

**THE SPUTNIK ERA:
WHY IS THIS EDUCATIONAL REFORM DIFFERENT FROM ALL OTHER
REFORMS?**

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At a recent meeting of science teachers, a colleague who was chairing the panel, asked me her favorite question about the current reform of science and mathematics education, “Why is this educational reform different from all other reforms?” Some will recognize this question as a paraphrase of one asked by the youngest child at dinner on the first night of Passover. The question provides the opportunity for the leader of the Seder to tell some history and explain why the celebration is significant. October 4, 1997, the 40th anniversary of Sputnik, presents the opportunity for educators to ask how the Sputnik era was different from other reforms. In this essay I use the Sputnik era to illuminate aspects of educational reform that have implications for contemporary period.

The educational reform of the 1950s and 1960s was already in progress when the Soviet Union placed Sputnik in orbit. In 1951, with the leadership of Max Beberman, the University of Illinois Committee on School Mathematics (UICSM) initiated a reform of the secondary school mathematics curriculum. In science the stage had been set by Jerrold Zacharias who in 1956 began the Physical Science Study Committee (PSSC) a year before the launch of Sputnik. However, Sputnik still played a significant role in educational reform. It has become a historical turning point. For the public, it symbolized a threat to American security, to our superiority in science and technology, and to our progress and political freedom. In short, the United States perceived itself as scientifically, technologically, militarily, and economically weak. As a result, educators, scientists, and mathematicians broadened and accelerated educational reform, the public understood and supported the effort, and the policy makers increased federal funding.

What is sometimes referred to as the “Golden Age” of science and mathematics education began in the 1950s with development of new programs that eventually became known by their acronyms. Science programs included the Physical Science Study Committee, known as PSSC Physics; the Chemical Education Materials Study, known as Chem Study; the Biological Sciences Curriculum Study, known as BSCS biology; the Earth Sciences Curriculum Project, known as ESCP earth science. At the elementary level, there was the Elementary Science Study, known as ESS; the Science Curriculum Improvement Study, known as SCIS, and Science-A Process Approach, known as S-APA.

In mathematics the new programs included the University of Illinois Committee on

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School Mathematics (UICSM), the School Mathematics Study Group (SMSG), the Greater Cleveland Mathematics (GCM), the University of Illinois Arithmetic Project, the University of Maryland Mathematics Project (UMMP), the Suppes Experimental Project in the Teaching of Elementary-School Mathematics, and the Madison Project.