National Study of Postsecondary Faculty (NSOPF)

Website: https://nces.ed.gov/surveys/nsopf/
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PERIODIC SURVEY OF A SAMPLE OF POSTSECONDARY INSTITUTIONS AND THEIR FACULTY:

NSOPF includes:

- Institution Questionnaire
- Faculty Questionnaire
- Department Chairperson Questionnaire (1987–88 only)

1. OVERVIEW

The National Study of Postsecondary Faculty (NSOPF) is conducted to provide information on postsecondary faculty and instructional staff: their academic and professional background, sociodemographic characteristics, and employment characteristics, such as institutional responsibilities and workload, job satisfaction, and compensation. Thus far, there have been four NSOPF administrations—in the 1987–88 academic year (NSOPF:88), the 1992–93 academic year (NSOPF:93), the 1998–99 academic year (NSOPF:99), and the 2003–04 academic year (NSOPF:04). The first cycle was conducted with a sample of institutions, faculty, and department chairpersons. The second, third, and fourth cycles were limited to surveys of institutions and faculty, but with a substantially expanded sample of public and private, not-for-profit institutions and faculty. Furthermore, unlike any previous cycle of NSOPF, the fourth cycle was conducted in tandem with another study, the 2004 National Postsecondary Student Aid Study (NPSAS:04) (see NPSAS chapter), as a component of a larger study, the 2004 National Study of Faculty and Students (NSoFaS:04).

Purpose
To provide a national profile of postsecondary faculty and instructional staff: their professional backgrounds, responsibilities, workloads, salaries, benefits, and attitudes.

Components
NSOPF consists of two questionnaires: one for institutions and one for faculty and instructional staff. Institutions receive both an *Institution Questionnaire* and a request to provide a faculty list. The *Faculty Questionnaire* is sent to faculty and instructional staff sampled from the lists provided by the institutions. The 1987–88 NSOPF also included a *Department Chairperson Questionnaire*.

Institution Questionnaire. The Institution Questionnaire obtains information on the number of full- and part-time instructional and noninstructional faculty (as well as instructional personnel without faculty status); the tenure status of faculty members (based on definitions provided by the institution); institution tenure policies (and changes in policies on granting tenure to faculty members); the impact of tenure policies on the influx of new faculty and on career development; the growth and promotion potential for existing nontenured junior faculty; the benefits and retirement plans available to faculty; and the turnover rate of faculty at the institution. The questionnaire is completed by an Institution Coordinator (IC) designated by the Chief Administrator (CA) at each sampled institution.

Faculty Questionnaire. This questionnaire addresses the following issues as they relate to postsecondary faculty and instructional staff: background characteristics and academic credentials; workloads and time allocation between classroom instruction and other activities such as research, course preparation, consulting, public service, doctoral or student advising, conferences, and curriculum development; compensation and the importance of other sources of income, such as consulting fees and royalties; the role of faculty in institutional policymaking and planning (and the differences, if any, between the role of part- and full-time faculty); faculty attitudes toward their jobs, their institutions, higher education, and student achievement in general; changes in teaching methods and the impact of new technologies on teaching techniques; career and retirement plans; differences between individuals who have instructional responsibilities and those who do not (e.g., those engaged only in research); and differences between those with teaching responsibilities but no faculty status and those with teaching responsibilities and faculty status. Eligible respondents for this questionnaire are faculty and instructional staff sampled from lists provided by institutions involved in the study. These lists are compiled by the IC at each sampled institution.

Department Chairperson Questionnaire. Administered only in the 1987–88 academic year, this questionnaire collected information from over 3,000 department chairpersons on the faculty composition in departments, tenure status of faculty, faculty hires and departures, hiring practices, activities used to assess faculty performance, and professional and developmental activities.

Periodicity
The NSOPF was conducted in the 1987–88, 1992–93, 1998–99, and 2003–04 academic years. No specific administration date has been set for the next round of NSOPF.

Data Availability
Information on NSOPF data files through NSOPF:04 is available at https://nces.ed.gov/pubsearch/getpubcats.asp?sid=011.

2. USES OF DATA

NSOPF provides valuable data on postsecondary faculty that can be applied to policy and research issues of importance to federal policymakers, education researchers, and postsecondary institutions across the United States. For example, NSOPF data can be used to analyze whether the size of the postsecondary labor force is decreasing or increasing. NSOPF data can also be used to analyze faculty job satisfaction and how it correlates with an area of specialization as well as how background and specialization skills relate to present assignments. Comparisons can be made on academic rank and outside employment. Benefits and compensation can be studied across institutions, and faculty can be aggregated by sociodemographic characteristics. Because NSOPF is conducted periodically, it also supports comparisons of data longitudinally.

The Institution Questionnaire includes items about

- the number of full- and part-time faculty (regardless of whether they had instructional responsibilities) and instructional personnel without faculty status;
- the distribution of faculty and instructional staff by employment (i.e., full-time, part-time) and tenure status (based on the definitions provided by the institution);
- institutional tenure policies and changes in policies on granting tenure to faculty members;
- the impact of tenure policies on the number of new faculty and on career development;
- the growth and promotion potential for existing nontenured junior faculty;
- the procedures used to assess the teaching performance of faculty and instructional staff;
- the benefits and retirement plans available to faculty; and
- the turnover rates of faculty at the institution.

The Faculty Questionnaire addresses such issues as respondents' employment, academic, and professional background; institutional responsibilities and workload; job satisfaction; compensation; sociodemographic characteristics; and opinions. The questionnaire is designed to emphasize behavioral rather than attitudinal questions in order to collect data on who the faculty are; what they do; and whether, how, and why the composition of the nation's faculty is changing.

The Faculty Questionnaire includes items about

- background characteristics and academic credentials;
- workloads and time allocation between classroom instruction and other activities (such as research, course preparation, consulting, work at other institutions, public service, doctoral or student advising, conferences, and curriculum development);
- compensation and the importance of other sources of income, such as consulting fees and royalties;
- the number of years spent in academia, and the number of years with instructional responsibilities;
- the role of faculty in institutional policymaking and planning (and the differences, if any, between the role of full- and part-time faculty);
- faculty attitudes toward their jobs, their institutions, higher education, and student achievement in general;
- changes in teaching methods, and the impact of new technologies on instructional techniques;
- career and retirement plans;
- differences between those who have instructional responsibilities and those who do not, such as those engaged only in research; and
- differences between those with teaching responsibilities but no faculty status and those with teaching responsibilities and faculty status.

3. KEY CONCEPTS

Some key concepts related to NSOPF are described below.

