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## Doctor of Arts Degree

In the last few years science has been under fire because it has not prepared to meet the changing demands of society. Higher education has been similarly challenged on many fronts, one of the points at issue being the narrowness of the traditional research-oriented Ph.D. program. This challenge has been intensified recently because of a sudden and rather dramatic tightening of the job market for Ph.D. graduates, especially in physics and chemistry.

Although this phenomenon is obviously related to the gloomy economic outlook, it stems from the academic world's resistance to change. But the monopoly of the standard Ph.D. may be starting to change.

Several years ago Carnegie-Mellon University established a program leading to the Doctor of Arts degree in the fields of history, English, art, music, and mathematics. It is not an attempt to alter the concept or value of the Ph.D., for the research orientation of the Ph.D. will, we believe, keep it always as the cornerstone of scientific progress. Rather, it supplements the traditional program with a new program designed to prepare people for certain teaching roles and to prepare them better. The first of these new degrees were awarded by Carnegie-Mellon University in 1968.

While acceptance of the new degree was relatively slow at first, recently there has been a sudden upsurge of interest. In 1969 the American Association of State Colleges and Universities and the Council of Graduate Schools in the United States formally endorsed the degree. In October 1970 these new programs were the subject of a national conference, which was sponsored by the Council of Graduate Schools in cooperation with Carnegie-Mellon University and attended by 80 invited participants.

Fifteen persons have received Doctor of Arts degrees from Carnegie-Mellon thus far, and approximately 100 are currently enrolled in the program. The program grew out of the university's deep involvement, over the past decade, in curriculum development and other innovative projects with personnel from secondary schools, junior colleges, and 4-year colleges.

The program is the university's considered answer to alternative graduate degree programs for training teachers and future leaders in secondary schools, junior colleges, and possibly some liberal arts colleges. The concept grew out of the Carnegie Education Center, which was established in 1966 by a grant of \$1 million from the Carnegie Corporation.

Unlike the Ph.D. program, the new Doctor of Arts program essentially eliminates the requirement to discover new knowledge by "a piece of original research," but requires each candidate instead to develop classroom teaching materials as a thesis project. The candidate writes a rationale for his project, evolves teaching materials, devises appropriate teaching strategies, develops evaluating instruments, and tests his materials in class. This work is carried out in the major-subject department rather than in a department of education.

I believe that this new Doctor of Arts program is an important development, and hope it will gain broader support not only in the humanities, fine arts, and social sciences but in the physical sciences as well.

—H. GUYFORD STEVER, *President, Carnegie-Mellon University*