

National Teacher and Principal Survey (NTPS)

Website: <https://nces.ed.gov/surveys/ntps/index.asp>

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1. OVERVIEW

The National Teacher and Principal Survey (NTPS), conducted every two to three years by the National Center for Education Statistics (NCES), is a system of related questionnaires that provides descriptive data on the context of elementary and secondary education. Redesigned from the Schools and Staffing Survey (SASS) with a focus on flexibility, timeliness, and integration with other ED data, the NTPS system allows for school, principal, and teacher characteristics to be analyzed in relation to one another. The NTPS is an in-depth, nationally representative survey of K-12 schools, principals, and teachers in the 50 states and the District of Columbia. The 2015–16 NTPS included public schools only (both traditional and charter), and the 2017–18 iteration collected data from both public and private schools. The NTPS utilizes core content and a series of rotating modules to allow timely collection of important education trends as well as trend analysis. Topics covered include characteristics of teachers, principals, schools, teacher training opportunities, retention, retirement, hiring, and shortages. NTPS has been conducted in 2015–16

SAMPLE SURVEY OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

NTPS collects data on:

- Schools
- Principals
- Teachers

Purpose

The purpose of the NTPS is to collect information necessary to understand the context of elementary and secondary education. Relative to the SASS, the NTPS redesign is aimed at developing a study that is highly flexible, timely, and integrated with other ED data while maintaining the SASS's longstanding role as the primary source of data on teacher and principal labor markets, and on the state of K-12 school staffing. The NTPS provides national estimates of elementary, secondary, and combined schools and teachers. Specifically, it allows for school, principal, and teacher characteristics to be analyzed in detail. This allows a wide variety of people interested in K-12 education, including teacher professional organizations, education advocacy groups, legislators, researchers, and journalists to compare subgroups, such as urban and rural settings. As well, the survey provides information on national and state level trends regarding core topics such as: workplace conditions, teacher retention rates, and professional development.

Components

The NTPS consists of three core components administered to a sample of public elementary and secondary schools (including charter schools), and private elementary and secondary schools. The 2017–18 NTPS consisted of six questionnaires, three each for public and private schools. These were the Principal Questionnaire, School Questionnaire, Teacher Questionnaire, Private School Principal Questionnaire, Private School Questionnaire, and Private School Teacher Questionnaire. The principal, school, and teacher questionnaires were modified slightly between the public and private school versions to refer to either the public or private sector correctly. The school and principal questionnaires are sent to sampled schools. The teacher questionnaire is sent to a sample of teachers working at sampled schools. There is one follow-up survey to the NTPS: the Principal Follow-up Survey (which is covered in the PFS chapter).

School questionnaire. The school questionnaire is addressed to the “Principal” (or, for private schools, the “Principal or School Head”), although the respondent can be any

knowledgeable school staff member (e.g., vice principal, head teacher, or school administrator). Items cover grades offered, student attendance and enrollment, staffing patterns, teaching vacancies, programs and services offered, curriculum, and community service requirements. In addition, the survey collects basic information about the school year, including the beginning time of students' school day and the length of the school year.

Principal questionnaire. This questionnaire collects information about principal/school head demographic characteristics, training, experience, salary, goals for the school, and judgments about school working conditions and climate. Information is also obtained on professional development opportunities for teachers and principals, teacher performance, barriers to dismissal of underperforming teachers, school climate and safety, parent/guardian participation in school events, and attitudes about educational goals and school governance.

Teacher questionnaire. A subsample of teachers is selected from the teacher listing form (TLF) to minimize burden on schools. These selected teachers are mailed a copy of the teacher questionnaire. The teacher questionnaire collects data from teachers about their current teaching assignment, workload, education history, and perceptions and attitudes about teaching. Questions are also asked about teacher preparation, induction, organization of classes, computers, and professional development. The only eligible respondent for the teacher questionnaire is the selected teacher labeled on the survey form. Teachers are sampled from the TLF, which collects the full list of teachers from a school, along with information on the subject matter taught and the teacher's email address. Pre-kindergarten, postsecondary, aides, and non-teaching librarians are omitted from the TLF.

