

Methodology

Overview

The 1997-98 Completions (C) survey was mailed to 4,730 Title IV participating institutions of higher education in the 50 states, District of Columbia, and the outlying areas. In addition, the Consolidated (CN) survey form, which also requested completions data, was mailed to 4,985 other schools offering degrees or awards ranging from certificates of less-than-one-year to post-master's certificates. The completions data collected by the CN survey were extracted, reformatted, and incorporated into the file along with the C data.

Universe, Institutions Surveyed and Response Rates

A major subset of all postsecondary institutions are those institutions that have Program Participation Agreements (PPA) with the Department of Education and thus may participate in Title IV federal financial aid programs. It is this group of institutions that annually receives a Completions survey. Beginning in 1996, this subset of institutions was validated by matching the IPEDS universe with the Postsecondary Education Participation System (PEPS) file which is maintained by the Office of Postsecondary Education (OPE). This validation process determined that 6,897 institutions would receive one of the survey forms.

The 1997-98 survey forms were mailed in July 1998 to a universe of all 4-year, 2-year, and less than 2-year schools. The survey results were collected from October 1998 through April 1999. During this time period institutions determined to be out-of-scope were deleted from the universe. These deletions resulted from formal notification by IPEDS state coordinators, validation against the PEPS file, and from followup telephone calls. Included in the deletions were schools that had closed, did not offer postsecondary programs, or that were identified as duplicates on the file. At the conclusion of this process, 9,519 institutions remained in-scope.

Followup for nonresponse began in November 1998 and was conducted by letter and telephone. The Postsecondary Education Telephone System (PETS) was used to solicit data from the nonrespondents to the surveys in those institutions for which IPEDS state coordinators were not responsible for followup. Schools responding through PETS were asked to provide only the total number of completions, by award level and gender; racial/ethnic data were not requested.

Table M-1 shows the number of institutions that were mailed the 1997-98 Completions survey (or Consolidated form) by level and control of institution (sector); the final in-scope universe of institutions receiving either survey form; the number of in-scope institutions that responded; and the response rates.

Table M-1.--Number of postsecondary institutions in the 1997-98 Completions survey and survey response rates, by survey form and sector of institution: 50 states, District of Columbia, and the outlying areas, 1997-98

Survey form and sector of institution	Mailed	Final universe	Number responded	Response rate
All postsecondary	9,715	9,519	7,028	73.8
Completions survey (C)	4,730	4,678	4,262	91.1
Consolidated survey (CN)	4,985	4,841	2,766	57.1
4-year	2,876	2,878	2,553	88.7
Public	639	644	635	98.6
Private, not-for-profit	2,002	1,987	1,708	86
Private, for-profit	235	247	210	85
2-year	2,773	2,728	2,405	88.2
Public	1,277	1,260	1,206	95.7
Private, not-for-profit	541	515	387	75.1
Private, for-profit	955	953	812	85.2
Less-than-2-year	4,066	3,913	2,070	52.9
Public	363	355	297	83.7
Private, not-for-profit	295	292	159	54.5
Private, for-profit	3,408	3,266	1,614	49.4

NOTE: By definition, 4-year institutions offer a bachelor's degree or postbaccalaureate award of some kind; 2-year institutions offer at least one program of at least 2 years duration; and less-than-2-year schools offer only programs of less-than-2-years duration. The sector of the institution at the time of mailout (as of July 1998) may differ from its final sector (as of June 1999), due to a shift in the highest level of offering, or due to improper classification by sector the prior year. Response rates were calculated as the ratio of the number of completed survey forms divided by the number of schools in the final universe; that is, the number mailed minus the number determined to be out-of-scope.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions" survey, 1997-98 and "Consolidated" survey, 1998.

On the Completions and Consolidated survey files, institutions are identified as (1) degree-granting, i.e., those that offer either an associate's, bachelor's, master's, doctor's, or first-professional degree; or (2) non-degree-granting (certificate only), i.e., those institutions offering only less-than-4-years, postbaccalaureate, post-master's, or first-professional certificates.

