

Appendix 2

Supplemental Notes





Contents

Note 1:	Commonly Used Variables.....	188
Note 2:	The Current Population Survey (CPS).....	196
Note 3:	Other Surveys	202
Note 4:	National Assessment of Educational Progress (NAEP)	210
Note 5:	International Assessments	212
Note 6:	NAEP, NELS, and HS&B Transcript Studies.....	214
Note 7:	International Definitions	219
Note 8:	Classification of Postsecondary Education Institutions.....	222
Note 9:	Finance.....	223
Note 10:	Fields of Study for Postsecondary Degrees	226
Note 11:	Expectations of Educational Attainment	227

Note 1: Commonly Used Variables

Certain common variables, such as parents' education, race/ethnicity, community type, poverty, family income quartiles, geographic region, and occupation are used by different surveys cited in *The Condition of Education 2004*. The definitions for these variables can vary from survey to survey and sometimes vary between different time periods for a single survey. This supplemental note describes how several common variables, used in various indicators in this volume, are defined in each of the surveys. In addition, this note describes in further detail certain terms used in several indicators.

PARENTS' EDUCATION

For *indicators 3, 8, 9, 10, 11, 25, and 30*, parents' education is the highest level attained by either parent. *Indicators 9, 10, and 11* report parents' highest level of education based on a question in the National Assessment of Educational Progress (NAEP) that asked students in 8th and 12th grade to indicate the highest level of education completed by each parent. Students could choose from "did not finish high school," "graduated from high school," "some education after high school," "graduated from college," and "I don't know." As of the 2001 assessment, data were not collected at grade 4 because 4th-graders' responses in previous assessments were highly variable and contained a large percentage of "I don't know" responses.

RACE/ETHNICITY

Classifications indicating racial/ethnic heritage are based primarily on the respondent's self-identification, as in data collected by the Bureau of the Census, or, in rare instances, on observer identification. These categories are in accordance with the Office of Management and Budget's standard classification scheme.

Ethnicity is based on the following categorization:

- *Hispanic or Latino*: A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

Race is based on the following categorization:

- *American Indian or Alaska Native, not Hispanic or Latino*: A person having origins in any of the original peoples of North and South America (including Central America) who maintains tribal affiliation or community attachment.
- *Asian, not Hispanic or Latino*: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippines, Thailand, and Vietnam.
- *Black, not Hispanic or Latino*: A person having origins in any of the Black racial groups of Africa.
- *Native Hawaiian or Other Pacific Islander, not Hispanic or Latino*: A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- *White, not Hispanic or Latino*: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East. In *The Condition of Education*, this category excludes persons of Hispanic origin.

Not all categories are shown in all indicators either because of insufficient data in some of the smaller categories or because sampling plans did not distinguish between groups, such as Asians and Pacific Islanders.

Note 1: Commonly Used Variables

Continued

In *The Condition of Education 2004*, these definitions apply to indicators 3, 5, 7, 8, 9, 10, 11, 12, 13, 15, 18, 22, 25, 26, 33, and 38.

Indicators based on the National Household Education Surveys Program (7, 26, and 34) use up to five categories of race/ethnicity: White, non-Hispanic; Black, non-Hispanic; Hispanic; Asian or Pacific Islander, non-Hispanic; and all other races, non-Hispanic. The latter category includes American Indian, Alaska Native, and all other races. Not all categories are shown in all indicators because of insufficient data in some of the smaller categories.

COMMUNITY TYPE

In the Bureau of the Census's Current Population Survey (CPS), community type is a collective term based on the concept of a metropolitan area (MA), "a large population nucleus together with adjacent communities that have a high degree of economic and social integration with that core." MAs are designated and defined by the Office of Management and Budget, following standards established by the interagency Federal Executive Committee on Metropolitan Areas, with the aim of producing definitions that are as consistent as possible for all MAs nationwide. (See <http://www.census.gov/prod/cen1990/cph-s/cph-s-1-1.pdf> and <http://www.census.gov/population/www/estimates/metroarea.html> for more details.)

In order to be designated as an MA, an area must meet one or both of the following criteria: (1) include a city with a population of at least 50,000 or (2) include a Census Bureau-defined urbanized area and a total MA population of at least 100,000 (75,000 in New England). Under the standards, the county (or counties) that contains the largest city in the area is the "central county" (or counties) and includes all adjacent counties that have at least 50 percent of their population in the urbanized area surrounding the largest city. Additional "outlying

counties" are included in the MA if they meet specified requirements of commuting to the central counties and selected requirements of metropolitan character (such as population density and percent urban). In New England, MAs are defined in terms of cities and towns, following rules analogous to those used with counties elsewhere.

All territory, population, and housing units inside of MAs are characterized as *metropolitan*. Any territory, population, or housing units located outside of an MA is defined as *nonmetropolitan*.

In large MAs, the individual counties (or other geographic entities) included may be combined into Metropolitan Statistical Areas (MSAs) or Primary Metropolitan Statistical Areas (PMSAs) within the MA. These MSAs and PMSAs may then be further grouped into even larger Consolidated Metropolitan Statistical Areas (CMSAs). These PMSAs and CMSAs may span states. As of June 1999, there were 258 MSAs and 18 CMSAs in the United States, which included a total of 72 PMSAs.

The largest city in each MSA/CMSA is designated a *central city*, and additional cities may qualify as such if specified requirements are met concerning population size and commuting patterns. In June 1999, there were 532 central cities in the United States plus 12 in Puerto Rico.

The Census also divides the entire geographic area of the United States into *urbanized*, *urban*, and *rural* areas. The boundaries of these geographical areas generally follow the contours of areas classified according to the metropolitan, central city, and nonmetropolitan classification, but there are both urban and rural territories within both metropolitan and nonmetropolitan areas.

An *urbanized area* consists of one or more "central places" and the adjacent densely

Note 1: Commonly Used Variables

Continued

settled surrounding “urban fringe” that together have a minimum population of 50,000 people. A “place” is either an incorporated governmental unit, such as a city, village, borough, or town, or a Census Designated Place (CDP), which is an unincorporated population cluster for which the Census Bureau delineates boundaries in cooperation with state and local agencies. The urban fringe is generally all the contiguous territory around the central place(s) having a density of at least 1,000 persons per square mile. The urban fringe also includes outlying territory of such density if it is connected to the contiguous area by roads of certain minimum length.

The Census Bureau then defines *urban* as being all areas that are either urbanized, an incorporated place of 2,500 or more persons, or a CDP of 2,500 or more persons. All territory, population, and housing units not classified as urban are classified as *rural*.

In the Common Core of Data (CCD), the community type of *schools* is classified according to a “Locale Code” that is defined according to these Census definitions. The CCD Locale Code is an eight-level classification of the urbanicity of the location address of a school relative to an MSA. The locale code methodology matches the school to the Census block level, and when that match cannot be done, the locale code is assigned using the ZIP code of the school location. Once the Census block is determined, the urban/rural, central city, and metropolitan/nonmetropolitan status of the school is known. The CCD Locale Code is a variable that NCES created for general description, sampling, and other statistical purposes. It is based upon the location of school buildings and in some cases may not reflect the entire attendance area or residences of enrolled students. For example, not all students enrolled in the school may live in the Census block of the school. The codes are assigned to schools by NCES using data

provided by the Bureau of the Census matching to the location addresses provided on the CCD. Every school is assigned one of the following locale codes:

- *Large city*: The school is located in the central city of an MSA or CMSA with a population of 250,000 or more.
- *Midsized city*: The school is located in the central city of an MSA or CMSA with a population less than 250,000.
- *Urban fringe of a large city*: The school is located in the urban area of an MSA or CMSA containing a large central city but not in any central city of the MSA or CMSA.
- *Urban fringe of a midsized city*: The school is located in the urban area of an MSA or CMSA containing a midsized central city but not in any central city of the MSA or CMSA.
- *Large town*: The school is located in a nonmetropolitan, urban area with a population of at least 25,000.
- *Small town*: The school is located in a nonmetropolitan, urban area with a population between 2,500 and 24,999.
- *Rural, outside an MSA*: The school is located in a nonmetropolitan, rural area.
- *Rural, inside an MSA*: The school is located in rural area within a metropolitan area.

School district locale codes are assigned through the use of these school locale codes. If 50 percent or more of students in the district attend schools that are located in a single locale code, that code is assigned to the district. If not, schools are placed into one of three groups: large or midsized city; urban fringe or rural, inside an MSA; and large town, small town, or rural, outside an MSA. The group with the

Note 1: Commonly Used Variables

Continued

largest number of students is determined, and then the locale code within the group having the largest number of students is assigned to the district. If the number of students between two or more groups is the same, then the largest (i.e., most rural) locale code is assigned. Districts with no schools or students are given a locale code of “N.”

In *The Condition of Education 2004*, these labels and definitions apply to *indicator 35*.

Variations of the eight-level CCD Locale Code are used to categorize community type in other NCES surveys.

In the Baccalaureate and Beyond Longitudinal Study (B&B), the community type of a college is determined according to its address using the following seven categories:

- *Large central city*: in a large central city within an MSA.
- *Midsized central city*: in a midsize central city within an MSA.
- *Urban fringe of large city*: in the urban fringe of a large central city within an MSA.
- *Urban fringe of midsized city*: in the urban fringe of a midsize central city within an MSA.
- *Large town*: in a nonmetropolitan, urban area with a population of at least 25,000.
- *Small town*: in a nonmetropolitan, urban area with a population between 2,500 and 24,999.
- *Rural*: in a rural area within or outside a metropolitan area.

In the National Assessment of Educational Progress (NAEP) and the Schools and Staffing Survey (SASS), the community type of a

school is categorized according to its address as follows:

- *Central city*: in a large or midsize central city within an MSA.
- *Urban fringe/large town*: in the urban fringe of a large or midsize city; a large town; or a rural area within an MSA.
- *Rural/small town*: in a small town or rural area outside of an MSA.

In *The Condition of Education 2004*, these labels and definitions apply to *indicators 5, 9, 10, and 11*.

In the Fast Response Survey System (FRSS), the community type of a school is categorized according to its address as follows:

- *Central city*: in a central city within an MSA.
- *Urban fringe*: in the urban fringe of a central city within an MSA.
- *Small town*: an incorporated place or Census-designated place with a population greater than or equal to 2,500 and located outside an MSA or CMSA.
- *Rural*: in a rural area within or outside a nonmetropolitan area.

In *The Condition of Education 2004*, these labels and definitions apply to *indicators 2 and 27*. In *indicator 2*, rural and small town are combined into one category.

In the National Education Longitudinal Study of 1988, the community type of a school is categorized according to its school address as follows:

- *Urban*: in a central city within an MSA.
- *Suburban*: all other area within an MSA, not including central cities.

Note 1: Commonly Used Variables

Continued

- *Rural*: nonmetropolitan, or not within an MSA.

In *The Condition of Education 2004*, these labels and definitions apply to *indicator 18*.

The National Household Education Surveys Program (NHES) relies on the urban/rural/urbanized area classification to categorize community type of a household. The respondent's community type is assigned to be the community type of the majority of households in the respondent's residential ZIP Code. The definitions of community type are as follows:

- *Urban, inside of urbanized areas*: a place and the adjacent densely settled surrounding territory that combined have a minimum population of 50,000.
- *Urban, outside of urbanized areas*: an incorporated or unincorporated place outside of urbanized areas with a minimum population of 2,500, with the exception of rural portions of extended cities.
- *Rural*: an area that is not classified as urban, either inside or outside of urbanized areas.

Extended cities are areas that have expanded in recent years to include territory that is essentially rural in character. Since the 1960 Census, these areas have been designated as rural rather than urban, as they would otherwise be according to the definition of "urban," as including all the area of a "place."

In *The Condition of Education 2004*, these labels and definitions apply to *indicators 25* and *33*.

POVERTY

Data on household income and the number of people living in the household are combined with estimates of the poverty threshold published by the Bureau of the Census to classify

children (or adults) as "poor" or "nonpoor" in *indicators 12, 13, and 25*. Children (or adults) in families whose incomes are at or below the poverty threshold are classified as poor; those in families with incomes above the poverty threshold are classified as nonpoor. The thresholds used to determine whether an individual is poor or nonpoor differ for each survey year. The weighted average poverty thresholds for various household sizes for 1991, 1993, 1995, 1996, 1999, 2001, and 2003 are shown in the table on the next page.

