

Bill Reynolds

CLOSING THE CONFIDENCE GAP

By Carl Binder

Look closely at those tentative trainees emerging from corporate training courses. You'd think trainers never heard of the phrase 'practice makes perfect.'

Here's a stumper question: How often does your training instill true confidence in the trainee? Mind you, we're not talking about the fleeting kind of assurance that comes from a zingy motivational speech capping a classroom session on selling skills. Nor are we talking about the kind of ephemeral confidence that evaporates just as soon as the trainee tries to use skills on the job he never had a chance to practice in a course. The question is: How often do training programs produce train-

ees who have justifiable confidence in their newly acquired skills and knowledge?

That's different, you say. Sadly, many training programs do not produce trainees who have that degree of confidence. In the typical sales training program, for example, a few chances to role play a segment of the face-to-face sales encounter may demonstrate to salespeople why they should follow a certain sequence of responses to the customer. But if salespeople don't practice enough,

they lack the sense that they can perform the skills effortlessly, as though the skills are second nature. In fact, they may leave the course knowing that they can't perform the skills or use the knowledge confidently.

It seems obvious to say that what we mean by "confidence" is the ability to perform an act without hesitation, smoothly, correctly and with a feeling of accomplishment. It's a matter of pace or quickness of response, as well as correctness or accuracy.

Unfortunately, even in most criterion-referenced programs, in which trainers use tests to judge trainees' pre- and post-course knowledge as well as progress along the way, skills and knowledge are seldom put to a performance test capable of detecting the trainees' degree of confidence in applying those skills. The usual tests and yes/no checklists aren't good enough to measure performance because they don't ordinarily incorporate the time dimension. They merely indicate whether or not a person can perform at all, or how correctly. As Eric Haughton, one of the founders of precision teaching and a former colleague of mine, once said, "You can take behavior out of time, but you can't take the time out of behavior."

I'm making a similar point here. In order to gain a complete picture of the trainees' performance, we must know how quickly, or with what degree of surety, trainees are able to perform criterion tasks and skills. Without it, we can't be sure they've mastered the skills.

What we have in many training programs, therefore, is a confidence gap. To close it, we must rediscover the virtues of practice, practice, practice.

Why Overlearning Is Good

Hundreds of times over the past 15 years I've asked groups to define behavioral fluency. Just about everyone knows the answer—or at least part of it. When I give people a minute to jot down as many ideas or words as they can think of that relate to the term, most groups will produce dozens of responses. Among them: smooth, masterful, confident, easy, quick, no hesitation, feels good, no anxiety, unconscious competence, automatic, without thinking, second nature, practiced, the ability to use learning and so on. Every one is correct.



Fluency is the mark of the expert—the performer who thinks, acts or speaks confidently and without hesitation. Whether we're talking about playing a musical instrument, answering sales objections, performing a martial art, using a computer software program, solving addition problems, handing off a football, comforting a dying patient or making a strategic decision, the ability to act and use knowledge correctly and quickly is what we recognize as true mastery. This is a level of performance that goes well beyond the point of 100 percent accuracy and into the realm of "overlearning."

Verbal learning studies from the 1950s gave us the concept. People who overlearn continue to practice material beyond the point of 100 percent accuracy. As they get beyond that point, their response times decrease. Retention and transfer of training to the job improve. Other studies have shown that overlearning improves the learner's ability to apply new concepts to more complex tasks, and that reduced reaction times make people more resistant to distractions as they use the new skills and knowledge.

My own laboratory and classroom research during the 1970s demonstrated that fluent performers can keep working for extended periods with relatively little fatigue or susceptibility to distraction. In contrast, hesitant performers tire more quickly. Indeed, when you ask those hesitant people to use skills or information for more than a brief period, they become discomfited, frustrated and sometimes angry. This hardly contributes to job satisfaction.

Still, we expect new trainees to perform tasks without helping them become fluent first. Research findings from different fields indicate that mastery—defined as retention plus application plus endurance—is a function of speed, not just accuracy.

