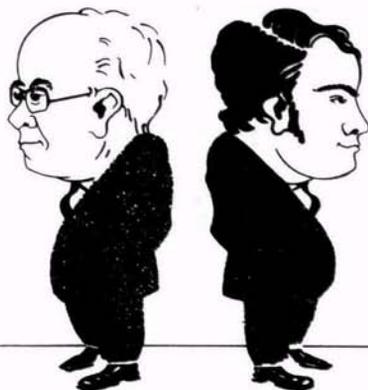


A FATHER AND SON EXCHANGE LETTERS



Dear Dad:

When I announced, some years back, that my interests had grown in the direction of "instructional development," I think I detected a twinge of horror on your face. In retrospect, I wonder if it reflected the loss of a son to the enemy camp, or if a sense of *déjà vu* overwhelmed you ("Must he repeat *all* my mistakes?"). Given the history of the relationship between instructional developers and curriculum developers, perhaps both reactions were appropriate. But I think the time has come for professionals in both fields to work for mutual understanding. The result, I believe, could be a cross-fertilization potentially beneficial to both fields.

As you know, instructional developers typically regard themselves as practitioners of a technological approach to the design of instruction and the development of instructional programs (Heinich, 1970). The key word is "technology," and it has a number of implications, many of which have been widely recognized.

First, technology brings to mind teaching machines, audiovisual aids, computer-based instruction, and the like. And, it is true that instructional developers frequently apply these tools with proficiency. It is also true that one of the roots of instructional development is the programmed instruction movement. But this is *not* what is meant by technology: instructional developers emphasize that the heart of their field is a systematic process of decision making about instructional problems, not the use of any particular gadget (Briggs, 1977).

Second, technology implies a problem-oriented, interdisciplinary approach to inquiry with great emphasis on the discovery of regu-

Wellesley R. Foshay is Assistant Professor Medical Education, University of Illinois, Urbana; and Arthur W. Foshay is Professor Emeritus of Teachers College, Columbia University, New York.

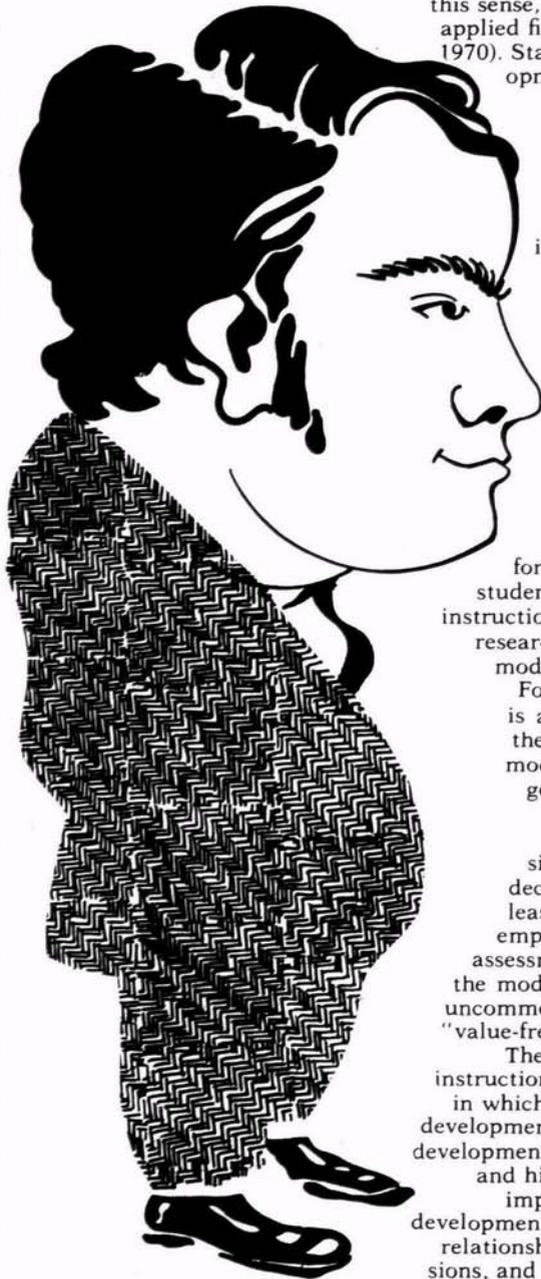
larities and principles about the way in which design and implementation decisions are made. These generalities tend to be "imported," either directly or metaphorically, from many disciplines. For example, much of the basic thinking about the instructional development process employs the operations research (systems analysis) metaphor; many prescriptions for design of instructional environments are extrapolations of behavioral psychology. The rule appears to be: if it seems to be generalizable to a variety of problems, use it, regardless of where it came from. In this sense, instructional development has been characterized as an applied field, rather than a formal theoretical discipline (Heinich, 1970). Stated another way, the relationship of instructional development to the disciplines from which it draws is not unlike that between engineering and the physical sciences, or between clinical medicine and the life sciences—although much less well-developed, of course.

