

The Future of Instructional Development—Through the Looking Glass Darkly

Editor's Note

The papers by Gustafson and Silber were originally presented at a Division for Instructional Development Symposium on "The Future of Instructional Development" at the 1978 Association for Educational Communications and Technology Convention in Kansas City. The speakers were asked to take diametrically opposed positions on the subject (Gustafson the negative, Silber the positive) with the expectation that the audience would begin to think about and question the extreme positions taken and develop their own positions somewhere in between.

When reading these papers, therefore, the reader is asked to bear in mind: (1) the deliberate one-sidedness of the papers; (2) the fact that the authors could just as easily have switched sides in the debate, and that while they believe what they say, they do not see the world in as black-and-white terms as the papers suggest; (3) the papers were prepared as oral presentations, not journal articles and the visual aids used during presentation were not reprinted here. These articles are included because of the important ideas they raise and not because of their scholarly approach to the subject or the number of references they cite.

It is hoped that the readers of these papers will respond in the same way that the audience did. *JID* welcomes responses to these papers—either in the form of papers expressing other views on the future of instructional development or in the form of Letters to the Editor addressing a few of the points made in these papers.

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The looking glass of Lewis Carroll's immortal *Alice in Wonderland* is a most appropriate instrument for examining the future of instructional development (ID). It points out very clearly the flaw in the perspective of instructional developers who have been using the looking glass only as a mirror. We gaze with great content and satisfaction at our supposedly handsome countenances completely ignoring the world on the other side of the mirror.

As you may remember, Alice found all manner of strange and disturbing personages and situations when she went through the looking glass, and my

intent is to provide you with a similar experience. I hope the point that Carroll's writings were really designed for an adult target audience is not lost on my readers. I also remind you that, in terms of the future of ID, forces in the outside world will have a major impact on the future of ID. We may think we represent such a powerful idea whose time has come that we chart our own course, but history will show the folly of such thinking. Our future is inextricably linked to a number of external forces that we can at best modify. Self contemplation may be good for the spiritual self but is folly in terms of forecasting the future. We are *part* of the environment not *the* environment.

The World Beyond Education

So let's go through our looking glass and examine the larger environment:

Instructional Development: Deliverance

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The movie title used in the title for this paper serves to underscore the reason that I believe the future of instructional development (ID) is an optimistic one. The problems identified by Kent Gustafson are, in my opinion, external to ID itself and can be overcome if we can "get our act together" and deliver what we promise to deliver.

Our Goal—and our Failure

The first question we must address is: What do we promise to deliver? Regardless of the specific theoretical approach to or model of ID each of us ascribes to, I think that all of us can accept

this as our goal: to provide effective, efficient, relevant instruction at a reasonable cost using a systematic process of designing, implementing, and evaluating the instruction, a process that is based on sound learning and instructional theory.

Because most of us accept this as our goal and because many of us believe we do indeed meet this goal, the next question we must address is: Why is there skepticism about whether or not ID can deliver?

To me, the answer is that we, and our predecessors, promised to deliver too much too soon—and did not deliver. We promised to "save education" though:

- behavioral objectives,
- criterion-referenced testing,
- programed instruction,

What conditions are likely to develop between now and 1990? First, some general conditions.

The Economy

- U.S. and world economics will continue to experience severe cyclical ups and downs with relatively short ups and longer downs. Inflation will run between 6 and 12 percent annually in the U.S.
- The balance of payments deficit will remain large because of two primary factors: (1) U.S. dependence on foreign oil imports and (2) foreign protectionist policies established as countries attempt to control their own economies.

Energy

- Energy costs will spiral rapidly upward and depress economic growth.
- A greater share of resources will be devoted to locating, acquiring, processing, and transporting energy. The days of cheap energy are past.

Employment

- Unemployment will remain at or above current levels.

- Underemployment (placement in a job for which the employee has greater than required education) will grow.
- The market for highly educated personnel will not expand beyond its current 15 to 17 percent of jobs. Thus, increasing numbers of higher education graduates at all levels will find little upward mobility.
- Job security will become of increasing importance.

Mood of the Public

- There will be a continued erosion of people's faith in technology as a means of solving problems. Appropriate technology will receive greater attention. We will not turn away from technology, but we will examine it much more closely.

The World Within Education

Now, what about education? (I am excluding business, industry, and military training for the moment; those kinds of training represent a different situation and will be discussed later.)

Higher Education

- Rapidly increasing costs will be largely uncontrollable.

- Ability to react to changing conditions will be poor.
- Reductions in the number of students will force curtailment of programs and staff reductions in some places.
- Unionism will increase; faculty members will be concerned about job security.
- There will be reductions of "nonessential and auxiliary services"—guess where that leaves ID personnel? (The point should not be missed that higher education has been one of the primary employers of ID types.)

Community Colleges

- There will be no real growth in most areas.
- Where overbuilding has occurred, there will be some reductions.
- Competition with higher education for the available students will be fierce.
- As in higher education, unionism will increase and faculty members will be concerned about job security.

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- individualized instruction,
- self- and mediated-instruction,
- the 90/90 criterion,
- formative evaluation.

