

Performance Technology and Other Popular Myths

Joe Harless

Something got lost in the translation of Joe Harless's oral presentation into written text. It is impossible to capture his diabolical timing, his charming asides, his spontaneous humor, and his dynamic delivery in the static text medium. Many consider Joe's invited speech at Chicago to be the highlight of the conference. Participant comments: "Joe combines a light-hearted delivery with a serious message. He keeps you thinking for days on the importance of the message." "You laugh while you listen to Joe, but you always take him seriously." "I got more useful ideas from his discussion of soft skills than from many workshops I've attended. I am ready for the toughest soft-skills client now."

*Joe is a former president of NSPI and the recipient of NSPI's highest award, "Honorary Life Member." He is one of the leaders who moved us away from our obsession with instruction to alternative approaches to improving human performance. He introduced the term "front-end analysis" (and the powerful concept behind it) in his 1969 book *An Ounce of Analysis*, which has become a classic introduction to performance technology. As this presentation demonstrates, Joe is still challenging our perceptions and pushing the frontiers of our technology.*

I hear the term "performance technology" bandied around a lot. Even though it is a relatively new term, there are already many myths growing up around it. Seeking to right some of the wrongs, I want to talk to you about these myths in our field:

1. Because there is a performance technology, the field must be populated by performance technologists.
2. Job aids are a trivial part of the technology and aren't worthy of more than a footnote in the revolution we are seeking to bring about.



3. Performance technology deals only with mundane skills. The "softer," but more important, elements of human behavior must be left to non-technological approaches.

Are We Performance Technologists?

Cleverly enough, I want to begin with the first one. Without being so presumptuous as to judge you, let me give you a simple test to discriminate whether you are a performance technologist or not.

When our clients come to us with a request (or demand) for our services such as, "Develop a two-day course to motivate our people to really appreciate the history and the beauty of the widget—and, by the way, use computer-based-instruction and try to work in some of

that left brain/right brain stuff," how do you reply?

You know how I reply? I say "sure."

But now comes the discrimination part. It is a mere matter of punctuation. Do you also say "Sure" and put a period after it, then get on with developing two days of computer-assisted left-brained (or maybe right-brained) widget-historing and appreciating?

If you put a period after "sure," then I submit you've flunked the first performance technologist test. Putting a period after "sure" is the ethical equivalent of standing under a street lamp waiting for a sailor to saunter by.

What separates performance technology from other fields is that it begins, or should begin, with a diagnostic process. A technology without a diagnostic front-end is not very much separated from the world's oldest business venture.

Go to a good physician and ask for any specific treatment. His or her response must surely be, "Tell me what *problem* you seem to be having and I'll help you." A good physician is the practitioner of the diagnosis-before-prescription approach. Also, a good physician does not hawk a single remedy.

1. Client says: "Gimme widget-appreciating course." Check the better response . . .
 - a. SURE.
 - b. SURE, glad to help with problem.

KEY FRONT-END QUESTIONS

- What is the **PROBLEM?**
- What are the **CAUSES?**
- Is it **WORTH** solving?
- What type of **SOLUTIONS?**

It is, perhaps, a good model for us also. Selling training, or its dumber brother, education, is hucksterism when there is no front-end present. Selling computer-based-training is hucksterism without a front-end. So is selling feedback, job aids, programmed texts, new-age thinking, work design, generic training, or any other *treatment*.

Our technology must begin with some approximation of a diagnosis which seeks to aid the client in defining problems, coming to grips with causes, aiding the client in determining the potential worth of solving the problem, and letting the analytical chips fall where they may in recommending solutions.

How did we get to hucksterism and find ourselves camping under street lamps? Perhaps the answer lies in one of the few fundamental truths in our business. It really isn't our fault. The first thing I keep in mind when dealing with the management of client organizations is Harless's Theory #1: The chances are excellent that anyone will be reinforced for anything. That is only a theory. I do have a law: Reinforcers get attached to the last event—which is solution-selection. Analysis almost never gets rewarded. In fact, tell me the job title and I'll tell you the most probable solution which will be specified.

	MOST
ROLE	PROBABLE SOLUTION
Training	More training
Sales	More salespeople
Manufacturing	New equipment
Advertising	More money

Trainers are reinforced for buying and selling training. If they don't their kids go hungry and are called "disadvantaged." Sales people always want to add more sales people. Manufacturing folks like "things." So if you are in the audio-visual or computer hustle, seek out clients who are manufacturers. Advertising organizations dig bread. Hang around with them if you are short on budget. They always seem to have plenty.

But it is not entirely the client's fault that we don't do some sort of front-end analysis. What is the consultant's favorite solution?