Periodicity

To date, the NTPS occurred in 2015–16 and in 2017–18. NCES plans for the NTPS to be collected on a two- to three-year cycle. Its predecessor, the SASS, was on a 3-year cycle starting in 1987–88 and ending in 1993–94. After a 6-year hiatus, the SASS was fielded again in 1999–2000, after which SASS administration occurred on a 4-year cycle (2003–04, 2007–08, and 2011–12).

Data Availability

Information on the availability of data and schedule of releases for NTPS can be found at <https://nces.ed.gov/surveys/ntps/>.

2. USES OF DATA

The NTPS is the largest, most extensive survey of schools, principals, and teachers in the United States today. It includes data from public and private elementary and

secondary schools. Public charter schools are also included in the study.

NTPS data have been collected in the 2015–16 and in the 2017–18 school year. However, the collected data resemble those collected in previous iterations of the SASS, which allow for the examination of trends over time.

Relative to the 2011–12 SASS, the 2015–16 NTPS did not produce state-representative estimates. Rather, the 2015–16 NTPS produced nationally representative estimates for public schools, principals, and teachers. This will allow analysts to gain a holistic view of the principal and teacher labor market. In the 2017–18 cycle, both national and state-level estimates were supported for public schools, principals, and teachers. For public schools, the sample was designed to produce national estimates for a wide range of topics by charter status, community type, school level, school size, and free and reduced-price lunch enrollment, as well as estimates by state.

The NTPS collects extensive data on teachers, principals, and schools. Information on teachers includes their qualifications, career paths, professional development needs and activities, and support for these aspects of teachers' careers by the school and district. The NTPS school principal questionnaire collects information about principals' or school heads' years of experiences and training, goals and decision making, professional development, and perceptions of school safety and work conditions. Information about schools includes enrollment, school year, staffing, school climate, and programs offered.

The NTPS data can be used by a wide variety of people interested in K-12 education, including teacher professional organizations, education advocacy groups, legislators, researchers, and journalists.

3. KEY CONCEPTS

Because of the large number of concepts in the NTPS, only those pertaining to the level of data collection (school, principal, and teacher) are described in this section. For additional terms, the reader is referred to future reports from NCES.

Public school. An institution that provides educational services for at least one of grades 1-12 (or comparable ungraded levels), has one or more teachers to give instruction, is located in one or more buildings, receives public funds as primary support, and is operated by an education agency. Schools located on military bases in the 50 states or District of Columbia and operated by the Department of Defense are included.

Charter school. A charter school is a public school that, in accordance with an enabling state statute, has been granted

a charter exempting it from selected state or local rules and regulations. A charter school may be a newly created school or it may previously have been a public or private school.

Private school. A private school is not supported primarily by public funds, provides classroom instruction for one or more of grades K-12 or comparable ungraded levels, and has one or more teachers. Organizations or institutions that provide support for home schooling without offering classroom instruction for students are not included.

Principal. The head administrator of the sampled school.

Teacher. A full- or part-time teacher who teaches any regularly scheduled classes in any of grades K-12.¹ This includes regular classroom and special education teachers. Itinerant teachers are also included, as well as long-term substitutes who are filling the role of a regular teacher on a long-term basis. An itinerant teacher is one who teaches at more than one school (e.g., a music teacher who teaches 3 days per week at one school and 2 days per week at another). Short-term substitute teachers and student teachers are not included.

4. SURVEY DESIGN

Target Population

Public (including charter schools) and private elementary and secondary schools in the United States; the principals of these schools; and the teachers of these schools. Charter schools are included in the study.

Private schools were dropped from the target population from the 2015–16 NTPS, due to low response rates in the 2011–12 Private School SASS and the 2013–14 Private School Survey (PSS). Private schools were included in the target population of the 2017–2018 cycle.

