From the launch of Sputnik in 1957 until the approval of Proposition 13 in California in 1978, pressures for academic and social reform prompted numerous changes in the schools. Academic reforms were begun first, focusing on curricular revisions in reading, mathematics, and science. Social reform efforts led to the equalization of access to education and the creation of new courses to prepare children to become effective citizens. Conflicts between the two reform movements, an overabundance of innovations, and shrinking financial support eventually brought the era to an end. Some innovations did take root, however, including the use of behavioral objectives, the application of research techniques in curriculum development, the decentralization of decision-making, and the development of new types of instructional materials. The changes also created some new dangers, such as those inherent in restricting instruction to the teaching of measurable skills, misusing research efforts to enhance fundraising, adopting "teacherproof" materials that can demoralize teachers, and focusing teacher education on academic content at the expense of pedagogy. Reviewing the mistakes of the post-Sputnik era and recalling the era's spirit of enthusiasm and dedication may help future reformers find effective paths to change. (PGD)
POST-SPUTNIK EDUCATIONAL REFORM ERA:
TO DREAM THE IMPOSSIBLE DREAM

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Rudolph Flesch reported Why Johnny Can't Read, the
Russians orbited a capsule into space, and the baby-boomers
were overcrowding the nation's elementary and junior high
schools. Add to that the pressure to provide equality of
opportunity to the minority population of America, and you have
sufficient pressure for a reform movement.

As an individual who entered teaching in response to Sput-
nik and the eloquent cry for competent teachers, I shall
address this reform movement from both inside and outside of
the events comprising this movement. In 1957, when Sputnik
beat an American vehicle to outer space, I was at that ideal-
istic time of my life when I wanted to make a commitment to a
vocation. I was examining medicine and the religious educa-
tion; my frame of mind was ready for the reformers who asked
that we commit our lives to the sound education of the next
generation. This type of call for a new vision and commitment
is missing from the present reform cries for teacher prepar-
ation, and a danger we should rectify.

Please remember this caveat. The remarks I am about to
make are generalizations which may not be applicable to indi-
viduals or even particular school districts. These generaliza-
tions were drawn from my own interpretation of research stu-
dies, survey of articles, and empirical evidence perceived
during this period.

The post-Sputnik reform movement consisted of two major
presses—-one academic and the other general social reform.
Immediately following the launching of Sputnik, numerous arti-
cles appeared claiming that the schools were responsible for
the American lag in technology. We were not educating youth
who were math and science literate. As a conscientious Ameri-
can, Jerome Bruner, respected Professor of Psychology at Har-
vard, organized and led academics who were interested in con-
tributing their expertise to American education. He reasoned
that American youth were being short-changed because experts in
the content areas were not contributing their knowledge to the
curriculum of the nation's schools. The outcome of the Woods
Hole Conference in 1971 was that these experts who knew the
subject area so well could work with practitioners and create a
new curriculum. Bruner called it later a "brave and noble"
idea (Bruner, 1971). The often quoted statement of Bruner's
was "any subject could be taught in some honest form to any child at any stage of development." This let individuals in math and science to join with publishers in creating materials for modern math, inquiry-oriented science in biology, general science and physics.

The 1960's was an exciting decade in which society questioned all past traditions and looked positively to technology as the savior of the future. Continual rising economic markets and increasing numbers of new students who required new textbooks and materials added a buoyant aspect to this reform era. At that time I was an elementary teacher and shared in the overall enthusiasm. I worked many afternoons on curriculum committees, provided demonstrations to other teachers in modern math, science, economic education, and attended numerous courses at the University of Connecticut. We were going to make the vision a reality, and I acted on that belief.

The other press arising after Sputnik was placing the burden of social reform on the public schools. Since all children were required to attend school, legislatures enacted laws at federal, state, and local levels placing reform programs into the enlarging school curriculum. Such reformers considered education as a part of the social sciences. Because of this connection, the schooling process can become part of the social pressures of the larger environment. The post-Sputnik era witnessed an outcry that the ills of the society were the result of the schools. Commentators remarked that the schools did not teach reading well, the schools were segregated and disenfranchised a segment of the American population, the schools did not counsel students into science and math, the schools were soft.