Faculty/Instructional Staff (NSOPF:04). Eligible individuals for NSOPF:04 included any faculty and instructional staff who

- were permanent, temporary, adjunct, visiting, acting, or postdoctoral appointees;
- were employed full- or part-time by the institution;
- taught credit or noncredit classes;
- were tenured, nontenured but on a tenure track, or nontenured and not on a tenure track;
- provided individual instruction, served on thesis or dissertation committees, or advised or otherwise interacted with first-professional, graduate, or undergraduate students;
- were in professional schools (e.g., medical, law, or dentistry); or
- were on paid sabbatical leave.

NSOPF:04 excluded staff who

- were graduate or undergraduate teaching or research assistants;
- had instructional duties outside of the United States, unless on sabbatical leave;
- were on leave without pay;
- were not paid by the institution (e.g., those in the military or part of a religious order);
- were supplied by independent contractors; or
- otherwise volunteered their services.

Faculty/Instructional Staff (NSOPF:99).
Faculty—All employees classified by the institution as faculty who were on the institution's payroll as of November 1, 1998. Included as faculty were

- any individuals who would be reported as "Faculty (Instruction/Research/Public Service)" in the U.S. Department of Education's 1997–98 Integrated Postsecondary Education Data System (IPEDS) Fall Staff Survey[1] (see IPEDS chapter);
- any individuals with faculty status who would be reported as "Executive, Administrative, and Managerial" in the 1997–98 IPEDS Fall Staff Survey, whether or not they engaged in any instructional activities; and
- any individuals with faculty status who would be reported as "Other Professionals (Support/Service)" in the 1997–98 IPEDS Fall Staff Survey, whether or not they engaged in any instructional activities.

Individuals who would be reported as "Instruction/Research Assistants" in the 1997–98 IPEDS Fall Staff Survey were excluded.

Instructional Staff—All employees with instructional responsibilities—those teaching one or more courses, or

[1] When constructing the NSOPF:99 institution frame, faculty data from 1995–96 IPEDS were used if 1997–98 data were missing.

advising or supervising students' academic activities (e.g., by serving on undergraduate or graduate thesis or dissertation committees or supervising an independent study or one-on-one instructions)—who may or may not have had faculty status. Included as instructional staff were

- any individuals with instructional responsibilities during the 1998 fall term who would be reported as "Executive, Administrative, and Managerial" in the 1997–98 IPEDS Fall Staff Survey (e.g., a finance officer teaching a class in the business school); and
- any individuals with instructional responsibilities during the 1998 fall term who would be reported as "Other Professionals (Support/Service)" in the 1997–98 IPEDS Fall Staff Survey.

Individuals who would be reported as "Instruction/Research Assistants" in the 1997–98 IPEDS Fall Staff Survey were excluded.

Faculty/Instructional Staff (NSOPF:93). All institutional staff (faculty and nonfaculty) whose major regular assignment at the institution (more than 50 percent) was instruction. This corresponds to the definition used in IPEDS glossary (Broyles 1995), which defines faculty (instruction/research/public service) as "persons whose specific assignments customarily are made for the purpose of conducting instruction, research, or public service as a principal activity (or activities), and who hold academic-rank titles of professor, associate professor, assistant professor, instructor, lecturer, or the equivalent of any of these academic ranks. If their principal activity is instructional, this category includes deans, directors, or the equivalent, as well as associate deans, assistant deans, and executive officers of academic departments…"

A dedicated instructional assignment was not required for an individual to be designated as faculty/instructional staff in NSOPF:93. Included in the definition were: administrators whose major responsibility was instruction; individuals with major instructional assignments who had temporary, adjunct, acting, or visiting status; individuals whose major regular assignment was instruction but who had been granted release time for other institutional activities; and individuals whose major regular assignment was instruction but who were on sabbatical leave from the institution. Excluded from this definition were graduate or undergraduate teaching assistants, postdoctoral appointees, temporary replacements for personnel on sabbatical leave, instructional personnel on leave without pay or teaching outside the United States, military personnel who taught only Reserve Officers Training Corps (ROTC) courses, and instructional personnel supplied by independent contractors.

Noninstructional Faculty (NSOPF:93). All institutional staff who had faculty status but were not counted as instructional faculty since their specific assignment was not instruction but rather conducting research, performing public service, or carrying out administrative functions.

Instructional Faculty (NSOPF: 88). Those members of the institution's instruction/research staff who were employed full- or part-time (as defined by the institution) and whose assignment included instruction. Included were administrators, such as department chairs or deans, who held full- or part-time faculty rank and whose assignment included instruction; regular full- and part-time instructional faculty; individuals who contributed their instructional services, such as members of religious orders; and instructional faculty on sabbatical leave. Excluded from this definition were teaching assistants; replacements for faculty on sabbatical leave; faculty on leave without pay; and others with adjunct, acting, or visiting appointments.

4. SURVEY DESIGN

Target Population

Since NSOPF:99, the target population has consisted of all public and private, not-for-profit Title IV-participating, 2- and 4-year degree-granting institutions in the 50 states and the District of Columbia that offer programs designed for high school graduates and are open to persons other than employees of the institution and faculty and instructional staff in these institutions. The NSOPF:93 and NSOPF:88 institution-level population included postsecondary institutions with accreditation at the college level recognized by the U.S. Department of Education. The NSOPF:88 faculty-level population included only instructional faculty, but it also targeted department chairpersons.

Sample Design

NSOPF:04 used a two-stage sample design, with a sample of 1,080 institutions selected for participation in the first stage, of which 1,070 were eligible and 890 provided a faculty list suitable for sampling. In the second stage, a total of 35,630 faculty were sampled from participating institutions. Of these, 34,330 were eligible.

The institution frame was constructed from the Winter 2001–02 IPEDS data file. Institutions were partitioned into institutional strata based on institutional control, highest level of offering, and Carnegie classification.

The sample of institutions was selected with probability proportional to size (PPS) based on the number of faculty and students at each institution.

In the faculty-level stage of sampling, faculty were grouped into strata based on race/ethnicity, gender, and

employment status. Furthermore, the faculty sample was implicitly stratified by academic field. Stratifying the faculty in this way allowed for the oversampling of relatively small subpopulations (such as members of Black, Hispanic, and other ethnic/racial groups) in order to increase the precision of the estimates for these groups. The selection procedure allowed the sample sizes to vary across institutions, but minimized the variation in the weights within the staff-level strata: the sampling fractions for each sample institution were made proportional to the institution weight.

The sample for NSOPF:99 was selected in three stages. Both the first-stage sample of institutions and the second-stage sample of faculty were stratified, systematic samples. In the initial stage, 960 postsecondary institutions were selected from the 1997–98 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) data files and the 1997 and 1995 IPEDS Fall Staff files. Each sampled institution was asked to provide a list of all of the full- and part-time faculty that the institution employed during the 1998 fall term, and 819 institutions provided such a list. In the second stage of sampling, some 28,580 faculty were selected from the lists provided by the institutions. Over 1,500 of these sample members were determined to be ineligible for NSOPF:99, as they were not employed by the sampled institution during the 1998 fall term, resulting in a sample of 27,040 faculty. A third stage of sampling occurred in the final phases of data collection. In order to increase the response rate and complete data collection in a timely way, a subsample of the faculty who had not responded was selected for intensive follow-up efforts. Others who had not responded were eliminated from the sample, resulting in a final sample of 19,210 eligible faculty.

