

Report Documents

Changes in U.S. Professional Work Force

The growth of the professional labor force in the United States has slowed during the past 5 years, despite the entry of record numbers of women. This is particularly evident in fields such as science and engineering where the total number of college graduates with degrees in these fields increased from 1970 to 1975 but dropped between 1976 and 1981 despite a 10 percent increase in the number of women earning these degrees.

A report from the Scientific Manpower Commission details how the U.S. labor force is changing in size and composition. Findings of the report, *Professional Women and Minorities—a Manpower Data Resource Service*, indicate that although recent graduates in science and engineering include more women and minorities, these groups continue to be underrepresented in the country's professional work force.

Women have made their most dramatic gains at the doctoral level in science and engineering. While the total number of doctorates awarded in the sciences has dropped slightly in recent years, the number of these degrees earned by women increased 145 percent from 1970 to 1981. By 1981, more than 20 percent of doctoral degrees in the sciences were earned by women.

Although the proportion of women scientists in the labor force is still below their proportion in recent graduating classes, women are 32 percent of biologists, 17 percent of chemists, 18 percent of mathematicians, 27 percent of computer specialists, 24 percent of medical scientists, and 40 percent of psychologists.

The growth of women in engineering

has been so rapid in the past decade that their proportion in the work force is well below their present proportion among students and graduates. In 1970 less than 1 percent of bachelor's degrees in engineering went to women; the freshman class of 1982 included almost 16 percent women engineering candidates.

Minorities also are increasing their participation in this field—growing from 0.9 percent of bachelor's graduates in 1970 to 8.8 percent in 1982. The number of black engineers graduating at the bachelor's level has risen from 657 in 1973 to 1608 in 1982, while their proportion of total graduates moved from 1.5 to 2.5 percent.

Minorities continue to be underrepresented in the physical and mathematical sciences, where they earned 8 percent of the bachelor's, 6 percent of the master's, and 5 percent of the doctorate degrees awarded in 1981. A significant percentage of these degrees, especially at the graduate levels, are earned by Asian Americans.

Particularly at the graduate level, the proportion of graduates who are foreign nationals on temporary visas has grown significantly over the decade. In engineering, for example, foreign students earned 8 percent of the bachelor's, 28 percent of the master's, and 40 percent of the Ph.D.'s awarded by U.S. schools in 1982. Among engineering doctoral graduates in 1981, only 50 percent were U.S. citizens.

It is apparent that any assessment of the future population of trained specialists in science and technology, as in other fields, must increasingly recognize the importance of a growing population of women and minorities in every field. Their increased share of enrollments in graduate and professional programs indicates that this proportionate increase will continue, at least for the next several years.

The new 288-page fourth edition of the publication details data in all fields from more than 200 sources by sex and/or minority group. The volume also includes annotated recruitment resources, both for specialized fields and for general recruitment of professional women and minorities; a detailed bibliography; and a cross-index of the 250 tables.

Professional Women and Minorities—a Manpower Data Resource Service is available for \$70 from the Scientific Manpower Commission, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.

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Scientific Manpower Commission

PIO Directory

The 1983 *Public Information Contact Directory* is now available. The *Directory*, which is prepared annually by the AAAS Office of Communications, includes public information contacts at and information about some 150 key research institutions in the United States.

Copies of the *Directory* are for sale at \$5 each (*prepaid only*) through the Office of Communications at the AAAS address.

AAAS Travelers

AAAS has been invited to be represented at a conference on "International Cooperation in Science and Technology for Developing Countries," organized by the Bangladesh Academy of Sciences. The conference will be held in Dacca, 14–18 January 1984.

Members who plan to be in the area at that time, have an interest in development issues, and might want to participate on behalf of the Association should contact Denise Weiner, Office of International Science, at the AAAS address, no later than 19 August 1983. Please include a curriculum vitae. No travel funds are available; however, partial support (per diem only) will be provided.

Opportunities in Science Searches for Exemplary Programs

The Office of Opportunities in Science is looking for outstanding pre-college programs aimed at improving the quality of mathematics, science, and technology education for minorities and/or women.

A study of such programs is being undertaken by the Office with support from the National Science Foundation. Information from the study will be used to assist the National Science Board's Commission on Pre-College Education in Mathematics, Science, and Technology in preparing its report.

Persons having programs which they believe to be eligible for inclusion are urged to call the AAAS Office of Opportunities in Science (202-467-5433) as soon as possible.

For more information about the activities and publications described in "AAAS News," write to the appropriate office, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036, unless otherwise indicated.