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### SCHOOL ENROLLMENT, EDUCATIONAL ATTAINMENT, AND ILLITERACY OCTOBER 1952

(Advance data on the school enrollment of the civilian population 14 years old and over were published in Current Population Reports, Series P-20, No. 43, "School Enrollment: October 1952." Additional data on school enrollment are contained in Series P-50, No. 47, "Employment of Students: October 1952")

The Nation's already large school population is continuing to increase, particularly at the elementary school level. In October 1952, the number of persons 5 to 29 years old enrolled in school reached 31.8 million, representing an increase of 1.4 million over the preceding year and of 4.2 million over the preceding five years, according to the results of a sample survey announced today by Robert W. Burgess, Director, Bureau of the Census, Department of Commerce. Information from other sources indicates a further increase of about 1½ million in the number of children of elementary school age, 6 to 13 years old, between October 1952 and October 1953 but only a slight increase in the number of persons of high school age, 14 to 17 years old.

Of the 31.8 million enrolled persons 5 to 29 years old in 1952, 22.8 million were in elementary school, 7.2 million were in high school, and 1.9 million were in college. (An additional 1.4 million children were enrolled in kindergarten and 0.6 million persons were attending special schools such as trade schools and business colleges.) About 1 million of the 1.4 million increase since the preceding year occurred in the age group 5 to 13 years and reflects the upsurge in births which occurred in the 1940's. Between the ages of 7 and 13 years, school attendance is compulsory in nearly all States; at these ages, about 99 percent of the population were enrolled. At the ages of 16 and 17 years, about 73 percent of the population were enrolled in 1952, compared with about 68 percent in 1947. At the ages of 20 to 24 years, about 10 percent were enrolled.

During the past decade about half of the young people in the United States have completed a full high school education, whereas a generation earlier

about half of the young people had not advanced beyond elementary school. The population 25 to 34 years old in 1952 had completed an average (median) of about 12 years of school; those 55 years old and over had completed an average of only 8 years. During the five years between 1947 and 1952, the number of college graduates living in the United States increased rapidly, from about 4.7 million in 1947 to 6.7 million in 1952.

Illiteracy in the United States continued at a low level. In 1952 only about 2.5 percent of the population 14 years old and over could not both read and write. Illiterate persons were generally found in the older age groups.

Since the statistics presented in this report are estimates based on sample surveys, they are subject to sampling variability. If use is made of the smaller figures or of small differences between figures based on the survey, particular care should be exercised as explained below in the section on "Source and reliability of the estimates."

#### SCHOOL ENROLLMENT

Age and sex.--Of the 3.8 million children 5 years old in October 1952, about 0.8 million, or 22 percent, were enrolled in school and 1.4 million, or 36 percent, were enrolled in kindergarten; of the 3.0 million 6-year-olds, 2.9 million, or 95 percent, were enrolled in school and only about 2 percent were enrolled in kindergarten. (See tables 1 and 8.) About 99 percent of all children 7 to 13 years old (a compulsory school age group in nearly all States) were enrolled in school in October 1952, according to the survey. Among persons 14 and 15 years old, about 96 percent were enrolled in school, but the

enrollment rates for succeeding age groups diminished sharply. About 73 percent of those 16 and 17 years old were enrolled, 29 percent of those 18 and 19 years old, 10 percent of those 20 to 24, 3 percent of those 25 to 29, and only about 1 percent of those 30 to 34 years old.

A comparison of enrollment rates for males with those for females shows little difference for the age groups under 18 years. In the older age groups, however, males had a substantially higher enrollment rate; the rate for males was about 1½ times the rate for females in the age group 18 and 19 years, and about 3 or 4 times the rate for females in the group 20 to 34 years old. The higher rates for men in the older age groups reflect the enrollment of veterans of military service.

Comparisons with earlier dates.--As indicated below, there have been large changes during recent years in the number of persons of each age who were enrolled in school. These have had a very considerable impact on the Nation's school system. At elementary school ages, the changes reflected simply the increase in population.

In October 1952, there were approximately 840,000 children 5 years old enrolled in school, representing an increase of about 260,000 over the number for October 1951. (See table 1.) The 2,900,000 6-year-olds who were in school in 1952 represented an increase of about 270,000 over the corresponding number in the previous year, and of about 530,000 over the number in 1947. These increases reflect population growth as a consequence of the many births occurring in the years shortly after World War II. Between October 1947 and October 1952, the enrolled population in the age group 7 to 13 years increased by about 3.1 million to 18.4 million, with about 470,000 of the increase occurring between 1951 and 1952.

The 8.6 million children 7 to 9 years old enrolled in school in October 1952 was 1.7 million greater than in October 1947. Almost no change occurred between 1951 and 1952, however. This situation is due to the fact that the age group 7 to 9 years in both these years reflected similar numbers of children born in the early years of the 1940's, whereas the children 7 to 9 years old back in 1947 reflected births in years of somewhat lower fertility.

Among children 10 to 13 years old in October 1952, the number enrolled was 9.8 million, an increase of 1.4 million over the figure for October 1947. This increase reflects the large number of children born near the beginning of the 1940 decade, who are now generally in the higher elementary school grades.