NSOPF:93 was conducted with a sample of 970 postsecondary institutions (public and private, not-for-profit 2- and 4-year institutions whose accreditation at the college level was recognized by the U.S. Department of Education) in the first stage and 31,350 faculty sampled from institution faculty lists in the second stage. Institutions were selected from IPEDS and then classified into 15 strata by school type, based on their Carnegie Classifications. The strata were (1) private, other Ph.D. institution (not defined in any other stratum); (2) public, comprehensive; (3) private, comprehensive; (4) public, liberal arts; (5) private, liberal arts; (6) public, medical; (7) private, medical; (8) private, religious; (9) public, 2-year; (10) private, 2-year; (11) public, other type (not defined in any other stratum); (12) private, other type (not defined in any other stratum); (13) public, unknown type; (14) private, unknown type; and (15) public, research; private, research; and public, other Ph.D. institution (not defined in any other stratum). Within each stratum, the institutions were further sorted by school size. Of the 960 eligible institutions, 820 (85 percent) provided lists of faculty. The selection of faculty within each institution was random except for the oversampling of the following groups: Blacks (both non-Hispanics and Hispanics); Asians/Pacific Islanders; faculty in disciplines specified by the National Endowment for the Humanities; and full-time female faculty.

NSOPF:88 was conducted with a sample of 480 institutions (including 2-year, 4-year, doctoral-granting, and other colleges and universities), some 11,010 faculty, and more than 3,000 department chairpersons. Institutions were sampled from the 1987 IPEDS universe and were stratified by modified Carnegie Classifications and size (faculty counts). These strata were (1) public, research; (2) private, research; (3) public, other Ph.D. institution (not defined in any other stratum); (4) private, other Ph.D. institution (not defined in any other stratum); (5) public, comprehensive; (6) private, comprehensive; (7) liberal arts; (8) public, 2-year; (9) private, 2-year; (10) religious; (11) medical; and (12) "other" schools (not defined in any other stratum). Within each stratum, institutions were randomly selected. Of the 480 institutions selected, 450 (94 percent) agreed to participate and provided lists of their faculty and department chairpersons. Within 4-year institutions, faculty and department chairpersons were stratified by program area and randomly sampled within each stratum; within 2-year institutions, simple random samples of faculty and department chairpersons were selected; and within specialized institutions (religious, medical, etc.), faculty samples were randomly selected (department chairpersons were not sampled). At all institutions, faculty were also stratified on the basis of employment status—full-time and part-time. Note that teaching assistants and teaching fellows were excluded in NSOPF:88.

Data Collection and Processing

NSOPF:04 allowed ICs to upload lists of faculty and instructional staff and to complete the Institution Questionnaire online. Institutions were also given the option of responding by telephone, though a web response was preferred. Faculty and instructional staff were allowed to participate via a self-administered web-based questionnaire or an interviewer-administered telephone interview (CATI). Follow-up with ICs and with faculty was conducted by telephone, mail, and e-mail.

NSOPF:99 allowed sample members to complete a self-administered paper questionnaire and mail it back or to complete the questionnaire online. Follow-up activities included e-mails, telephone prompting, and, for nonresponding faculty, CATI. As part of the study, an experiment was conducted to determine if small financial incentives could increase use of the web-based version of

the questionnaire. Previously, NSOPF was a mailout/mailback survey with telephone follow-up.

NSOPF:88 was conducted by SRI International; NSOPF:93 by the National Opinion Research Center (NORC) at the University of Chicago; NSOPF:99 by The Gallup Organization; and NSOPF:04 by RTI International.

Reference Dates. Most of the information collected in NSOPF pertains to the fall term of the academic year surveyed. For NSOPF:04, the fall term was defined as the academic term containing November 1, 2003. The Institution Questionnaire also asked about the number of full-time faculty/instructional staff considered for tenure in the 2003–04 academic year. The NSOPF:04 Faculty Questionnaire asked faculty and instructional staff about the year they began their first faulty or instructional staff position at a postsecondary institution; the number of presentations and publications during their entire career and, separately, the number during the last 2 years; and their gross compensation and household income in calendar year 2003. Similarly, NSOPF:99, NSOPF:93, and NSOPF:88 requested most information for the 1998, 1992, and 1987 fall term, respectively, but included some questions requiring retrospective or prospective responses.

Data Collection. The NSOPF:04 data collection offered both a CATI and a web-based version of the Institution and Faculty questionnaires, with mail, telephone, and e-mail follow-up. Some 1,070 institutions in the eligible institution sample for the 2004 National Study of Faculty and Students (NSoFaS:04) were sampled and recruited to participate in both components of NSoFaS:04 (NSOPF:04 and NPSAS:04). The fielding of NSOPF:04 and NPSAS:04 together as NSoFaS:04 was one of three changes made in the institution contacting procedures for this cycle of NSOPF. The second change was to administer the Institution Questionnaire as a web or CATI instrument, with no hard-copy equivalent. The third change was to begin recruiting institutions and initiating coordinator contacts in March 2003—a full 8 months prior to the November reference date for the fall term and 5 to 6 months earlier than the September start dates of previous cycles. This change was prompted by the need to draw a faculty sample and subsequently contact sampled faculty for participation prior to the 2004 summer break.

The data collection procedure started in March 2003 with a cover letter and a set of pamphlets on NSoFaS, NSOPF, and NPSAS being sent to the *institution's Chief Administrator (CA) as an introduction* to the study. Study personnel then followed up with the CA by telephone, asking him or her to name an IC. An information packet was then sent to the IC. Each IC was then asked to complete a Coordinator Response Form to confirm that the institution could supply the faculty list within stated schedule constraints. ICs who indicated that a formal review process was needed before their institution would participate were forwarded additional project materials as appropriate.

A binder containing complete instructions for NSOPF:04, as well as a request for a faculty/instructional staff list, was sent to ICs in September 2003. ICs were asked to complete the Institution Questionnaire using the study's website. Data collection for the Institution Questionnaire ended in October 2004.

In NSOPF:04 full-scale study, the faculty data collection began with introductory materials being sent to sample members via first-class mail as well as e-mail. The letter included instructions for completing the self-administered questionnaire on the Internet or by calling a toll-free number to complete a telephone interview. After an initial 4-week period, telephone interviewers began calling sample members. An early-response incentive, designed to encourage sample members to complete the self-administered questionnaire prior to outgoing CATI calls, was offered to sample members who completed the questionnaire within 4 weeks of the initial mailing. Incentives were also offered to selected sample members as necessary (i.e., those who refused to complete the questionnaire and other nonrespondents).