	MOST
ROLE	PROBABLE SOLUTION
Consultant	Whatever he/she selling at the time

And, we tend to sell whatever new fad seems to come along. And, brothers and sisters, I've lived through them all so far.

It is our aim which is wrong if we are in the specific solution-selling business.

Now this is difficult because we must go beyond our roots which are in the *treatment* of skills/knowledge deficits and get into unfamiliar waters of dealing with solutions outside training and education. Performance technology is a demanding technology. In the presence of a front-end diagnosis it may demand us to know how to re-engineer the way the work itself is performed; design feedback systems; deal with incentives; and use many other strategies.

Which brings me to the second diagnostic test question for performance technologists.

2. Do you know how to handle non-skills/knowledge solutions?
- YES
- NO

The curse of insisting on a diagnostic process first has made it hard for me, for one. Things were so much easier when I could simply develop a programmed text for everything. Now I've got to learn more and keep up with a stunning array of influences on human performance. I, for one, very often flunk the test.

Are Job Aids Trivial?

I've got a lot more to say about the first myth, but because of limited time, let's get on to the second myth: "Job aids are a trivial part of performance technology."

To me a job aid is best defined as a storage place for information other than memory which guides and directs the performance of work in real-time. That is, it is an *external* influence on skills/knowledge which is employed *during* the performance of the work. This should be contrasted to instruction which seeks to store information in memory for later recall by the performer when he/she has the occasion to use the information. I'm talking about cookbooks, decision tables, checklists, and the like when I refer to job aids.

Tell me a job aid is a trivial performance-influencing mechanism when I relate some facts.

Fact 1. If you have described the performance to be influenced as part of FEA, then you almost have a job aid. But a description of performance is just the beginning of the development process when we seek to develop instruction for storage in the memory of students. Our studies show we can develop job aids three to five times quicker than developing training on the *same* content. Want to be a hero to your clients? Tell 'em that.

Fact 2. Almost invariably when we build formal training *around* a job aid,

this reduces training time to a third of the time required for memory-storage. We are talking potential big bucks here in that trainee salaries usually exceed all other training costs combined. Where else can we get a three to one return on our investment?

Fact 3. We've seen many cases where the need for formal training can be eliminated altogether—even in the presence of a skill/knowledge deficit. For example, we once spent 24K on an eight-page job aid. (That's \$3,000 a page for those of you who are into long-division.) Sounds awfully expensive until you realize that this job aid totally eliminated a two-week residential course for 200 highly-paid engineers. We are talking hero time here as far as line management goes, but we are talking about being a bad guy with the manager of the residential training facility whose goodness is measured by the number of trainees who sleep in his beds.

The biggest payoff is that job aids don't forget. They don't worry about the retention curve. They don't make errors because of hangovers or fluctuating motivation. Job aids never have a bad day. They by-pass all this instructional technology stuff and go directly to the performance itself.

Job aids have disadvantages also, and they are certainly not a universal solution to performance problems or training needs. But they are certainly potentially powerful enough and potentially appropriate in a large number of situations to warrant an equally prominent place in our technology.

It was interesting to note that this 1985 NSPI conference seems to support my contention that we consider job aids trivial. There is not a track devoted to them. There was no newcomers session devoted to them. No postconference workshop is devoted to them. Out of 167 sessions, only three are concerned with job aids. (That is about 2 percent for those of you into data.) Know why? Job aids aren't sexy. Instruction is sexy. The brain stuff is sexy. Computers are sexy. Job aids simply reduce training cost and obtain the desired performance. But these potential benefits pale by comparison to sexy.

What I want you to do is simply to keep Harless' Rule #342 in mind, or to see me after the show and I'll teach you how to make a job aid out of it so you won't have to "keep it in mind."

HARLESS'S RULE #342:

"Inside every fat course there's a thin Job Aid crying to get out."

Incidentally, I review literally hundreds of job aids in our workshops every year, but here is one written in 1952. It is the world's most elegant job

HOW TO COOK AN OWL

1. Remove feathers.
2. Boil in much water.
3. Salt to taste.

(From Eskimo Cookbook, 1952)

aid. I keep it around to remind me that power and simplicity often go together. But I haven't cooked up an owl yet. I need an owl-catching job aid.

Are "Soft" Areas Beyond Our Reach?

Another popular myth is that performance technology cannot handle the so-called "soft" areas of human performance. I hear this all the time. I hear it mostly from management trainers, educators, cognitive psychologists, linguists, and expert systems people. I also hear it from members of the hard-core performance technology family who should know better.