Between 1947 and 1952, enrollments increased by about 510,000 for those 14 and 15 years old and

190,000 for those 16 and 17 years old, despite the fact that the latter group actually showed a decrease in population during that period. Relatively more persons in these age groups in 1952 were continuing their education to higher levels. The increasing proportion of persons enrolled may reflect the upward trend of family incomes, more stress by employers on their employees' having at least a high school education, expanded and more accessible school facilities, and stricter enforcement of compulsory attendance laws.

In October 1952, there were 630,000 men 20 to 24 years old enrolled in school, a decline of about a third from the 947,000 in the postwar peak year of 1947. The general decline in enrollment of men in these ages since 1947 probably reflects the gradual exhaustion of educational rights of veterans under the World War II "GI Bill," the fact that the right to enroll for the first time under the bill had expired, and the passing of World War II veterans into the older age groups. Although the number of World War II veterans enrolled in school diminished somewhat between 1951 and 1952, there was an increase in the enrollment of nonveterans. Furthermore, veterans had educational privileges under the "Korean GI Bill" for the first time; hence the number of enrolled men 20 to 24 years old was about the same in 1951 and 1952. (See table 3.)

Only about one-half as many women as men 20 to 24 years old were attending school in October 1952, and about one-fourth as many women as men 25 to 34 years of age were enrolled. These, however, represent larger proportions than in October 1947. The fact that enrollment of women diminishes more rapidly than that of men at the older ages probably reflects, to a large extent, differences between the sexes with regard to their future plans. Women tend to marry at a younger age than men and a larger proportion of men enter professional and managerial positions which usually require long periods of educational training.

As may be seen from table A, the percentage enrolled in school has remained fairly constant since 1945 for persons 6 to 13 years old. The small fluctuations which occurred formed no special pattern and may be accounted for by sampling variability. The ages of compulsory school attendance are from 7 to 16 years, according to the laws of a majority of the States; but many local cities within these States, as well as some entire States, require children 6 years old to attend school. Attendance at all ages, but particularly at older ages, is affected by some exceptions for physical disability, distance from school, graduation from elementary school, and seasonal farm labor. Hence, the percentage enrolled in school is highest, about 99 percent, for ages 7 to 13 years. The data in table A indicate a general increase since 1945 in the percent enrolled among persons 14 to 19 years old; one of the largest increases took place among persons in the high school

ages of 16 and 17 years, where there has been a rise from about 65 percent in 1945 to about 73 percent in 1952. Only 4 percent of the persons 20 to 24 years old were enrolled in school in 1945, as compared with about 9 or 10 percent each year since 1946;

many veterans have been attending schools and colleges with aid received under the "GI Bills" of World War II and of the Korean conflict. In the prewar year of 1940, only about 7 percent of those 20 to 24 years old were enrolled.

Table A.--PERCENT OF THE CIVILIAN NONINSTITUTIONAL POPULATION 5 TO 24 YEARS OLD ENROLLED IN SCHOOL, BY AGE, FOR THE UNITED STATES: OCTOBER 1945 TO 1952

Year	Total, 5 to 24 years	5 years <sup>1</sup>	6 years <sup>1</sup>	7 to 9 years	10 to 13 years	14 and 15 years	16 and 17 years	18 and 19 years	20 to 24 years
1952.....	66.9	22.2	95.1	98.7	98.9	96.4	73.4	28.8	9.7
1951.....	65.6	18.9	93.1	99.0	99.2	94.8	74.9	26.2	8.6
1950.....	63.9	20.8	94.9	98.9	98.5	94.8	71.3	29.7	9.2
1949.....	62.3	21.6	95.2	98.5	98.7	93.5	69.5	25.3	9.2
1948.....	61.2	21.6	93.4	98.3	98.0	92.7	71.2	26.9	9.7
1947.....	60.6	25.4	93.8	98.4	98.6	91.6	67.6	24.3	10.2
1946.....	61.1	32.3	93.8	98.1	98.3	92.8	66.7	22.5	10.1
1945.....	64.0	28.3	93.2	98.2	98.0	92.1	64.9	20.7	3.9

<sup>1</sup> Enrollment figures for 1946 and 1945 include varying proportions attending kindergarten; such children were excluded beginning in 1947.

Urban and rural residence.--With one exception, the proportion enrolled in school for each age group was generally highest in urban areas, intermediate in rural-nonfarm areas, and least in rural-farm areas. (See table 1.) The exception was in the compulsory school attendance ages of 7 to 13 years where both urban and rural-nonfarm areas had enrollment rates of about 99 percent; rural-farm areas were not far behind with a rate of about 96 percent, as a result of some failures to attend for reasons of seasonal farm labor, distance from school, etc. In the later high school ages of 16 and 17 years, about 77 percent of the youths in urban areas and about 75 percent in rural-nonfarm areas were enrolled, compared with about 62 percent in rural-farm areas. (The figures of 77 percent and 75 percent are not significantly different.) In the college ages of 20 to 24 years, about 12 percent of those in urban areas were enrolled, as compared with about 5 percent in rural areas. Some persons from rural areas were living in urban areas in order to attend college, but the effect of this was minimized by instructions to enumerators to enumerate unmarried students at the home of their families when the students were living away from home while attending college. (In the 1950 Census, all college students were enumerated at their school residence. In the Current Population Surveys, only married college students are counted at the school residence.)

Color.--A comparison of the enrollment rates for 1952 suggests a tendency for rates among nonwhites to be about the same as for whites for the age groups below 14 years of age. (See table 2.) Other surveys also indicate that there has been a tendency in recent years for whites and nonwhites to start school at nearly the same age and for nearly the same proportion to remain in school until they have passed through the compulsory attendance ages.