The NSOPF:99 data collection offered both a paper and a web version of the Institution and Faculty questionnaires, with telephone (including CATI) and e-mail follow-up. The data collection procedure started with a prenotification letter to the institution's CA to introduce him or her to the study and secure the name of an appropriate individual to serve as the IC. The data collection packet was then mailed directly to the IC.

The packet contained both the Institution Questionnaire and the faculty list collection packet. The IC was asked to complete and return all materials at the same time. The mailing was timed to immediately precede the November 1, 1998, reference date for the fall term.

The field period for the NSOPF:99 faculty data collection extended from February 1999 through March 2000. Questionnaires were mailed to faculty in waves, as lists of faculty and instructional staff were received, processed, and sampled. Questionnaires were accompanied by a letter that provided the web address and a unique access code to be used to access the web questionnaire. The first wave of questionnaires was mailed on February 4, 1999; the seventh and final wave was mailed on December 1, 1999. Faculty sample members in each wave received a coordinated series of mail, e-mail, and telephone follow-ups. Mail follow-up for nonrespondents included a postcard and up to four questionnaire re-mailings; these were mailed to the home address of the faculty member if

provided by the institution. E-mail prompts were sent to all faculty for whom an e-mail address was provided; faculty received as many as six e-mail prompts. Telephone follow-up consisted of initial prompts to complete the mail or web questionnaire. A CATI was scheduled for nonrespondents to the mail, e-mail, and telephone prompts.

The following efforts were made for the NSOPF:93 institution data collection: initial questionnaire mailing, postcard prompting, second questionnaire mailing, second postcard prompting, telephone prompting, third questionnaire mailing, and telephone interviewing. Similarly, the NSOPF:93 faculty data collection used an initial questionnaire mailing, postcard prompting, second questionnaire mailing, third questionnaire mailing, telephone prompting, and CATI. In both collections, institutions and faculty who missed critical items and/or had inconsistent or out-of-range responses were identified for data retrieval. Extra telephone calls were made to retrieve these data.

Data collection procedures for NSOPF:88 involved three mailouts for both the Institution Questionnaire and the Department Chairperson Questionnaire, and two mailouts and one CATI interview for the Faculty Questionnaire.

Data Processing. The NSoFaS:04 website was used for both NSOPF:04 and NPSAS:04. For institutions, it was a central repository for all study documents and instructions. It allowed for the uploading of electronic lists of faculty and instructional staff. In addition, it housed the Institution Questionnaire for the IC to complete online.

For NSOPF:04, institutions were asked to provide a single, unduplicated (i.e., with duplicate entries removed) electronic list of faculty in any commonly used and easily processed format (e.g., ASCII fixed field, comma delimited, spreadsheet format). However, as in previous cycles, paper lists were accepted, as were multiple files (e.g., separate files of full- and part-time faculty) and lists in electronic formats that did not lend themselves to electronic processing (such as word processing formats). For the first time, institutions were given the option of transmitting their electronic faculty lists via a secure upload to the NSoFaS:04 website and were encouraged to do so. (In previous cycles, direct upload was available only by file-transfer protocols, an option that few institutions utilized.) Institutions were also given the option of sending a CD-ROM or diskette containing the list data or sending the list via e-mail (as an encrypted file, if necessary).

Follow-up with ICs was conducted by telephone, mail, and e-mail. As faculty lists were received, they were reviewed for completeness, readability, and accuracy. Additional follow-up to clarify the information provided or retrieve missing information was conducted by the institution contactors as necessary. For institutions lacking the resources to provide a complete list of full- and part-time faculty and instructional staff, list information was, if possible, abstracted from course catalogs, faculty directories, and other publicly available sources. Faculty lists abstracted in this fashion were reviewed for completeness against IPEDS before being approved for sampling.

Institution Questionnaire follow-up was conducted simultaneously with follow-up for lists of faculty. If an institution was unable to complete the questionnaire online, efforts were made to collect the information by telephone. To expedite data collection, missing questionnaire data was, in some instances, abstracted directly from benefits and policy documentation supplied by the institution or from information publicly available on the institution's website.

For the faculty data collection, NSOPF:04 also utilized a mixed-mode data collection methodology that allowed sample members to participate via a web-based self-administered questionnaire or via CATI. The NSOPF:04 faculty instrument was designed to minimize potential mode effects by using a single instrument for both self-administration and CATI interviews. Four weeks after the release of the web-based questionnaire, nonrespondents were followed up to conduct a CATI interview.

Faculty lists and questionnaire data were evaluated by the project staff for quality, item nonresponse, item mode effects, break-offs, coding, quality control monitoring of interviewers, and interviewer feedback.

In NSOPF:99, each of the three modes of questionnaire administration required separate systems for data capture. All self-administered paper questionnaires were optically scanned. The system was programmed so that each character was read and assigned a confidence level. All characters with less than a 100 percent confidence level were automatically sent to an operator for manual verification. The contractor verified the work of each operator and the recognition engines on each batch of questionnaires to ensure that the quality assurance system was working properly. Also, 100 percent of written-out responses (as opposed to check marks) were manually verified.

Each web respondent was assigned a unique access code, and respondents without a valid access code were not permitted to enter the website. A respondent could return to the survey website at a later time to complete a survey that was left unfinished in an earlier session. When respondents entered the website using the access code, they were immediately taken to the same point in the survey item sequence that they had reached during their previous session. If respondents, re-using an access code, returned to the website at a later time after completing the

survey in a previous session, they were not allowed access to the completed web survey data record. Responses to all web-administered questionnaires underwent data editing, imputation, and analysis.

All telephone interviews used CATI technology. The CATI program was altered from the paper questionnaire to ensure valid codes, perform skip patterns automatically, and make inter-item consistency checks where appropriate. The quality control program for CATI interviewing included project-specific training of interviewers, regular evaluation of interviewers by interviewing supervisors, and regular monitoring of interviewers.

NSOPF:93 used both computer-assisted data entry (CADE) and CATI. The CADE/CATI systems were designed to ensure that all entries conformed to valid ranges of codes; enforce skip patterns automatically; conduct inter-item consistency checks, where appropriate; and display the full question-and-answer texts for verbatim responses. As part of the statistical quality control program, 100 percent verification was conducted on a randomly selected subsample of 10 percent of all Institution and Faculty questionnaires entered in CADE. The error rate was less than 0.5 percent for all items keyed. Quality assurance for CATI faculty interviews consisted of random online monitoring by supervisors.

Editing and Coding. For the study in general, a large part of the data editing and coding was performed in the data collection instruments, including range edits; across-item consistency edits; and coding of fields of teaching, scholarly activities, and highest degree. During and following data collection, the data were reviewed to confirm that the data collected reflected the intended skip-pattern relationships. At the conclusion of the data collection, special codes were inserted in the database to reflect the different types of missing data.