Table M-2 provides the number of institutions and survey response rates by degree-granting status, the existence of a PPA, and by location and sector of institution. A final verification against the PEPS file in March 1999 indicated that 196 institutions that were sent a Completions or Consolidated survey no longer had valid PPA's. There are 6,474 participating institutions on the file; of these, 4,092 are degree-granting and 4,015 are in the 50 states and District of Columbia.

Editing

During editing, all forms were checked for CIP code validity against the 1990 version of *Classification of Instructional Programs*. Several addition checks were performed. For each 6-digit program, the sum of the racial/ethnic columns for men and women was compared with the totals reported. Also, for each award level, total lines for each race/ethnicity and gender were generated and compared to reported totals. If the reported total differed, but was within a designated range, the reported total was replaced by the generated total and the cell was flagged with the proper imputation code. If the difference exceeded the designated range, institutions were contacted for verification of the reported data and, as appropriate, corrections were made to the file.

Imputations

Completions data were imputed for nonresponding institutions - both total nonresponse and partial nonresponse to specific data items. The following imputation procedures were used:

Total Nonrespondents

1. For institutions with reported data on the 1996-97 Completions file, the prior year's data, including race/ethnicity and program or discipline, were used. The totals by award level and discipline were unchanged.
2. For institutions without prior year data but that were respondents or had data imputed on the Fall Enrollment 1997 file and responded to the 1998-99 Institutional Characteristics (IC) survey:
 - a. The level(s) of awards to be imputed were determined from the IC data; and
 - b. Schools which did respond to the 1997-98 Completions survey were grouped by institution sector and degrees/certificates awarded. Ratios of

Table M-2.--Number and survey response rates of postsecondary institutions, by Title IV participation, degree-granting status, and location and sector of institution: 50 states, District of Columbia, and the outlying areas, 1997-98

Degree-granting status and location and sector of institution	All institutions			Participating			Not participating		
	Final universe	Number responded	Response rate	Final universe	Number responded	Response rate	Final universe	Number responded	Response rate
All institutions	9,519	7,028	73.8	6,474	6,153	95.0	3,045	875	28.7
50 states and DC	9,355	6,907	73.8	6,333	6,042	95.4	3,022	865	28.6
Outlying areas	164	121	73.8	141	111	78.7	23	10	43.5
Degree-granting	4,543	4,195	92.3	4,092	3,999	97.7	451	196	43.5
50 states and DC	4,455	4,122	92.5	4,015	3,932	97.9	440	190	43.2
Outlying areas	88	73	83.0	77	67	87.0	11	6	54.5
Non-degree-granting	4,976	2,833	56.9	2,382	2,154	90.4	2,594	679	26.2
50 states and DC	4,900	2,785	56.8	2,318	2,110	91.0	2,582	675	26.1
Outlying areas	76	48	63.2	64	44	68.8	12	4	33.3
All institutions	9,519	7,028	73.8	6,474	6,153	95.0	3,045	875	28.7
4-year	2,878	2,553	88.7	2,408	2,368	98.3	470	185	39.4
Public	644	635	98.6	633	630	99.5	11	5	45.5
Private, not-for-profit	1,987	1,708	86.0	1,586	1,551	97.8	401	157	39.2
Private, for-profit	247	210	85.0	189	187	98.9	58	23	39.7
2-year	2,728	2,405	88.2	2,342	2,236	95.5	386	169	43.8
Public	1,260	1,206	95.7	1,216	1,183	97.3	44	23	52.3
Private, not-for-profit	515	387	75.1	310	291	93.9	205	96	46.8
Private, for-profit	953	812	85.2	816	762	93.4	137	50	36.5
Less-than-2-year	3,913	2,070	52.9	1,724	1,549	89.8	2,189	521	23.8
Public	355	297	83.7	258	247	95.7	97	50	51.5
Private, not-for-profit	292	159	54.5	105	95	90.5	187	64	34.2
Private, for-profit	3,266	1,614	49.4	1,361	1,207	88.7	1,905	407	21.4
Degree-granting	4,543	4,195	92.3	4,092	3,999	97.7	451	196	43.5
4-year	2,731	2,476	90.7	2,371	2,335	98.5	360	141	39.2
Public	634	628	99.1	627	624	99.5	7	4	57.1
Private, not-for-profit	1,869	1,650	88.3	1,562	1,531	98.0	307	119	38.8
Private, for-profit	228	198	86.8	182	180	98.9	46	18	39.1
2-year	1,812	1,719	94.9	1,721	1,664	96.7	91	55	60.4
Public	1,091	1,061	97.3	1,079	1,052	97.5	12	9	75.0
Private, not-for-profit	203	176	86.7	161	153	95.0	42	23	54.8
Private, for-profit	518	482	93.1	481	459	95.4	37	23	62.2
Non-degree-granting	4,976	2,833	56.9	2,382	2,154	90.4	2,594	679	26.2
4-year	147	77	52.4	37	33	89.2	110	44	40.0
Public	10	7	70.0	6	6	100.0	4	1	25.0
Private, not-for-profit	118	58	49.2	24	20	83.3	94	38	40.4
Private, for-profit	19	12	63.2	7	7	100.0	12	5	41.7
2-year	916	686	74.9	621	572	92.1	295	114	38.6
Public	169	145	85.8	137	131	95.6	32	14	43.8
Private, not-for-profit	312	211	67.6	149	138	92.6	163	73	44.8
Private, for-profit	435	330	75.9	335	303	90.4	100	27	27.0
Less-than-2-year	3,913	2,070	52.9	1,724	1,549	89.8	2,189	521	23.8
Public	355	297	83.7	258	247	95.7	97	50	51.5
Private, not-for-profit	292	159	54.5	105	95	90.5	187	64	34.2
Private, for-profit	3,266	1,614	49.4	1,361	1,207	88.7	1,905	407	21.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions" survey, 1997-98 and "Consolidated" survey, 1998.