When I first began to hear this challenge, I assumed that the challengers were defining "soft-skills" to mean that we did not deal with cognitive events. That is not only a myth, but patently absurd. We have well worked out models for dealing with cognition if one simply defines it as covert behavior. I'm able in our new workshops to defeat the soft-skills business by showing methods and examples for dealing with discriminations, rule-applying, thinking serially, problem solving, and the like.

But, frankly, I have diagnosed the problem too narrowly. I came to find that the challenger might mean a vast array of things by "soft." This is my summation in definition form.

Definition of "soft:"

The situation is unclear ("hazy"). I don't know what to do, and I don't know where to begin. But with all this stuff piled around, there must be a pony somewhere.

I found that I had to deal with *anything* which was unclear in the situation. Thus, I found myself always having to probe for the meaning of "soft." Some-

What does "soft" mean?

- Don't know Problem? Cause? Solution?
- Don't know desired PERFORMANCE?
- Performance is COVERT?
- Client wants to teach SUBJECT MATTER?
- Client wants to teach "ATTITUDES"?

times the term meant that the problem and/or the cause were not apparent and, therefore, the solution was also unclear. Thus, the term simply meant no FEA had been done. Sometimes the term

meant that the desired performance was unknown. Or that the performance was covert or couched in subject-matter, or dealt with so-called internal states such as attitudes and the like.

In other words, the situation may be soft if these elements are unknown at the beginning.

What to do will be soft, if these are fuzzy . . .

- General PROBLEM
- Deficient ACCOMPLISHMENTS
- Target PERFORMER
- Deficient PERFORMANCE
- CAUSES of deficiencies
- SOLUTIONS

These elements are almost invariably unknown at the beginning. Performance technology, strictly applied, is designed to deal with the "soft."

Bob Mager gave us a good start on the whole question of dealing with soft situations and soft skills with his excellent little book *Goal Analysis*. Currently, I'm attempting to work out ways to help performance technologists take the fuzz out of *any* request a client or management makes, but especially to deal with these kinds of soft-skill areas.

Examples of "soft:"

Communications
Leadership
Computer Literacy
Basic Principles of . . .
Orientation
Product Knowledge
Accepting Change

Can PT handle these sorts of requests? I can give you, for one, a re-sounding "sure," and there is no comma or "but" after this "sure."

Let me give you our new soft skills workshop for free and in one figure:

KEYS TO MAKING "SOFT" INTO "HARD"

- Stop asking the question: "What do we want 'em to know?"
- Consensus on problem/causes.
- Match solution to cause.
- "Deeper" performance description.
- Consensus on accomplishments and behaviors and criteria.
- Stop waiting for "deus ex machina" and the "Subject-Matter Messiah."

Now, we play right into the soft-challengers' hands when we ask the most damaging question possible: "What do we want them to know?" It is a bog we can never extract ourselves out of. The question has no place in our technology. The correct and most helpful questions

and analyses involve coming to agreement on problems and causes and matching solutions to the results of the analysis. And, they involve a rather rigorous specification of the performance, often to the operant-level of detail.

It is consensus and description which make soft-skills and soft situations into hard ones. You and I must simply stop being religious and superstitious. A god will not, I fear, come down from the machine as in the Greek plays. Computers won't save us anymore than teaching machines did. There is no subject-matter messiah to cleanse us or our students of our sins. This is a technology we want to practice and preach. It is not a religion. It may not even be a revolution. Though religion and revolution are admittedly more fun than FEA and sweat. Sorry about that.

More Myths

Let me add some more myths before I close.

MORE MYTHS . . .

- Clients are stupid.
- Good objectives = Good instruction.
- Instructional development is an art.
- Analysis costs too much.
- Consulting is way to get rich and famous.

Clients aren't stupid—as a rule. Clients are often ignorant and pressured. We can help the ignorant and we can often help the pressured. But, we can't help the stupid.

Relevant, clear, performance-based objectives are good things to have as an *output* of a good FEA. But too many of us stop there. Objectives may be the *start* of developing good instruction, but such instruction is a function of good analysis, design, development, and testing. Good objectives, by themselves, will not guarantee good instruction.

There is nothing wrong with artistry and creativity except it often isn't there when I need it. Also, most of us aren't creative enough to be more than silly. A systematic technological approach to instructional analysis, design, development, and evaluation is always there when you need it. (However, we can also be silly about that, and so it goes.)

I could fill in a number of things in the front of "costs too much." "Analysis costs too much" is a myth. The thing that costs too much is no-analysis.

Consulting—at least outside consulting—is not the way to get rich and famous. The way to get rich is to marry money. The way to get famous is to hang around NSPI presidents long enough until you get invited to say your piece.