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EDUCATIONAL CHARACTERISTICS OF THE POPULATION OF THE UNITED STATES, BY AGE: 1940

(This is the last of a series of four releases abstracting data from the United States Summary of the fourth series of Population bulletins. Other data for the United States on education and on school attendance appeared in releases Series P-10, Nos. 8 and 17, respectively. Data for individual States on educational attainment were published in release series P-17.)

Educational attainment among males 20 to 44 years old in the United States in 1940 ranged from a median of 10.9 years (the equivalent of almost 3 years of high school) for those 20 to 24 years old, to a median of 8.6 years (the equivalent of more than 8 years of grade school) for those aged 40 to 44, according to an analysis of 1940 census statistics issued by Director J. C. Capt of the Bureau of the Census, Department of Commerce. Males 20 to 44 years old constitute the group from which most members of the armed forces have been drawn.

School attendance.—The school attendance rate varied widely among the single year groups from ages 5 to 24 in the United States. (The school attendance statistics are based on the replies to the enumerator's inquiry as to whether the person had attended, or been enrolled in, any school, college, or other educational institution that was a part of the regular school system, at any time between March 1 and April 1, 1940.) Among children 5 and 6 years old for whom, in general, school attendance is not compulsory, the proportions attending school were 18.0 and 69.1 percent, respectively. At age 7 the proportion was 92.4 percent, and at each year of age thereafter through 14 years, more than 92 percent were attending school, with the highest attendance rate of 95.9 percent occurring at age 11. Beyond age 14 school attendance is, in many States, not compulsory and the progressively lower rates reflect the leaving of school to enter the labor force or to marry. Among persons in the ages from 21 to 24, the proportion in attendance dropped from 8.5 percent for those aged 21 to 2.5 percent for those 24. Those attending at these ages are mainly in the later college years and in graduate and professional schools.

Table 1 (page 5) presents for the United States, urban and rural, figures on school attendance for the population 5 to 24 years old, by single years of age, color, and sex.

Years of school completed.—The 1940 census schedule included a question on the formal educational attainment of each person. This question asked for the last full grade that the person had completed in the regular school system -- public, private or parochial school, college, or university. The classification in accordance with the highest grade of school completed or, to use a somewhat more convenient expression, the number of years of school completed, has a special significance when presented in combination with age, with separate figures for persons in school and for those not in school.

The figures for persons in school, classified by age and by number of grades or years completed, may be used as a basis for statements with respect to retardation or acceleration. Such an interpretation of the figures is best justified when the figures represent a single city or at least a relatively small area in which conditions affecting school attendance are fairly uniform. Under such conditions, standards or norms may be set up and those children who fail to reach the standard may be classified as retarded and those who have accomplished more, as accelerated. One might say, for example, that an 8-year-old child should have completed one or two grades; then those who had not completed at least one grade would be counted as retarded and those who had completed three grades or more, as accelerated.

Somewhat the same methods may be applied to the interpretation of the figures for the

United States as a whole or for other very large areas. In dealing with such figures, however, allowance must be made for the fact that they represent results obtained under widely varying conditions, including, on the one hand, urban areas where schools are readily accessible and where it is thus easy for very young children to enter school, and, on the other hand, sparsely settled rural areas where school attendance is physically difficult and where there is, therefore, a tendency to defer the beginning of a child's school career until he is a year or two older.

In making an analysis of this kind on the basis of census figures, especially of those for the country as a whole, it should be kept in mind that the census was taken in April, at which time a child in the third grade, for example, would be within a few weeks of completing that grade. Because of this fact, it seems probable that parents in many cases reported the completion of the grade which the child would finish within a few weeks but had not at that time actually completed--that is, they reported "3" as the highest grade completed for a child in the third grade rather than "2," the correct figure.