the number of degrees by award level, race, and gender to enrollment by level, race, and gender were developed, and these ratios were applied to the nonresponding institution's enrollment data to compute estimated total completions by award level, race, and gender.

c. No imputations were made by program or discipline. (Note: These show as “undesigned” in the tables

3. For institutions with neither 1996-97 Completions data nor Fall Enrollment 1997 data, but which did have data on the 1998-99 IC file, the levels of awards to be imputed were again determined from the IC data and responding institutions were grouped by institution sector and degrees/certificates awarded. The mean numbers of degrees by award level, race, and gender from respondents in each group were used as the imputed values for nonresponding institutions within that same group.

Partial Nonrespondents

Partial imputations were performed for those institutions that failed to report race/ethnicity and/or data by program or discipline, but provided total awards by level of award and gender.

1. If prior year Completions data were available, the distributions for levels of awards, race/ethnicity and discipline reported in the prior year were applied to current year reported total awards.

2. If no prior year Completions data were available, the distributions of reported total awards by race/ethnicity within degree levels and gender were based on a group of similar institutions, as defined by institutional sector and degrees/certificates awarded.

Table M-3 provides the number and percentage of degrees imputed for each award level, by gender.

Table M-3.--Number and percentage of all degrees and awards imputed for all postsecondary institutions, by control of institution, level of award, and gender: 50 states, District of Columbia, and the outlying areas, 1997-98