Indicators 12, 13, and 25 modify the categories of poverty, to include the "poor," "near-poor," and "nonpoor." Poor is defined to include those families below the poverty threshold, near-poor is defined as those at 100–199 percent of the poverty threshold, and nonpoor is defined as those at 200 percent or more than the poverty threshold.

Indicator 8 employs the Census poverty thresholds for 1998 in determining the number of family risk factors.

Eligibility for the National School Lunch Program also serves as a measure of poverty status. The National School Lunch Program is a federally assisted meal program operated in public and private nonprofit schools and residential child care centers. Unlike the poverty thresholds discussed above, which rely on dollar amounts determined by the Bureau of the Census, eligibility for the National School Lunch Program relies on the federal income poverty guidelines of the Department of Health and Human Services. To be eligible for free lunch, a student must be from a household with an income at or below 130 percent of the federal poverty guideline; to be eligible for reduced-price lunch, a student must be from a household with an income at or below 185 percent of the federal poverty guideline. Title I basic program funding relies on free-lunch eligibility numbers as one (of four) possible poverty measures for levels

Note 1: Commonly Used Variables

Continued

Weighted average poverty thresholds, by household size: 1991, 1993, 1995, 1996, 1999, 2001, and 2003

Household size	Poverty threshold	Household size	Poverty threshold
NHES:1991		NHES:1999	
2	\$8,865	2	\$10,869
3	10,860	3	13,290
4	13,924	4	17,029
5	16,456	5	20,127
6	18,587	6	22,727
7	21,058	7	25,912
8	23,605	8	28,967
9 or more	27,942	9 or more	34,417
NHES:1993		NHES:2001	
2	9,414	2	11,569
3	11,522	3	14,128
4	14,763	4	18,104
5	17,449	5	20,405
6	19,718	6	24,195
7	22,383	7	27,517
8	24,838	8	30,627
9 or more	29,529	9 or more	35,286
NHES:1995		NHES:2003	
2	9,933	2	12,024
3	12,158	3	14,675
4	15,569	4	18,811
5	18,408	5	22,240
6	20,804	6	25,136
7	23,552	7	28,639
8	26,237	8	31,611
9 or more	31,280	9 or more	37,907
NHES:1996			
2	10,233		
3	12,516		
4	16,036		
5	18,952		
6	21,389		
7	24,268		
8	27,091		
9 or more	31,971		

NOTE: Poverty thresholds for 2003, revised January 22, 2004; for 2001, September 24, 2002; for 1991, 1993, 1996, and 1999, August 22, 2002.

SOURCE: U.S. Department of Education, NCES. National Household Education Surveys Program (NHES), 1991, 1993, 1995, 1996, 1999, 2001, and 2003.

Note 1: Commonly Used Variables

Continued

of Title I federal funding. In *The Condition of Education 2004*, eligibility for the National School Lunch Program applies to indicators 2, 9, 10, and 24.

FAMILY INCOME QUARTERS

Indicators 19, 37, and 38 use family income quarters in their analyses. Indicator 19 collapsed the four quarters calculated from the Beginning Postsecondary Students Longitudinal Study (BPS) data into three categories: the lowest 25 percent of the student population (lowest quarter); the middle 50 percent of the student population (two middle quarters); and the highest 25 percent of the student population (highest income quarter). Indicator 38 collapsed the four quarters calculated from B&B data into the same three categories. Indicator 37 retained all four quarters calculated from NPSAS data and labeled the lowest 25 percent of the student population “lowest quarter,” the second lowest 25 percent of the student population “lower middle quarter,” the second highest 25 percent of the student population “upper middle quarter,” and the highest 25 percent of the student population “highest income quarter.” Family income was determined for the year before students enrolled in postsecondary education. Family income was used for dependent students (i.e., those under age 24) and student income was used for independent students. Dependent and independent student quarters were calculated separately and then combined into one income variable.

GEOGRAPHIC REGION

The regional classification systems on the next page represents the four geographical regions of the United States as defined by the Bureau of the Census and the Bureau of Economic Analysis (BEA), both of the U.S. Department

of Commerce. In *The Condition of Education 2004*, indicators 3, 4, 12, and 25 use the Bureau of the Census system. Indicators 2 and 27 use the Bureau of Economic Analysis system. The Bureau of the Census’ Midwest region includes the same states as the BEA’s Central region.

OCCUPATION

Indicator 7 uses the occupation groups in the 2003 National Household Education Surveys Program (NHES), Adult Education for Work-Related Reasons Survey (AEWR–NHES: 2003) that were aggregated from a set of 22 categories from the Standard Occupational Classification (SOC) categories. The professional or managerial group consisted of the following occupations: executive, administrative, and managerial occupations; engineers, surveyors, and architects; natural scientists and mathematicians; social scientists, social workers, religious workers, and lawyers; teachers: college, university, and other postsecondary institutions; counselors, librarians, and archivists; teachers, except postsecondary institutions; health diagnosing and treating practitioners; registered nurses, pharmacists, dietitians, therapists, and physician’s assistants; writers, artists, entertainers, and athletes; and health technologists and technicians. The service, sales, or support group consisted of technologists and technicians, except health; marketing and sales occupations; administrative support occupations, including clerical; service occupations; and miscellaneous occupations. The trades consisted of agricultural, forestry, and fishing occupations; mechanics and repairers; construction and extractive occupations; precision production occupations; production working occupations; transportation and material moving occupations; and handlers, equipment cleaners, helpers, and laborers.

Note 1: Commonly Used Variables

Continued

Bureau of the Census, Regional Classification

Bureau of the Census, Regional Classification		Midwest	West
Northeast	South	Illinois	Alaska
Connecticut	Alabama	Indiana	Arizona
Maine	Arkansas	Iowa	California
Massachusetts	Delaware	Kansas	Colorado
New Hampshire	District of Columbia	Michigan	Hawaii
New Jersey	Florida	Minnesota	Idaho
New York	Georgia	Missouri	Montana
Pennsylvania	Kentucky	Nebraska	Nevada
Rhode Island	Louisiana	North Dakota	New Mexico
Vermont	Maryland	Ohio	Oregon
	Mississippi	South Dakota	Utah
	North Carolina	Wisconsin	Washington
	Oklahoma		Wyoming
	South Carolina		
	Tennessee		
	Texas		
	Virginia		
	West Virginia		

BEA, Regional Classification

BEA, Regional Classification		Central	West
Northeast	Southeast	Illinois	Alaska
Connecticut	Alabama	Indiana	Arizona
Delaware	Arkansas	Iowa	California
District of Columbia	Florida	Kansas	Colorado
Maine	Georgia	Michigan	Hawaii
Maryland	Kentucky	Minnesota	Idaho
Massachusetts	Louisiana	Missouri	Montana
New Hampshire	Mississippi	Nebraska	Nevada
New Jersey	North Carolina	North Dakota	New Mexico
New York	South Carolina	Ohio	Oklahoma
Pennsylvania	Tennessee	South Dakota	Oregon
Rhode Island	Virginia	Wisconsin	Utah
Vermont	West Virginia		Texas
			Washington
			Wyoming

Note 2: The Current Population Survey (CPS)

The Current Population Survey (CPS) is a monthly survey of approximately 50,000 households that are selected scientifically from the 50 states and the District of Columbia. The CPS has been conducted for more than 50 years. The Bureau of the Census conducts the survey for the Bureau of Labor Statistics, asking a knowledgeable adult household member (known as the “household respondent”) to answer all the questions on all of the month’s questionnaires for all members of the household.

The CPS collects data on the social and economic characteristics of the civilian, noninstitutional population, including information on income, education, and participation in the labor force. However, the CPS does not collect all this information every month. Each month a “basic” CPS questionnaire is used to collect data about participation in the labor force of each household member, 15 years old and above, in every sampled household. In addition, different supplemental questionnaires are administered each month to collect information on other topics.

In March and October of each year, the supplementary questionnaires contain some questions of relevance to education policy. The Annual Social and Economic Supplement, or March CPS Supplement, is a primary source of detailed information on income and work experience in the United States. The labor force and work experience data from this survey are used to profile the U.S. labor market and to make employment projections. Data from this survey are also used to generate the annual Population Profile of the United States, reports on geographical mobility, educational attainment, and detailed analyses of wage rates, earnings, and poverty status. The October Supplement contains basic annual school enrollment data for preschool, elementary and secondary, and postsecondary students, as well as educational background information needed to produce

dropout estimates on an annual basis. In addition to the basic questions about education, interviewers ask supplementary questions about school enrollment for all household members 3 years old and above.

CPS interviewers initially used printed questionnaires. Since 1994, the Census Bureau has used Computer-Assisted Personal and Telephone Interviewing (CAPI and CATI) to collect data. Both technologies allow interviewers to use a complex questionnaire and increases consistency by reducing interviewer error. Further information on the CPS can be found at <http://www.bls.census.gov/cps>

DEFINITION OF SELECTED VARIABLES

Family income

The October CPS collects data on family income, which are used in *indicators 3 and 16* to measure a student’s economic standing. Family income is derived from a single question asked of the household respondent. Income includes money income from all sources including jobs, business, interest, rent, and social security payments. The income of nonrelatives living in the household is excluded, but the income of all family members 14 years old and above, including those temporarily living away, is included. Family income refers to income received over a 12-month period.

Families in the bottom 20 percent of all family incomes are classified as low income, families in the top 20 percent of all family incomes are classified as high income, and families in the 60 percent between these two categories are classified as middle income. The table on the next page shows the current dollar amount (rounded to the nearest \$100) of the breakpoints between low and middle income and between middle and high income. For example, low income in 2000 is defined as the range between \$0 and \$15,300; middle income is defined as the

Note 2: The Current Population Survey (CPS)

Continued

range between \$15,301 and \$72,000; and high income is defined as \$72,001 and over. Therefore, the breakpoints between low and middle income and between middle and high income are \$15,300 and \$72,000, respectively.

Dollar value (in current dollars) at the breakpoint between low- and middle- and between middle- and high-income categories of family income: October 1970–2001

October	Breakpoints between:	
	Low- and middle-income	Middle- and high-income
1970	\$3,300	\$11,900
1971	—	—
1972	3,500	13,600
1973	3,900	14,800
1974	—	—
1975	4,300	17,000
1976	4,600	18,300
1977	4,900	20,000
1978	5,300	21,600
1979	5,800	23,700
1980	6,000	25,300
1981	6,500	27,100
1982	7,100	31,300
1983	7,300	32,400
1984	7,400	34,200
1985	7,800	36,400
1986	8,400	38,200
1987	8,800	39,700
1988	9,300	42,100
1989	9,500	44,000
1990	9,600	46,300
1991	10,500	48,400
1992	10,700	49,700
1993	10,800	50,700
1994	11,800	55,500
1995	11,700	56,200
1996	12,300	58,200
1997	12,800	60,800
1998	13,900	65,000
1999	14,700	68,000
2000	15,300	72,000
2001	16,200	75,100

— Not available.

NOTE: Amounts are rounded to the nearest \$100.

Note 2: The Current Population Survey (CPS)

Continued

Parental education

For *indicator 3*, information on parents' education was obtained by merging data from parents' records with their children's. Estimates of a mother's and father's education were calculated only for children who lived with their parents at the time of the survey. For example, estimates of a mother's education are based on children who lived with "both parents" or with "mother only." For children who lived with "father only," the mother's education was unknown; therefore, the "unknown" group was excluded in the calculation of this variable.

Event dropout rate

Indicator 16 reports event dropout rates by family income. Event dropout rates measure the proportion of students who drop out of high school in a given year. They are computed using CPS data on the number of youth ages 15–24 who, in the data collection year, were not enrolled in school, had not earned a diploma or alternative credential, and had been enrolled the previous October in high school. There are several issues that affect interpreting dropout rates by family income using the CPS. First, it is possible that the family income of the students at the time they dropped out was somewhat different from that at the time of the CPS interview. Furthermore, family income is derived from a single question asked of the household respondent in the October CPS. In some cases, there are persons ages 15–24 living in the household who are unrelated to the household respondent yet whose family income is defined as the income of the family of the household respondent. Therefore, the current household income of the respondent may not accurately reflect that person's family background. In particular, some of the young adults ages 15–24 do not live in a family unit with a parent present.