Veteran status.--The number of male veterans of World War II who were enrolled in school continued

to decline but in 1952 still represented about 34 percent of all enrolled men 20 to 34 years old; the corresponding proportion was 91 percent in the peak year of 1947. About 330,000 veterans were enrolled in 1952 compared with 1.2 million in 1947. (See tables 3 and 4.) The older average age of the veterans in 1952 than in 1947 was reflected in the fact that at the later date most of the enrolled veterans were 25 years old and over whereas in 1947 most were in the group 20 to 24 years. An increase in enrollment of young nonveterans partly offset the decline in enrollment of veterans of World War II, with the result that total enrollment of men 20 to 34 years old was about 1.0 million in 1952, compared with about 1.4 million in 1947.

Veterans of service since July 1950 who were enrolled in school in 1952 numbered about 70,000, of whom about 36,000 were also veterans of World War II.

Type of school--Acceleration and retardation.--There were 22.8 million persons 5 to 34 years old enrolled in elementary schools in October 1952; about 7.2 million were in high schools and 2.0 million in colleges or professional schools. (See table 4.) Approximately equal proportions of males and females were attending elementary and high schools, but nearly twice as many men as women were enrolled in college.

The proportion of persons of a given age who are enrolled in a type of school above or below the level normally expected for that age is a rough indication of relative "acceleration" or "retardation" in education. Approximately 98 percent of all children 5 to 13 years old enrolled in school (excluding those in kindergarten) were in their normal type of school, that is, in elementary school; 84 percent of those 14 to 17 years old enrolled were in high school; and 78 percent of those 18 to 29 years old enrolled were in college. Acceleration is

represented by the 2 percent of enrolled children of elementary school age (5 to 13 years) who were in high school, and by the 2 percent of the enrolled persons of high school age (14 to 17 years) who were in college. Retardation is indicated by the 15 percent of enrolled persons of high school age who were in elementary school, and by the 22 percent of enrolled persons of college age (18 to 29 years) who were in high school or elementary school.

Among persons of high school age, there was greater retardation among males than females. Approximately 17 percent of enrolled males 14 to 17 years old were in elementary school as compared with 12 percent of the females in the same age group. For the college ages, special care must be exercised in the interpretation of figures by sex, since enrolled females 18 to 29 years of age are much more concentrated among those 18 and 19 years old than in the case of males. Retardation in school was found to be relatively greatest in rural-farm areas and least in urban areas. (See tables 5 and 6.) As might have been expected, in the larger urban areas more of the enrolled persons of college age were actually attending college. Thus, 86 percent of the persons 18 to 24 years old enrolled in school in urbanized areas were attending college, as compared with only 68 percent in other urban areas. Each urbanized area includes at least one city of 50,000 inhabitants or more and its surrounding closely settled urban fringe.

A higher degree of retardation exists among nonwhites than among whites. (See table 7.) Among enrolled children 14 to 17 years old, 37 percent of the nonwhites were in elementary school as compared with 12 percent of the whites. Also, 47 percent of the enrolled nonwhites 18 to 24 years old were in high school as compared with 21 percent for whites.

There are many factors which may account for either acceleration or retardation. Among them are "skipping" grades and failure to be promoted, starting school at an abnormally early or late age, and missing terms because of sickness, service in the Armed Forces, and temporary employment. A much more refined study of acceleration and retardation can be made from 1950 Census data which have been published in Series P-C on single years of age by single grades of school in which enrolled.

Public and private schools.--Among children 5 and 6 years old enrolled in kindergarten in October 1952, about 1 in 5 were enrolled in private schools. (See table 8.) Among students in elementary school, the corresponding proportion in private schools was 1 in 9; among high school students, 1 in 11; and among college students, 1 in 2. (See table 9.)

Special schools.--In October 1952, the number of persons 14 to 29 years old attending "special"

schools,<sup>1</sup> who were not also attending elementary school, high school, or college, was about 480,000. (See table 10.) This represents a decrease of about 220,000 from the October 1951 figure of 700,000. Much of the decrease can be accounted for by a drop in the number of veterans enrolled in special schools. About 120,000 male veterans 20 to 29 years old were in special schools in 1952 as compared with 300,000 in 1951.

About equal proportions of males and females were enrolled in special schools in 1952. Since enrollment in special schools was confined almost completely to persons at age 18 and over, attendance at special schools probably represents mostly study after graduation from high school.

The 440,000 persons 18 to 29 years old attending special schools in October 1952 may be compared with the approximately 2,260,000 persons of the same age enrolled in "regular" schools. Thus, about one-sixth of those in this age range pursuing further education were attending a school outside the regular school system. The ratio of attendance at special schools to enrollment in regular schools ranged from 1 to 7 among those 18 to 24 years old, to 1 to 2 in the group 25 to 29 years old.

#### EDUCATIONAL ATTAINMENT

Data on educational attainment are given in this report for the population 14 years old and over. It should be noted, however, that the population 14 to 24 years old includes many youths and young adults who were still attending school at the time of the survey, whereas the population 25 years old and over includes mainly persons who have completed their formal schooling.

