

## Reflections on the State of Educational Technology Research and Development: A Response to Kozma

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□ I have been given the opportunity to respond to Kozma's comments in his "Reflections" article (this issue), and would like to do so even though I have not had the opportunity to read all of the articles to which he is reacting or to the various chapters frequently referenced from Kozma's forthcoming book on science and mathematics education. Responding to literature that is not available is always difficult, even if one has some idea of its direction. So I will confine my comments to his views of the field of Instructional (or Educational) Technology.

### BROADENING THE FIELD OF INSTRUCTIONAL TECHNOLOGY

Like Kozma, I am concerned with the need to broaden the field of Instructional Technology (IT). Fields of study and practice can indeed stagnate and subsequently decline without continuing intellectual revitalization. Where Kozma and I differ profoundly is on the ways to stimulate such growth. Kozma sees that this invigoration will come, to a great extent, from partnering with content-area specialists, and from studying the literature and practices of these fields. Ultimately, he suggests that this invigoration will come only when research, product development, and academic programs focus on technology-driven instruction and learning. He suggests that media research should have a paramount, if not exclusive, role in the field's research agenda. In many respects, Kozma is simply reaffirming his previous, broadly circulated position on the benefits of media research (1991, 1994), a reaction to Clark's widely cited 1983 paper, "Reconsidering Research on Learn-

ing from Media," which discounts the value of such research.

In my paper (Richey, 1998), I argued for expanding and attuning IT research to practitioner needs and to professional and social problems. The paper was written to address only research issues, rather than to grapple with other dimensions of the field. Nonetheless, many of the same questions of relevance could apply to enhancing the field at large—issues such as expanding the range of topics to address the interests and values of a broad spectrum of the field and focusing on real world problems.

The crux of the differences in our two approaches to broadening the field seems to be in our conceptions of what the field itself is. Kozma asserts (this issue) that the "unique contribution" of this field is "understanding the relationship between media, design, and learning" (p. 14). While this has been an important element of the field historically, currently it is but one facet of the field. Other views of the field describe a more complex enterprise with a more complex knowledge base (Seels and Richey, 1994). In addition to the design and development domains alluded to by Kozma, there is also a major emphasis on management, utilization, and evaluation.

This broader perspective on the field suggests that it is fundamentally about solving problems of teaching, learning, and performance improvement. Some of these problems are technology related. Many are not. Some are related to instructional delivery. Many are not.

The broader view is also necessary to encompass the work of the community of IT practitioners. Kozma's practitioners appear to be concerned primarily with technology-based

product development that relates to educational settings—principally K–12 environments. Today a large portion of the field’s practitioners work in corporate environments. Their primary concern is not technology-based delivery, nor is it even learning. Instead, they are typically concerned with organizational problem solving. The innovative technology demonstration projects lauded by Kozma, by and large, are not directly relevant to this community. It was this demand for relevance that I was addressing in my paper.

#### THE ROLE OF TECHNOLOGY

The field may wither (to use Kozma’s word, p. 12) if its thinking is focused narrowly on only one concern, even if the concern is as important and timely as exploiting technology. However, an exclusive emphasis on technology clouds the very nature of the field, blurring the distinctions between the *field* of IT and the *topic* of technology in instruction. This confusion simply reinforces the commonly held view that this field is only about computers. To suggest that the field should be exploring technology prior to determining what the problems are that technology may serve would seem to be putting the cart before the horse. Ely (1997) has previously made this point when he said, “Technology’s the answer, but what is the question?” The attempt should be to match technology with purpose. This is why I was not offended by Kozma’s use of handwritten notes at the American Educational Research Association presentation to present his reactions to the papers. Technology for the sake of technology is meaningless, which is not to say that we should “ignore media considerations in our thinking” (Kozma, this issue, p. 14).

#### THE FUTURE OF ACADEMIC PROGRAMS IN THE FIELD

How one views the field obviously influences one’s conception of how academic programs should be structured and what research agendas should be pursued. Kozma’s ideal doctoral program matches his views of the field. My ideal program (in fact, the program we are currently

offering at Wayne State University) is broader in scope and more flexible than Kozma’s. It is adapted to the varying needs of students and the varying communities that hire them. I have spent considerable time combating the notion of “one size fits all” doctoral programs. My ideal program does not restrict the subsequent use of student skills and knowledge by directing their education toward only one “client” environment. Rather, students should be flexible enough, and, it is hoped, talented enough, to be able to work in diverse settings. My ideal program also exposes students to alternative philosophies and theories, encompassing far more than only those currently in vogue.

On the other hand, we should welcome efforts to facilitate the influx of new ideas into the field. Interdisciplinary projects can lead to useful knowledge, and we can learn a great deal from studying client cultures and concerns. We can also learn from explorations of IT applications globally, and from literature that is not exclusively from the United States. We need to continually update our own disciplinary and research skills.

Unlike Kozma, I am not pessimistic about the traditional concerns of IT. I do not see that demonstration projects revolving around advanced technologies offer the only available avenue for exciting research and intellectual stimulation, or the only way to avoid disciplinary “impoverishment” (Kozma, this issue, p. 14). Instead, I see a field that is growing and changing. I see a field that is becoming more diverse, including a substantial number of women and a growing minority population among its members. I see a field that has expanded its scope to include practitioners not only in school environments, but also in corporate, community, and health care settings. I see a student body of future academics and practitioners with increasingly varied backgrounds and interests. I see an increase in theorizing and intellectual debate. Most importantly, I see a lot of work to be done. □

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