The October survey was administered to about 56,700 households. About 11,300 households

were classified as low income. Of the low-income households, about 2,300 included 15-through 24-year-olds. The use of event dropout rates, which are based on a smaller number of cases than status dropout rates, contributes to large annual fluctuations.

An analysis of 1997 event dropout rates by family income and family status (presence of parent in the household) indicates whether any bias is introduced into the analysis of dropout rates by family income of youth not living with at least one parent (see table on the next page). About 10 percent of 15- through 24-year-olds enrolled in high school in the previous year were not living with a parent, and the percentage was much higher for students in low-income households than for those in middle- and high-income households.

The event dropout rate was lower for those with at least one parent in the household than for those not living with a parent. This was true for all 15- through 24-year-olds as well as within each category of household income. The dropout rate for those with at least one parent in the household was 82 to 83 percent of the dropout rate for all 15- through 24-year-olds within each of the three categories of household income. As a result, despite the fact that a much higher proportion of students in low-income households did not reside with a parent, the relative relationships among dropout rates for the three income groups were similar for those with a parent in the household to those for all 15- through 24-year-olds. Specifically, the event dropout rate for those from low-income households was about three times higher than for those from middle-income households and seven times higher than for those from high-income households, both among all 15- through 24-year-olds and among those residing with at least one parent.

Note 2: The Current Population Survey (CPS)

Continued

Percentage distribution of event dropouts for 15- through 24-year-olds according to household type, by family income: October 1997

Family income	Percentage			Event rate (percent)		
	Total	Parent in home	No parent in home	Total	Parent in home	No parent in home
Estimate						
Total	100.0	90.1	9.9	4.6	3.5	14.0
Low income	100.0	67.5	32.5	12.3	10.1	17.0
Middle income	100.0	91.8	8.2	4.1	3.4	11.6
High income	100.0	97.2	2.8	1.8	1.5	10.3
Standard error						
Total	†	0.09	0.09	0.32	1.33	0.56
Low income	†	0.40	0.40	1.36	2.18	1.89
Middle income	†	0.12	0.12	0.41	1.31	0.69
High income	†	0.10	0.10	0.37	2.06	0.87

†Not applicable.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), October Supplement 1997.

Youth neither enrolled nor working

The March CPS Supplement added questions to collect information on the educational enrollment of all respondents as well as on their employment status in 1986. To construct the variable for *indicator 13*, all youth ages 16–24 were categorized as being in one of four categories: “enrolled in an education institution but not working”; “working but not enrolled”; “both enrolled and working”; or “neither enrolled nor working.” Respondents who were unemployed and looking for work as well as those who were unemployed and not in the labor force (i.e., not looking for work) were both considered not working. The category “neither enrolled nor working” used in *indicator 13* comprises the population of youth neither enrolled nor working.

Educational attainment

Data from CPS questions on educational attainment are used in *indicators 3, 13, and 14*. From 1972 to 1991, two CPS questions provided data on the number of years of school completed: (1) “What is the highest grade . . . ever attended?”

and (2) “Did . . . complete it?” An individual’s educational attainment was considered to be his or her last fully completed year of school. Individuals who completed 12 years were deemed to be high school graduates, as were those who began but did not complete the first year of college. Respondents who completed 16 or more years were counted as college graduates.

Beginning in 1992, the CPS combined the two questions into the following question: “What is the highest level of school . . . completed or the highest degree . . . received?” This change means that some data collected before 1992 are not strictly comparable with data collected from 1992 onward and that care must be taken when making such comparisons. The new question revised the response categories from the highest grade completed to the highest level of schooling or degree completed. In the revised response categories, several of the lower levels are combined into a single summary category such as “1st, 2nd, 3rd, or 4th grades.” Several new categories are used, including “12th grade, no diploma”; “High school graduate, high school diploma, or the equivalent”; and “Some

Note 2: The Current Population Survey (CPS)

Continued

college but no degree.” College degrees are now listed by type, allowing for a more accurate description of educational attainment. The new question emphasizes credentials received rather than the last grade level attended or completed if attendance did not lead to a credential. The new categories include the following:

- High school graduate, high school diploma, or the equivalent (e.g., GED)
- Some college but no degree
- Associate’s degree in college, occupational/vocational program
- Associate’s degree in college, academic program
- Bachelor’s degree (e.g., B.A., A.B., B.S.)
- Master’s degree (e.g., M.A., M.S., M.Eng., M.Ed., M.S.W., M.B.A.)
- Professional school degree (e.g., M.D., D.D.S., D.V.M., LL.B., J.D.)
- Doctorate degree (e.g., Ph.D., Ed.D.)

High school completion

The pre-1992 questions about educational attainment did not specifically consider high school equivalency certificates (GEDs). Consequently, an individual who attended 10th grade, dropped out without completing that grade, and who subsequently received a high school equivalency credential would not have been counted as completing 12th grade. The new question counts these individuals as if they are high school completers. Since 1988, an additional question has also asked respondents if they have a high school degree or the equivalent, such as a GED. People who respond “yes” are classified as high school completers. Before 1988, the number of individuals who earned a high school equivalency certificate was small relative to the number of high school graduates, so that the subsequent increase from including equivalency certificate recipients in

the total number of people counted as “high school completers” was small in the years immediately after the change was made.

Before 1992, the CPS considered individuals who completed 12th grade to be high school graduates. The revised question added the response category “12th grade, no diploma.” Individuals who select this response are not counted as graduates. Historically, the number of individuals in this category has been small.

College completion

Some students require more than 4 years to earn an undergraduate degree, so some researchers are concerned that the completion rate, based on the pre-1992 category “4th year or higher of college completed,” overstates the number of respondents with a bachelor’s degree (or higher). In fact, however, the completion rates among those ages 25–29 in 1992 and 1993 were similar to the completion rates for those in 1990 and 1991, before the change in the question’s wording. Thus, there appears to be good reason to conclude that the change has not affected the completion rates reported in *The Condition of Education 2004*.

Some college

Based on the question used in 1992 and in subsequent surveys, an individual who attended college for less than a full academic year would respond “some college but no degree.” Before 1992, the appropriate response would have been “attended first year of college and did not complete it”; the calculation of the percentage of the population with 1–3 years of college excluded these individuals. With the new question, such respondents are placed in the “some college but no degree” category. Thus, the percentage of individuals with some college might be larger than the percentage with 1–3 years of college because “some college” includes those who have not completed an entire year of college, whereas “1–3 years of college”

Note 2: The Current Population Survey (CPS)

Continued

does not include these people. Therefore, it is not appropriate to make comparisons between the percentage of those with “some college but no degree” using the post-1991 question and the percentage of those who completed “1–3 years of college” using the two pre-1992 questions.

In *The Condition of Education*, the “some college” category for years preceding 1992 includes only the responses “1–3 years of college.” After 1991, the “some college” category includes those who responded “some college but no degree,” “Associate’s degree in college, occupational/vocational program,” and “Associate’s degree in college, academic program.” The effect of this change of the “some college category” is indicated by the fact that in 1992, 48.9 percent of 25- to 29-year-olds reported completing some college or more compared with 45.3 percent in 1991 (see NCES 2002–025, table 25-2). The 3.6 percent

difference is statistically significant. Some of the increase may be due to individuals who have completed less than 1 year of postsecondary education who in years preceding 1992 would not have responded that they completed “some college.”

Another potential difference in the “some college” category is how individuals who have completed a certificate or some other type of award other than a degree respond to the new questions about their educational attainment introduced in 1992. Some may answer “some college, no degree,” while others may indicate only high school completion, and others may equate their certificate with one of the types of associate’s degrees. No information is available on the tendencies of individuals with a postsecondary credential other than a bachelor’s or higher degree to respond to the new attainment question introduced in 1992.

Note 3: Other Surveys

BACCALAUREATE AND BEYOND LONGITUDINAL STUDY, 2001 (B&B:2000/01)

The Baccalaureate and Beyond Longitudinal Study, 2001 (B&B:2000/01) is a longitudinal study of a subsample of bachelor's degree recipients from the sample of students included in the 1999–2000 National Postsecondary Student Aid Study (NPSAS:2000), which is described below. The subsample includes members of the NPSAS:2000 cohort who completed a bachelor's degree between July 1, 1999 and June 30, 2000.

The estimates reported in this publication are based on data collected in the first follow-up of this subsample of bachelor's degree recipients in 2001, 1 year after they graduated from college. These B&B:2000/01 data provide a profile of the 1999–2000 cohort of college graduates, including degree recipients who have enrolled sporadically over time as well as those who enrolled in college immediately after completing high school. The data set contains comprehensive data on the enrollment, attendance, and demographic characteristics of college students and provides a unique opportunity to understand their immediate transitions into work, graduate school, or other endeavors.

Unless otherwise specified, all estimates using data from the Baccalaureate and Beyond Study include students in the 50 states, the District of Columbia, and the Commonwealth of Puerto Rico.

The weighted overall response rate for the B&B:2000/01 follow-up interview was 74 percent, reflecting an institution response rate of 90 percent and a student response rate of 82 percent. Because the B&B:2000/01 study includes a subsample of NPSAS:2000 nonrespondents, the overall study response rate is the product of the NPSAS:2000 institution-level response rate and the B&B:2000/01 student-level response rate. For further information about the B&B study, see U.S. Department

of Education, National Center for Education Statistics, *Baccalaureate and Beyond Longitudinal Study: 2000/01 Methodology Report* (NCES 2003–156), Washington, DC: 2003, or see the B&B web site at <http://nces.ed.gov/surveys/b&b/>

Data from B&B:2000/01 are used in *indicator 38*.

BEGINNING POSTSECONDARY STUDENTS LONGITUDINAL STUDY (BPS)

The Beginning Postsecondary Students Longitudinal Study (BPS) is a survey of students who enrolled in postsecondary education for the first time in the year of the survey. Data are collected concerning students' persistence in and completion of postsecondary education programs, the relationships between their work and education efforts, and the effect of postsecondary education on their lives. Like the Baccalaureate and Beyond Longitudinal Study (B&B), the BPS is based on a subsample of students from the National Postsecondary Student Aid Study (NPSAS). The first BPS followed about 8,000 students who began postsecondary education in the 1989–90 academic year and were sampled in NPSAS:90 and responded to the NPSAS questionnaires. These students were surveyed again in spring 1992 (BPS:90/92) and spring 1994 (BPS:90/94), about 5 years after they had first enrolled in postsecondary education. NPSAS:90 collected data on more than 6,000 parents of those students. In addition, BPS collected financial aid records covering the entire period that students were enrolled to provide complete information on their progress and persistence. A second BPS followed a cohort of students drawn from NPSAS:96, who were first followed up in 1998 (BPS:96/98) and then again in 2001 (BPS:96/01), about 6 years after students had first enrolled. To allow comparisons of 5-year outcomes for students covered by the BPS:90/94 and BPS:96/01 surveys, the

Note 3: Other Surveys

Continued

later cohort was asked about enrollment and attainment in 2000 as well as in 2001 when surveyed in 2001.

Unless otherwise specified, all estimates using data from the Beginning Postsecondary Students Study include students in the 50 states, the District of Columbia, and the Commonwealth of Puerto Rico.

Indicators 19 and 29 use data from the BPS. Further information about the survey is available at <http://nces.ed.gov/surveys/bps/>.

COMMON CORE OF DATA (CCD)

The Common Core of Data (CCD), the Department of Education's primary database on public elementary and secondary education in the United States, is a comprehensive annual, national statistical database of information concerning all public elementary and secondary schools (approximately 91,000) and school districts (approximately 16,000). The CCD consists of five surveys that state education departments complete annually from their administrative records. The database includes a general description of schools and school districts; data on students and staff, including demographics; and fiscal data, including revenues and current expenditures.