And practice is the way to attain mastery.

We know intuitively that all this is true. The question remains, how many of our training programs truly help people master skills? If the programs don't produce fluency, what is their return on investment? What are we getting for our money if we can't be sure which skills and knowledge learners will retain and be able to apply later?

Ask any concert pianist, martial artist, accomplished athlete or experienced salesperson how they mastered their jobs, and they'll probably give you a simple answer: practice. On the other hand, ask educators and training professionals about practice, and they'll probably hem and haw about drill and practice and say such things as: "That's just for rote memory tasks. We're interested in higher-order skills." I'm always amazed when people think trainees can acquire such skills as analysis and decision making without having mastered the fundamentals.

Recently, I've started referring to "the dirty D and P words"—drill and practice. Because practice exercises in education and training have often been boring, frustrating, inefficient, poorly designed and only vaguely connected to tangible performance goals, students have avoided them. In response, many educators and trainers have thrown out the baby with the bathwater. Instead of improving practice exercises, they've eliminated them altogether or relegated them to minor roles.

Knowledge Evaporates on Beaches

It's a simple fact that in order to achieve behavioral fluency one must practice skills and knowledge well beyond the point of perfect accuracy. Consider the example of learning to use a new word processor. Once you've gone through a tutorial or classroom training, you might be able to navigate the program fairly well by using simple commands.

But now try to take a paragraph, put it in italics and shove it down five paragraphs. Do you find yourself thumbing through the manual? Without fluency, you'll probably find it tiring to work for very long or to create a complex document. At the very least, it will be aggravating. If you had little chance to practice the program

before you took a two-week vacation, you'd probably find that your knowledge—and whatever confidence you had—evaporated into the balmy air as you lay on the beach.

But if you could practice to the point of fluency on a set of key functions, commands and sequences before you left on vacation—and if you were able to use the reference manual expertly—then using the program would be a snap when you got back.

Consider the salesperson who needs to have ready information about the company's products and services. For popular products, the salesperson may be able to give details, discuss features and benefits, and respond to objections quickly and correctly.

But what if she has the unexpected chance to sell a product she doesn't usually push? If she's unsure of the features of a product or her ability to sell it, she may avoid making the pitch. The result: lost sales.

Practice is a problematic concept for many of us in the human resources development (HRD) field. We know it's necessary, but we usually lack the tools for making practice pay off in the form of masterful performance. Our trainees become victims of programs that do not ensure true mastery of the skills and knowl-

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edge that the programs are supposed to teach.

Perhaps we need to redesign practice exercises so trainees can become fluent in a relatively short period of time. The accompanying table summarizes some of the key principles of this approach by listing factors that can limit or prevent fluency and the corresponding design factors that promote fluency.

These program design and evaluation factors fall into five categories:

- *Measurement:* If trainers do not properly attend to the time dimension when setting performance objectives and measuring outcomes, their evaluation systems will not be able to distinguish between fluent and non-fluent performance.

- *Materials and procedures:* These can be limiting factors if they do not provide enough examples or practice

opportunities, or if they prevent trainees from moving at their own pace.

- *Skills and knowledge:* If trainees aren't fluent in prerequisite skills and knowledge, they're not likely to become fluent in new information and skills.

Typical fluency-building exercises are quite brief. They last from 10 or 15 seconds to a maximum of five minutes and provide highly concentrated chances for people to practice important skills and knowledge, and to track their progress toward performance standards.

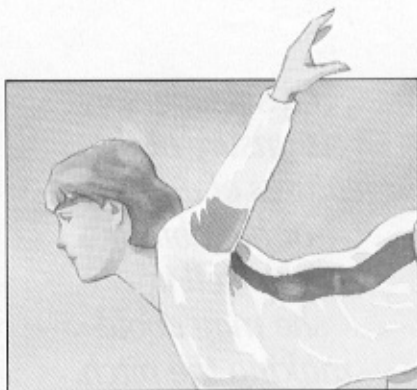
As an example, consider a performance standard in mathematics. If we give the average adult 150 grade-school addition problems and ask him to answer as many as possible in one minute, he would complete between 80 and 110 problems, with maybe one or two errors. That tells us something about competent adult performance. But that's quite different than describing mastery as getting 95 percent of the answers correct—it doesn't tell us how many problems the test contained or how much time it took to get 95 percent of them right.