Age and sex.--By October 1952, persons 14 to 17 years old had completed an average (median) of 9.5 years of school. (See table 11.) (Since about 85 percent of persons in this age group were still enrolled in school in 1952, according to table 4, the highest grade of school completed was usually the grade below the one in which they were enrolled.) Persons 18 to 24 years old had completed about 12 years of school.

For persons 25 years old and over, there was a pattern of increasing educational attainment at successively younger ages. The data indicate that the average person 65 years old or over, who had probably received most of his education about two generations ago, was an elementary school graduate (median of 8.2 years); the average person 45 to 54 years old, who probably received most of his schooling more than one generation ago, had completed one

<sup>1</sup> Generally trade schools or business colleges. See the section on "Definitions and explanations" for a fuller statement.

year of high school (median of 9.0 years); and the average person 25 to 34 years of age, who completed his education in the past decade, was a high school graduate (median of 12.2 years).

For each level of school, the highest percentage of persons 25 years old and over who had completed that level or more was at the youngest ages and the lowest percentage at the oldest ages. Thus, persons completing at least elementary school ranged from about 89 percent of those 25 to 29 years old to about 55 percent of those 65 years old and over, persons completing at least high school ranged from about 57 percent of those 25 to 29 years old to about 18 percent of those 65 years old and over, and persons completing 4 years or more of college ranged from about 10 percent of those 25 to 29 years old to only 4 percent of those 65 years old and over.

At the lower end of the attainment scale, it is estimated that about 1 percent of persons 25 to 29 years old had completed no years of schooling, as compared with 2 percent of those 45 to 54 years old and 6 percent of persons 65 years old and over. Persons having completed fewer than 5 years of school (often called "functional illiterates") constituted about 4 percent of those 25 to 29 years old, 9 percent of those 45 to 54 years old, and 21 percent of those 65 years old and over.

There was a tendency for girls in their teens to have completed about one-half grade more of school than boys in their teens. But for persons 20 to 24 years old, the difference between the medians for the two sexes was smaller.

Women 25 years old and over, as a group, also had a somewhat higher median educational attainment (10.4 years) than men (9.7 years). Among persons reporting on their attainment, relatively fewer women than men had completed less than 5 years of elementary school (8 percent vs. 11 percent), relatively more women than men had completed at least elementary school (78 percent vs. 74 percent), and relatively more were at least high school graduates (40 percent vs. 37 percent). Relatively fewer women than men were college graduates, however (6 percent vs. 8 percent). Among persons who had completed at least one year of college, about 52 out of 100 men had graduated, as compared with 43 out of 100 women.

Urban and rural residence.--The median number of school years completed by persons 25 years old and over in October 1952 varied by urban-rural residence. Persons in urban areas had the highest median educational attainment (10.8 years), those living in rural-nonfarm areas ranked next (9.7 years), and persons in rural-farm areas ranked lowest (8.5 years). (See table 12.) Within urban areas, there was no consistent pattern of variation by size of place. Urbanized areas of less than 250,000 persons had one of the highest medians (11.3 years).

The lower educational attainment in rural areas may reflect, in part, a tendency for persons who remained in rural areas to have discontinued schooling at a lower grade than persons who moved from rural areas to urban areas. Also, proportionately more of the high schools and colleges are located in urban areas. The tendency of the larger urbanized areas to have slightly lower median educational attainments than the smaller areas probably reflects the higher proportion of foreign-born whites and of nonwhites in the big cities.

Color.--A comparison of median school years completed by the total and nonwhite population 25 years old and over for 1952 shows significant differences. (See tables 11 and 13.) Nonwhite adults had completed about 7.1 years of school, on the average, as compared with 10.1 years for all adults; the median for nonwhite males was about 6.8 years and for nonwhite females, 7.4 years. For each age group above 25 years, the median for nonwhites was considerably smaller than for the total population. The relative difference, however, was much less among the younger persons over 25. Thus, for persons 25 to 29 years old, the median was 12.2 years for all persons and 9.3 years for nonwhites, whereas, for persons 65 years old and over, the median was 8.2 years for all persons and 3.5 years for nonwhites.

Among youths 18 and 19 years old, about 55 percent of the total population had completed at least a high school education as compared with 26 percent for nonwhites; for persons 20 to 24 years old, those completing at least high school amounted to 59 percent of the total population and 30 percent of the nonwhite population; and for those 25 years old and over, 38 percent of all persons and 15 percent of nonwhites completed at least high school. At the extremes, 7 percent of all persons 25 and over and only 2 percent of nonwhites completed 4 or more years of college; conversely, about 9 percent of the total population in the age group had less than 5 years of schooling as compared with 30 percent of the nonwhite population.

Changes since 1947.--Between 1947 and 1952 the median educational attainment of persons 14 to 24 years old increased less than that of persons over 25. (See tables 11 and 13 to 15.) For the population 25 years and over, as a group, the median rose during the 5-year period from about 9.0 years in 1947 to about 10.1 years in 1952. Actually, this rise took place mainly at ages over 30. The most striking gain appears in estimates for the age group 35 to 44 years, where the median rose by about 1.5 years. The improvement in the medians for these age groups reflects, in part, the differences between relatively poor educational opportunities during the depression of the 1930's and relatively good educational opportunities during the prosperous 1940's. The rise at the older ages reflects progressive expansion of education in the past; as persons with less schooling

die or pass on to older ages, they are followed by persons who have had the advantage of more schooling.