Indicators 4 and 35 use data from the CCD. Further information about the database is available at <http://nces.ed.gov/ccd/>

EARLY CHILDHOOD LONGITUDINAL STUDY, KINDERGARTEN CLASS OF 1998–99 (ECLS–K)

The Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS–K) is an ongoing study conducted by NCES. Launched in fall 1998, the study follows a nationally representative sample of children from kindergarten through 5th grade. The purpose of the ECLS–K is twofold: to be both descriptive and analytic.

First, the ECLS–K provides descriptive national data on children's status at entry into school; children's transition into school; and their progression through 5th grade. Second, the ECLS–K provides a rich data set that enables researchers to study how a wide range of family, school, community, and individual variables affect children's early success in school.

A nationally representative sample of 21,260 children enrolled in 1,277 kindergarten programs participated in the initial survey during the 1998–99 school year. These children were selected from both public and private kindergartens, offering full- and half-day programs. The sample consists of children from different racial/ethnic and socioeconomic backgrounds and includes an oversample of Asian/Pacific Islander children. All kindergarten children within the sampled schools were eligible for the sampling process, including language minority and special education students. The sample design for the ECLS–K is a dual-frame, multistage sample. First, 100 Primary Sampling Units (PSUs), which are counties or groups of counties, were selected. Schools within the PSUs were then selected—public schools from a public school frame and private schools from a private school frame, which oversampled private kindergartens. In fall 1998, approximately 23 kindergartners were selected within each of the sampled schools.

Data on the kindergarten cohort were collected in the fall and spring of the kindergarten year from the children, their parents, and their teachers. In addition, information was collected from children's schools and school districts in the spring of the kindergarten year. During the 1999–2000 school year, when most of the cohort moved to the 1st grade, data were again collected from a 30 percent subsample of the cohort in the fall and from the full sample in the spring. Spring 1st-grade data were obtained between March and July 2000, and spring 3rd-

Note 3: Other Surveys

Continued

grade data were obtained between March and July 2002, with 80 percent of the assessments at each round conducted between early April and late May.

Trained evaluators assessed children in their schools and collected information from parents over the telephone. Teachers and school administrators were contacted in their school and asked to complete questionnaires. The children and their families, teachers, and schools provided information on children's cognitive, social, emotional, and physical development. Information was also collected on the children's home environment, home educational practices, school and classroom environments, curricula, and teacher qualifications. Additional surveys of the sampled children are planned for spring 2004 (when children are in the 5th grade).

ECLS-K constructed a family risk index consisting of whether the household income was below the poverty level, the primary home language was other than English, the mother's highest level of education was less than a high school diploma or GED, and whether the child lived in a single-parent household. The percentage of fall 1998 kindergartners with each level of family risk factors was zero (62 percent), one (23 percent), two (12 percent), three (3 percent), and four (rounds to zero).

Indicator 8 is based on the ECLS-K. Further information on the survey is available at <http://nces.ed.gov/ecls/kindergarten.asp>

EDUCATION LONGITUDINAL STUDY OF 2002 (ELS:2002)

The Education Longitudinal Study of 2002 (ELS:2002) is the fourth major national longitudinal survey of high school students conducted by NCES. Three similar previous surveys were the National Longitudinal Study of the High School Class of 1972 (NLS-72), the High School and Beyond Longitudinal

Study of 1980 (HS&B:80), and the National Education Longitudinal Study of 1988 (NELS:88). Like its predecessors, ELS:2002 is designed to provide information to researchers, policy-makers, and the public about high school students' experiences and activities, and to track changes in these young people's lives as they mature in the years after high school. ELS:2002 sampled and collected data from 10th-graders in spring 2002 (the base year), along with data from their English and mathematics teachers, their school's librarian and principal, and one parent for each student. The base-year data include 10th-graders' scores on cognitive tests in reading and mathematics, and the first follow-up will include a test in mathematics. Follow-up surveys are currently planned for 2004 (when most students in the cohort will be seniors preparing for high school graduation) and 2006. About 750 schools were selected (in both the public and private sectors); about 15,000 students in these schools completed base-year surveys, along with about 13,000 of their parents, 7,000 of their teachers, 700 principals, and 700 librarians.

ELS:2002 collected information on students' experiences while in high school (including their coursetaking, achievement, extracurricular activities, social lives, employment, and risk-taking behaviors); students' aspirations, life goals, attitudes, and values; and the influence of family members, friends, teachers, and other people in their lives. Following the same cohort of students over time allows data users to monitor changes in students' lives, including their progress through high school, participation in postsecondary education (entry, persistence, achievement, and attainment), early experiences in the labor market, family formation, and civic participation. In addition, by combining data about students' school programs, coursetaking experiences, and cognitive outcomes with information from teachers and principals, the ELS:2002 data support investi-

Note 3: Other Surveys

Continued

gation of numerous educational policy issues. Such policy questions include the influence of different curriculum paths, instructional methods, and teacher characteristics and whether the effectiveness of high schools varies with their size, organization, student body composition, academic climate, and other characteristics.

Indicator 15 uses data from the ELS. For further details on the survey, see <http://nces.ed.gov/surveys/els2002/overview.asp>

FAST RESPONSE SURVEY SYSTEM (FRSS)

The Fast Response Survey System (FRSS) was established in 1975 to collect and report data on key educational issues at the elementary and secondary level quickly and with minimum response burden. The surveys were designed to meet the data needs of the Department of Education's analysts, planners, and decisionmakers when information cannot be collected quickly through traditional NCEs surveys. Data collected through FRSS surveys are representative at the national level, drawing from a universe that is appropriate for each study. FRSS collects data from state education agencies and national samples of other educational organizations and participants, including local education agencies, public and private elementary and secondary schools, elementary and secondary school teachers and principals, and public and school libraries.

Indicators 2 and *27* use data from the FRSS. Further information on the surveys are available at <http://nces.ed.gov/surveys/frss/>

INTEGRATED POSTSECONDARY EDUCATION DATA SYSTEM (IPEDS)

The Integrated Postsecondary Education Data System (IPEDS) is the core program that NCEs uses for collecting data on postsecondary education (before IPEDS some of the same information was collected by the Higher Edu-

cation General Information Survey [HEGIS]). IPEDS is a single, comprehensive system that encompasses all identified institutions whose primary purpose is to provide postsecondary education.

IPEDS consists of institution-level data that can be used to describe trends in postsecondary education at the institution, state, and/or national levels. For example, researchers can use IPEDS to analyze information on (1) enrollments of undergraduates, first-time freshmen, and graduate and first-professional students by race/ethnicity and sex; (2) institutional revenue and expenditure patterns by source of income and type of expense; (3) salaries of full-time instructional faculty by academic rank and tenure status; (4) completions (awards) by type of program, level of award, race/ethnicity, and sex; (5) characteristics of postsecondary institutions, including tuition, room and board charges, calendar systems, and so on; (6) status of postsecondary vocational education programs; and (7) other issues of interest.

Data are collected from approximately 9,900 postsecondary institutions, including the following: baccalaureate or higher degree-granting institutions, 2-year award institutions, and less-than-2-year institutions (i.e., institutions whose awards usually result in terminal occupational awards or are creditable toward a formal 2-year or higher award). Each of these three categories is further disaggregated by control (public, private not-for-profit, private for-profit), resulting in nine institutional categories or sectors.

The completion of all IPEDS surveys is mandatory for all institutions that participate or are applicants for participation in any federal financial assistance program authorized by Title IV of the Higher Education Act of 1965.

Indicators 6, 20, 31, and the *special analysis* use data from the IPEDS. The institutional

Note 3: Other Surveys

Continued

categories used in the surveys are described in *supplemental note 8*. Further information about IPEDS is available at <http://nces.ed.gov/ipeds/>

NATIONAL EDUCATION LONGITUDINAL STUDY OF 1988 (NELS:88)

The National Education Longitudinal Study of 1988 (NELS:88) is the third major secondary school student longitudinal study sponsored by NCES. The two studies that preceded NELS:88, the National Longitudinal Study of the High School Class of 1972 (NLS-72) and the High School and Beyond Longitudinal Study of 1980 (HS&B:80), surveyed high school seniors (and sophomores in HS&B) through high school, postsecondary education, and work and family formation experiences. Unlike its predecessors, NELS:88 begins with a cohort of 8th-grade students. In 1988, some 25,000 8th-graders and their parents, teachers, and school principals were surveyed. Follow-ups were conducted in 1990, 1992, and 1994, when a majority of these students were in 10th and 12th grades, and then 2 years after their scheduled high school graduation. A fourth follow-up was conducted in 2000.

NELS:88 is designed to provide trend data about critical transitions experienced by young people as they develop, attend school, and embark on their careers. It complements and strengthens state and local efforts by furnishing new information on how school policies, teacher practices, and family involvement affect student educational outcomes (i.e., academic achievement, persistence in school, and participation in postsecondary education). For the base year, NELS:88 includes a multifaceted student questionnaire, four cognitive tests, and separate questionnaires for parents, teachers, and schools.

In 1990, when the students were in 10th grade, the students, school dropouts, teach-

ers, and school principals were surveyed. The 1988 survey of parents was not a part of the 1990 follow-up. In 1992, when most of the students were in 12th grade, the second follow-up conducted surveys of students, dropouts, parents, teachers, and school principals. Also, information from the students' transcripts were collected.

Indicators 15, 18, and 21 use data from NELS:88. Further information about the survey is available at <http://nces.ed.gov/surveys/nels88/>

NATIONAL HOUSEHOLD EDUCATION SURVEYS PROGRAM (NHES)

The National Household Education Surveys Program (NHES), conducted in 1991, 1993, 1995, 1996, 1999, 2001, and 2003, collects data on educational issues that cannot be addressed by school-level data. Each survey collects data from households on at least two topics, such as adult education, early childhood program participation, parental involvement in education, and before- and afterschool activities.

NHES surveys the civilian, noninstitutionalized U.S. population in the 50 states and the District of Columbia. Interviews are conducted using computer-assisted telephone interviewing. Data are collected from adults and occasionally from older children (grades 6–12). Whether older or younger children are sampled, data about them are collected from the parent or guardian who is most knowledgeable.

Although NHES is conducted primarily in English, provisions are made to interview persons who speak only Spanish. Questionnaires are translated into Spanish, and bilingual interviewers, who are trained to complete the interview in either English or Spanish, are employed.

Indicators 7, 25, 33, and 34 use data from the NHES. Further information about the program is available at <http://nces.ed.gov/nhes/>

Note 3: Other Surveys

Continued

NATIONAL HEALTH INTERVIEW SURVEY (NHIS)

The National Health Interview Survey (NHIS) is a continuing nationwide sample survey of the noninstitutionalized civilian population. It collects data by conducting personal household interviews, at which time interviewers obtain self-reported information on personal and demographic characteristics, including race and ethnicity, or information from another member of the household. Investigators also collect data about illnesses, injuries, impairments, chronic conditions, activity limitation caused by chronic conditions, utilization of health services, and other health topics. The survey asks respondents about their general health and the effects of any physical, mental, or emotional health problems. Each year the survey is reviewed and special topics are added or deleted. For most health topics, the survey collects data over an entire year.

The NHIS sample includes an oversample of Black and Hispanic persons and is designed to allow researchers to develop national estimates of health conditions, the utilization of health services, and health problems of the U.S. noninstitutionalized civilian population. The response rate for the ongoing part of the survey has been between 94 and 98 percent over the years. In 1997, the NHIS was redesigned, so estimates beginning in 1997 are likely to vary slightly from those for previous years. Interviewers collected information for the basic questionnaire on 100,618 persons in 2000, including 28,495 children.

Indicator 12 uses data from the NHIS. Further information about the survey is available at <http://www.cdc.gov/nchs/nhis.htm>

NATIONAL POSTSECONDARY STUDENT AID STUDY (NPSAS)

The National Postsecondary Student Aid Study (NPSAS) is based on a nationally representative sample of all students in postsecondary education institutions, including undergraduate, graduate, and first-professional students. For NPSAS:2000, information was obtained from more than 900 postsecondary institutions on approximately 50,000 undergraduate, 9,000 graduate, and 3,000 first-professional students. They represented nearly 17 million undergraduates, 2.4 million graduate students, and 300,000 first-professional students who were enrolled at some time between July 1, 1999 and June 30, 2000.

