From the Editor

The Deer or the Driver?

The tragedy of September Eleventh is over a year behind us. Little did I know in the days following that event that there would be a connection to the JTE. Email messages arrived from around the world, expressing concern about what had happened. Most of the messages came from people with whom I have worked in my editorial role. It occurred to me once again how global our profession has become over the past couple of decades as a result of the work of individuals and professional organizations, as well as the technological systems of email and the Internet.

Though I have no cause-effect evidence of a connection to the catastrophe, it seems more than just coincidental that the JTE did not receive even one manuscript for nearly five months following the event. This resulted in one of the lowest years ever in terms of manuscripts submitted. Now, fortunately, the manuscript submission numbers for the year 2002 appear to be approaching the norm.

The terrorist attacks exacerbated a declining economy. Like the chain reaction of dominoes falling against each other, a number of states in the US are encountering severe shortfalls in tax revenue. These shortfalls are then reflected in budget reductions for universities. As this issue goes to press, the State of Virginia is on the verge of announcing how it will deal with a budget deficit that exceeds 1.5 billion dollars. This is on top of a severe budget cut last spring. Since personnel costs typically represent 85% or more of the budgets of most educational institutions, revenue shortfalls take their toll on faculty positions. Vacancies go unfilled and early retirement incentives are initiated. Similar economic woes are spreading around the globe.

Changes in the distribution of resources result in changes in how people and organizations go about their business. In general, technology education in the secondary schools has been quite dynamic in recent years, experiencing growth, a new focus, and renewed vigor. Federal support for some technology education programs has no doubt had a positive influence in this regard. Development at the elementary level has been phenomenal, though still rather regionalized. At the teacher education level in the US, though, there has been a sizable net loss over the past 20-25 years in the number of faculty involved in the preparation of technology education teachers.

The most significant change at the teacher education level has been in land grant, research universities. In the past, not only were these universities major producers of teachers at the undergraduate level, they were also the grantors of

most of the graduate degrees in the field, including virtually all of the doctorates. Moreover, faculty at these universities did most of the research and development work. Now, the vast majority of technology education teachers are prepared in regional universities and nearly all of these institutions offer graduate degrees as well. Several of these institutions have had a phenomenal growth in the number of teachers they prepare each year and are thriving, a significant positive indicator. On the other hand, few institutions remain that offer a doctoral degree with a concentration in technology education.

In the past, those aspiring to become technology teacher educators had two, rather clear-cut options. One was to work primarily in research and scholarship in a large research-oriented university. The other was to emphasize teaching at a regional college or university. Now, there is mounting pressure at virtually every higher education institution for faculty members to procure funding, do research, and publish the results. State support for higher education has eroded significantly over the years, causing colleges and universities to rely increasingly upon overhead monies generated through grants.

Role expectations in higher education have changed dramatically as well. In years gone by, a person could be highly recognized as a professor in many universities by being a good teacher and providing service to one's profession. Especially in those universities aspiring to establish or maintain a national ranking for their research prowess, empirical research and its publication is now the expectation, *sine qua non*. Though teaching and service are valued, superior contributions in those areas alone will no longer assure continued employment as they have in the past, even at smaller, regional institutions.

Not long ago, the typical model for curriculum development in technology education involved teacher educators leading the effort, facilitated by state departments of education. As large amounts of federal money began flowing to state governments in the 1970s, some state departments of education began to provide the leadership for curriculum development. Teacher educators facilitated their efforts by delivering inservice education, effectively reversing the respective roles. In recent times, the leadership for curriculum development has begun to shift once again, this time to ad hoc groups and professional organizations, both of which are eligible recipients of grant dollars. The funding of the International Technology Education Association by NASA and the National Science Foundation to develop standards for the field is an example of this contemporary model. Even more exemplary of this changing approach is ITEA's Center to Advance the Teaching of Technology and Science (CATTS). This Center (see http://www.iteawww.org) has four goals: development of standards-based curricula, teacher enhancement, research concerning teaching and learning, and curriculum implementation and diffusion. The overlap between the goals of the Center and the goals of institutions of higher education are obvious.

The traditional curriculum development model was bound to change if for no other reason than the fact that there were not enough horses among the teacher educators to do the work. Fully fifteen years went by from the time the

field redirected itself toward technology education before a reasonably clear vision began to emerge about what technology education should be. The field has desperately needed some curricular guidelines to move ahead.

Over the past year or so I have heard increasing criticism leveled at teacher educators for not contributing to the development of the profession, in comparison to their predecessors. This allegation is absolutely true when looking at teacher educators as a group. However, to suggest that the teacher educators as individuals are not working as hard as their predecessors is at once absurd and naïve. The same work simply cannot be done with only a small fraction of the people that once worked toward the endeavor. What is more, active or former teacher educators are playing a significant role in virtually every curriculum project and standards-based endeavor in the field.

The act of singling out teacher educators as a group may, in itself, reflect an outdated paradigm about how work should be done in our profession these days, a paradigm akin to the division of labor notion that started well over a century ago. The old idea of teachers doing the teaching, teacher educators doing research and curriculum development, and supervisors monitoring and facilitating the process needs to be displaced. We all have responsibility for the entire effort. We all need to use the talents that we have to contribute to the good of the whole. In other words, we need to unify the constituencies in our profession and expand the participation and role of each member. The members of our profession have increased their level of capability to participate in it through higher levels of educational attainment, professional development, organizational participation, and increased responsibility.

The interest in technological literacy is expanding at a phenomenal rate, both inside our field and out. Change is occurring at every avenue and new alliances are forming at an unparalleled rate. In the area of curriculum development, for example, a new program called Project Lead the Way (see http://www.pltw.org/) seemed to spring into the forefront of our profession, like a deer at night appears out of nowhere into the headlights of our automobile. The deer is stunned motionless by the bright lights and must gain its wits before it is able to make a decision about what action to take next. The driver is equally surprised, slamming on the brakes and trying to decide whether to maintain a straight course or veer off to the side to avoid hitting the deer. Are we the deer or the driver?

JEL

Credit

I am fortunate to have wonderful colleagues with whom to work, namely Allen Bame, Sharon Brusic and Mark Sanders. From our discussions come most of my thoughts and ideas about our profession. Though the context was different, the "deer in the headlights" analogy came from a conversation with Mark.