Veteran status.--Despite the fact that the education of many veterans had been interrupted upon their entrance into the Armed Forces, veterans in general attained higher levels of school by 1952 than had nonveterans of comparable age. (See table 16.) For example, veterans of World War II in ages between 25 and 44 years had completed an average of about 12 years of school as compared with an average of about 10 years among nonveterans in these ages. The results are affected by the selective process whereby the Armed Forces tended to eliminate persons in the lowest educational levels and thus to raise the average for the veteran group. Still another important factor is the advantage of educational privileges under the "GI Bill" used by many veterans after completing their service.

#### ILLITERACY

Approximately 2.8 million persons 14 years old and over in October 1952 were illiterate, that is, were unable to read and write either in English or in any other language. The illiterate population comprised 2.5 percent of all persons 14 years old and over. (See table 17.) The population 14 years of age and over increased by about 4 million (more than 3 percent) in the five years following the October 1947 survey, but the number of illiterates remained approximately the same.

Age and sex.--The rate of illiteracy in 1952 tended to be higher in each successively older age group, ranging from about 1 percent for persons 14 to 24 years old to about 7 percent for those 65 years old and over. The lower rates among younger persons reflect the progress that has been made over the years in expanding educational opportunities. The concentration of illiterates at the older ages is due, in part, also to the aging of the foreign-born population with its higher rate of illiteracy. The median age of the illiterate population is 56 years as compared with 40 years for all persons 14 years old and over.

There were proportionately fewer illiterates among females than males in 1952 and this pattern tended to prevail in the various age and residence groups. Approximately 3 percent of all males 14 years old and over were illiterate as compared with 2 percent for females.

Urban and rural residence.--The rate of illiteracy among the farm population (6 percent) was about three times as great as the rate among the nonfarm population (2 percent). There are many factors which may be cited as probable reasons for this wide variation. It is likely, for instance, that the general decrease for several decades in the proportion of the population on farms involved the movement of persons from farms who had attained a higher educa-

tional level, on the average, than those who remained. In addition, because of the nature of work on family farms, many farm children may have dropped out of school to work at home before they had attended school long enough to learn to read and write. These factors, combined with the inaccessibility of schools in some rural areas, probably accounts for the major part of the difference in illiteracy rates in the different residence groups.

In urban areas the rate of illiteracy was approximately the same for males and females. Among farm persons, the proportion of illiterate males was almost twice that for females--7 percent as compared with 4 percent.

Color.--Approximately 10 out of every 100 nonwhite persons in 1952 were illiterate as compared with 2 out of every 100 white persons. The illiteracy rates for the nonwhite population ranged, however, from 4 percent for persons 14 to 24 years old to 33 percent for persons 65 years old and over. These facts indicate both the past improvement and the potential future improvement in the over-all illiteracy rate for nonwhites. Yet at present a wide difference still exists between the illiteracy rates of whites and nonwhites. Furthermore, the difference between the illiteracy rates of nonwhite males and females tended to be greater, age for age, than that between white males and females.

Years of school completed.--In October 1952, the question on illiteracy was asked of all persons who had completed less than 6 years of school. It was assumed that practically all persons who were illiterate would fall in this group. The proportion reported as illiterate ranged from about 78 percent of all persons having no formal schooling to only 1 percent of those with 5 years of schooling. (See tables 18 and 19.) Furthermore, the proportion illiterate in each sex, color, and residence group tended to decrease sharply as the number of years of school completed increased. There is evidence that many persons beyond the customary school ages have learned to read and write by some means, perhaps often without the benefit of formal training at a school.

Estimates of illiteracy for 1950.--In each census from 1870 through 1930 the Bureau of the Census collected data on the literacy of the population 10 years old and over. Any person who was not able to read and write, either in English or in some other language, was classified as illiterate. In 1950 as in 1940, however, in order to obtain a more comprehensive picture of the educational level of the population, information was obtained on the highest grade of school completed as a substitute for data on illiteracy.

It is difficult to define illiteracy for an individual in terms of the number of years of school completed; thus, data from the 1952 and 1947 surveys

show that the completion of no one particular grade of school corresponds to the attainment of literacy. This fact may stem in part from such factors as variation in methods of teaching and individual differences in learning abilities, as well as variation in responses to the survey questions. Also some persons learn to read and write without the benefit of formal education. As pointed out above, however, there is a well-established pattern in the general relationship between grade of school completed and illiteracy for the population as a whole.

By making use of this pattern of relationships the estimated number and proportion illiterate were computed as of the date of the 1950 Census (April 1950)--a date midway between the dates of the October 1952 and October 1947 surveys. An average of the rates of illiteracy obtained from these two surveys for each age-sex group having completed a given grade of school was applied to the same age-sex-grade-completed group shown in the 1950 Census of Population, Volume II. A summary of the results is shown in table B.

