

## *From the Editor*

Will the idea of integrating technology education with other disciplines outlive the Clinton administration? I think it depends on whether you see the glass half empty or half full.

On days when I see it half full, I think of interdisciplinary collaborations among technology, science, math, and other teachers as the stuff of the future. More than any other trend or movement in our field, interdisciplinary collaboration represents an opportunity for the “general education” status we’ve lusted for throughout this century. We know in our hearts that all children benefit from a better understanding about the technological world in which we live. Technology education is not just good for a few, it is essential for all. But collaboration between technology education and other disciplines in the schools takes it a leap beyond that. It demonstrates the interconnectedness of technology with nearly all aspects of our lives.

Certainly the time is right for technology teachers to “come out of the basement” (where the industrial arts shops of yesteryear were invariably sequestered) and talk to our colleagues about mutually beneficial collaboration. The science and math education establishments are making loud noises about the sort of “hands-on” activities we’ve taken very much for granted for the past century.

The NCTM (National Council of Teachers of Mathematics, 1989, p. 66) Standards suggest: “Problem situations that establish the need for new ideas and motivate students should serve as the context for mathematics in grades 5-8.” Similarly, AAAS (American Association for the Advancement of Science, 1989) recommends: “Science education should utilize a coherent, integrated approach that breaks down rigid disciplinary boundaries and emphasizes connections among science, mathematics, and technology.”

Recognizing the need is one thing — making it happen, of course, is altogether another problem. But there are significant efforts now underway. All over the country, interdisciplinary projects involving technology education, science, math, and to a lesser extent language arts and social science are being funded. The National Science Foundation is leading the way. Thus far, NSF has funded “State Systemic Initiative” projects in 20 states (and counting) at \$10 million each to develop new approaches to science education. The language behind this initiative includes references to the integration of science, math and technology.

NSF has also funded a number of projects in technology education that are working to integrate the three disciplines. *Phys-Ma-Tech* brought high school physics, math, and technology teachers together to develop curriculum

materials. The *Technology/Science/Math Integration Project* is working on integrated middle school activities. *Project UpDate* is developing, collecting and distributing activities that integrate technology, science, and math. And the *Integrating Math, Science and Technology Project* is developing an integrated seventh grade curriculum.

The Technology Education Demonstration projects, funded by the Department of Education (1990), also focused on the integration of these three disciplines. And many state departments of education are funding similar projects that are beginning to result in curriculum materials and changing attitudes about how this content should be delivered.

If it were up to the technology education community alone to bring about widespread collaboration with other disciplines, I would see the glass as half empty. But the education reports of the 1980s have spawned a lot of interesting development in the 1990s. And not just from technology education, but from the other disciplines as well. So widespread integration of technology education with other subjects, particularly science and math, might just happen. Certainly, the opportunity is there. If we miss it, we may not get a second shot.

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