Society used the launching of Sputnik to generate support for any "American" goal. The first curricular changes focused on the cries from the academics. Introduction of phonics and elimination of the look-say method in textbooks and classroom would solve the reading problem. Revised textbooks in math and science would produce math and science-literate citizens. Then came the general social reformers who understood that such changes were small and would not remedy the more serious concerns of our society. Court cases began to make a powerful impact on the curriculum. The major concern was to provide equal opportunity for all aspects of the population. Headstart was instituted and would equalize the deprivations of the home environments of Blacks. Title I would help any and all disadvantaged youth. The courts continued the push to equalize opportunities for disadvantaged children with judgments requiring forced integration action through busing programs.

Prior to 1960, health and driver's education had been the only "social reform" programs among the traditional high school
The 1960's and 1970's witnessed groups who pressured for a multitude of social reforms in the schools. Courses in marriage and the family, physical fitness, driver's training, sex education, drug prevention, career education, values clarification, and even death education entered the public school curriculum. Schools would prepare youth to create a better society from womb to the tomb.

The press of the social reformers ran counter-productive to the press from the academics. The resulting conflict suggested that the danger of this reform movement would be that no change would occur. John Goodlad's Behind the Classroom Door is the description of a research study which displayed the picture of American primary teachers in 1969 (Goodlad and Klein, 1970). These teachers were operating in their classrooms ignoring the pressures of the previous technology.

School was kept as school had been kept for the previous forty years. My own doctoral dissertation seven years later produced little different evidence (Hiatt, 1979). The continual rising press for one change and the other left little time to institutionalize the first innovation before another followed on its heels. W.W. Charters, Jr., reported in the mid-seventies that most innovations, widely proclaimed by legislatures and leading spokespersons, were "non-events" (Charters, Jr., 1976). Such innovations existed in words but not in practice.

Our nation pressed to legislate morality and looked to the public schools as the agency to manifest that morality. Social reform continued in the 1970's with Early Childhood Education (ECE) program in California, promoting decentralization of decision-making and additional funds for the education of those in K-3 classrooms, PL94-142 requiring more opportunities for children who needed special education, and Lau v. Nichols case requiring bilingual education in schools. The society witnessed an almost annual adoption of a social reform program in a decade in which the dollar was shrinking. Such educational "progress" could not continue.

1978 brought the end of the Post-Sputnik Reform movement. Proposition 13 in California, Proposition 2 1/2 in Massachusetts, and the bandwagon effect of competency-based testing forced a re-thinking of priorities. A change in the tax base meant that there would be less money for education. Within one year 33 out of 50 states legislated some form of competency test as a prerequisite for high school graduation, forcing schools to examine student outcomes (Pipho, 1978). 1978 through 1983 was a period for rethinking the aims of American education.

The primary danger of the Post-Sputnik educational reform movement lie mainly in the lack of focus. The movement became consumed with such an ever widening press for school change.
that many teachers and administrators had to become reactionary in order to cope. Jerome Bruner, John Goodlad, and other evaluations of that period reported from their studies of schools that the lack of teacher education was the major limitation to the change being adopted (Burry, 1979; Bruner, 1971; McLaughlin, 1977; Goodlad, 1984). Such an interpretation might be plausible if this movement had simply attended to teachers using modern math or incorporating inquiry techniques into their instructional repertoire. However, as a nation we were expecting teachers to become bilingual or oftentimes multilingual, experts in special education so we could mainstream youngsters, counselors of parents, counselors of students as well as experts in humanities, social studies, fine arts, career education, and all the mandated programs, not simply math or science. We were expecting too much. I sense that the danger lie not in the initial focus of a reform movement, such as a call for modern science, math, or computer literacy, but in the bandwagon effect of diverse groups joining the reform movement. The current "Back to the Basics" movement is beginning to see such phenomena.

An examination of the Post-Sputnik era indicates that the era did witness the adoption of selected innovations. Some reformers did achieve the institutionalization of their goals. The decade of the 1970's showed teachers' and administrators' acceptance of behavioral objectives. John Goodlad's A Place Called School documented that teachers in mid-seventies were using and liking educational objectives, an idea promoted by Ralph Tyler forty years before (Goodlad, 1984; Tyler, 1949).

Research techniques became an accepted part of the development of curriculum. Needs-assessments were used by districts or states as part of the requirements to secure the grant monies being offered through the social reform program offices. Eight percent of Elementary and Secondary Education Act grant monies had to be allocated for evaluation of the grant, and this mandate at federal level became practice by many state or regional agencies.