The data cleaning and editing process in NSOPF:04 consisted of the following steps:

- Review of one-way frequencies for every variable to confirm that there were no missing or blank values and to check for reasonableness of values. This involved replacing blank or missing data with -9 for all variables in the instrument database and examining frequencies for reasonableness of data values.
- Review of two-way cross-tabulations between each gate-nest combination of variables to check data consistency. Gate variables are items that determine subsequent instrument routing. Nest variables are items that are asked or not asked, depending on the response to the gate question. Legitimate skips were identified using the interview programming code as specifications to define all gate-nest relationships and replace -9 (missing values that were blank because of legitimate skips) with -3 (legitimate skip code). Additional checks ensured that the legitimate skip code was not overwriting valid data and that no skip logic was missed. In addition, if a gate variable was missing (-9), the -9 was carried through the nested items.
- Identify and code items that were not administered due to a partial or abbreviated interview. This code replaced -9 values with -7 (item not administered) based on the section completion and abbreviated interview indicators.
- Recode "don't know" responses to missing. This code replaced -1 (don't know) values with -9 (missing) for later stochastic imputation. For selected items for which "don't know" seemed like a reasonable response, variables were created both with and without the "don't know" category.
- Identify items requiring recoding. During this stage, previously uncodable values (e.g., text strings) collected in the various coding systems were upcoded, if possible.
- Identify items requiring range edits, logical imputations, and data corrections. Descriptive statistics for all continuous variables were examined. Values determined to be out-of-range were either coded to the maximum (or minimum) reasonable value or set to missing for later imputation. Logical imputations were implemented to assign values to legitimately skipped items whose values could be implicitly determined from other information provided. Data corrections were performed where there were inconsistencies between responses given by the sample member.

Estimation Methods

Weighting was used in NSOPF to adjust for sampling and unit nonresponse at both the institution and faculty levels. Imputation was performed to compensate for item nonresponse.

Weighting. In NSOPF:04, three weights were computed: full-sample institution weights, full-sample faculty weights, and a contextual weight (to be used in "contextual" analyses that simultaneously include variables drawn from the Faculty and Institution questionnaires). The formulas representing the construction of each of these weights are provided in the *2004 National Study of Postsecondary Faculty (NSOPF:04) Methodology Report* (Huer et al. 2005).

NSOPF:99 used weighting procedures similar to those used in NSOPF:04. For details on these procedures, see the *1999 National Study of Postsecondary Faculty (NSOPF:99) Methodology Report* (Abraham et al. 2002).

The weighting procedures used in NSOPF:93 and NSOPF:88 are described below.

NSOPF:93. Three weights were computed for the NSOPF:93 sample—first-stage institution weights, final institution weights, and final faculty weights. The first-stage institution weights accounted for the institutions that participated in the study by submitting a faculty list that allowed faculty members to be sampled. The two final weights—weights for the sample faculty and for institutions that returned the Institution Questionnaire—were adjusted for nonresponse. The final faculty weights were poststratified to the "best" estimates of the number of faculty. The "best" estimates were derived following reconciliation and verification through recontact with a subset of institutions that had discrepancies of 10 percent or more between the total number enumerated in their faculty list and Institution Questionnaire. For more information on the reconciliation effort, see "Measurement Error" (in section 5 below). For more information on the calculation of the "best" estimates of faculty, see the *1993 National Study of Postsecondary Faculty Methodology Report* (Selfa et al. 1997).

NSOPF:88. The NSOPF:88 sample was weighted to produce national estimates of institutions, faculty, and department chairpersons by using weights designed to adjust for differential probabilities of selection and nonresponse. The sample weights for institutions were calculated as the inverse of the probability of selection, based on the number of institutions in each size substratum. Sample weights were adjusted to account for nonresponse by multiplying the sample weights by the reciprocal of the response rate. Sample weights for faculty in NSOPF:88 summed to the total number of faculty in the IPEDS universe of institutions, as projected from the faculty lists provided by participating institutions, and accounted for two levels of nonresponse: one for nonparticipating institutions and one for nonresponding faculty. Sample weights for department chairpersons in NSOPF:88 summed to the estimated total number of department chairpersons in the IPEDS universe of institutions and accounted for nonresponse of nonparticipating institutions and nonresponding department chairpersons.

Imputation. Data imputation for the NSOPF:04 Faculty Questionnaire was performed in four steps:

- *Logical imputation.* The logical imputation was conducted during the data cleaning steps (as explained under "Editing and Coding" above).
- *Cold deck.* Missing responses were filled in with data from the sample frame or institution record data whenever the relevant data were available.
- *Sequential hot deck.* Nonmissing values were selected from "sequential nearest neighbors" within the imputation class. All questions that were categorical and had more than 16 categories were imputed with this method.
- *Consistency checks.* After all variables were imputed, consistency checks were applied to the entire faculty data file to ensure that the imputed values did not conflict with other questionnaire items, observed or imputed. This process involved reviewing all of the logical imputation and editing rules as well.

Data imputation for the institution questionnaire used three methods, within-class mean, within-class random frequency, and hot deck. The imputation method for each variable is specified in the labels for the imputation flags in the institution dataset. Logical imputation was also performed in the cleaning steps described previously in the "Editing and Coding" section.

Imputation for the NSOPF:99 Faculty Questionnaire was performed in four steps:

- *Logical imputation*. The logical imputation was conducted during the data cleaning steps (as explained under "Editing and Coding" above).
- *Cold deck*. Missing responses were filled in with data from the sample frame whenever the relevant data were available.
- *Sequential hot deck*. Nonmissing values were selected from "sequential nearest neighbors" within the imputation class. All questions that were categorical and had more than 16 categories were imputed with this method.
- *Regression type*. This procedure employed SAS PROC IMPUTE. All items that were still missing after the logical, cold-deck, and hot-deck imputation procedures were imputed with this method. Project staff selected the independent variables by first looking through the questionnaire for logically related items and then by conducting a correlation analysis of the questions against each other to find the top correlates for each item.

Data imputation for the NSOPF:99 Institution Questionnaire used three methods. Logical imputation was also performed in the cleaning steps described under "Editing and Coding."

- *Within-class mean*. The missing value was replaced with the mean of all nonmissing cases within the imputation class. Continuous variables with less than 5 percent missing data were imputed with this method.
- *Within-class random frequency*. The missing value was replaced by a random draw from the possible responses based on the observed frequency of nonmissing responses within the imputation class. All categorical

questions were imputed with this method, since all categorical items had less than 5 percent missing data.

- *Hot deck*. As with the faculty imputation, this method selected nonmissing values from the "sequential nearest neighbor" within the imputation class. Any questions that were continuous variables and had more than 5 percent missing cases were imputed with this method.