NPSAS is a comprehensive nationwide study designed to determine how students and their families pay for postsecondary education and to describe some demographic and other characteristics of those enrolled. Students attending all types and levels of institutions are represented, including public and private not-for-profit and for-profit institutions and less-than-2-year institutions, community colleges, and 4-year colleges and universities.

To be eligible for inclusion in the institutional sample, an institution must have satisfied the following conditions: (1) offers an education program designed for persons who have completed secondary education; (2) offers an academic, occupational, or vocational program of study lasting 3 months or longer; (3) offers access to the general public; (4) offers more than just correspondence courses; and (5) is located in the 50 states, the District of Columbia, or the Commonwealth of Puerto Rico.

Part-time and full-time students enrolled in academic or vocational courses or programs at these institutions, and not concurrently enrolled in a high school completion program,

Note 3: Other Surveys

Continued

are eligible for inclusion in NPSAS. The first NPSAS, conducted in 1986–87, sampled students enrolled in fall 1986. Since the 1989–90 NPSAS, students enrolled at any time during the year have been eligible for inclusion in the survey. This design change provides the opportunity to collect data necessary to estimate full-year financial aid awards.

Unless otherwise specified, all estimates in *The Condition of Education* using data from the National Postsecondary Student Aid Study include students in the 50 states, the District of Columbia, and the Commonwealth of Puerto Rico.

Each NPSAS survey provides information on the cost of postsecondary education, the distribution of financial aid, and the characteristics of both aided and nonaided students and their families. Following each survey, NCES publishes three major reports: *Student Financing of Undergraduate Education* (NCES 2002–167), *Student Financing of Graduate and First-Professional Education* (NCES 2002–166), and *Profile of Undergraduates in U.S. Postsecondary Education Institutions* (NCES 2002–168).

Indicators 29, 37, and the special analysis use data from NPSAS. Further information about the survey is available at <http://nces.ed.gov/surveys/npsas/>

POSTSECONDARY EDUCATION QUICK INFORMATION SURVEY (PEQIS)

The Postsecondary Education Quick Information Survey (PEQIS) was established by NCES to collect timely data on focused issues needed for program planning and policy development with a minimum burden on respondents. The survey was designed to assist postsecondary policy analysts, program planners, and decisionmakers who frequently need data on emerging issues quickly. It is not always feasible for NCES to use its large, recurring surveys to provide such data quickly due to the

length of time required to implement large-scale data collection efforts. In addition to obtaining information on emerging issues in a timely manner, PEQIS surveys are used to assess the feasibility of developing large-scale data collection efforts on a given topic or to supplement other NCES postsecondary surveys.

PEQIS uses a standing sample (panel) of approximately 1,600 postsecondary education institutions at the 2- and 4-year levels. The nationally representative panel includes public and private colleges and universities that award associate's, bachelor's, master's, and doctoral degrees. PEQIS can also conduct surveys of states' higher education agencies.

Indicators 31 and 32 use data from the PEQIS. Further information about the survey is available at <http://nces.ed.gov/surveys/peqis/>

SCHOOLS AND STAFFING SURVEY (SASS)

The Schools and Staffing Survey (SASS) is the nation's largest sample survey of America's elementary and secondary schools. First conducted in 1987–88, SASS periodically surveys the following:

- public schools and collects data on school districts, schools, principals, teachers, and library media centers;
- private schools and collects data on schools, principals, teachers, and library media centers;
- schools operated by the Bureau of Indian Affairs (BIA) and collects data on schools, principals, teachers, and library media centers; and
- public charter schools and collects data on schools, principals, teachers, and library media centers.

To ensure that the samples contain sufficient numbers for estimates, SASS uses a stratified

Note 3: Other Surveys

Continued

probability sample design. Public and private schools are oversampled into groups based on certain characteristics. After schools are stratified and sampled, so are the teachers within the schools based on their characteristics. Due to the relatively few numbers of these schools, all charter schools under state supervision that were in existence during the 1998–99 school

year and all schools run by the BIA or American Indian/Alaska Native tribes were included in the 1999–2000 SASS.

Indicators 24, 26, and 28 use data from the SASS. Further information about the survey is available at <http://nces.ed.gov/surveys/SASS/OVERVIEW.ASP>

Note 4: National Assessment of Educational Progress (NAEP)

The National Assessment of Educational Progress (NAEP), administered regularly in a number of subjects since 1969, has two major goals: to assess student performance reflecting current educational and assessment practices and to measure change in student performance reliably over time. To address these goals, the NAEP includes a main assessment and a long-term trend assessment. The assessments are administered to separate samples of students at separate times, use separate instruments, and measure different educational content. Consequently, results from the assessments should not be compared.

MAIN NAEP

Indicators 5, 9, 10, and 11 are based on the main NAEP. The main NAEP periodically assesses students' performance in several subjects, following the curriculum frameworks developed by the National Assessment Governing Board (NAGB) and using the latest advances in assessment methodology. NAGB develops the frameworks using standards developed within the field, using a consensus process involving educators, subject-matter experts, and other interested citizens. Before 2002, the NAEP national sample was an independently selected national sample. However, beginning in 2002, the NAEP national sample was obtained by aggregating the samples from each state. As a result, the size of the national sample increased in 2002, which means that smaller differences between estimates from different administrations and different types of students can now be found to be statistically significant than can be detected in assessment results reported before 2002.

The content and nature of the main NAEP evolves to match instructional practices, so the ability to measure change reliably over time is limited. As standards for instruction and curriculum change, so does the main NAEP. As a result, data from different assessments are not

always comparable. However, recent NAEP main assessment instruments for mathematics, science, and reading have typically been kept stable for short periods, allowing for a comparison across time. For example, from 1990 to 2001, assessment instruments in the same subject areas were developed using the same framework, shared a common set of questions, and used comparable procedures to sample and address student populations. For some subjects that are not assessed frequently, such as civics and the arts, no trend data are available.

The main NAEP results are reported in *The Condition of Education* in terms of both average scale scores and achievement levels. The achievement levels define what students who are performing at *Basic*, *Proficient*, and *Advanced* levels of achievement should know and be able to do. NAGB establishes achievement levels whenever a new main NAEP framework is adopted. These achievement levels have undergone several evaluations but remain developmental in nature and continue to be used on a trial basis. Until the Commissioner of NCES determines that the levels are reasonable, valid, and informative to the public, they should be interpreted and used with caution. The policy definitions of the achievement levels that apply across all grades and subject areas are as follows:

- **Basic:** This level denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.
- **Proficient:** This level represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.

Note 4: National Assessment of Educational Progress (NAEP)

Continued

- *Advanced*: This level signifies superior performance.

STUDENT ACCOMMODATIONS

Until 1996, the main NAEP assessments excluded certain subgroups of students identified as “special needs students,” including students with disabilities and students with limited English proficiency. For the 1996 and 2000 mathematics assessments and the 1998 and 2000 reading assessments, the main NAEP included a separate assessment with provisions for accommodating these students (e.g., extended time, small group testing, mathematics questions read aloud, and so on). Thus, for these years, there are results for both the unaccommodated assessment and the accommodated assessment. For the 2002 and 2003 reading and 2003 mathematics assessments, the main NAEP did not include a separate unaccommodated assessment; only a single accommodated assessment was administered. The switch to a single accommodated assessment instrument was made after it was determined that accommodations in NAEP did not have any significant effect on student scores.

MATHEMATICS COURSETAKING

The 2003 main NAEP assessments include questions asking students about their course-taking patterns. In 8th grade, students reported on the mathematics course they were currently taking. For reporting purposes, courses were grouped into lower level (group 1) courses and higher level (group 2) courses. Group 1 courses include 8th-grade mathematics and prealgebra. Group 2 courses include algebra I, algebra II, geometry, and integrated or sequential mathematics.

LONG-TERM TREND NAEP

The long-term trend NAEP measures basic student performance in reading, mathematics, science, and writing. Since the mid-1980s, the long-term trend NAEP has used the same instruments to provide a means to compare performance over time, but they do not necessarily reflect current teaching standards or curricula. Results have been reported for students at ages 9, 13, and 17 in mathematics, reading, and science, and at grades 4, 8, and 11 in writing. Results from the long-term trend NAEP are presented as mean scale scores because, unlike the main NAEP, the long-term trend NAEP does not define achievement levels. None of the indicators in *The Condition of Education 2004* are based on the long-term trend NAEP assessments.

Note 5: International Assessments

VIDEOTAPE CLASSROOM STUDY

Under the auspices of the International Association for the Evaluation of Educational Achievement (IEA), the Third International Mathematics and Science Study (TIMSS) assessed and collected data and reported results for more than half a million students at five grade levels, providing information on student achievement, student background characteristics, and school resources in 42 countries in 1995. In 1999, TIMSS was repeated at the 8th-grade level for science and mathematics in 38 countries.

TIMSS 1999 included a Videotape Classroom Study, on which *indicator 23* is based, that examined (1) teachers' beliefs about reform and how these beliefs related to instructional practices; (2) the organization and process of mathematics and science instruction; and (3) the mathematical and scientific content of lessons. The 1999 Video Study expanded on the TIMSS 1995 Video Study (NCES 1999–074, described in NCES 2001–072, *supplemental note 5*) by investigating science teaching in Australia, the Czech Republic, Japan, the Netherlands, and the United States.¹ The TIMSS 1995 Video Study did not investigate science teaching and included only three countries.

The 1999 Video Study selected participants from among those countries and regions whose 8th-graders performed on average above U.S. 8th-grade students on the TIMSS 1995 mathematics assessment. Students in the Czech Republic, Japan, and the Netherlands also outperformed U.S. students on the TIMSS 1995 science assessment, while the average for Australian students was not significantly different from the U.S. average in 1995 (NCES 2004–015).

The 1999 Video Study selected a set of 8th-grade classrooms to be representative of the classrooms in the TIMSS 1999 main study. All of the countries participating in the 1999

Video Study were required to include at least 100 schools in their initial selection of schools for the study. The Video Study final sample, however, included 87 schools from Australia, 100 from the Czech Republic, 100 from Japan, 85 from the Netherlands, and 83 from the United States. Within the specified guidelines, each participating country and region developed their own strategy for obtaining a random sample of 8th-grade lessons to videotape. National or regional research coordinators were responsible for selecting or reviewing the selection of schools and lessons in their country or region.

Most videotaping for this study was done in 1999, though in some countries it began in 1998 and ended in 1999. Only one science class was randomly selected within each school for videotaping. No substitutions of teachers or class periods were allowed. The designated class was videotaped once, in its entirety, without regard to the particular science topic being taught or type of activity taking place. After their classroom was videotaped, teachers were asked to complete a questionnaire. English, Czech, Dutch, and Japanese versions of the questionnaire were created and judged to be equivalent by a group of researchers, each of whom was fluent in at least two of these languages. Questionnaire data were obtained from teachers in 100 percent of the 8th-grade science lessons videotaped in Australia, the Czech Republic, and Japan, 98 percent of Dutch lessons, and 95 percent of U.S. lessons.

Each of the videotaped lessons was examined to assess various elements of the lesson—such as the lesson's coherence, the type of reasoning required of students, the level of complexity of the lesson's content, the connections between parts of the lesson, the kinds of tasks students were asked to engage in as part of the lesson, and the methods students used to solve scientific problems. For this in-depth analysis of the videotaped lessons, an international team

Note 5: International Assessments

Continued

of bilingual representatives from each country assembled to develop and apply codes to the video data. They applied codes in coding passes to each of the videotaped lessons and also created a lesson table for each videotaped lesson, which combined information from a number of codes. After the team finished coding half of their assigned set of lessons, they established a minimum acceptable reliability score for each code of 85 percent. Because not all members of the international coding team were experts in science or teaching, several special coding teams with different areas of expertise were employed to create special codes regarding the scientific nature of the content, the pedagogy, and the discourse. These groups included a science problem analysis group, a science quality analysis group, a problem implementation analysis group, and a text analysis group. Statistical findings presented in the report are based on analyses of these codes.

For these analyses, the following definitions were employed for the terms “making connections among experiences” and “facts, definitions, or problem-solving algorithms”:

- *Making connections*: The primary approach of the lesson is to support students in making connections among experiences,

ideas, patterns, and explanations. Teachers and/or students are engaged in pattern-based reasoning. That is, recognizing, explaining, and using patterns in data by working on such tasks as building a case or an argument to explain patterns observed in data, predicting patterns in data from scientific laws or theories, or collecting data to verify the predicted patterns.