In California when the Early Childhood Education act promoted decentralized decision-making, principals and teachers were freed from district and state constraints to attempt innovations. Evaluations of ECE schools across the state noted schools tried team-teaching, individualized instruction, open classrooms, and increased use of the new publisher materials. Two major innovations had to be adopted in every school which applied for ECE funds: namely, each school had to create a parent advisory board and had to employ teacher aides in the classroom. With the possible 1987 sunsetting of School Improvement Program, the name for the continuation of the ECE Program, concern has been raised that these innovations will disappear. One finding of my doctoral dissertation, which was
also supported by the Center for Study of Evaluation in their statewide study in 1976, was that teacher aides were the teachers' most valued part of the ECE program (Hiatt, 1978). It will be interesting to observe what will happen if the program is sunsetted.

Publishers created educational materials beyond textbooks and workbooks. They began to produce educational cassettes, films, kits, and simulations. Such diversity continues as contemporary publishers assist teachers in creating videos and computer software, tasks too time-consuming for the practicing teacher.

These publishers also began to create programmed materials, such as SRA materials, Sullivan readers and a variety of other self-checking materials. The knowledge and techniques of creating such materials now serve as the foundation for developing computer tutorials.

The call to live one's life in service to the future generations through teaching was heard by many idealistic youth and also those in middle-age. Many entered teaching as a way to serve society.

For each of the opportunities presented in the reform, there existed a danger created by its acceptance.

The tail began to wag the dog. Accountability, in the form of competency-based testing, directed instruction. Teachers narrowed instruction to those facts or skills which could be measured (Borman, 1986). Only measurable objectives were included in the test. Affective objectives were excluded because they were difficult to objectively assess.

Special program "experts" were hired to direct a given categorical grant. In some schools, only these experts were focusing on the innovation and oftentimes under pounds of paperwork. Needs-assessments were being done to obtain information which promoted and supported the administrators' biases. The needs-assessment became a way for the grant writer to argue the worth of his plea and the writer included only the information supportive of his argument. To some, needs-assessments became a window-dressing to cover reality and soothe parents or community groups who wanted a voice in educational matters. They did the survey and filed the results on a back shelf.

Evaluation studies of these specially funded programs had difficulty assessing the worth of the program in light of the high costs. McLaughlin's 1977 evaluation of Title I for HEW remarked that the achievement of Title I intent to equalize educational opportunity for economically disadvantaged youth was "hopeful" but that there were problems with evaluating a
decentralized program (McLaughlin, 1977). Results of testing indicated that the funding did not bring up the scores of the disadvantaged to those of the advantaged. However, since funds were made available to all disadvantaged groups, it was difficult to assess if disadvantaged youth receiving funds and those not receiving funds tested differently.

The Center for Study of Evaluation reported many concerns in their attempt to assess bilingual programs (Burry, 1979). This report noted problems of lack of commitment from a diversity of groups, lack of teachers trained to teach bilingually, limited parental involvement, and lack of adequate evaluation instruments.

The press to utilize prepared materials made some teachers feel demoralized. In the early seventies, Eva Baker and James Popham created "teacher-proof" materials. Studies of teachers attempting to use such lessons suggested that utilization of such materials were better left to robots. Teachers should instruct in more human ways.

The Ryan Act in California incorporated the requirement that an academic major should be a prerequisite for any teaching credential. This resetting of priorities in teacher education left little room for courses in pedagogy. Bruce Joyce, Goodlad, and others have noted in their studies the limited repertoire of teachers' instructional techniques or strategies. Some may argue that teachers prior to those graduating under Ryan Act also demonstrated a limited repertoire. The point I wish to make is that the knowledge, skills and values desired in a master teacher do not develop in an academic program which disregards life in the actual instructional situation. The Carnegie Forum Task Report on Teacher Education suggests that students do not participate in education courses until after the Bachelors degree (Carnegie Task Force, 1986). This recommendation shows a lack of understanding of late adolescent youth who want some meaning and purpose to their lives. Participating in teaching in various settings, such as the school, the child care center, the "Y," Boy or Girl Scouts, the church, is a means through which youth can make a contribution to other children and find esteem for themselves. Those that truly find teaching joyful and rewarding can be encouraged to continue. Selecting a career should not begin the day of graduation from college. The present teacher education reformers do not indicate that they have learned from the past; and, I feel, are bound to repeat the mistakes of their forebears.

This analysis of the Post-Sputnik Educational Reform Era was intended to recall past events so that we may use such historical insights for present decision-making.
REFERENCES


Charters, W.W. Jr., Interview, April, 1976.


