

Four-year Science Curriculum Proposed to 'Empower' High School Students

To "empower" all American students with a working knowledge of science concepts, the high school science curriculum should be restructured around a core of learning that provides an "opportunity for in-depth engagement with science" during all four years of high school, argues a report from the National Center for Improving Science Education.

The report outlines a proposed framework that would require all students to take a two-year series of core courses. During their final two years of high school, students would enroll in specialized courses in one of three alternative pathways.

The model curriculum is designed to dovetail with other reform models for the lower grades developed by the N.C.I.S.F.

In its most radical recommendation, the report suggests heterogeneous grouping, rather than segregating students by ability. The report also urges that courses in the core curriculum seek to engage students in learning by focusing on contemporary social, civic, and personal issues.

Students who have completed the two-year core curriculum would have separate pathways set out for them, depending on their interests and goals:

- College-bound students would take half-year courses in biology, chemistry, physics, and earth and space sciences, as well as advanced-placement courses in the natural sciences. The courses would emphasize the knowledge and methodologies of the natural sciences.

- Technical- or engineering-school-bound students would take half-year courses aimed at developing natural-science concepts within the context of agricultural, medical, or engineering studies.

- Students who intend to enter the job market after graduation would receive a mixture of academic coursework with practical experience in the workplace and supervised internships at local businesses.

Although content would "vary greatly" in such courses, "a clear principle should guide the individual's program planning: maintaining the student's involvement with science while keeping options open."

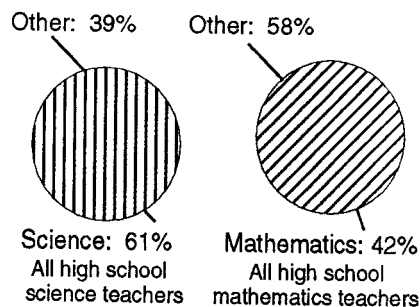
The report also noted that restructuring the curriculum to fit the outlines of its recommendations will require significant changes in the ways in which student performance is assessed, the methods used to train teachers, and the "culture" of schools.—Reported by *Education Week*, vol. XI, No. 19, January 29, 1992.

Preparation of U.S. Science and Math Teachers

Only four out of 10 U.S. high school mathematics teachers have a degree in mathematics and six out of 10 have a science degree, a survey by the U.S. Education Department has found.

The data, from the department's 1988 Schools and Staffing Survey, was included in the first report card on progress toward the national education goals.—Reported by the *National Center for Education Statistics*, 1991.

Teachers Who Have a Degree in the Field In Which They Teach



Source: National Center for Education Statistics, 1991

U.S. Master's Degrees Quadrupled in Past Three Decades

The number of persons earning master's degrees more than quadrupled in the United States during the past 30 years, at a time when some careers began to require a higher degree for advancement, according to the American Council on Education.

More than 320,000 people received master's degrees in 1990, compared with fewer than 75,000 who earned the degree in 1960, the council said in a report released in July 1992. More than half of the degrees were in education and business, according to the report.

Although degrees in education still accounted for the largest share of master's degrees awarded, they constituted a smaller share than in the past. In 1965 39 percent of master's degrees were in education, contrasted with 26.6 percent in 1989.

Meanwhile, master's degrees awarded in business and management have increased nearly tenfold since 1965. A similar increase has occurred in health professions.

About 85 percent of people studying for a master's degree choose a field related to their career, according to Peter Syverson, director of information for the Council of Graduate Schools.

Holding a master's degree has a "definite payoff in terms of income," the council's report concluded. Individuals with master's degrees earned an average of \$2,776 a month, compared with college graduates, whose average monthly salary was \$2,109, and high school graduates, who earned an average of only \$1,135 monthly.

Slightly more than half of master's students in 1990 were women, compared with the 1960s when only about a third were women. The study found that 52 percent were older than 30, and that two-thirds attended school part time.—Reported by the *Washington Post*, July 6, 1992.