Level of award and gender	Total			Public			Private, not-for-profit			Private, for-profit		
	Degrees/ certificates awarded	Imputed Total	%									
Less than 1 year :	386,666	13,380	3.5	159,239	2,086	1.3	17,258	444	2.6	210,169	10,850	5.2
Men	180,325	4,365	2.4	74,427	825	1.1	8,077	189	2.3	97,821	3,351	3.4
Women	206,341	9,015	4.4	84,812	1,261	1.5	9,181	255	2.8	112,348	7,499	6.7
At least 1 but less than 2 years :	269,413	12,452	4.6	142,456	1,925	1.4	16,374	564	3.4	110,583	9,963	9.0
Men	98,222	4,114	4.2	55,888	758	1.4	6,920	213	3.1	35,414	3,143	8.9
Women	171,191	8,338	4.9	86,568	1,167	1.3	9,454	351	3.7	75,169	6,820	9.1
Associate's degrees :	580,591	6,626	1.1	468,700	4,615	1.0	52,151	674	1.3	59,740	1,337	2.2
Men	230,218	2,649	1.2	180,590	1,736	1.0	19,818	219	1.1	29,810	694	2.3
Women	350,373	3,977	1.1	288,110	2,879	1.0	32,333	455	1.4	29,930	643	2.1
At least 2 but less than 4 years :	36,169	1,694	4.7	16,143	185	1.1	7,707	372	4.8	12,319	1,137	9.2
Men	17,792	700	3.9	9,871	115	1.2	2,447	153	6.3	5,474	432	7.9
Women	18,377	994	5.4	6,272	70	1.1	5,260	219	4.2	6,845	705	10.3
Bachelor's degrees :	1,203,827	5,350	0.4	791,630	2,343	0.3	398,238	3,001	0.8	13,959	6	0.0
Men	527,779	2,070	0.4	351,018	1,097	0.3	168,772	969	0.6	7,989	4	0.1
Women	676,048	3,280	0.5	440,612	1,246	0.3	229,466	2,032	0.9	5,970	2	0.0
Post-baccalaureate certificates :	10,786	43	0.4	3,054	0	0.0	6,112	43	0.7	1,620	0	0.0
Men	3,674	17	0.5	1,114	0	0.0	2,262	17	0.8	298	0	0.0
Women	7,112	26	0.4	1,940	0	0.0	3,850	26	0.7	1,322	0	0.0
Master's degrees :	434,491	1,576	0.4	237,086	258	0.1	190,384	1,315	0.7	7,021	3	0.0
Men	186,444	629	0.3	98,412	107	0.1	84,301	520	0.6	3,731	2	0.1
Women	248,047	947	0.4	138,674	151	0.1	106,083	795	0.7	3,290	1	0.0
Post-master's certificates :	8,862	29	0.3	5,691	0	0.0	3,158	29	0.9	13	0	0.0
Men	2,957	14	0.5	1,747	0	0.0	1,207	14	1.2	3	0	0.0
Women	5,905	15	0.3	3,944	0	0.0	1,951	15	0.8	10	0	0.0
Doctor's degrees :	46,571	174	0.4	29,815	3	0.0	16,150	171	1.1	606	0	0.0
Men	26,985	85	0.3	17,454	2	0.0	9,284	83	0.9	247	0	0.0
Women	19,586	89	0.5	12,361	1	0.0	6,866	88	1.3	359	0	0.0
First-professional degrees * :	80,021	492	0.6	31,673	0	0.0	47,853	492	1.0	495	0	0.0
Men	45,800	284	0.6	17,176	0	0.0	28,343	284	1.0	281	0	0.0
Women	34,221	208	0.6	14,497	0	0.0	19,510	208	1.1	214	0	0.0
First-professional certificates :	1,047	0	0.0	479	0	0.0	532	0	0.0	36	0	0.0
Men	556	0	0.0	286	0	0.0	245	0	0.0	25	0	0.0
Women	491	0	0.0	193	0	0.0	287	0	0.0	11	0	0.0

* First-professional degrees are awarded after completion of the academic requirements to begin practice in the following professions: Chiropractic (D.C. or D.C.M.); Dentistry (D.D.S. or D.M.D.); Law (L.L.B., J.D.); Medicine (M.D.); Optometry (O.D.); Osteopathic Medicine (D.O.); Pharmacy (Pharm.D.); Podiatry (D.P.M., D.P., or Pod.D.); Theology (M.Div., M.H.L., B.D., or Ordination); or Veterinary Medicine (D.V.M.).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Completions survey, 1997-98 and "Consolidated" survey, 1998.

User Guidelines for Processing the 1997-98 IPEDS Completions Data File

Overview

The 1997-98 Completions and Consolidated surveys, part of the Integrated Postsecondary Education Data System (IPEDS), provide a vehicle for estimating program completions data for postsecondary education providers in the IPEDS universe. The file contains completions data for 4-year, 2-year, and less-than-2-year institutions. This information can be used to answer such questions as:

- What is the total number of degrees, certificates, and diplomas awarded by the nation's postsecondary institutions?
- How many awards were conferred in each instructional program?
- How do degrees and other awards vary by major field of study, by gender, and by race/ethnicity in postsecondary institutions?
- How do private versus public institutions compare in numbers of degrees with respect to field of study and level of degree conferred?
- What is the availability and location of highly trained manpower?

The guidelines that follow are designed to help analysts by reducing the time lag between receiving the file and generating accurate numbers to answer these types of questions.

