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## The Search for Excellence in Science Education

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# **The Search for Excellence in Science Education**

*John E. Penick  
University of Iowa*

## **The Problem**

In 1976 several NSF funded studies revealed the current state of science education in the United States. In 1978, a synthesis of the more than 2,000 pages of information from those three NSF reports and the NAEP data was begun by twenty-three science educators throughout the U.S.

The synthesis researchers worked independently in small teams, each focusing on one aspect of science education: elementary science, biology, physical science, science/technology/society, or inquiry. A critical part of the synthesis analysis was developing a description of an ideal or desired state for a focus area and then comparing the actual to the desired state.

Goals arising from the synthesis desired state for each of the five focus areas were used as criteria for defining excellence in a school science program.

## **Recommendations**

1. Fund large, regional centers for mathematics and science education which would:
  - A. Develop and implement intensive and flexible inservice efforts focusing on teaching strategy, rationale, and curriculum revision.
  - B. Provide a source of support for teachers, schools, or districts wishing to improve their abilities or programs.
  - C. Develop model preservice science and mathematics teacher education programs.
  - D. Help schools develop model science and mathematics programs.
  - E. Help schools develop locally relevant curricula.
2. Sponsor research efforts aimed at answering such questions as:
  - A. What are appropriate materials and strategies for achieving desired state goals?
  - B. How effective are preservice and inservice programs in developing teachers who can meet these goals?
  - C. What school or district organizational plans best facilitate excellence in science and mathematics teaching?