Sample Design

Public schools. The starting point for the 2017–18 NTPS public school sampling frame was the 2014–15 Common Core of Data (CCD) [Nonfiscal School Universe data file](#). The sampling frame was adjusted from the CCD to fit the definition of a school eligible for NTPS. To be eligible for NTPS, a school was defined as an institution or part of an institution that provides instruction to students, has one or more teachers to provide instruction, serves students in one or more of grades 1–12 or the ungraded equivalent, and is located in one or more buildings apart from a private home. It was possible for two or more schools to share the same building; in that case, they were treated as different schools

if they had different administrators (i.e., principal or school head). This definition is unchanged from the Schools and Staffing Survey (SASS). The 2017–18 NTPS universe of schools is confined to the 50 states plus the District of Columbia and excludes the other jurisdictions, Department of Defense overseas schools, and CCD schools that do not offer teacher-provided classroom instruction in grades 1–12 or the ungraded equivalent.

Unlike the SASS, the NTPS did not stratify schools prior to sampling. The NTPS used a systematic, probability proportionate to size (PPS) sample, where size is defined to be the square root of the number of full-time-equivalent (FTE) teachers in the school. Some types of schools were oversampled based on select characteristics, such as urbanicity (city, suburban, town, rural), school grade level (primary, middle, high, combined), and charter status. In addition to oversampling based on specific school characteristics, sample sizes were inflated for schools in 29 states with smaller numbers of schools, in order to ensure that all state-level estimates would meet the criteria for publish ability.

Private Schools. The 2017–18 NTPS private school frame was based on the 2015–16 [Private School Universe Survey](#) (PSS) list frame and certainty area frame. In order to provide coverage of private schools founded since 2016 and to improve coverage of private schools existing in 2016, the Census Bureau collected membership lists during the summer of 2016 from private school associations and religious denominations. The associations were asked to list all schools meeting the PSS school definition. The 50 states and the District of Columbia were also asked to provide lists of private schools meeting the PSS definition of a school.

The NTPS private school sample that was drawn from the list frame was a systematic probability proportionate to size (PPS) sample, where size is defined to be the square root of the number of full-time equivalent (FTE) teachers in the school. However, some types of schools were oversampled by being placed into domains for oversampling. The domains were defined by affiliation strata (Catholic, Baptist/Seventh Day Adventist, Lutheran/Jewish/other religious, nonreligious regular, and nonreligious special education or special emphasis), grade level (elementary, secondary, and combined), school size (large, small) and census region (Northeast, Midwest, South, and West).

Principal selection. All principals from sampled schools were also surveyed for NTPS.

¹ A teacher teaching only kindergarten students is in scope, provided the school serves students in a grade higher than kindergarten.

Teacher selection. Prior to allocating teachers to sampling strata, the Census Bureau first allocated an overall number of teachers to be selected. The maximum number of sampled teachers per school was set at 20, in order to avoid overburdening a school by sampling too large a proportion of its teachers. An average of seven to nine teachers were selected per public school, depending on the school's grade range, school size, urbanicity, and poverty status. For private schools, an average of two to four teachers per school were selected, depending on affiliation, school size, and region. Within each sampled school (both public and private), teachers were stratified by subject, as follows: math, science, English/language arts, social studies, and everything else. No oversampling by subject was performed. Within each teacher stratum in each school, teachers were selected systematically with equal probability.

The selected samples of the 2017–18 NTPS included about 10,600 traditional and charter public schools and their principals, 60,000 public school teachers, 4,000 private schools and their principals, and 9,600 private school teachers.

Data Collection and Processing

The 2017–18 NTPS used a combination of mail-based methodology and Internet reporting for questionnaires, with telephone and in-person field follow-up. An advance letter was mailed to sampled schools during the summer of 2017 to verify school addresses and eligibility. Subsequently, a package containing school and principal surveys and explanatory information was mailed to sampled schools. The Census telephone center called sampled schools to verify school information, establish a survey coordinator, and follow up on the Teacher Listing Form (TLF), which served as the teacher list frame. Sampled teachers were mailed questionnaires on a flow basis. Field follow-up was conducted for types of schools expected to have a lower response propensity (e.g., city schools) and schools that had not returned the TLF. Schools were called from Census telephone centers to remind the survey coordinator to have staff complete and return all forms. Sampled principals and teachers were called from the telephone centers to attempt to complete the questionnaire with them over the phone. Field follow-up was conducted for schools and teachers that had not returned their questionnaires.