- *Acquiring facts, definitions, and problem-solving algorithms*: The primary approach in the lesson is to teach students a set of facts, definitions, or problem-solving procedures that they will acquire primarily through memorization and practice. Problem-solving is limited to following linear, step-by-step procedures. The information is presented as distinct pieces that are not organized within a larger conceptual framework that links experiences, data, and explanations.

NOTES

¹The 1999 Video Study also expanded on the 1995 Video Study by investigating mathematics teaching in six countries (Australia, the Czech Republic, Japan, the Netherlands, Switzerland, and the United States) and in one region (the Special Administrative Region of Hong Kong).

Note 6: NAEP, NELS, and HS&B Transcript Studies

There are various ways to measure the academic coursework that students complete. For example, one can measure the number of courses a student has completed in different subjects (i.e., whether a student completed two, three, or four courses in mathematics). Another method is to measure the highest level of coursework completed in different subjects (i.e., whether a student's most academically challenging mathematics course was algebra I, trigonometry, or calculus). If one is interested in how common it is for students to complete certain courses, one can measure the frequency with which certain courses are taken as a proportion of all courses taken. Based on these three methods, analysts have created different taxonomies to categorize high school and postsecondary student coursetaking. This supplemental note describes three such taxonomies used in the analyses of individual indicators in *The Condition of Education*.

Indicators 21 and *22* use an “academic pipeline” to classify coursetaking data according to the highest level of coursework completed by high school graduates. These data come from transcripts of graduates of public and private high schools, which were collected as part of the U.S. Department of Education’s National Assessment of Educational Progress (NAEP), National Education Longitudinal Study of 1988 (NELS:88), and the High School and Beyond Longitudinal Study (HS&B). (It is important to note that comparability among these data sets cannot be perfect both because (1) the Secondary School Taxonomy (SST), discussed below, was revised in 1998 and (2) these data come from different transcript collections, thus introducing the possibility of minor variations in the coding methodology even though steps were taken to replicate the data collection and coding methodology in each study.)

Indicator 30 uses a “credit ratio” to classify coursetaking data according to the frequency with which postsecondary courses were completed. These data come from transcripts of three cohorts of different NCES longitudinal studies:

- *1972 Cohort*: The National Longitudinal Study of the High School Class of 1972 (NLS:72/86), with a sample of 22,500 12th-graders. Postsecondary transcripts were collected in 1984 for 12,600 of these students.
- *1982 Cohort*: High School and Beyond Longitudinal Study of 1980 Sophomores (HS&B-So:PETS), with a sample of over 30,000 10th-graders. The students in this cohort were scheduled to graduate from high school in 1982. Postsecondary transcripts were collected in 1993 for 8,400 of these students (HS&B-So:PETS).
- *1992 Cohort*: The National Education Longitudinal Study of 1988 (NELS:88/2000), with a sample of 24,600 8th-graders. The students in this cohort were scheduled to graduate from high school in 1992. Postsecondary transcripts were collected in 2000 for 8,900 of these students (NELS:88/2000-PETS).

The analyses reported in *indicator 30* are based on a subsample of students from each cohort who were in 12th grade on schedule in 1992 and who earned a bachelor’s degree within 8.5 years of their graduation from high school.

Indicator 18 uses five remediation categories to measure the number of remediation courses taken by students who were also in the 12th grade on schedule and entered college by 2000. These estimates come from the postsecondary transcripts in the NELS:88/2000-PETS study.

Note 6: NAEP, NELS, and HS&B Transcript Studies

Continued

ACADEMIC PIPELINES FOR HIGH SCHOOL COURSE-TAKING

Academic “pipelines” organize transcript data in English, science, mathematics, and foreign language into levels based on the normal progression and difficulty of courses within these subject areas. Each level includes courses either of similar academic challenge and difficulty or at the same stage in the progression of learning in that subject area. In the mathematics pipeline, for example, algebra I is placed at a level lower in the pipeline continuum than is algebra II because algebra I is traditionally completed before (and is generally less academically difficult or complex than algebra II).

Classifying transcript data into these levels allows one to infer that high school graduates who have completed courses at the higher levels of a pipeline have completed more advanced coursework than graduates whose courses fall at the lower levels of the pipeline. Tallying the percentage of graduates who completed courses at each level permits comparisons of the percentage of high school graduates in a given year who reach each of the levels, as well as among different graduating classes.

The high school courses taken by students are sorted into the academic levels of the pipeline after they have been organized according to the Classification of Secondary School Courses (CSSC) and the Secondary School Taxonomy (SST). All courses in a student’s transcript are coded with a CSSC value after checking course titles on the student’s transcripts with course catalogs from the student’s high school describing the contents of those courses. These coded courses are then assigned to broader course groupings, forming the academic levels of the pipeline in each subject area, using the SST.

Transcript studies are a reliable source of information, but they do have limitations. One limitation is that transcript studies can describe

the intended—but not the actual—curriculum. The content and instructional methods of one course taught in one school by a certain teacher may be different from the content and instructional methods of another course classified as having the same CSSC code taught in another school, or even the same school, by a different teacher. Nevertheless, validation studies and academic research have shown significant differences between the highest level of academic courses completed by students and their scores on tests of academic achievement (Chaney, Burgdorf, and Atash 1997; Berends, Lucas, and Briggs 2002).

In classifying students’ courses from their transcripts according to a pipeline, only the courses *completed* with a passing grade in a subject area are included and not courses *attempted*. The pipeline also does not provide information on how many courses graduates completed in a particular subject area. Graduates are placed at a particular level in the pipeline based on the level of their highest completed course, regardless of whether they completed courses that would fall lower in the pipeline. Thus, graduates who completed year 3 of (or 11th-grade) French did not *necessarily* complete the first 2 years.

Mathematics Pipeline

Originally developed by Burkam and Lee (NCES 2003–01; NCES 2003–02), the mathematics pipeline progresses from no mathematics courses or nonacademic courses to low, middle, and advanced academic coursework. Each level in the pipeline represents the highest level of mathematics coursework that a graduate completed in high school. Thus, a graduate whose highest course is at the low academic level progressed no further in the mathematics pipeline and did not complete a traditional algebra I course, a prerequisite for higher level mathematics in high school.

Note 6: NAEP, NELS, and HS&B Transcript Studies

Continued

The mathematics pipeline has eight levels: no mathematics; nonacademic; low academic; middle academic I; middle academic II; advanced I; advanced II; and advanced III. Middle levels I and II and advanced levels I, II, and III can be combined to create one middle level and one advanced level, respectively, thus creating a five-level pipeline (no mathematics; nonacademic; low academic; middle academic; and advanced academic).

No mathematics

No coursework completed in mathematics by graduates, or only basic or remedial-level mathematics completed. It is thus possible for a graduate to have taken one or more courses in mathematics, but to be placed in the no mathematics level.

Nonacademic level

Highest completed courses are in general mathematics or basic skills mathematics, such as general mathematics I or II; basic mathematics I, II, or III; consumer mathematics; technical or vocational mathematics; and mathematics review.

Low academic level

Highest completed courses are preliminary courses (e.g., prealgebra) or mathematics courses of reduced rigor or pace (e.g., algebra I taught over the course of 2 academic years). Considered to be more academically challenging than nonacademic courses, courses at this level include prealgebra; algebra I, part I; algebra I, part II; and geometry (informal).

Middle academic level

The middle academic level is divided into two sublevels, each of which is considered to be more academically challenging than the nonacademic and low academic levels, though level I is not considered as challenging as level II.

- *Middle academic level I:* Highest completed course includes algebra I; plane geometry; plane and solid geometry; unified mathematics I and II; or pure mathematics.
- *Middle academic level II:* Highest completed course is algebra II or unified mathematics III.

Advanced academic level

The advanced academic level is divided into three sublevels, each of which is considered more academically challenging than the nonacademic, low academic, and middle academic levels, though level I is not considered as challenging as level II, nor level II as challenging as level III.

- *Advanced academic level I:* Highest completed course is algebra III; algebra/trigonometry; algebra/analytical geometry; trigonometry; trigonometry/solid geometry; analytical geometry; linear algebra; probability; probability/statistics; statistics; statistics (other); or an independent study.
- *Advanced academic level II:* Highest completed course is precalculus or an introduction to analysis.
- *Advanced academic level III:* Highest completed course is Advanced Placement (AP) calculus; calculus; or calculus/analytical geometry.

Science Pipeline

Unlike mathematics and other subjects, such as foreign languages, coursework in science does not follow a common or easily defined sequence. Depending on a school's curriculum, students can choose from several courses with minimal sequencing requirements. Consequently, the method used to construct the science pipeline differs from that used to construct the mathematics pipeline. First, all science courses

Note 6: NAEP, NELS, and HS&B Transcript Studies

Continued

were placed in one of four groups based on subject matter: (1) life science (biology); (2) chemistry; (3) physics; and (4) all other physical sciences (e.g., geology, earth science, physical science). Second, a pipeline was constructed for each of these four groups. Third, the pipelines for chemistry, physics, and all other physical sciences were combined into a single pipeline (a physical science pipeline). Finally, the physical science and life science pipelines were combined to create a single science pipeline. The final pipeline has seven levels: no science; primary physical science; secondary physical science and basic biology; general biology; chemistry I or physics I; chemistry I and physics I; chemistry II or physics II or advanced biology.

No science

Includes graduates who did not complete any courses in science or who completed only basic or remedial-level science. It is possible for a graduate to have taken one or more courses in science but to be placed in the no science level.

Primary physical science

Highest completed course is in basic physical sciences: applied physical science; earth science; college preparatory earth science; or unified science.

Secondary physical science and basic biology

Highest completed course is astronomy; geology; environmental science; oceanography; general physics; basic biology I; or consumer or introductory chemistry.

General biology

Highest completed course is general biology I; secondary life sciences (including ecology, zoology, marine biology, and human physiology); or general or honors biology II.

Chemistry I or physics I

Highest completed course is introductory chemistry; chemistry I; organic chemistry; physical chemistry; consumer chemistry; general physics; or physics I.

Chemistry I and physics I

Highest completed courses include one level I chemistry course (see above) and one level I physics course (see above).

Chemistry II or physics II or advanced biology

Highest completed course is advanced biology; International Baccalaureate (IB) biology II; IB biology III; AP biology; field biology; genetics; biopsychology; biology seminar; biochemistry and biophysics; biochemistry; botany; cell and molecular biology; cell biology; microbiology; anatomy; miscellaneous specialized areas of life sciences; chemistry II; IB chemistry II; IB chemistry III; AP chemistry; physics II; IB physics; AP physics B; AP physics C: mechanics; AP physics C: electricity/magnetism; or physics II without calculus.

CREDIT RATIOS FOR POSTSECONDARY COURSES

Courses recorded on students' transcripts were assigned 6-digit codes using the College Course Map (CCM), which is a modification of the Classification of Instructional Programs (CIP). NCES developed the CIP taxonomy in 1981 as a standard for reporting enrollments and credentials in postsecondary programs. Because the CIP taxonomy was developed to report on postsecondary programs, rather than postsecondary courses, a new taxonomy, the College Course Map (CCM), was developed that retained the basic CIP structure but is more appropriate for transcript analyses. The CCM taxonomy was first published in 1990 for use with the NLS:72/86 transcript data, was modified in 1999 for use with the HS&B-So:PETS

Note 6: NAEP, NELS, and HS&B Transcript Studies

Continued

data, and modified again in 2003 for use with the NELS:88/2000 transcript data. Each 6-digit code represents a discrete subject matter, or a “course,” and reflects the finest level of detail in the taxonomy. Specific course titles may vary across institutions. For example, “introduction to accounting” may be “accounting I” at some institutions, but all introductory accounting courses would have the same 6-digit code regardless of their actual title.