Third, the technological approach implies a commitment to precision in model-building and to the application of a priori decision rules, rather than solely to intuition and ad hoc invention. The models and decision rules serve only as imperfect guides, however, and the design of instruction requires considerable creative intuition. Nonetheless, the literature of instructional development consists, in large part, of increasingly more precise discussions of methodology and attempts to construct empirically-based models. The greatest strides in this area are being made in the design science of instruction (Glaser, 1976), where insights drawn from recent research on concept acquisition are applied to developing new ways of mapping the structure of content to be taught and deriving from that structure direct prescriptions

for presentation of explanations, examples, and practice to students (Merrill, Reigeluth, and Faust, 1979). In addition, the instructional environment is modeled more precisely by applying research on motivation to elaborate earlier behaviorally-based models of the instructional environment (Keller, 1979).

Fourth, technology implies that instructional development is a means to an end, not an end in itself. I believe that the first stage (needs assessment) of the usual development model implicitly assumes that basic value judgments about goals have been made. Work begins by refining the goals and operationalizing them with objectives by a process which includes making a number of cost-benefit decisions. However, many of the values used in making these decisions are presumed to be the province of the client—at least in a general sense. Similarly, the evaluation processes employed in instructional development are usually based on assessment of discrepancies from the originally stated goals of the module, course, or program. More general policy studies are uncommon at this level. In this sense, instructional technology is "value-free" (Briggs, 1977).

There is an additional point to be recognized in contrasting instructional and curriculum development concerning the settings in which the two fields have emerged. The setting of curriculum development has been the public school, while that of instructional development primarily has been the military, government, industry, and higher education. This historical accident has led to some important differences in professional practice. Instructional development is usually conducted within the context of a consulting relationship, where content expertise, authority for program decisions, and funding usually are vested exclusively or primarily with the client. Consequently, there has been considerable interest in the consulting process itself and the intended outcomes of the



developer-client relationship (Schwen and others, in press). There also has been a tradition of the instructional developer as a change agent who should discover how to intervene in a given organization, both to affect its development and to realize the stated instructional goals.

Does all this talk of technology, systems, and such mean that instructional developers are mere technicians? Probably not. I think you would agree that the failures of educational programs are frequently—perhaps usually—at the stage of converting the vision into a functioning reality. Success at this stage of program development requires great sensitivity to the values upon which program goals are based, as well as the most comprehensive understanding possible of principles of instructional design, program implementation, and evaluation. It is to this stage of program development—the conversion of theory into practice—that the instructional developer seeks to bring disciplined inquiry.

Wellesley R. Foshay

Dear Rob:

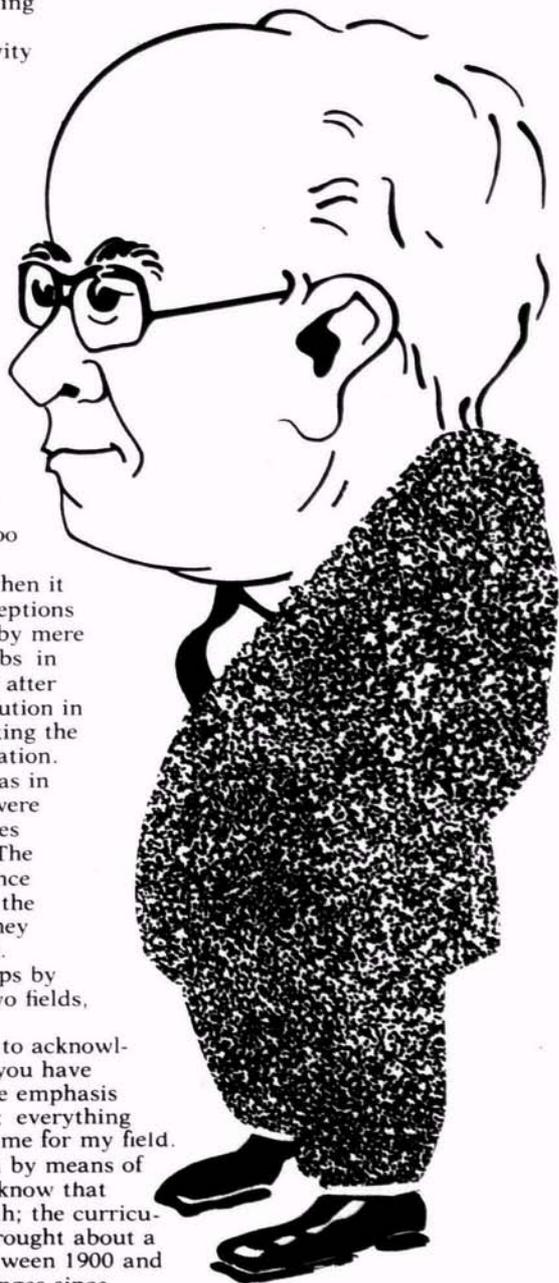
You correctly inferred that I was less than wholly pleased with your decision to enter technology. The reasons for this are historical, and your letter does much to alter my impression.

You are also correct in emphasizing that cross-fertilization between educational technology and curriculum development would be fruitful. We can't have it just because we want it, however. There is too much history in the way.

My introduction to the field was in the old days when it was called "audiovisual." With some important exceptions (notably Edgar Dale), the field was then dominated by mere promoters who were trying to protect their shaky jobs in the public schools. They chased one will-o'-the-wisp after another, claiming that each was the ultimate revolution in education, and often (as in the case of film) overlooking the very real advantages of the medium under consideration. Sometimes the great new invention was ridiculous, as in the case of airborne TV; sometimes its limitations were overlooked, as in programmed instruction; sometimes it was supposed to take over, as in language labs. The serious curriculum people from 1930 on looked askance at this nonsense and because they failed to jump at the opportunity every time a new gadget came along, they were ridiculed by the AV people and their successors.

That's the legacy, and it won't go away, but perhaps by being reasonable and up-to-date in discussing the two fields, we can mitigate it.

I think the first thing to do about the two fields is to acknowledge that at present they both work. In your field, you have carefully gathered evidence on this point. I notice the emphasis on evaluation that characterizes your present efforts; everything you do is tested thoroughly. I wish I could say the same for my field. A great deal of curriculum development is carried on by means of common sense and some accumulated wisdom. You know that technology works with the populations you work with; the curriculum people know that they and their predecessors brought about a "transformation of the school" during the period between 1900 and 1940, and have successfully brought about other changes since then. They learned about innovation through direct, lengthy experience.



I must disagree with you about the disciplines. All disciplines draw on other disciplines. In this sense, they are all multidisciplinary. What makes a discipline is the degree to which it is founded on testable theory, has a clear and agreed on domain, has a set of rules that govern its truth-claiming, and is grounded in a history. By these criteria, neither your field nor mine is a discipline; they are both in the early stages of becoming one. At present, the most profitable activity for both of them would be to describe the phenomena they deal with, rigorously. In this respect, your field is ahead of mine, because mine is more nearly in the public domain with all the distractions that brings.

The work on model-building is very important. It is part of what is new about your field and it is impressive. I hope the practical demands of the field will permit you and your colleagues to pursue it.