Data processing. The U.S. Census Bureau conducted the data processing for the 2017–18 NTPS. Each questionnaire was coded according to its response status—for example, whether the questionnaire contained a completed interview, a respondent refused to complete it, or a school closed. The next step was to make a preliminary determination of each case's interview status, i.e., whether it was an interview, a non-interview, or if the respondent was ineligible for the survey.

Once the data were compiled, a computer program conducted a series of quality control checks, such as range checks, consistency edits, and blanking edits, and generated a list of cases where problems occurred in each survey. After the completion of these checks, the program made a final determination of whether the case was eligible for the survey, and if so, whether there were sufficient data for the case to be classified as an interview. As a result, a final interview status recode value was assigned to each case.

Estimation Methods

Sample units are weighted to produce national and state-level estimates for public and private elementary and secondary school surveys (i.e., schools, teachers, and principals). These estimates are produced through the weighting and imputation procedures discussed below.

Weighting. Estimates from NTPS sample data are produced by using weights. The base weight for schools and principals is the reciprocal of the probability of selection for each school and principal. The base weight for teacher sampling is generated by taking the base weight for school sampling (the reciprocal of the probability of selection of the school), adjusting for sampled schools for which a TLF is not obtained, and multiplying this by the reciprocal of the probability of selection of the teacher within the school (from the TLF). Next, a nonresponse adjustment factor for nonresponse is calculated and applied based on a weighting cell adjustment. Weighting cells are developed using tree search algorithms. These cells are selected to be homogenous in response propensity within cells and heterogeneous in response propensity across cells. The adjustment is the inverse of the weighted response rate within each cell, and each respondent in the cell receives this adjustment. Nonrespondents are given weights of zero and the respondents are reweighted to represent the nonrespondents. The variables examined for potential bias were the same as those used by the tree search algorithms.

Imputation. Cases with “not answered” values for items were imputed. Two imputation approaches were used in the 2015–16 NTPS and 2017–18 NTPS. First, donor respondent methods, such as hot-deck imputation, were used. Second, if no suitable donor case could be matched, the few remaining items were imputed using mean or mode from groups of similar cases to impute a value to the item with missing data. After each stage of imputation, computer edits were run again to verify that the imputed data were consistent with the existing questionnaire data. If that was not the case, an imputed value was blanked. In these situations, Census Bureau's analysts looked at the items and tried to determine an appropriate value. Edit and imputation flags, indicating which edit or imputation method was used, were assigned to each relevant survey variable.

Changes Over Time

Some changes have been implemented since the first 2015–16 cycle.

- In the 2017–18 cycle, private schools, principals, and teachers were added into the target population.
- In the 2017–18 cycle, both national and state-level estimates were supported for public schools, principals, and teachers, while the 2015–16 cycle produced nationally representative estimates only.
- The 2017–18 NTPS collected and reported information on the National School Lunch Program differently than previous years of both NTPS and SASS. Rather than asking for a count of K–12 students approved for the program, schools were asked to report the percentage of K–12 students approved for the program. Additionally, schools that did not participate in the program used to be treated as a separate category for reporting purposes, but in this cycle, are grouped with schools that participated in the program but had no students approved for the program.

Future Plans

NCES plans for the NTPS to be collected on a two- or three-year cycle. The next planned collection phase is 2020–21.

5. DATA QUALITY AND COMPARABILITY

Sampling Error

Sampling errors arise when a sample of the population, rather than the whole population, is used to estimate some statistics. Different samples from the same population would likely produce somewhat different estimates of the statistic in question. This fact means that there is a degree of uncertainty associated with statistics estimated from a sample. This uncertainty is referred to as sampling variance and is usually expressed as the standard error of a statistic estimated from sample data. The approach used for calculating standard errors in the NTPS is jackknife replication. Jackknife replication methods involve dropping a small portion of the sample from the full sample and computing the statistic of interest for the retained and reweighted sample. The sum of squares of the replicate estimates around the full sample estimate provides an estimate of the variance of the statistic.

Nonsampling Error

Nonsampling error is a term used to describe variations in the estimates that may be caused by population coverage limitations, nonresponse bias, and measurement error, as well as data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems like unit and item nonresponse, differences in respondents' interpretations of the meaning of the survey

questions, response differences related to the particular time the survey was conducted, and mistakes in data preparation.

