

EDITORIAL

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Reform: to amend or improve by change of form or removal of faults or abuses. There continues to be a great deal of discussion concerning “reform” of the mathematics curriculum. This discussion takes place not only in professional journals and conferences, but in the more general media, as well. In some cases the discussion has become strident as we are encouraged to take a stand in favor of or against reform.

Over the past year, I have been involved in a project in which high school mathematics teachers and college/university mathematics faculty have been investigating four of the “reform” mathematics curriculum projects. These projects, funded by the National Science Foundation, have been piloted in a number of schools around the country and the year 1 and 2 materials are now being sold by commercial publishers.

Much of the criticism of mathematics reform has centered on these “new” curricula. While there are differences among the materials produced by these projects, there are more similarities. In general, these materials emphasize an integrated curriculum (year 1, 2, 3, and 4 instead of Algebra I, Geometry, Algebra II, etc.). Further, these curricula are structured around a constructivist view of learning — the learner must construct meaning for mathematical concepts and relationships from his/her experiences. Thus, there is an emphasis in these materials on individual and group “investigations,” the use of concrete models and calculators/computers, and using a variety of assessment tools and procedures. Finally, these curricula emphasize that mathematics should be viewed as more than computation and imitation of procedures; mathematics involves problem solving, applications, and relationships.

After investigating these curriculum materials and talking with the directors of the projects and teachers who have been/are using these materials, I have some initial observations about this “reform controversy.” First, I do not believe that these materials eliminate fundamental paper and pencil skills from the curriculum. In some cases the paper and pencil algorithms are embedded in the students activities and investigations. Teachers who are using these materials tell me that they do, at times, have to supplement these materials with “drill and practice.” These same teachers emphasize that it is easier to supplement drill and practice than it is to supplement relevant, interesting investigations and applications. Certainly, technology provides tools for students that may justify a decreased emphasis on