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Credit in Education?

In a recent survey conducted under the auspices of the Science Teaching Improvement Program, more than 200 colleges and universities in all parts of the country indicated that they are now offering special courses in subject matter in science and mathematics for teachers for which graduate credit is given. In a number of instances these courses will be offered for the first time during the summer session of 1956. The survey does not show whether credit for the courses is to be granted in the subject matter, such as mathematics or physics, or in education. It is assumed that, where graduate credit is allowed, the credit can be counted in partial fulfillment of requirements for the master's degree in education, in some plan for a combined master's degree in education and a science subject, or for a master of science teaching degree.

The need for such courses is generally recognized. Many of the present secondary-school science and mathematics teachers were prepared to teach some other subject. A considerable number of others were undergraduates more than 10 years ago. Not only scientists but the secondary-school teachers themselves are aware of the need for content courses that are planned especially for teachers. One of the goals of the Science Teaching Improvement Program is to foster the offering of such courses. The summer institute program of the National Science Foundation, now extended at Wisconsin and Oklahoma A and M to include year-long institutes, has made a major contribution in making available content courses for science and mathematics teachers. This is one of the most significant developments in teacher education in the past 20 years.

When the desirability of special course offerings for teachers is discussed with scientists, the question of graduate credit is always raised. Some institutions, as noted above, do offer graduate credit. Others offer these courses for undergraduate credit. Since many salary schedules are based on number of hours of graduate credit earned or upon the master's degree, the courses that are offered for graduate credit lead to more satisfactory enrollments. Some propose that there should be an organized effort to bring about change in salary schedules, so that credit for content courses at the undergraduate level would meet salary schedule requirements. Because of the complexity of the American public school system and the decentralized control in a multitude of small districts, this suggestion does not appear very practical. The question of whether this would be desirable could also be raised. One of the great present needs is to add to the prestige and status of the teacher and to his feeling of competence in the subject he teaches.

Another problem related to these course offerings is whether the courses should be listed as mathematics, physics, or other science or as education. Practice in the various universities seems about equally divided on this. The reason for the reluctance of the science departments to offer these courses as regular departmental courses is fairly obvious. Since the courses are planned for teachers, it seems to some only appropriate that the courses be listed as education courses. On the other hand, scientists are unhappy, with justification, when they see included in a teacher's credentials many more hours of credit in education than in the science subject taught. Furthermore, credit in science will add to the confidence of the teacher, to his interest in the subject, and to his pride in being a "subject" teacher rather than a generalist. Teachers obtain genuine satisfaction from credit and grade in mathematics or in a science. In some schools such credit would be of considerable assistance to the teacher in securing promotion to a position as head of the department or as supervisor in science.

This is a period of experimentation and change in teacher education. Level of credit and course label become important questions in the total picture of improving secondary-school science teaching.—JOHN R. MAYOR, *Director, AAAS Science Teaching Improvement Program*