Here's an exercise that's designed to make you fluent about product knowledge. If you can blurt out 15 or

**TABLE 1
FLUENCY FACTORS**

Category	Factors That Prevent Fluency	Factors That Promote Fluency
Measurement	Measurement procedures that ignore the time dimension. Measurement procedures with too few response opportunities for the allotted time.	Time-based performance measurement and evaluation. More response opportunities than an expert can complete in the time allowed.
Procedures	Too few practice opportunities. Preventing learners from moving at their own pace. Limited response opportunities per minute. Emphasis on preventing errors during learning.	Sufficient practice to attain fluency. Self-paced learning and practice procedures. Many opportunities per minute. Treating errors as "learning opportunities."
Materials	Too few examples. Materials that are difficult to use, waste paper, movement, etc. Unnecessarily wordy work sheets and directions. Difficult to read and comprehend.	Many examples. Easy-to-manipulate or use, efficient use of paper, space and movement. Succinct work sheets and directions. Easy to read and comprehend.
Skill Elements	Critical steps in procedures or chained skills that are not fluent.	Fluent steps in procedures.
Knowledge Elements	Prerequisite knowledge that is not "second nature" or fluent. Inability to quickly locate critical information.	Fluent prerequisite knowledge (facts, concepts, structures, principles, classifications or processes). Ability to use reference systems or job aids routinely.

20 correct facts per minute about customer needs and product solutions for a couple of minutes, you'll know enough to be able to talk easily about those products for five minutes or longer. Again, these are standards that are objective enough to allow you to monitor your own progress. Such fluency standards provide simple performance goals that learners can achieve, sometimes with only a few minutes of practice at a time spread over a day or week. If you design practice exercises correctly, they can be fun, productive and cost-effective.



that any criterion-referenced approach to instruction assumes that we can set objectively defined standards that virtually any nonhandicapped learner can attain, given a self-paced program. This approach is no different.

We don't arbitrarily select levels of performance to measure. But it is possible to determine ranges of speed and accuracy that correspond to human competence. If we use ranges of performance as goals, such as being able to say 15 to 20 facts about a topic in one minute, everyone can meet them.

"What about learning styles?" dissenters inquire. The simple answer is that the need to perform confidently certainly doesn't vary according to learning styles. But it's a good idea to vary the ways in which we present, package and use exercises. The more tools we can find that work, the better it will be for participants.

Another objection to fluency-based instruction concerns quantitative measurement. "Isn't this just a form of scientific management?" doubters ask. Here we may simply

build timed measurement into frequent, brief practice activities, and if we show learners how to measure and monitor their own progress, anxiety disappears. It turns into a healthy, competitive desire to improve on previous scores.

Once people begin to see results, they get excited. In one program in an Arizona bank, branch managers stood at the bar placing bets with one another about who could complete the exercises more quickly.

Another objection to timed practice is that not everybody can do things quickly. "Isn't this just for the top 30 percent of the people?" dissenters ask. The response to this one is

Defining Standards

Most training professionals will agree in theory that fluency is a proper goal for training, but they often raise objections when we get technical about this approach to instructional design.

They object to the use of timed assessment and practice exercises. "Doesn't this cause stress?" they inquire. If the timed assessments are "tests" that occur only at certain points in a training program, they may produce test anxiety. But if we

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have run into a schism between two large segments of the training field. Some training professionals believe that you can objectively define and measure skills and knowledge as performance, while others in the field think that you can't.