Tables 2, 3, and 4 (pages 6 to 9) present data on years of school completed in combination with single years of age, for the population of the United States 5 to 24 years old still attending school. In these tables may be noted a rather wide range of educational attainment for some of the ages. Combinations of classifications representing conditions that seemed to be absolutely impossible were eliminated from the tabulation on which these tables are based, as being presumably the result of clerical errors or misunderstanding. It is possible, however, that this process of elimination may not have been carried quite far enough in some cases. Those figures representing, for example, the maximum educational attainment for a given age should therefore be interpreted with caution.

Median years of school completed.—Several of the tables presented here show median years of school completed for persons of specified ages. The median is usually defined as that value in a series of values arranged in ascending or descending order which stands in

the middle of the series, so that one-half the items are greater than the median and one-half less. In order to understand clearly the relation between the frequency distributions presented in the accompanying tables and the figures representing the median number of years of school completed, it is necessary to keep in mind also the fact that the frequency distribution is in terms of completed years, while the medians are expressed with decimals representing tenths of a year. For example, the number of persons shown in the tables as having completed 3 years of school includes not only those who have completed exactly 3 years, but also all those who have completed in addition any fraction of a year. In other words, the range of the group is from 3 years to 3.9 years. A median of 3.4, then, does not indicate a point beyond the limits of the 3-year group, but rather a position within that group.

By way of illustration we may take a group of 9-year-old children with the following hypothetical distribution by highest grade of school completed:

Total....................		2,000
No school years completed.		50
Grade school:	1 year.....	100
	2 years....	250
	3 years....	1,500
	4 or more..	100

Assuming these 2,000 children to be arranged in order as indicated above, it is evident that to reach the midpoint in the series we must take all of those having completed 0, 1, and 2 grades and 600 of those having completed 3 grades. Since 600 is 0.4 of the third-grade group, we write the median as 3.4. Of the 2,000 children, however, only a very small number have completed more than 3 grades. It is necessary, therefore, to give the proper interpretation to the decimal part of the median in order to get the right relation between the median and the distribution.

This detailed explanation has been given in order to avoid any misinterpretation of the medians on the part of those who desire to make an intensive study of the data. In general, the medians may simply be accepted as summary figures which indicate in convenient fashion the differences between one population group and another.

Education of persons attending school.— The median grade of school completed for the population of all classes attending school increased by approximately one grade for each year of age from 7 through 17 years. For those attending school after age 17, this regular increase of one year of school completed for each added year of age does not continue, probably because these persons are above the age to which compulsory school attendance laws apply, and many have dropped out of school for periods of time and then returned to continue their education.

Females attending school had a higher median for years of school completed than males at each single year of age through 21 years, the maximum difference being, however, only three-tenths of one school year. At ages 22, 23, and 24, however, at which ages most persons attending school are in college or in graduate or professional schools, the median for males is higher by 0.5, 1.2, and 1.6 school years, respectively.

The white population attending school had on the average a consistently higher educational attainment at each age than the non-white, the differences between the medians increasing from 0.1 school year at age 7 to 2.0 school years at age 24. The differences between the average educational achievement of whites and nonwhites were least in urban areas and greatest in rural-farm areas.

Throughout the entire age range, urban educational attainment was the highest and rural-farm the lowest, the differences between the medians being small at the early ages but reaching one full grade by age 20. The relative educational lag of the rural-farm nonwhites may be illustrated by the following statistics for males 17 years old: The median years of school completed was 11.1 for urban whites and 10.2 for urban nonwhites; whereas the median was 10.7 for rural-farm whites and only 7.1 for rural-farm nonwhites.

Table 5 (page 10) presents median years of school completed by persons 5 to 24 years old attending school, by single years of age, color, and sex, for the United States, urban and rural.

Education of persons 5 to 24 years old not attending school.— About 80 percent of the persons 5 to 24 years old who were not attending school in 1940 were at least 15 years old and, therefore, generally old enough to be at work or to be married. Other reasons for not attending school include seriously impaired physical or mental health or institutionalization for correctional purposes.

As in the case of those attending school, median years of school completed by females not attending school were higher than those shown for males, except that for those not attending there was no reversal in favor of the males at the higher ages. Also, just as for those attending school, medians for whites not attending were appreciably higher than those for nonwhites, and urban residents had the highest average educational attainment whereas persons living in rural-farm areas had the lowest.

