a job, but could not find work.
4 ☐ Did not work. Did not look for work.
5 ☐ Other.

30. a. During the 1983-84 school year, did you receive a cash bonus from your school district?

1 ☐ Yes *(Continue)*
2 ☐ No *(Skip to Item 31)*

b. What was the amount of the cash bonus?

Amount of bonus: $_____

31. a. During the 1983-84 school year, were you placed on a higher step of your salary schedule for agreeing to teach in a particular field or geographic location?

1 ☐ YES (Continue) ↓
2 ☐ NO *(Skip to Item 32)*

b. What was the total YEARLY amount of the salary step increase referred to in (a) above?

Amount of increase: $_____

32. During the 1983-84 school year, did you receive free training to assist you to change your teaching field?

1 ☐ YES
2 ☐ NO

E. PERSONAL DESCRIPTIVE INFORMATION *(Questions 33 through 35)*

33. To which one of the following racial/ethnic groups do you belong? *(Check one)*

1 ☐ American Indian or Alaskan Native
2 ☐ Asian or Pacific Islander
3 ☐ Black (not of Hispanic origin)
4 ☐ White (not of Hispanic origin)
5 ☐ Hispanic

34. What is your sex?

1 ☐ Male
2 ☐ Female

35. What was your age on your last birthday?

Age on last birthday: _____

F. THIS FINAL QUESTION (36) SEEKS TO DETERMINE YOUR OPINION ON AN IMPORTANT EDUCATIONAL ISSUE:

36. Whether you teach in a high school program or not, list below the number of YEARS of study in 4 years of high school you feel should be required in each subject area for high school graduation. (Answer separately for college-bound and non-college-bound students.) *(Report to the nearest half-year of study using decimals, e.g., 3.5 years.)*

Subject area	Years for college-bound	Years for non-college-bound
a. Science	_____	_____
b. English	_____	_____
c. Computer Science	_____	_____
d. Foreign Language	_____	_____
e. Social Science	_____	_____
f. Mathematics	_____	_____

THIS COMPLETES THE QUESTIONNAIRE. THANK YOU FOR YOUR COOPERATION.

In case it becomes necessary to contact you further regarding this questionnaire, please circle the day and enter the approximate time when it would be best to contact you at school, or, if you prefer, at home. Please include a telephone number at which we can reach you.

	Day							Approximate Time	Phone
	1	2	3	4	5	6	7		
At School	M	T	W	T	F	Sat	Sun	1 ☐ AM _____ 2 ☐ PM	( ) —
	Day							Approximate Time	Phone
	1	2	3	4	5	6	7		
At Home	M	T	W	T	F	Sat	Sun	1 ☐ AM _____ 2 ☐ PM	( ) —

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