Table B.--ESTIMATES OF ILLITERACY, BY AGE AND SEX, FOR THE UNITED STATES: 1950 AND 1940

Age	Both sexes						Male, 1950			Female, 1950		
	1950			1940			Total	Illiterate		Total	Illiterate	
	Total	Illiterate		Total	Illiterate			Number	Per-cent		Number	Per-cent
		Number	Per-cent		Number	Per-cent						
Total, 14 and over....	111,703,400	3,623,000	3.2	101,102,924	4,218,000	4.2	54,601,105	1,966,000	3.6	57,102,295	1,657,000	2.9
14 to 24 years.....	24,219,920	452,000	1.9	26,327,088	552,000	2.1	11,972,755	266,000	2.2	12,247,165	186,000	1.5
25 to 34 years.....	23,641,395	425,000	1.8	21,339,026	506,000	2.4	11,467,290	242,000	2.1	12,174,105	183,000	1.5
35 to 44 years.....	21,239,845	487,000	2.3	18,333,220	734,000	4.0	10,402,195	286,000	2.7	10,837,650	201,000	1.9
45 to 54 years.....	17,172,120	577,000	3.4	15,512,071	895,000	5.8	8,484,515	298,000	3.5	8,687,605	279,000	3.2
55 to 64 years.....	13,173,270	750,000	5.7	10,572,205	741,000	7.0	6,540,100	400,000	6.1	6,633,170	350,000	5.3
65 years and over.....	12,256,850	932,000	7.6	9,019,314	791,000	8.8	5,734,250	473,000	8.2	6,522,600	458,000	7.0

A comparison of the illiteracy rates for 1952, 1950, and 1947 shows that the 1950 figures are somewhat higher than the others. This difference may be explained in large part by the inclusion of the institutional population in the 1950 data but not in those for 1952 or 1947; the institutional population undoubtedly contained a relatively large proportion of illiterates. All members of the Armed Forces in continental United States were included in 1950 but only a part of them in 1952 and 1947; the influence of this difference in coverage on the rates of illiteracy shown is thought to have been quite small and in the opposite direction. In addition, there was a difference in wording of the educational attainment questions in 1952 and 1950, on the one hand, and in 1947, on the other hand, as is explained in the section of "Definitions and explanations." The new wording used in 1952 and 1950 tended to make many persons report fewer years of school completed than they would have reported under the old wording. This may, in turn, have had some effect on the illiteracy rates shown. There may also be some variation in responses obtained in censuses and surveys, arising from many causes, such as the thoroughness of the enumerator in explaining concepts or in making callbacks when a respondent other than the person concerned is not sure of the facts.

The figures for 1940 shown in table B are reprinted from table 4 of the Current Population Reports, Series P-20, No. 20, and are based on a method of estimation which is not strictly comparable with that for 1950. In preparing the 1940 estimates, the illiteracy rates for 1947 were applied to corresponding age-sex-grade-completed groups shown in the 1940 Census of Population, Volume IV. In pre-

paring the 1950 estimates, the illiteracy rates for two dates centering on April 1950 were applied, as explained above. Since there has been a secular trend toward lower illiteracy rates, with many of the rates within attainment classes showing declines from 1947 to 1952, it is reasonable to believe that the illiteracy rates shown for 1940 may be slightly lower than they would have been if they had been based on data for a year (or combination of years) nearer to 1940. The magnitude of the error, however, is probably small enough so that a comparison of the figures for 1940 and 1950 is not seriously affected thereby.

#### RELATED REPORTS

School enrollment statistics for October of each year from 1951 back to 1945 have been published in the following reports: 1951--Series P-20, No. 40; 1950--Series P-20, No. 34; 1949--Series P-20, No. 30; 1948--Series P-20, No. 24; 1947--Series P-20, No. 19; 1946--Series P-20, No. 1; and 1945--Series P-S, No. 9. Enrollment data for April 1947 were published in Series P-20, No. 12.

Additional school enrollment data on the population 14 years old and over for October 1952 (and earlier years) are contained in the Bureau of the Census report "Employment of Students: October 1952," Series P-50, No. 47.

Data on educational attainment for persons 14 years old and over have been published in Current Population Reports, "Educational Attainment of the Civilian Population: April 1947," Series P-20, No. 15.

Final data on school enrollment and educational attainment for States and smaller areas, and for the United States as a whole, from the 1950 Census appear in Population Volume II, Characteristics of the Population, Chapters B and C.

Data on illiteracy (inability to read and write) cross-classified by educational attainment based on the Current Population Survey, were published in the report "Illiteracy in the United States: October 1947," Series P-20, No. 20.

Comparability.--It should be noted, however, that data on school enrollment and education attainment from the Current Population Survey for 1952 may differ from 1950 Census data for reasons other than the differences in the dates. In the first place, the data for 1952 exclude the institutional population and members of the Armed Forces living in barracks on post in the United States. These two groups were included in the 1950 Census. Second, there were differences in field work. The small group of Current Population Survey enumerators were more experienced and had more intensive training and supervision than the large number of temporary census enumerators and may have more often obtained more accurate answers from respondents. Third, the enrollment data for the two periods differ because the census was taken in April and relates to enrollment since February 1, whereas the survey was taken in October and relates to enrollment in the current term. This difference in months of the year also affects slightly the data on attainment for persons of school age.

Data on illiteracy obtained in the October 1952 survey will differ very slightly from the October 1947 data, in part, because the question on illiteracy in 1952 was asked of all persons who had completed less than 6 years of school whereas the 1947 illiteracy question was confined to persons completing less than 5 years of school. Furthermore, the questions on level of schooling completed differed in the two surveys as explained below. There was probably a greater tendency toward overstatement of years of school completed in the 1947 survey when only one question was asked. In the 1952 survey, as in the 1950 Census, two questions were asked in order to overcome the exaggeration of attainment reported. An overstatement of year of school completed in 1947 may have resulted in a slight underestimation of the number of illiterates for that year.