I have only one serious criticism to offer: the disposition of those in your field to take for granted ends, or goals, or ultimate objectives. It is ironic that this should be so, given the heavy emphasis you place on immediate objectives. This flaw could ultimately prove to be highly damaging to the field. You people could be *mere* technicians. It is the attention to the ends of education that differentiates your field from mine most profoundly and importantly. You take the client's ultimate goals as givens to be reworked; the curriculum developer takes them as problematic. A great deal of the attention of the curriculum people is given to the nature of the goals of education.

There is a long history of goal statements, including Plato, Montaigne, Milton, Franklin, Rousseau, Jefferson, Newman, Spencer, Dewey, and Whitehead, as well as the highly influential statements of the Educational Policy Commission in the 40s and the Secondary Education group in 1918. Your group seems unaware of this literature. This failure leaves you working within the framework of the known and removes probing from the field. Equally important, it leaves you unaware of the implied goals your work entails. Every teaching act carries with it a train of consequences, including the overt and intended, but also the latent and unintended. The "hidden curriculum" may well account for the failure of educational reforms on the western model in the developing countries, for example. Important as this matter is, we cannot expect your field to contribute to its clarification, if you are correct in saying that the field is not concerned with ultimate goals. It's too bad and it's unnecessary.*

Adults are easier to teach than children. The fact that technologists are working chiefly with adults makes their job less complicated than the attempts of the curriculum people to work with the public schools. It is in the public schools that the principal battle for good education is fought. Notice how little transfer there is from the military, or the professional schools, or industrial settings to the lower schools. The problem is basically different. If, as seems evident, the quality of education in the public schools has a long way to go, it is in part because you and your colleagues have failed to put your good minds on the problem. Occasionally, as in some inner-city schools now, someone stumbles on a bit of technology that works—but they have to pick it up on their own. They get little help from your group. Again, this is too bad and it's not necessary.

One of the potentially important strengths of your field, which the curricularists have so far failed to achieve, is its beginning successes in linking psychology to the teaching act. In the schools the linkage is very weak, as I pointed out several years ago in a chapter for the NSSE Yearbook on Elementary Education (Foshay, 1973). As things stand, the practice of teaching feeds mainly on itself. It is an outgrowth of practice, of lore, of conventional wisdom, and there is very little theory used to guide it. You people may well succeed where the curriculum people have not. As things

stand, the psychologists are busy talking to one another, not to practitioners. You will have to invent new knowledge to forge the link. Good luck.

There is considerable overlap between your field as you describe it and my sense of the curriculum field. Two obvious examples are in the field of consulting and in innovation. Neither of these fields has yet been the object of successful empirical studies, but there is much known about each—though those who know it are not numerous.

Some generalizations have come out of efforts to consult and to innovate: for example, that consultants have to put themselves in the place of the ones they would help, and that they have to gain permission (forgiveness?) for offering to help; that innovation consists in large measure of providing the means of evaluation to the person who would try the innovation; that the school is the unit for innovation, and so on. Such generalizations, so far, have been learned through raw experience. They could be refined if we knew how to approach them empirically—but we don't, and no one is trying so far as I know.

Both groups, yours and mine, use many of the same sources, but they don't read each other. Both groups, for example, have read Havelock on innovation. Both acknowledge the seminal work of the County Agricultural Agent. Both read the operations research literature when it first appeared during World War II and borrowed from it. But I'll bet you never heard of Matt Miles' *Innovation in Education*, Alice Miel's democratic process book, Stephen Corey's *Helping Other People Change*, to say nothing of the several ASCD yearbooks devoted to consultation and curriculum change. By the same token, the references you mention are strange to me.

If the two groups were to begin to listen to each other, the curriculum developers would benefit from your precision, and the technologists would benefit from the skills of studying long-range goals. For both, the encounter would call into question what they have taken as given and cross-fertilization would take place.

Arthur W. Foshay

*I think this criticism reacts to the excesses of the programmed instruction movement of the mid-1960s, when instructional technology was just beginning to come into its own. More recently, instructional technologists have paid attention to the implicit messages of the instructional environment (Mager, 1968), and are learning to deal with the "hidden curriculum" more precisely (for example, Keller, 1979; Foshay, 1978).

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