We have since learned that none of these techniques individually can meet the goal. In the process of learning that however, some of us and many outside the ID field became skeptical of our techniques, ourselves, and our promises to deliver.

This skepticism leads to our next questions: Have we gone beyond that early stage of promising too much? Do we now know enough really to deliver what we promise? I believe that the answer to both questions is a resounding, "Yes!" Let's briefly review what we now know and what we can deliver.¹

ID Today and Tomorrow

Systematic Process. We know that the individual components that made up our early promises did not work because they were applied in isolation; to work they, and other components, must be applied to solving instructional prob-

lems by a systematic process. Though there are different versions of it, we know basically what the systematic process—the ID process and model—is, and more importantly, we can apply it to solve real problems.

Needs Assessment. We know what a needs assessment is, why we should do it to begin the ID process, how to do it, and how to interpret it (Kaufman).¹

Learner Analysis. We know why it is important to analyze the learners for whom the instruction is to be designed

¹The names cited as providing the knowledge base for each area are given as a representative, not exhaustive, list of people working in that area whose work is most familiar to the author. It is not the intention of the author to slight those not mentioned or to endorse the work of those cited. Complete references can be obtained from the author.

and what some of the key characteristics we must analyze are—for example, cognitive style (Hill), aptitudes (Allen, Cronbach and Snow), brain functioning (Debbs, Herman).

Management of ID. We know the importance of, and some strategies for, implementing ID within the constraints of an organization, changing the climate of an organization to make it more receptive to ID, developing ID teams, and working with clients in a facilitative manner (Diamond, Durzo, Heinrich, Mager, Lawrason, Reiser, Silber).

Task/Content Analysis. We know how to take a set of desired goals or competencies and break them down into their component tasks (Gagné), concepts and relationships (Markle, Merrill), or algorithms (Landa, Gerlach).

Instructional Strategies. We know how to sequence the tasks/concepts to be taught (Gagné, Merrill, Homme), use appropriate instructional events to teach them (Gagné and Briggs), design lessons to teach the most difficult intel-

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The Future of Instructional Development—Through the Looking Glass Darkly (continued)

Public School

- With no growth in real dollars available, many schools will face continued real-dollar reductions as populations fall.
- Very few new teaching positions will be available; the average age of teachers will rise rapidly.
- Willingness to experiment with new "fads" will lessen.
- There will be a reduction of auxiliary services not deemed essential to the basic missions of the school.

Overall in education, I predict no great catastrophe or crisis that would precipitate major restructuring.

Changes will continue to occur bit by bit as policy makers, administrators, and teachers respond in essentially conservative ways and attempt to maintain the status quo.

Facing Tomorrow

So, where do all these less-than-rosy predictions about the future leave our good old ID specialist? Well, let's ask some hard questions.

1. Where do most of us work? Higher Education. (A most unlikely candidate for rapid transition to the new millennium.)

2. What are we doing? How many of us who call ourselves ID specialists are really doing any systematic design of instruction? Are we really doing ID or something else?

3. How many well-documented cases can you cite of instructional development efforts that were or are effective—and continue to operate? (Getting a project completed only to have it not be adopted doesn't count.)

4. How many cases can you cite of efficient instructional development? Either in terms of the resulting product or the process (or both) can we really provide education with even partial

answers to the dollar crunch, or do we simply want new dollars to do our thing?

5. How much evidence can you cite that ID has increased the relevance of instruction? How many times have you asked your client whether the content is even worth being taught? Are we helping people do better what shouldn't be done at all?

6. What is the survival rate of the results of our development efforts? If we dared go back 1, 2, or 3 years later, what would we find?

7. Where do we obtain the funds to support our development efforts? Are we supported by a firm commitment of institutional dollars or do we find it necessary to work on a project-to-project basis seeking whatever funds happen to be available?

8. Are we focusing our efforts on the central problems of educational institutions or are we off chasing any old wind that blows? The sudden discovery of "faculty development" by ID types provides some evidence on this question.

If I were a vengeful type, I would now provide a self-test for each reader to complete and mail in for evaluation, but I suspect the low return rate would re-

Instructional Development: Deliverance (continued)

lectual skill level for the learner—the concept level (Markle, Merrill and Tennyson, Wilson)—and modify the strategies for different types of learners (Allen, Cronbach and Snow).

Media Selection. We know some general rules for selecting media based on the type of objective (Allen, Goodman, Kemp, Merrill) and some rules for modifying that selection based on learner characteristics (Allen, Cronbach and Snow).

Evaluation. We know about the importance of evaluating (or testing out) our instruction, the number of times in

the ID process it should be done, and the techniques to use in doing so (Scriven, Stufflebeam, Baker, Kelley, Children's Television Workshop).

Cost and time of ID. We are learning to apply economic and management models to the ID process to provide cost effectiveness data related to instructional development (Cook, Doughty, Mager).

Diffusion of ID Concepts. We are beginning to learn how general diffusion models apply to the acceptance of ID by those outside the field and to develop strategies for gaining the acceptance of the ID philosophy and approach (SRI).

Even this brief list of what we know today about the systematic process of designing effective, efficient, relevant instruction indicates that we can deliver today.