General Information

The following general guidelines will be useful in working with the Completions file:

1. To aid the analyst and make processing more manageable, the file has been divided into several related data sets. Two contain institutional information: C9798_HD.DAT which has survey-specific response information and IC98_HD.DAT which has characteristics of the institution. The next file contains the actual completions counts for all award levels and program codes reported by or imputed for the institution (C9798_A.DAT). The fourth contains the institution's response to the two clarifying questions (C9798_B.DAT).
2. Each institution's data consist of one of each characteristics records; one or more of the completions counts records; and one clarifying questions record (if the institution responded to them). This arrangement is the same for each institution, regardless of the survey form type completed by the school (except schools completing the CN form do not have the Part B record).

3. A UNITID number is present on every record, and is the unique identification code assigned by NCES to separately identify each postsecondary institution and administrative unit on the file. The UNITID is a constant number and will not change over time. The UNITID links all IPEDS survey data bases for that institution (specifically, the Institutional Characteristics, Fall Enrollment, Completions, Finance, Salaries, Fall Staff, and Consolidated surveys).
4. The Office of Postsecondary Education Identification Number (OPEID) is the identification number assigned to institutions that are in the Postsecondary Education Participants System (PEPS). This system is maintained by the Office of Postsecondary Education (OPE) which tracks the eligibility status of postsecondary institutions for Title IV federal general aid programs. Having an OPEID identifies an institution as being in both IPEDS and PEPS. The eligibility status of an institution can be found in an OPE indicator variable called OPEFLAG. All institutions that are eligible to participate in Title IV federal general aid programs will have a value of "1" in this position. A value of "2" was assigned to any branch campus, or system office in IPEDS that was not identified as being eligible by PEPS but was part of a main campus that is eligible. A value of "3" was assigned to an institution which is eligible for Title IV but for deferment only. IPEDS will consider any institution with a value of "1", "2", or "3" as being eligible to participate in Title IV federal financial aid programs. The OPEID is an 8-digit code, structured as follows. The first 6 digits of the OPEID identify the main campus. The last 2 digits represent branch campuses or additional locations and are coded as 01,02...99. For the main campus, the last 2-digits will always be "00". For branch campuses of an eligible main campus in IPEDS that is not in PEPS (OPEFLAG=2), the last 2 digits are coded as A1, A2...A9.
5. As mentioned earlier IPEDS will now maintain a subset of institutions called degree-granting institutions. A degree-granting institution is any institution that offers an associate's, bachelor's, master's, doctor's, or first-professional degree. Institutions that grant only certificates or awards of any length program (less-than-2-years or 2-years or more) are categorized as non-degree-granting institutions. The variable HDEGOFFR may be used for identifying degree-granting institutions.

File Structure and Other Information

Each record in the completions counts file (C9798_A.DAT) represents a single line from the survey form. This equates to the number of degrees/awards at an award level in a particular field of study, by race/ethnicity and gender of recipient. The award level is represented on the file by a two-digit number and the field of study by the CIP Code.

The CIP code is generally structured as follows:

AA.BBCC, where:

- AA = a two digit discipline division ;
- BB = one or more intermediate groupings within AA; and
- CC = designation of specific field of study, within BB.

For a more complete discussion of CIP code detail, refer to the 1990 version of "*A Classification of Instructional Programs (CIP)*".

There are two special CIP codes which require attention. CIP code "99.0000" is generated for each award level present, indicating the total degrees/awards for that award level. If data was imputed using any method other than prior Completions respondents, reporting via PETS where only total degrees by award level and gender were collected, or completions were reported for a program without a CIP code, another special code ("95.9500") is used.

Other than the 99.0000, there are no other summary CIP's on the file. However, records can be aggregated to derive summaries by two-digit ("AA") or four-digit ("AA.BB") by race/ethnicity and gender of recipient.

Subsetting the File

When preparing a program to answer specific analysis questions, the user will have to explicitly subset the file with care; otherwise, incorrect results will occur. The file is structured so that all records are of fixed length and contain data in a consistent format to simplify subsetting. For example, you must know:

- a) What level of institution and/or control is being analyzed;
- b) the award level(s) analyzed;
- c) the level or levels of programs analyzed (i.e., two-, four-, or six-digit CIP codes); and
- d) whether award/degree completions by racial/ethnic groups are sought.