For a small number of items, special procedures were used. See the *1999 National Study of Postsecondary Faculty (NSOPF:99) Methodology Report* (Abraham et al. 2002).

In NSOPF:93, two imputation methods were used for the Faculty Questionnaire—PROC IMPUTE and the "sequential nearest neighbor" hot-deck method. PROC IMPUTE alone was used for the NSOPF:93 Institution Questionnaire. All imputation was followed by a final series of cleaning passes that resulted in generally clean and logically consistent data. Some residual inconsistencies between different data elements remained in situations where it was impossible to resolve the ambiguity as reported by the respondent.

Although NSOPF:88 consisted of three questionnaires, imputations were only performed for faculty item nonresponse. The within-cell random imputation method was used to fill in most Faculty Questionnaire items that had missing data.

Recent Changes
NSOPF:04 was, in one respect, unlike any previous cycle of NSOPF, as it was conducted in tandem with another major study, NPSAS:04, under one overarching contract: NSoFaS:04. NCES recognized that, historically, there had been considerable overlap in the institutions selected for participation in NSOPF:04 and NPSAS:04. By combining the two independent studies under one contract, NCES sought to minimize the response burden on institutions and to realize data collection efficiencies. Nevertheless, NSOPF:04 and NPSAS:04 retain their separate identities. The purpose of this chapter is to summarize the methodology of NSOPF:04; sampling and data collection procedures for NPSAS:04 are referred to only as they are combined with, or impact, the parallel procedures for NSOPF:04.

The combination of NSOPF:04 and NPSAS:04 into NSoFaS:04 had important implications for the NSOPF:04 institution sample design and institution contacting procedures. Institutions for the NSOPF:04 sample were selected as a subsample of the NPSAS:04 sample. This combination resulted in a somewhat larger sample of institutions for the full-scale study than in previous NSOPF cycles (1,070 eligible institutions in NSOPF:04 compared to 960 in NSOPF:99) and created a need to balance the design requirements of both studies in all institution-related study procedures.

Future Plans
A specific date has not yet been selected for the next administration of NSOPF.

5. DATA QUALITY AND COMPARABILITY

NSOPF:04 included procedures for both minimizing and measuring nonsampling errors. A field test was performed before NSOPF:04, and quality control activities continued during interviewer training, data collection, and data processing.

Sampling Error
Standard errors for all NSOPF data can be computed using a technique known as Taylor Series approximation. Individuals opting to calculate variances with the Taylor Series approximation method should use a "with replacement" type of variance formula. Specialized computer programs, such as SUDAAN, calculate variances with the Taylor Series approximation method. The Data Analysis System (DAS) from NCES available on CD-ROM calculates variances using the Taylor Series method, and the DAS available online calculates variances using the balanced repeated replicate method.

Replicate weights are provided in the NSOPF data files (64 sets of replicates in NSOPF:99 and NSOPF:04 and 32 replicate weights in NSOPF:93). These weights implement the balanced half-sample (BHS) method of variance estimation. They have been created to handle the certainty strata and to incorporate finite population correction factors for each of the noncertainty strata. Two widely available software packages, WesVar and PC CARP, have the capability to use replicate weights to estimate variances.

Analysts should be cautious about the use of BHS-estimated variances that relate to one stratum or to a group of two or three strata. Such variance estimates may be based upon far fewer than the number of replicates; thus, the variance of the variance estimator may be large. Analysts who use either the restricted-use faculty file or the institution file should also be cautious about cross-classifying data so deeply that the resulting estimates are based upon a very small number of observations. Analysts should interpret the accuracy of the NSOPF statistics in light of estimated standard errors and the small sample sizes.

Nonsampling Error
To minimize the potential for nonsampling errors, the NSOPF:04 Institution and Faculty questionnaires (as well

as the sample design, data collection, and data processing procedures) were field-tested with a national probability sample of 150 postsecondary institutions (though only 80 of these were used for the full second-stage sampling of faculty and instructional staff) and 1,200 faculty members. A major focus of the field test was the effect of combining NSOPF and NPSAS. The field test also included an incentive experiment, which tested the use of incentives for increasing early responses and for obtaining interviews from nonrespondents. Other aspects of data quality were also examined.

The NSOPF:99 Institution and Faculty questionnaires (as well as the sample design, data collection, and data processing procedures) were field-tested with a national probability sample of 160 postsecondary institutions and 510 faculty members. Four methodological experiments—to increase unit response rates, speed the return of mail questionnaires, increase data quality, and improve the overall efficiency of the data collection process—were conducted as part of the field test. The experiments involved the use of prenotification, prioritized mail, a streamlined instrument, and the timing of CATI attempts. Another focus of the field test was the effort to reduce discrepancies between the faculty counts derived from the list of faculty provided by each institution and those provided in the Institution Questionnaire. Changes introduced to reduce discrepancies included providing clearer definitions of faculty eligibility (with consistency across forms and questionnaires) and collecting list and Institution Questionnaire data simultaneously (with the objective of increasing the probability that both forms would be completed by the same individual and evidence fewer inconsistencies).

During the NSOPF:93 field test, a subsample of faculty respondents was reinterviewed to evaluate reliability. In addition, an extensive item nonresponse analysis of the field-tested questionnaires was conducted, followed by additional evaluation of the NSOPF:93 instruments and survey procedures. An item nonresponse analysis was also conducted for the full-scale data collection. Later, in 1996, NCES analyzed discrepancies in the NSOPF:03 faculty counts, conducting a retrieval, verification, and reconciliation effort to resolve problems.

Coverage Error. Because the IPEDS universe is the institutional frame for NSOPF, coverage of institutions is complete. However, there are concerns about the coverage of faculty and instructional staff. In NSOPF:04, prior to sampling, faculty counts from all lists provided by participating institutions were checked against both IPEDS and the counts that institutions provided in their Institution Questionnaire. (In NSOPF:99, the IPEDS comparison was used as a quality control check only when Institution Questionnaire counts were absent.) In NSOPF:04, as in NSOPF:99, institutions were contacted to resolve any discrepancies between data sources.

In NSOPF:99, in an effort to decrease the discrepancies in faculty counts noticed in NSOPF:93, ICs were asked to provide counts of full- and part-time faculty and instructional staff at their institutions as of November 1, 1998, the same reference date used for the 1997-98 IPEDS Fall Staff Survey; asked them to return both the faculty list and the Institution Questionnaire at the same time; and—giving them explicit warnings about potential undercounts of faculty—asked them to ensure that the counts provided in the list and questionnaire were consistent. These efforts appear to have worked, with 73 percent of institutions in NSOPF:99 providing questionnaire and list data that exhibited discrepancies of less than 10 percent, an improvement of 31 percentage points since NSOPF:93.