The 30 most commonly completed courses for each cohort are identified using “credit ratios,” calculated by summing all the undergraduate credits earned in each of the more than 1,000 6-digit course categories and then dividing that sum by the total number of credits earned. Credit ratios were computed for each of the three weighted samples. Supplemental table 30-1 shows that the credit ratios for the “top 30” courses for the 1992 cohort range from 3.2 percent for English composition to 0.6 percent for introduction to computing. Adelman (forthcoming-a) suggests that with such a large number of course categories, for any one category to contain 0.5 percent of all credits represents a substantial amount.

The institutional selectivity categories for the 1992 cohort in supplemental table 30-2 are from the *American Freshman* (Higher Education Research Institute 1992). The selectivity indicator includes five categories: “highly selective,” “selective,” “nonselective,” “open door,” and “not ratable” (principally less-than-2-year institutions and specialized conservatories of art and music). Institutions from the last two categories, “open door” and “not ratable,” are not included in the analysis reported in indicator 30. Selectivity is a relative measure based on a number of factors, including the ratio of acceptances to applicants and the average composite SAT score of students in the enter-

ing class. In the 1992 cohort, 7.2 percent of students earned a degree from highly selective institutions, 26.1 percent from selective institutions, and 65.8 percent from nonselective institutions.

POSTSECONDARY REMEDIATION COURSES

The remediation categories used in *indicator 18* are based on the following “if-then-else” coding logic:

1. Any courses in remedial reading
2. Two or fewer remedial courses, mathematics only
3. Two or more remedial courses, but no remedial reading
4. One remedial course, not mathematics or reading
5. No remedial courses

This coding logic identifies students with the most serious problem (reading) first. Reading was judged to be the most serious remedial problem because two-thirds of the students who required remediation in reading were also enrolled in a minimum of two other remedial courses. The second level identified students whose only remedial problem was mathematics, and who required, at most, two remedial mathematics courses. In the third level of the logic cascade, 60 percent of the students enrolled in three or more remedial courses other than remedial reading (the logic allowed this combination to include three or more mathematics courses). The fourth level identified those students who completed only one remedial course other than reading or mathematics. The residual group of students completed no remedial courses.

Note 7: International Definitions

LEVELS OF EDUCATION

Indicators 17 and *36* use the International Standard Classification of Education (ISCED) (OECD 1999) to compare educational systems in different countries. The ISCED is the standard used by many countries to report education statistics to UNESCO and the Organization for Economic Cooperation and Development (OECD). The ISCED divides educational systems into the following seven categories, based on six levels of education.

Education preceding the first level (early childhood education) usually begins at age 3, 4, or 5 (sometimes earlier) and lasts from 1 to 3 years, when it is provided. In the United States, this level includes nursery school and kindergarten.

Education at the first level (primary or elementary education) usually begins at age 5, 6, or 7 and continues for about 4 to 6 years. For the United States, the first level starts with 1st grade and ends with 6th grade.

Education at the second level (lower secondary education) typically begins at about age 11 or 12 and continues for about 2 to 6 years. For the United States, the second level starts with 7th grade and typically ends with 9th grade. Education at the lower secondary level continues the basic programs of the first level, although teaching is typically more subject focused, often using more specialized teachers who conduct classes in their field of specialization. The main criterion for distinguishing lower secondary education from primary education is whether programs begin to be organized in a more subject-oriented pattern, using more specialized teachers conducting classes in their field of specialization. If there is no clear breakpoint for this organizational change, the lower secondary education is considered to begin at the end of 6 years of primary education. In countries with no clear division between lower secondary and upper secondary education, and

where lower secondary education lasts for more than 3 years, only the first 3 years following primary education are counted as lower secondary education.

Education at the third level (upper secondary education) typically begins at ages 15 or 16 and lasts for approximately 3 years. In the United States, the third level starts with 10th grade and ends with 12th grade. Upper secondary education is the final stage of secondary education in most OECD countries. Instruction is often organized along subject-matter lines, in contrast to the lower secondary level, and teachers typically must have a higher level, or more subject-specific, qualification. There are substantial differences in the typical duration of programs both across and between countries, ranging from 2 to 5 years of schooling. The main criteria for classifications are (1) national boundaries between lower and upper secondary education and (2) admission into educational programs, which usually requires the completion of lower secondary education or a combination of basic education and life experience that demonstrates the ability to handle the subject matter in upper secondary schools.

Education at the fourth level (postsecondary nontertiary education) straddles the boundary between secondary and postsecondary education. This program of study, which is primarily vocational in nature, is generally taken after the completion of secondary school, typically lasts from 6 months to 2 years, and may be considered as an upper secondary or postsecondary program in a national context. Although the content of these programs may not be significantly more advanced than upper secondary programs, these programs serve to broaden the knowledge of participants who have already gained an upper secondary qualification. This level of education is not included in the analysis for *indicator 17* but is included for select countries in *indicator 36*.

Note 7: International Definitions

Continued

Education at the fifth level (first stage of tertiary education) includes programs with more advanced content than those offered at the two previous levels. Entry into programs at the fifth level normally requires successful completion of either of the two previous levels. *Indicator 17* makes a distinction between two types of tertiary education.

- *Tertiary-type A* programs provide an education that is largely theoretical and is intended to provide sufficient qualifications for gaining entry into advanced research programs and professions with high-skill requirements. Entry into these programs normally requires the successful completion of an upper secondary education; admission is competitive in most cases. The minimum cumulative theoretical duration at this level is 3 years of full-time enrollment. In the United States, tertiary-type A programs include first university programs that last 4 years and lead to the award of a bachelor's degree and second university programs that lead to a master's degree.
- *Tertiary-type B* programs are typically shorter than tertiary-type A programs and focus on practical, technical, or occupational skills for direct entry into the labor market, although they may cover some theoretical foundations in the respective programs. They have a minimum duration of 2 years of full-time enrollment at the tertiary level. In the United States, such programs are often provided at community colleges and lead to an associate's degree.

Education at the sixth level (advanced research qualification) is provided in graduate and professional schools that generally require a university degree or diploma as a minimum condition for admission. Programs at this level lead to the award of an advanced, postgraduate degree, such as a Ph.D. The theoretical duration of these programs is 3 years of full-time

enrollment in most countries (for a cumulative total of at least 7 years at levels five and six), although the length of actual enrollment is often longer. Programs at this level are devoted to advanced study and original research.

For *indicator 36*, postsecondary education includes the fifth and sixth levels, except as noted.

ENTRY RATES

For *indicator 17*, entry rates represent the proportion of people who enter *tertiary-type A* or *B programs* for the first time, regardless of changes in population sizes and of differences among OECD countries in the typical age of entry. The *entry rate* is the sum of the net entry rates for single ages. The net entry rate of a single age (such as age 18) is obtained by dividing the number of first-time entrants of that age in each type of tertiary education by the total population in the corresponding age group (multiplied by 100 to obtain a percentage). This calculation controls for different modal ages of entry into tertiary education across OECD countries.

First-time entrants are those who enroll for the first time in either a type A or type B program. Not all OECD countries are able to distinguish among students entering a tertiary program for the first time and those transferring between different levels of tertiary education or repeating or re-entering a level after an absence. Thus, first-time entry rates for each type of tertiary education cannot be added to obtain the total tertiary-level entry rate. Doing so would result in double counting of some entrants.

When no data on new entrants by age are available (such as is the case for 1998 data on type B programs for Germany and type A and B programs for Japan and Korea, and for 2001 data on type B programs for Germany, Italy, and the Slovak Republic and type A and

Note 7: International Definitions

Continued

B programs for Japan and Korea), the OECD calculates *gross entry rates*, which indicate the ratio of all entrants, regardless of age, to the size of the population at the typical age of entry. Data by a single year of age are available only for those ages 15–29, so the net entry rates for older students are estimated using 5-year age bands.

SOURCE: Organization for Economic Cooperation and Development (OECD), Center for Educational Research and Innovation. (2003). *Education at a Glance: OECD Indicators, 2003*.

Note 8: Classification of Postsecondary Education Institutions

The U.S. Department of Education’s Integrated Postsecondary Education Data System (IPEDS) employs various categories to classify postsecondary institutions. This note outlines the different categories used in varying combinations in the special analysis and several of the indicators.

BASIC IPEDS CLASSIFICATIONS

The term “postsecondary institutions” is the category used to refer to institutions with formal instructional programs and a curriculum designed primarily for students who have completed the requirements for a high school diploma or its equivalent. For many analyses, however, comparing all institutions from across this broad universe of postsecondary institutions would not be appropriate. Thus, postsecondary institutions are placed in one of three levels, based on the highest award offered at the institution:

- *4-year-and-above institutions:* Institutions or branches that award a 4-year degree or higher in one or more programs, or a postbaccalaureate, postmaster’s, or post-first-professional certificate.
- *2-year but less-than-4-year institutions:* Institutions or branches that confer at least a 2-year formal award (certificate, diploma, or associate’s degree), or that have a 2-year program creditable toward a baccalaureate degree.
- *Less-than-2-year institutions:* Institutions or branches that have programs lasting less than 2 years that result in a terminal occupational award or are creditable toward a degree at the 2-year level or higher.

Postsecondary institutions are further divided according to these criteria: degree-granting versus nondegree-granting; type of financial control; and Title IV-participating versus not Title IV-participating.

Degree-granting institutions offer associate’s, bachelor’s, master’s, doctor’s, and/or first-professional degrees that a state agency recognizes or authorizes. *Nondegree-granting* institutions offer other kinds of credentials and exist at all three levels. The number of 4-year nondegree-granting institutions is small compared with the number at both the 2-year but less-than-4-year and less-than-2-year levels.

IPEDS also classifies institutions at each of the three levels of institutions by type of financial control: *public*; *private not-for-profit*; or *private for-profit* (e.g., proprietary schools). Thus, IPEDS divides the universe of postsecondary institutions into nine different “sectors.” In some sectors (for example, 4-year private for-profit institutions), the number of institutions is small relative to other sectors. Institutions in any of these nine sectors can be degree- or nondegree-granting.

Institutions in any of these nine sectors can also be Title IV-participating or not. For an institution to participate in federal Title IV, Part C, financial aid programs, it must offer a program of study at least 300 clock hours in length; have accreditation recognized by the U.S. Department of Education; have been in business for at least 2 years; and have a Title IV participation agreement with the U.S. Department of Education.

- *Indicator 6* includes 2-year and 4-year degree-granting institutions in its analysis.
- *Indicators 18 and 19* include 2-year, 4-year, and less-than-2-year degree-granting institutions in their analyses.
- *Indicators 31, 32, and the special analysis* include 2-year and 4-year, public and private, degree-granting institutions in their analyses.
- *Indicators 37 and 38* include 4-year, public and private, degree-granting institutions in their analyses.

Note 9: Finance

USING THE CONSUMER PRICE INDEX (CPI) TO ADJUST FOR INFLATION

The Consumer Price Indexes (CPIs) represent changes in the prices of all goods and services purchased for consumption by households. Indexes vary for specific areas or regions, periods of time, major groups of consumer expenditures, and population groups. Finance indicators in *The Condition of Education* use the “U.S. All Items CPI for All Urban Consumers, CPI-U.”

The CPI-U is the basis for both the calendar year CPI and the school year CPI. The calendar year CPI is the same as the annual CPI-U. The school year CPI is calculated by adding the monthly CPI-U figures, beginning with July of the first year and ending with June of the following year, and then dividing that figure by 12. The school year CPI is rounded to three decimal places. Data for the CPI-U are available on the Bureau of Labor Statistics web site (given below). Also, figures for both the calendar year CPI and the school year CPI can be obtained from the *Digest of Education Statistics 2002* (NCES 2003–060), an annual publication of NCES.

Although the CPI has many uses, its principal function in *The Condition of Education* is to convert monetary figures (salaries, expenditures, income, and so on) into inflation-free dollars to allow comparisons over time. For example, due to inflation, the buying power of a teacher’s salary in 1998 is not comparable to that of a teacher in 2002. In order to make such a comparison, the 1998 salary must be converted into 2002 constant dollars by multiplying the 1998 salary by a ratio of the 2002 CPI over the 1998 CPI. As a formula, this is expressed as

$$1998 \text{ salary} * \frac{(2002 \text{ CPI})}{(1998 \text{ CPI})} = 1998 \text{ salary in } 2002 \text{ constant dollars}$$

For more detailed information on how the CPI is calculated or the other types of CPI indexes, go to the Bureau of Labor Statistics web site (<http://www.bls.gov/cpi/>).