Once those factors are selected, you may extract the records using the variables (such as award level, specific CIP codes, etc) that correctly define the desired analysis. Two examples of subsetting a file demonstrate the extraction of Completions data at various levels of detail.

Example #1: Total Bachelor's Degrees Conferred in Economics by Race/ethnicity and Gender:

Bachelor degrees are designated by an award level of 5, and the four-digit CIP code for Economics is '45.06'. Using SAS statements as an example, select the proper records:

```
LIBNAME INDATA 'C:\C98';
DATA ECON;
  LENGTH CIP4 $5;
  SET INDATA.C9697_A(KEEP=AWLEVEL CIPCODE CRACE01-CRACE14);
  CIP4=SUBSTR(CIPCODE,1,5);
  IF CIP4 = '45.06' AND AWLEVEL = 5;
PROC SUMMARY;
  VAR CRACE01-CRACE14;
  OUTPUT OUT=BACHSUM SUM=;
PROC PRINT;
  VAR CRACE01-CRACE14 ;
RUN;
```

There are obviously many ways to subset a file. Just remember that the ordering of the IF tests can dramatically affect processing time. The rule of thumb is to eliminate irrelevant records as soon as possible, so structure the IF tests accordingly.

Example #2: Awards and Degrees Completed by Program Category in Degree-granting Institutions

As explained earlier, degree-granting institutions are considered those eligible for Title IV which grant degrees; therefore, both the OPEFLAG and HDEGOFFR variables must be queried to select the correct institutions. For the purposes of this example, first-professional programs will be excluded, so that only award levels 1 through 9 will be selected. Also, racial/ethnic counts are not required, so only the total men and total women will be processed. The award level total record (CIP code 99.0000) will be the only one selected. This reduces the number of observations to be processed and avoids double counting of degrees and awards. Using SAS statements, select the proper records as follows:

```
LIBNAME INDATA 'C:\C98';
DATA COMP;
  SET INDATA.C9798_A(KEEP=UNITID AWLEVEL CIPCODE CRACE15
CRACE16);
  IF CIPCODE='99.0000' AND AWLEVEL < 10 ;
```

```

PROC SORT; BY UNITID;
DATA HEGIS;
MERGE INDATA.IC98_HD(KEEP=UNITID OPEFLAG HDEGOFFR IN=A)
COMP(IN=B); BY UNITID;
IF A AND B
AND (OPEFLAG=1 OR OPEFLAG=2 OR OPEFLAG=3) AND HDEGOFFR GE
1;
PROC SUMMARY;
CLASS AWLEVEL;
VAR CRACE15 CRACE16;
OUTPUT OUT=LEVSUM SUM=;
PROC PRINT;
VAR AWLEVEL CRACE15 CRACE16;
RUN;

```

Cautionary Notes

The definitions and instructions for compiling IPEDS data have been designed to minimize comparability problems. However, postsecondary institutions differ widely among themselves. As a result of these differences, comparisons of data provided by individual institutions may be misleading.

Be aware that any given institution may not have had actual awards/degrees conferred for particular CIP codes reported. This "zero awards" or "zero degrees" reported occur because the program still exists at the institution, although there were no students completing the program during the reporting period July 1, 1997 to June 30, 1998.

One final note of caution concerns the use of award level versus Sector. Forms were mailed to institutions based upon the information provided on the prior year's Institutional Characteristics (IC) survey; i.e., control and highest level of offering, which when combined, determine an institution's sector. Even if the institution's characteristics change in the current IC, completions can properly be reported at the previous level. For example, a school which last year was designated in sector 4 (public 2-year) but in the current year's IC submission, indicates that its highest level of offering is now less than 2-years, would be changed to sector 7. However, that institution could still correctly report associate degrees (Award Level 3) on the C survey. Another institution reports on the current IC that it now offers a baccalaureate program, where previously it had only offered 2-year programs. The completions from that new program will only be reported in subsequent years. For these reasons, it is important to query the counts of completions for the levels needed rather than the sector; otherwise, legitimate completions such as the first example above will be missed in calculations or the number of schools granting baccalaureate degrees would be overstated.