These several types of differences, however, should not seriously affect the conclusions that have been drawn from comparisons of the data for 1952, 1950, and 1947.

Data from school systems.--Information on school enrollment and educational attainment is also collected and published by Federal, State, and local governmental agencies, and by independent research organizations. This information is obtained from

reports of school systems and institutions of higher learning, and from other surveys and censuses. These data are only roughly comparable with data collected by the Bureau of the Census by household interviews, however, because of differences in definitions, subject matter covered, time references, and enumeration methods. To illustrate, for comparable grades, the enrollment figures of the Bureau of the Census tend to be lower than those in the Biennial Survey of Education conducted by the United States Office of Education, largely because the census data refer to shorter time periods and count a person only once, although he may have attended more than one school during the reporting period. In the biennial survey, some persons are included in the enrollment figures more than once, such as those enrolled in both public and private schools and, generally, those enrolled in two different States at any time during the school year. Furthermore, children enrolled in kindergarten are included in the total enrollment figures of the Office of Education but not in those of the Bureau of the Census.

#### DEFINITIONS AND EXPLANATIONS

Population coverage.--The figures shown for 1947 to 1952 are for the civilian population excluding the relatively small number of inmates of institutions.

Urban and rural residence.--The definition of urban and rural areas which was used in the October 1952 survey was the same as that used in the 1950 Census, but it differed substantially from that used in surveys and censuses before 1950. According to the definition that was adopted for use in the 1950 Census, the urban population comprises all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs, and villages; (b) incorporated towns of 2,500 inhabitants or more, except in New England, New York, and Wisconsin, where "towns" are simply minor civil divisions of counties; (c) the densely settled urban fringe, including both incorporated and unincorporated areas, around cities of 50,000 or more; and (d) unincorporated places of 2,500 inhabitants or more outside of any urban fringe. The remaining population is classified as rural.

Size of place.--The urban population is classified as living in urbanized areas or in urban places outside urbanized areas. According to the definition used in the 1950 Census and in the April 1952 Current Population Survey, the population in urbanized areas comprises all persons living in (a) cities of 50,000 inhabitants or more in 1940 or according to a special census taken between 1940 and 1950; and (b) the densely settled urban fringe, including both incorporated and unincorporated areas, surrounding these cities. Residents of urbanized areas were classified according to the size of the entire area rather than by the size of the place in which they lived. The remaining urban population is classified



as living in the smaller urban places not in the urbanized areas.

Farm and nonfarm residence.--The rural population is subdivided into the rural-farm population, which comprises all rural residents living on farms, and the rural-nonfarm population, which comprises the remaining rural population. The method of determining farm and nonfarm residence in the October 1952 Current Population Survey is the same as that used in the 1950 Census but differs somewhat from that used in censuses and surveys before 1950. In the 1950 Census, as in the present survey, persons on "farms" who were paying cash rent for their house and yard only were classified as nonfarm; furthermore, persons in institutions, summer camps, and tourist courts were classified as nonfarm.

Age.--The age classification is based on the age of the person at his last birthday.

Color.--The term "color" refers to the division of the population into two groups, white and nonwhite. The nonwhite group includes Negroes, Indians, Japanese, Chinese, and other nonwhite races.

School enrollment.--The school enrollment statistics for October 1952 are based on replies to the enumerator's inquiry as to whether the person had been enrolled at any time during the current term or school year in any type of day or night school, public, parochial, or other private school in the regular school system. Such schools include elementary schools (but not kindergartens); high schools (including junior and senior high); and colleges, universities, and professional schools. Children enrolled in kindergarten are not included in the enrollment figures for "regular" schools, but are shown separately. Persons attending "special" schools not in the regular school system, such as trade schools or business colleges, are also not included in the enrollment figures but are shown separately. Persons enrolled in classes which do not require physical presence in school, such as correspondence courses or other courses of independent study, and in training courses given directly on the job, are neither reported as enrolled in school nor included in the "special" school category.

The data shown for all the dates--1945 to 1952--are comparable (except for children of kindergarten age, as indicated below) with respect to the coverage of schools and colleges.

For children 5 and 6 years old, the enrollment data for 1947 to 1952 shown in table A are comparable with each other but not with those for the years 1945 and 1946. The 5-year-olds (and, to a lesser extent, 6-year-olds) classified as "enrolled" in 1945 and 1946 included some kindergarten children among them, whereas in the 1947 to 1952 surveys those children who were enrolled in kindergarten were sep-

arately identified and eliminated from the school enrollment figures.

Type of school.--The statistics on type of school indicate the number of persons enrolled at each of three levels: elementary school (generally first to eighth grades), high school (generally ninth to twelfth grades), and college or professional school. The last group includes graduate students in colleges or universities. Persons enrolled in junior high school through the eighth grade are classified as in elementary school, and the others as in high school.

Public or private school.--In this report, a public school is defined as any educational institution under the legal control of a public body.

Years of school completed.--Data on years of school completed in this report were derived, as in the 1950 Census, from the combination of answers to two questions, (a) "What is the highest grade of school that he has attended?" and (b) "Did he finish this grade?" Both questions were asked of all persons 14 years old and over.

The questions on educational attainment applied only to progress in "regular" schools, as defined in the section on "School enrollment."