The average educational attainment of persons not attending school tended to be progressively lower, as the age advanced, than that for the corresponding group attending school. This was true not only for the total population but also for most of the subgroups by sex, color, and urban-rural residence. Furthermore, for the population not attending school the increase in the median grade completed for each year of age was neither as regular, nor, on the whole, as great, as the one-grade-per-year increase shown by those in attendance. In comparing the educational attainment of children attending at a given age with that of those not attending, it should be noted that most of the former had almost completed another full year by April, whereas many of the latter had dropped out at the end of the previous school year or earlier. Hence, the difference between the respective medians slightly understates the true difference. From age 19 to age 24, the median remains relatively constant at each year for all sex and color groups in all urban-rural areas, thus indicating that the majority of these persons had probably completed their formal education.

Table 6 (page 10) presents median years of school completed by persons 5 to 24 years old

not attending school, by single years of age, color, and sex, for the United States, urban and rural.

Education of the population 20 years old and over.—Of the 85,234,370 persons 20 years old and over in the United States who reported the amount of schooling they had completed, 2,902,284, or 3.4 percent, had never completed as much as one year of formal schooling, while 8,923,799, or 10.5 percent, had completed one or more years of college. The same general differentials in educational attainment (and, probably, in the underlying educational opportunities) are indicated for those educated almost entirely in the past (persons 25 years old and over), as compared with those being educated mainly at the present time (persons 5 to 24 years old).

Tables 7 and 8 (pages 11 and 12) present data for urban-rural areas, and by color and sex, respectively, on years of school completed by age for the population of the United States 20 years old and over.

The median number of years of school completed by all persons 20 years old and over in the United States was 8.8. Because of the more favorable educational opportunities in recent years, there is a marked relationship between age and amount of education, the educational attainment being progressively lower for the older age groups.

For the white population, the decrease in average educational attainment from the younger to the older age groups is particularly pronounced through age 39, the decrease after age 40 being slight. Thus, the median number of years of school completed by the white population was 11.7 for those 20 to 24 years old, as compared with 8.9 years for those 35 to 39 and 8.1 years for those 75 and over. For the nonwhite population, however, the decrease in average educational attainment is more pronounced after age 40, the medians being 7.4 years for those 20 to 24, 6.2 years for those 35 to 39, and 1.0 years for those 75 and over.

On the whole, the educational attainment of the population living in urban areas in 1940 showed somewhat more improvement during the last 50 years than that of the population living in rural areas. Within practically every age group, females had more years of schooling than males, whites than nonwhites, and the medians were highest for the urban and lowest for the rural-farm population.

Table 9 (page 13) presents median years of school completed by persons 20 years old and over, by age, color, and sex, for the United States, urban and rural.

School attendance by employment status.—In the United States, 5.9 percent of all males 14 to 24 years old attending school were employed (excluding those on public emergency work, such as NYA), as compared with 68.2 percent of those not attending school. For females the corresponding percentages were 3.2 and 36.1. Among those attending school, males exceeded females in the proportion employed at each year of age from 14 through 19, females exceeding males from 20 through 24. Among those not attending school, males substantially exceeded females at each age in the proportion employed.

For males and females, both attending and not attending school, nonwhites exceeded whites in the percentages employed throughout the younger ages. In almost all groups, the proportion employed increased for each year of age from 14 to 24. For white females not attending school the proportion employed decreased after age 21, in all probability because of marriage and retirement from the labor force; among nonwhite females, there is apparently a greater tendency to continue working after marriage.

The proportion of males 14 to 24 years old who were employed was larger in the rural-farm areas than it was in the rural-nonfarm or urban areas. This circumstance was true of those attending school and also of those not attending school. On the other hand, the proportion of females 14 to 24 years old who were employed was largest in urban areas.

Table 10 (page 14) presents figures on school attendance by employment status, by single years of age and sex, for the population of the United States 14 to 24 years old, by color and urban-rural residence.