EDITORIAL

Terry Goodman

The beginning of a new decade generally brings forth numerous reflections on the decade past as well as predictions for the future. With respect to education, the 1980s may well be thought of as the "Decade of the Report."

The loud calls for reform in the teaching and learning of mathematics gave rise to or grew out of numerous reports (*A Nation at Risk, Everybody Counts, Educating Americans for the 21st Century, New Goals for Mathematical Sciences Education, The Underachieving Curriculum,* and so on). Virtually all of these reports painted a rather dismal picture of education in general and mathematics education in particular. Most of the reports made recommendations for change, but these recommendations were often rather general in nature and failed to discuss in detail how these improvements could be attained.

More recently, the National Council of Teachers of Mathematics has published *Curriculum and Evaluation Standards for School Mathematics.* This document focused on what should be included in the mathematics curriculum and on appropriate ways of evaluating student learning and school programs. Currently, NCTM has produced a working draft of *Professional Standards for Teaching Mathematics* which focuses on standards for teaching and the professional development of teachers.

In light of increasing public demand for accountability by teachers and schools and the call for reform from within the mathematics education community, what should one's individual response be? I would like to suggest three ways that we, as individuals, can help to bring about positive changes.

First, I believe each of us must be open to change. We must be willing to carefully evaluate the mathematics curriculum and how it is being taught. This may require each individual to evaluate his/her own practices and priorities. There should be no "sacred cows" in the curriculum, our programs, or in our teaching methods.

We must be willing to consider challenging questions and issues. What should be in the mathematics curriculum? At what level? For which students? How can those disadvantaged/underrepresented students be reached? How can we make the best use of technology in the learning and teaching of mathematics? What funding will be necessary and where will it come from? Tough questions? Absolutely!

While you and I may be very comfortable with what we are doing, we must never become complacent. The best teachers I know (at any level) are those who are never satisfied with their teaching. They are constantly "on the lookout" for problems, models, and activities that can be used to enhance learning. A teacher never "arrives," but is involved in a life–long process of learning and teaching. A good teacher/researcher is one who continues to be a good learner.

Secondly, we must communicate and cooperate with other interested individuals and groups. No one person or group can have all the answers to the challenges that we face. Ideas and resources from research, teachers, business, parents, and students must be carefully explored and integrated. The sweeping reforms that are being suggested can never be implemented unilaterally. Many past efforts at reform have failed, at least partially, because changes were implemented in a piece–meal fashion with little or no cooperation among interested groups and individuals. Broad change will require participation.

Finally, each of us must make a commitment to change and reform. Certainly, change for the sake of change is not the answer. Neither are overly simplistic solutions to complex problems. Clearly, however, we must acknowledge the need for clearly thought out alternatives. Each of us must become committed to making a difference when and where we can. Here at CMSU, for example, we are changing significantly the nature of our mathematics for elementary teachers courses. Students work with a number of laboratory–type modules with a heavy emphasis on the use of manipulative materials (we did some of this before, but not nearly as much as now). Most reports have called for an increased use of manipulative materials at the elementary level. We have decided that if future elementary teachers are going to use these materials with their students, then we must provide opportunities for them to use such materials as they learn. There are numerous other opportunities for us to experiment with various alternatives — use of the calculator/computer in mathematics learning, cooperative learning, etc.

We must be realistic. An important prerequisite for change is a commitment to change. Certainly, change is not easy — in fact, many times it is almost painful. Growth, itself, is not easy, but necessary for improvement. Each of us can help to create an environment that will be most conducive to positive, productive change and reform.

We at **MJMS** encourage your input with respect to the issues discussed here. Your letters and/or manuscripts are most welcomed. You may want to share what you or your school/department are doing. We look forward to hearing from you.