In NSOPF:93, a discrepancy between the faculty counts reported in the Institution Questionnaires and those provided in faculty lists by institutions at the beginning of the sampling process necessitated the "best estimates" correction to the NSOPF:93 faculty population estimates, as described earlier (in "Weighting," section 4).

Nonresponse Error. *Unit nonresponse.* Unit response rates have been similar over NSOPF administrations, though they decreased slightly in NSOPF:04 (see table NSOPF-1). Note that the overall faculty response rates are the percentage of faculty responding in institutions that provided faculty lists for sampling.

Item nonresponse. For the NSOPF:04 Institution Questionnaire, 2 of the 90 items had more than 15 percent of the data missing. For the Faculty Questionnaire, 34 of the 162 items had more than 15 percent of the data missing. For further details on item nonresponse, see the *2004 National Study of Postsecondary Faculty (NSOPF:04) Methodology Report* (Huer et al. 2005).

For the NSOPF:99 Institution Questionnaire, the mean item nonresponse rate was 3.4 percent (weighted). Overall, the item nonresponse rate for the Faculty Questionnaire was 6.2 percent. More than half of the items in the Faculty Questionnaire (55 percent) had an item nonresponse rate of less than 5 percent, 25 percent had rates between 5 and 10 percent, and 20 percent had rates greater than 10 percent. For further details on item nonresponse, see the *1999 National Study of Postsecondary Faculty (NSOPF:99) Methodology Report* (Abraham et al. 2002).

For the NSOPF:93 Institution Questionnaire, the mean item nonresponse rate was 10.1 percent, with the level of nonresponse increasing in the latter parts of the questionnaire. For the Faculty Questionnaire, the mean item nonresponse rate was 10.3 percent.

Measurement Error. In NSOPF:04, as in prior administrations of this study, secured faculty lists were evaluated for accuracy and completeness of information before being processed for sampling. To facilitate quality control, faculty list counts were compared against counts obtained from the following supplementary sources:

- the Institution Questionnaire (or the file layout form, if a questionnaire was not completed but an overall faculty count was supplied);
- the 2001 IPEDS Fall Staff Survey;
- the Contact Information and File Layout (CIFL) form (which included faculty counts and was used when questionnaire data was unavailable); and
- NSOPF:99 frame data.

Discrepancies in counts of full- and part-time faculty between the faculty list and other sources that were outside the expected range were investigated. All institutions with faculty lists that failed any checks were recontacted to resolve the observed discrepancies. Because of time and definitional differences between NSOPF and IPEDS, it was expected that the faculty counts obtained from the institutions and IPEDS would include discrepancies. Consequently, quality control checks against IPEDS were less stringent than those against the Institution Questionnaire. However, list count comparisons against IPEDS and NSOPF:99 data were useful in identifying systematic errors, particularly those related to miscoding of the employment status of faculty members.

Results of the data quality evaluations showed that 82 percent of faculty list counts were within 10 percent of the corresponding Institution Questionnaire counts. There were greater variances between list counts and IPEDS, which is based on a narrower definition of faculty. Patterns of discrepancies between IPEDS and list data followed expected patterns, with list counts larger than counts from IPEDS. For more information, see the *2004 National Study of Postsecondary Faculty (NSOPF:04) Methodology Report* (Huer et al., 2005).

For NSOPF:99, NCES conducted an intensive follow-up with 230 institutions (29 percent of those participating) whose reports exhibited a variance of 5 percent or more between the list and questionnaire counts overall or between the two part-time counts. NSOPF has experienced discrepancies in faculty counts among IPEDS, Institution Questionnaires, and faculty lists across all cycles of the study. Even though identical information is requested in the questionnaire and in the list (e.g., in NSOPF:99, a count of all full- and part-time faculty and instructional staff as of November 1, 1998), institutions have continued to provide discrepant faculty data. As in NSOPF:93, large discrepancies tend to be concentrated among smaller institutions and 2-year institutions in NSOPF:99. Undercounting of part-time faculty and instructional staff without faculty status in the list remains the primary reason for the majority of these discrepancies.

However, procedures implemented in NSOPF:99 improved the consistency of the list and questionnaire counts when compared to previous cycles of NSOPF. The percentage of institutions providing list and questionnaire data that had less than a 10 percent discrepancy increased from 42 percent in NSOPF:93 to 73 percent in NSOPF:99. A total of 43 percent provided identical data in the list and questionnaire in NSOPF:99 (compared to only 2.4 percent in NSOPF:93). Moreover, schools providing identical list and questionnaire data were shown to have provided more accurate and complete data in both the list and questionnaire. These findings suggest that the changed procedures that were introduced in the 1998 field test and NSOPF:99 resulted in more accurate counts of faculty and instructional staff. Institutions may also be in a better position to respond to these requests for data. Their accumulated experience in handling NSOPF and IPEDS (and other survey) requests, their adoption of better reporting systems, more flexible computing systems and staff, and a general willingness to provide the information are probably also a factor in their ability to provide more consistent faculty counts, although data to support these assertions are not available. For more detail, see the *1999 National Study of Postsecondary Faculty (NSOPF:99) Methodology Report* (Abraham et al., 2002).

NCES conducted three studies to examine possible measurement errors in NSOPF:03, including (1) a reinterview study of selected faculty questionnaire items, conducted after the field test; (2) a discrepancy and trends analysis of faculty counts in the full-scale data collection; and (3) a retrieval, verification, and reconciliation effort involving recontact of institutions. For detail on these studies, see *Measurement Error Studies at the National Center for Education Statistics* (Salvucci et al, 1997) and the *1993 National Study of Postsecondary Faculty Methodology Report* (Selfa et al., 1997).

Reinterview Study. A reliability reinterview study was conducted after the NSOPF:93 field test to identify Faculty Questionnaire items that yielded low-quality data and the item characteristics that caused problems, thus providing a basis for revising the questionnaire items prior to implementation of the full-scale data collection. The analysis of the reinterview items was presented by item type—categorical or continuous variables—rather than by subject area. The level of consistency between the field-test responses and the reinterview responses was relatively high: a 70 percent consistency for most of the categorical variables and a 0.7 correlation for most of the continuous variables. A detailed analysis of the question on

employment sector of last main job was conducted because it showed the highest percentage of inconsistent responses (28 percent) and the highest inconsistency index (36.0). It was concluded that the large number of response categories and the involvement of some faculty in more than one job sector were plausible reasons for the high inconsistency rate. The items with the lowest correlations were those asking for retrospective reporting of numbers that were small fractions of dollars or hours and those asking for summary statistics on activities that were likely to fluctuate over time—the types of questions shown to be unreliable in past studies.