Unit nonresponse. Unit nonresponse error results from nonparticipation of schools, teachers, and principals. NCES standards require base-weighted response rates greater than 85 percent. The weighted response rates are displayed in Table NTPS-1 for the data collection of 2016 and 2018.

For each of the three populations of interest to the NTPS (schools, principals, and teachers), nonresponse bias analyses were carried out. First, the base-weighted distribution of responding members was compared to the base-weighted distribution of sampled members through *t* tests to identify any potential bias prior to weighting adjustments. Next, weighting adjustments were designed to reduce or eliminate nonresponse bias and to reduce the variance introduced due to sampling by adjusting the sample estimates to known totals from the frame. Following weighting adjustment, evidence of potential bias remained for schools, principals, and teachers. For more details regarding the nonresponse bias analysis, see the *Survey Documentation for the 2017–18 National Teacher and Principal Survey* (Cox et al. forthcoming).

Item nonresponse. The item response rate indicates the percentage of respondents who answered a given survey question. The weighted NTPS item response rate is calculated by dividing the weight number of respondents who provided an answer to an item by the weighted number of respondents who were eligible to answer that item.

Data Comparability

The NTPS is a new survey that is strongly based on the SASS. However, care must be taken in estimating changes over time in data elements that both surveys have in common because some of the change measured may not be attributable to a change in the education system.

Some of the change may be due to changes in the sampling frame, changes in the questionnaire item wording, or other changes. Additionally, the NTPS is a different survey than the SASS and pulls data from a larger variety of sources and timeframes than the SASS did. While the SASS collected data on student race/ethnicity, special programs, and high school graduations, the 2015–16 NTPS gets this information from external sources. Data on student gender and race/ethnicity are taken from the 2014–15 CCD, while graduation rates come from the 2014–15 EDFacts data and information on special programs come from the 2013–14 Civil Rights Data Collection (CRDC).

Additionally, the 2015–16 NTPS is not representative at the state level, and comparison to the SASS may only be made at the national level. Private sector schools are also excluded from the 2015–16 NTPS.

Furthermore, the 2017–18 NTPS collected and reported information on the National School Lunch Program differently than previous years of both NTPS and SASS. In this cycle, schools were asked to report the percentage of K–12 students approved for the program. Additionally, schools that did not participate in the program used to be treated as a separate category for reporting purposes but, in this cycle, are grouped with schools that participated in the program but had no students approved for the program. This

decision was based on the small size of the number of schools that did not participate and the categories used for sampling, calculating response rates, and conducting bias analyses. Due to both the change in the question and the change in categorization of non-participating schools, users should exercise caution when comparing estimates for, or reported by, the percentage of students approved for free and reduced-price lunches.

Table NTPS-1. NTPS weighted unit level response rates: 2016 and 2018

Year	Public School	Public School Principal	Public School Teacher	Private School	Private School Principal	Private school Teacher
2016	72.5	71.8	57.2 ¹	†	†	†
2018	72.5	70.2	67.0 ²	64.5	62.6	53.9 ³

† Not applicable.

¹ Represents the overall response rate for public school teachers in the 2015-2016 cycle, calculated as the product of the response rate to two stages: the teacher listing form (84.4%) and the teacher questionnaire (67.8%).

² Represents the overall response rate for public school teachers in the 2017-2018 cycle, calculated as the product of the response rate to two stages: the teacher listing form (87.1%) and the teacher questionnaire (76.9%).

³ Represents the overall response rate for private school teachers in the 2017-2018 cycle, calculated as the product of the response rate to two stages: the teacher listing form (71.0%) and the teacher questionnaire (75.9%).

SOURCE: Methodology reports for the National Teacher and Principal Survey. Reports are available at <https://nces.ed.gov/pubsearch/getpubcats.asp?sid=122>.

6. CONTACT INFORMATION

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7. METHODOLOGY AND EVALUATION REPORTS

General

Cox, S., Gilary, A., Simon, D., and Thomas, T. (forthcoming). *Survey Documentation for the 2017–18 National Teacher and Principal Survey*. U.S. Department of Education. Washington, DC: National Center for Education Statistics.

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