In *The Condition of Education 2004*, this description of the CPI applies to *indicators 14, 35, 37, 38* and the *special analysis*.

CLASSIFICATIONS OF EXPENDITURES FOR ELEMENTARY AND SECONDARY EDUCATION

Indicator 35 uses three categories of expenditure in its analysis: total public expenditures, current expenditures, and capital expenditures.

Total public expenditures for elementary and secondary education include all expenditures allocable to per student costs and include current expenditures for regular school programs, interest on school debt, and capital outlay. Expenditures on education by other agencies or equivalent institutions (e.g., the Department of Health and Human Services and the Department of Agriculture) are included. Total expenditures exclude expenditures for nonelementary and secondary programs including community services, adult education, and other.

Current expenditures, generally the largest component of total expenditures, are expenditures on goods and services consumed within the current year, which need to be made recurrently to sustain the production of educational services. Current expenditures for *indicator 35* include those incurred for elementary and secondary instructional as well as noninstructional programs. Expenditures for instructional programs include expenditures for instruction; support services (for pupils, instructional staff, general administration, school administration, operation and maintenance of plant); student transportation; and business/central/other support services. Current expenditures for

Note 9: Finance

Continued

noninstructional programs include food services, enterprise operations, and other expenditures.

Compared with total expenditures, current expenditures exclude expenditures for debt service, capital outlay, and reimbursement to other governments (including other governments/school systems). Also excluded are payments made on behalf of the school systems by other governments including employee retirement payments made by state governments to state retirement funds and to social security. Employer contributions made by those few school systems that have their own retirement system/funds are also excluded.

Capital expenditures are the second component of total expenditures. Capital expenditures include interest on school debt and capital outlays. Capital expenditures represent the value of educational capital acquired or created during the year in question—that is, the amount of capital formation regardless of whether the capital outlay was financed from current revenue or by borrowing. Capital expenditures include outlays on construction, land and existing structures, instructional equipment, and all other equipment.

Capital expenditures together with current expenditures equal total expenditures.

GEOGRAPHICAL COST OF EDUCATION INDEX

In *indicator 35*, the Geographical Cost of Education Index (GCEI) is used to adjust the estimates of expenditures per student for geographic differences in the price of hiring and retaining comparable personnel for delivering education. This price is primarily the salary of these personnel. However, the salaries paid are highly correlated with building, transportation, and other costs of producing education, so that the GCEI adjust for both salary and to some extent the price of other resources. School districts having teachers with similar degree attainment,

age, and years of teaching experience can result in very different levels of total expenditure per student depending upon differences in the salaries paid to personnel with these characteristics in different geographic areas. The adjustment of education expenditures by the GCEI provides a measure of the resource level devoted to education that is less sensitive to differences in the price of these inputs among geographic areas than is the level of expenditures alone. For further information on the GCEI, see <http://nces.ed.gov/edfin/prodsurv/data.asp>.

In *indicator 35*, expenditures per student are adjusted only for 1994–95 because 1993–94 is the most recent year for which School and Staffing Survey (SASS) data were used to create the GCEI. An example of the effects of cost adjustment on conclusions drawn from using expenditures compared to price-adjusted expenditures, or “resource levels,” is that inflation adjusted expenditures in 1994–95 were \$7,685 per student in large city school districts and \$7,074 in rural school districts. When also adjusted for differences in the price of education resources in large cities and rural areas using the GCEI, expenditures were \$7,156 per student in large city districts and \$7,674 in rural school districts.

CLASSIFICATIONS OF EXPENDITURES FOR INTERNATIONAL COMPARISONS

Indicator 36 presents international data on public and private expenditures on instructional and noninstructional educational institutions. Instructional educational institutions are educational institutions that directly provide instructional programs (i.e., teaching) to individuals in an organized group setting or through distance education. Business enterprises or other institutions providing short-term courses of training or instruction to individuals on a “one-to-one” basis are not included. Noninstructional educational institutions are educational institutions that provide admin-

Note 9: Finance

Continued

istrative, advisory, or professional services to other educational institutions, although they do not enroll students themselves. Examples include national, state, and provincial bodies in the private sector; organizations that provide education-related services such as vocational and psychological counseling; and educational research.

Public expenditures refer to the spending of public authorities at all levels. *Total public expenditures* used for the calculation of data in *indicator 36* correspond to the nonrepayable current and capital expenditure of all levels of the government that are directly related to education. Expenditure that is not directly related to education (e.g., culture, sports, youth activities, and so on) is in principle not included. Expenditure on education by other ministries or equivalent institutions (e.g., Health and Agriculture) is included. Public subsidies for students' living expenses are excluded to ensure international comparability of the data.

Private expenditures refer to expenditures funded by private sources (i.e., households and other private entities). "Households" mean students and their families. "Other private entities" include private business firms and nonprofit organizations, including reli-

gious organizations, charitable organizations, and business and labor associations. Private expenditures comprise school fees; the cost of materials such as textbooks and teaching equipment; transportation costs (if organized by the school); the cost of meals (if provided by the school); boarding fees; and expenditures by employers on initial vocational training. Private educational institutions are considered to be service providers and do not include sources of private funding.

Current expenditures include final consumption expenditures (e.g., compensation of employees, consumption of intermediate goods and services, consumption of fixed capital, and military expenditure); property income paid; subsidies; and other current transfers paid.

Capital expenditures include spending to acquire and improve fixed capital assets, land, intangible assets, government stocks, and nonmilitary, nonfinancial assets and spending to finance net capital transfers.

Please note that for the purpose of international comparability, the definition of total public expenditures used in the analysis for *indicator 36* is slightly different from that used for *indicator 35*.

Note 10: Fields of Study for Postsecondary Degrees

In accord with the procedure used in the *Digest of Education Statistics*, analyses in *The Condition of Education* use the following 14 general categories for fields of study to provide consistent data for 1970–71 and 2001–02. Most of these general categories group several more narrowly defined fields of study. The lists below detail the specific fields of study, defined by the 1990 Classification of Instructional Program (CIP) codes, that comprise these 14 general categories. These general categories are referred to in *indicator 20*.

Agriculture and natural resources: agricultural business and production; agricultural sciences; and conservation and renewable natural resources.

Biological/life sciences: biology; biochemistry and biophysics; botany; cell and molecular biology; microbiology/bacteriology; zoology; and other biological sciences.

Business management and administrative services: business management/administrative services; marketing operations/marketing and distribution; and consumer and personal services.

Communications: communications, general; advertising; journalism; broadcast journalism; public relations and organizational communications; radio and television broadcasting; other communications; and communications technologies.

Computer and information sciences: computer and information sciences, general; computer programming; data processing technology/technician; information science and systems; computer systems analysis; and other computer and information sciences.

Education: education.

Engineering: engineering; engineering-related technologies; construction trades; and mechanics and repairers from 1969–70 through 2001–02.

English language and literature/letters: English language and literature, general; comparative literature; English composition; English creative writing; American literature; English literature; speech and rhetorical studies; English technical and business writing; and English language and literature/letters, other.

Health professions and related sciences: chiropractic; communication disorders sciences; community health liaison; dentistry; dental services; health services administration; health and medical assistants; health and medical diagnostic and treatment services; medical laboratory technologies; predentistry; premedicine; prepharmacy; preveterinary; medical basic sciences; mental health services; nursing; optometry; pharmacy; epidemiology; rehabilitation and therapeutic services; veterinary medicine; and other health professions.

Mathematics: mathematics and statistics.

Physical sciences: physical sciences, general; astronomy; astrophysics; atmospheric science and meteorology; chemistry; geology; miscellaneous physical sciences; physics; science technologies; and other physical sciences.

Psychology: psychology.

Social sciences and history: social sciences, general; anthropology; archeology; criminology; demography and population studies; economics; geography; history; international relations and affairs; political science and government; sociology; urban affairs/studies; and social sciences and history, other.

Visual and performing arts: visual and performing arts, general; crafts, folk art, and artisanry; dance; design and applied art; theatre arts and stagecraft; film/video and photographic arts; fine arts and art studies; music; and visual and performing arts, other.

Note 11: Expectations of Educational Attainment

Indicator 15 traces the expectations of 10th-graders in 1980, 1990, and 2002, comparing 2002 expectations as well as trends by socioeconomic status (SES) and other characteristics. The data sets analyzed in the indicator differed slightly in how they constructed variables for race/ethnicity, SES, and test scores; and in whether they imputed missing data. This supplemental note describes these differences to provide contextual information for the trend comparisons made in *indicator 15*. The data sets are the following:

- High School and Beyond Longitudinal Study of 1980 Sophomores (HS&B-So:80);
- National Education Longitudinal Study of 1988 (NELS:88/90), “First Follow-up”; and
- Education Longitudinal Study of 2002, Base Year (ELS:2002).

Each of the three surveys elicited student responses to this question: “As things stand now, how far in school do you think you will get?” Although some response categories provided slightly different wording, the responses were collapsed into four broader categories with equivalent meaning: High school diploma or equivalent or less (no postsecondary experience); some college, including vocational/technical (including postsecondary credits but no credentials, certificates, and associate’s degrees—essentially, any postsecondary experience less than a bachelor’s degree); bachelor’s degree; and graduate or first-professional degree.

The HS&B-So:80 and the NELS:88/90 had five categories for race/ethnicity: Hispanic or Latino (of any race) and four categories among non-Hispanic respondents (American Indian/Alaska Native, Asian or Pacific Islander, Black or African American, and White). However, the ELS:2002 included a sixth category: “more

than one race, non-Hispanic.” Respondents in the two earlier surveys who would have identified themselves as multiracial presumably chose one of the available categories or did not respond to the question about their race. Therefore, comparing responses of any of the racial categories over time may be misleading because of this inconsistency. The effects of this change in definitions are unknown, but they are likely to be minor because only 4 percent of the weighted ELS:2002 sample was in the multiracial category.

Socioeconomic status. The SES variable was constructed similarly for each of the three data sets, but some differences exist. First, in NELS:88/90 and ELS:2002, five items were equally weighted to create the variable: father’s educational attainment, mother’s educational attainment, father’s occupation, mother’s occupation, and family income. However, the 1980 survey (HS&B-So:80) omitted mother’s occupation and used only the other four items to create the SES variable. Second, HS&B relied on student reports for the variables used to create the SES variable, while NELS and ELS used parent reports and substituted student reports when parents’ data were unavailable; ELS imputed data that were still missing. Finally, HS&B incorporated both family income and household belongings to estimate income, while NELS used data on family income, turning to household belongings only if income was not reported. For more information on minor differences among the SES-related variables used in the three data sets, see the ELS:2002 codebook, available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004405>

Composite test scores. In all three data sets, available test scores for each student were combined into an average composite score, and quartiles were identified from the distribution of weighted scores for the cohort. However, the tests given and the scoring methods differed

Note 11: Expectations of Educational Attainment

Continued

some across the three data sets. HS&B-So:80 averaged students' scores on three tests to make a composite test score variable: reading, vocabulary, and mathematics. NELS:88/90 collected students' test scores on standardized achievement tests in four subjects: reading, mathematics, science, and history/citizenship/geography. ELS:2002 collected 10th-grade students' scores on achievement tests in reading and mathematics only. The NELS tests differed from those in the other two data sets in another way as well: students took one of several versions (differing in difficulty) of the reading and mathematics tests; the student's score from 8th grade on that subject test, when available, determined which test form he or she got. Scores on those tests were then adjusted (using Item Response Theory methods) to estimate what the scores

would have been if all students had taken the same tests in those two subjects. Finally, ELS scores were norm-referenced (standardized to a national mean), in contrast to NELS scores, which were criterion-referenced.

Imputation. In addition to the differences in variables, the ELS:2002 data used for *indicator 15* include imputed responses, while the NELS:88/90 and HS&B-So:80 data do not. Imputations extrapolate logically from respondents' answers to other items, to the extent possible. When logical inference is not possible, imputations follow tested statistical methods. Therefore, imputation is unlikely to change estimates in a meaningful way. Therefore, trend analysis using data sets—some with imputation and some without—is believed to be valid.

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