But even with all we know today, instructional development is just in its infancy. As we develop more instructional theories and procedures and test them through systematic research,

we will be able to deliver even more in the future. Just developing are new techniques for:

- identifying key aptitudes of learners;
- adapting instructional strategies, sequences, materials, techniques, and individual stimulus displays to the individual differences in learners;
- using algorithms in instruction;
- providing cost-benefit data about ID to decision-makers;
- infiltrating institutional structures and overcoming resistance to ID.

Defining ID Problems

Despite the rosy future orientation I was asked to take in this discussion (and also happen to concur with), I would be remiss in my analysis of the future of ID if I did not add a concluding caveat. If we are to succeed in the future, and deliver, there are some problems the field of instructional development must overcome.

duce the validity. As an alternative I will present my own opinion about how we measure up on each of these questions.

1. Higher education is not going to save the world all by itself. In fact, it needs a little saving itself.

2. An awful lot of people have suddenly become ID specialist but continue to do what they did before. So, the numbers game of counting people in the field of ID is meaningless.

3. Our ability to prove we can develop effective instruction is improving and this is the area in which we have had the greatest success. It is disturbing however, to realize how many ID reports still report only what was done and not how well it was done.

4. We haven't even scratched the surface on the issue of efficiency. We haven't even developed a language, not to mention a data base. Personally, I think this should be the primary area of concern if we expect to have a future.

5. We have payed almost no attention to the issue of relevance. Again, we don't even have a language for discussing the issue.

6. The survival rate of our development efforts is distressingly low. If we

could say ID programs gradually evolved into something even better, that would be nice, but generally they are unceremoniously dropped.

7. Most of our funds are from external sources; we respond to whatever hand will feed us.

8. Our projects usually are not central to the institution's missions and areas of concern. In fact, many of us never even think to ask if they are.

To add insult to injury, I will also point out a couple of other not-so-trivial concerns related to whether or not ID has a future. First, we operate totally without anything resembling a theoretical base. Sooner or later one must emerge if ID is to become viable. Second, the ID literature is distressingly thin. We have thousands of publications and tens of ideas. As our friend Alice would say, "You'd generally get to somewhere else—if you ran for a long time like we've been doing." Neither of these two issues will be explored in detail, because they assume there is a future, and I am not convinced we will be around long enough that it will even matter.

At this point I might add a few comments about business, industrial, and

military training. These areas often have made excellent use of the ID process. However, it must be remembered that their goals are often quite limited and the analysis, development, and evaluation readily linked to a real world referent. For example, when trainees are being paid it is relatively easy to calculate the cost-savings of one training procedure over another. This is not to say that all business, industry, and military training has made appropriate use of ID. There is a substantial amount of fuzzy thinking and development in these settings, too. But there are at least a few exceptions worthy of note.

In conclusion, I think the ID movement must seriously re-examine its basis of existence and modus operandi. We have been tolerated and even accepted in some locales, but that is not sufficient for survival. I believe ID can have a future and it can make a significant contribution to education in this country. Like Alice shaking the red queen and thus awakening herself, my intent is to jar us into awareness. We must stop reflecting on what we have been and start looking on the other side of the mirror. To do otherwise is to ensure that we have no future.

ID Skills. Not all instructional developers (including the author) know all they need to know about ID to be able to deliver as effective professionals. Instructional developers must keep pace with the current body of knowledge and techniques in the field—through formal instruction in degree programs or professionally sponsored continuing education programs or through self-initiated and self-directed reading and study.

Additional Skills. While all the knowledge and techniques discussed earlier are necessary to be a successful instructional developer, we are beginning to suspect they are not sufficient. There may be additional general skills, related to the way an individual processes information and interacts with people, that make the difference between a successful instructional developer and a not-so-successful one (Wallington). We need to find out what these additional skills are and incorporate them into training programs, continuing education programs, and our own self-

directed professional growth and development.

Target Audience. No matter how much it delivers, not all potential users of instructional development will accept it. Instructional developers need to re-think their emphasis on higher education and on gaining acceptance of ID in public schools. They need to expand the target audience for applying instructional development to areas that might be more amenable to its philosophy and processes—for example, business and industry, medical education, hospital training, developmental/remedial education, special education.

Professional Home. At present, there is no one professional home for instructional development as a field and instructional developers as professionals. The Division of Instructional Development, Association for Educational Communications and Technology; the International Communications Association; the American Educational Research Association, a division of the

American Psychological Association; the National Society for Performance and Instruction; the American Society for Training and Development and so on, each considers ID "its territory." Developers must decide whether this situation is beneficial (diversity of viewpoint) or detrimental (fragmentation); and if it is detrimental, they must decide how to deal with it.

External Problems. ID as a field must recognize and deal with the problems that Kent Gustafson clearly identified in his paper.

In summary, I believe that instructional development can deliver right now and will be able to deliver even more as knowledge and techniques expand: the future of instructional development is a healthy one. Like any field, instructional development has some problems. I am convinced, however, that with perseverance we will solve these problems as we have solved others. Then will instructional development reach its full potential: deliverance.