Discrepancy and Trends Analysis of Faculty Counts. This analysis compared discrepancies between different types of institutions to identify systematic sources of discrepancies in faculty estimates between the list counts provided by the institutions and the counts they reported in the Institution Questionnaire. The investigation found that list estimates tended to exceed questionnaire estimates in large institutions, in institutions with medical components, and in private schools. Questionnaire estimates tended to be higher in smaller institutions, in institutions without medical components, and in public schools. Institutions supplied much higher questionnaire estimates than list estimates for part-time faculty. Faculty lists submitted early in the list collection process showed little difference in the magnitude of questionnaire/list discrepancies from faculty lists submitted later in the process.

Retrieval, Verification, and Reconciliation. This effort involved recontacting 509 institutions: 450 institutions (more than half of all institutions) whose questionnaire estimate of total faculty differed from their list estimate by 10 percent or more and an additional 59 institutions NCES designated as operating medical schools or hospitals. All institutions employing health sciences faculty and participating in NSOPF:93 were selected for recontact.

NCES accepted the reconciled estimates obtained in this study as the true number of faculty. More than half (57 percent) of the recontacted institutions identified the questionnaire estimate as the most accurate response, while 25 percent identified the list estimate as the most accurate. Another 11 percent of the institutions provided a new estimate; 1 percent indicated that their IPEDS estimate was the most accurate response; and 6 percent could not verify any of the estimates and thus accepted the original list estimate.

The majority of discrepancies in faculty counts resulted from the exclusion of some full- or part-time faculty from the list or questionnaire. Another factor was the time interval between the date the list was compiled and the date the questionnaire was completed. Downsizing also affected faculty counts at several institutions. Some of the reasons for the discrepancies were unexpected. For example, some institutions provided "full-time equivalents" (FTEs) on the Institution Questionnaire instead of an actual headcount of part-time faculty.

Sometimes part-time faculty were overreported—often as a result of confusion over the pool of part-time and temporary staff employed by, or available to, the institution during the course of the academic year versus the number actually employed during the fall semester. Another reason for overreporting part-time faculty was an inability to distinguish honorary/unpaid part-time faculty from paid faculty and teaching staff. This study also confirmed that a small number of institutions, those that considered their medical schools separate from their main campuses, excluded medical school faculty from their lists of faculty.

While these results indicate that there may have been some bias in the NSOPF:93 sample, no measure of the potential bias, such as the net difference rate, was computed. Instead, the reconciliation prompted NCES to apply a poststratification adjustment to the estimates based entirely on the "best" estimates obtained during the reinterview study described above. Problems with health science estimates, however, could only be partly rectified by the creation of new "best" estimates. For more information on the calculation of the "best" estimates and further discussion of the health science estimates, see the *1993 National Study of Postsecondary Faculty Methodology Report* (Selfa et al. 1997).

Data Comparability

Design Changes. Each succeeding cycle of NSOPF has expanded the information base about faculty. NSOPF:04 was designed both to facilitate comparisons over time and to examine new faculty-related issues that had emerged since NSOPF:99. The NSOPF:04 sample was designed to allow detailed comparisons and high levels of precision at both the institution and faculty levels. The merging of NSOPF with NPSAS for the 2003–04 administration allowed for the inclusion of a larger number of institutions in NSOPF while reducing respondent burden. Since NSOPF:93, the operant definition of "faculty" for NSOPF has included instructional faculty, noninstructional faculty, and instructional personnel without faculty status.

NSOPF:04, NSOPF:99, and NSOPF:93 consisted of two questionnaires: an Institution Questionnaire and a Faculty Questionnaire. NSOPF:88 included, in addition, a Department Chairperson Questionnaire.

Definitional Differences. Comparisons among the cycles must be made cautiously because the respondents in each cycle were different. At the institution level, the NSOPF:04 sample consisted of all public and private, not-for-profit Title IV-participating, 2- and 4-year degree-

granting institutions in the 50 states and the District of Columbia. The sample was first constituted in this way in NSOPF:99 so that the NSOPF sampling universe would conform with that of IPEDS. In the two previous rounds of the study (NSOPF:93 and NSOPF:88), the sample consisted of public and private, not-for-profit 2- and 4-year (and above) higher education institutions.

The definition of faculty and instructional staff for each NSOPF cycle is given above (see Section 3, "Key Concepts"). On the design level, note that NSOPF:04, NSOPF:99, and NSOPF:93 requested a listing of *all faculty (instructional and noninstructional) and instructional staff* from institutions for the purpose of sampling. For NSOPF:88, institutions were asked to provide only the names of *instructional faculty*. Although not specifically stated, NCES expected that institutions would provide information on instructional staff as well. The term faculty was used generically. However, there is no way of knowing how many institutions that had instructional staff as well as instructional faculty provided the names of both. Each institution was allowed to decide which faculty members belonged in the sample, thereby creating a situation that does not allow researchers to precisely match the *de facto* sample definition used by institutions in NSOPF:88.

Content Changes. Major goals for NSOPF:04 included making the questionnaires shorter and easier to complete. Other changes were implemented to bring NSOPF up to date with current issues in the field. As a result, 9 items from the NSOPF:99 Institution

Questionnaire were eliminated from the NSOPF:04 Institution Questionnaire, 14 items were revised, and 3 items were repeated without change. For the NSOPF:04 Faculty Questionnaire, 39 items from the NSOPF:99 Faculty Questionnaire were eliminated, 51 items were simplified or otherwise revised, 1 item was added, and 3 items were unchanged.

Comparisons with other surveys. Comparisons of NSOPF:93 salary estimates with salary estimates from IPEDS and from the American Association of University Professors indicate that NSOPF data are consistent with these other sources. Most differences are relatively small and can be easily explained by methodological differences between the studies. The NSOPF estimates are based on self-reports of individuals, whereas the other two studies rely on institutional reports of salary means for the entire institution.

However, the reader should be aware of differences in faculty definitions between NSOPF and IPEDS. In IPEDS, individuals have to be categorized according to their primary responsibility (administrator, faculty, or other professional); in NSOPF, it is possible to categorize individuals according to any of their responsibilities.

Because NSOPF includes all faculty and instructional staff, it is possible for an "other professional" to have instructional responsibilities and/or be a faculty member, and it is also possible for an administrator to have instructional responsibilities and/or be a faculty member. Therefore, NSOPF includes all faculty under IPEDS, some of the administrators under IPEDS, and some of the other professionals under IPEDS.

Table NSOPF-1. Summary of weighted response rates for selected NSOPF surveys

Questionnaire	List participation rate	Questionnaire response rate	Overall
NSOPF:93			
Institution	†	94	94
Faculty	84	83	70
NSOPF:99			
Institution	†	93	93
Faculty	88	83	74
NSOPF:04			
Institution	†	84	84
Faculty	91	76	69

†Not applicable.
SOURCE: NSOPF methodology reports; available at https://nces.ed.gov/pubsearch/getpubcats.asp?sid=011.

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7. METHODOLOGY AND EVALUATION REPORTS

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