The 1947 figures on educational attainment shown in this report were derived from a single question on highest grade of school completed. There is some evidence that in answer to the single question respondents frequently reported the year or grade in which they had last been enrolled, instead of the one completed. The 1952 questions tend to reduce this kind of error. It is possible, therefore, that the apparent amount of increase in educational attainment between 1947 and 1952 would have been greater than that shown in this report if the questions had been the same in both surveys.

The median year of school completed may be defined as that year which divides the population group into two equal parts--one-half having completed more schooling and one-half having completed less schooling than the median. These medians are expressed in terms of a continuous series of numbers representing years of school completed. For example, the completion of the first year of high school is indicated by 9 and the first year of college by 13.

Illiteracy.--In 1952, as in past censuses and surveys, persons who could not both read and write a simple message either in English or any other language were classified as illiterate. Thus, illiterates include persons who are able to read but not write. Persons who formerly knew how to read and write but who were unable to do so at the time of the survey because of mental or physical impairment, such as blindness, are classified as literate.

In October 1952, the question on literacy was asked of those persons 14 years old and over who had completed less than 6 years of school; all persons who had completed 6 or more years of school were classified as literate. In October 1947, the literacy question was asked only of those completing less than 5 years of school. Since only about 1 percent of those with 5 years of schooling were reported as illiterate in 1952, this difference in coverage was not an important source of change in the illiteracy rate between 1947 and 1952.

Veteran status.--A civilian who served as a member of the Armed Forces of the United States on active duty is considered a "veteran of World War II" if such service was at any time between September 16, 1940, and July 25, 1947, and a "veteran of service since July 1950" if the service was at least in part between July 1, 1950, and the time of the survey. Data on veteran status are shown in this report for males only.

SOURCE AND RELIABILITY OF THE ESTIMATES

The estimates for the years 1945 through 1952 presented in this report are based on data obtained in connection with the Bureau of the Census monthly population sample survey, the sample consisting of about 25,000 households located in 68 areas in 42 States and the District of Columbia.

The estimating procedure used in the surveys after 1945 involved, as a final step, the inflation of weighted sample results to independent estimates of the civilian noninstitutional population of the United States by age, sex, and veteran status. These independent estimates were based on statistics from the 1940 Census of Population; statistics of births,

deaths, immigration, and emigration; and statistics on the strength of the Armed Forces and separation records. The estimating procedure used in the 1945 survey involved the above adjustments by age and sex but not by veteran status.

Since the estimates, except the independent estimates mentioned above, are based on sample data, they are subject to sampling variability.

The sampling variability of an absolute estimate depends not only on the size of the estimate but also on the distribution of the estimate by the age, sex, and veteran status control groups. The following are examples of the sampling variability of absolute estimates: the number of persons 25 to 29 years of age enrolled in school in October 1952 was estimated at 296,000. The chances are about 19 out of 20 that a complete census would have yielded a figure between 213,000 and 379,000.

The number of persons 30 to 34 years of age who have completed 4 years of college was estimated at 890,000. The chances are about 19 out of 20 that a complete census would have yielded a figure between 751,000 and 1,029,000. The total number of illiterates 14 years of age and over was estimated at 2,780,000. The chances are about 19 out of 20 that a complete census would have yielded a figure between 2,527,000 and 3,033,000.

The reliability of an estimated percentage depends upon both the size of the percentage and the size of the total on which it is based. Table C presents the approximate sampling variability of estimated percentages based on totals of selected sizes for the United States in the years 1945 through 1952:

Table C.--SAMPLING VARIABILITY OF ESTIMATED PERCENTAGE

If the estimated percentage is--	And if the size of the base is--							
	40,000,000	20,000,000	10,000,000	5,000,000	3,000,000	1,000,000	500,000	200,000
	Then the chances are about 19 out of 20 that the difference between the estimated percentage and the percentage which would have been obtained from a complete census is less than--							
2 or 98.....	0.3	0.5	0.7	1.0	1.2	2.2	3.0	4.8
5 or 95.....	0.5	0.8	1.1	1.5	1.9	3.4	4.7	7.5
10 or 90.....	0.7	1.0	1.5	2.1	2.7	4.6	6.5	10.3
25 or 75.....	1.0	1.5	2.1	3.0	3.8	6.6	9.4	14.9
50.....	1.2	1.7	2.4	3.4	4.4	7.6	10.8	17.2

The reliability of an estimated median depends upon the distribution for which the median is being computed as well as on the size of the base. Among persons 25 to 29 years old in October 1952, the median number of school years completed was estimated at 12.2. The chances are about 19 out of 20 that a complete census would have yielded a figure between 12.1 and 12.3.

The estimates of sampling variability shown above are not directly applicable to differences obtained by subtracting one figure from another. The

sampling variability in an observed difference between two estimates depends on the sampling variability of each of the estimates and the correlation between them.

In addition to sampling variation, the estimates are subject to biases due to errors of response and to nonreporting. There is evidence that in the survey veterans were underrepresented in the sample relative to nonveterans and that some veterans were incorrectly reported as nonveterans. Veterans whose length of service was short may in some cases be

erroneously classified as nonveterans by the respondent. Therefore, although the total number of veterans has been made to agree with the independent estimate, the distribution of veterans by school enrollment may be affected.

The individual figures in this report from 1946 to 1951 are rounded to the nearest thousand without being adjusted to group totals, which are independently rounded. Percentages are computed from the rounded figures.

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