I belong to the former camp. I'm a believer in self-correction through measured results. The term "scientific management" has acquired a negative cast, primarily because of how managers used measurement procedures in the 1950s and 1960s. When numbers become a value in themselves, overriding any other humanistic concern, then management by numbers can be very unpleasant and ultimately ineffective.

A fluency-based approach actually gives people more control over their accomplishments by providing measurement and practice tools that enable them to succeed as rapidly as possible. Certainly the numbers are important as descriptors, guidelines and benchmarks. But the point is to provide tools and methods, not controls and oppression.

At one bank, participants who suc-

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cessfully completed a training program received a certificate that confirmed their fluency in the skills and knowledge taught by the course. The training manager awarded a bottle of fine cognac to the trainee who reached all her fluency standards first. After trainees completed the program, an evaluation showed that these "new" account managers were more knowledgeable about key bank services than experienced account managers who had not completed the program.

Wind Sprints for Hoopsters

One way to think about timed exercises is that they are aerobics for the

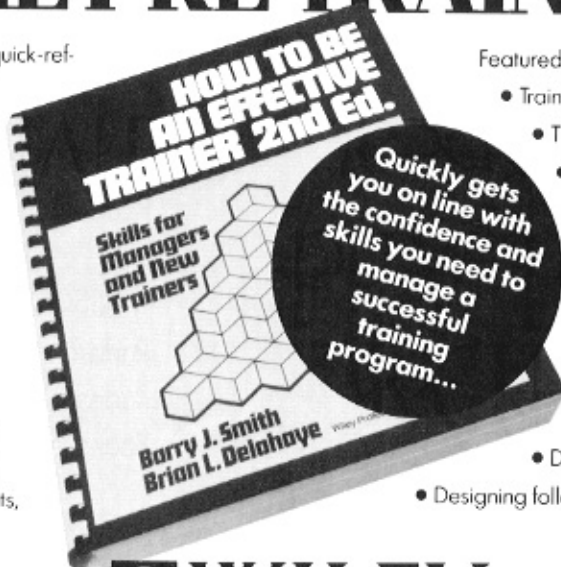
brain—ways of pushing the brain's processing speed. Many of the exercises are like sprints, brief intervals in which people push to perform their very best. The important point is that these exercises give people ways to practice efficiently and as painlessly as possible.

Like sprints or aerobics, these exercises may sometimes seem artificial. That is, they often isolate bits of skill or knowledge using procedures and materials that would never appear quite the same on the job. Musicians, for example, practice musical scales and chord-change exercises to prepare for concert performances. Basketball players practice wind sprints. We practice the key elements of skills and knowledge to be sure we're fluent and then find that combining them comes fairly easily.

At this point, you might assume that behavioral fluency applies best—perhaps exclusively—to technical skills and knowledge training. But it actually applies to all kinds of performance interventions. For example, the advantage of well-analyzed, carefully organized operating man-

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uals is that they support fluency on the job—people can find what they need to know quickly. Job redesign often improves performance by streamlining jobs, thus allowing workers to become more confident in their jobs more quickly.

Some people assume that the principles associated with fluency can't apply to soft skills. Not true. Consider the following example. The salesperson's objective is to respond to a customer without hesitation, with the correct manner and the correct information, in order to move beyond a question or objection. In an exercise pairing trainees, one person asks a question or poses an objection to which the other must respond. Over and over again, they practice a series of these brief interactions about specific types of topics or objections.

The partners exchange roles, provide feedback and practice until there's no question about their ability to respond smoothly, accurately and with feeling. Contrast this approach to the usual role play that contains a few chances to respond and concentrates mostly on telling trainees what they should do, rather than letting them develop the skills to actually do it. It's a lot of work but it pays off on the job.

In evaluating the effects of training, we might ask a simple question: What did the trainees learn and what can they now do better than before? In the past, head counts and other measures of the training process were used to justify training expenditures. Evaluations were—and often still are—based on subjective responses from participants rather than on objective measures of learning and performance. However, in an increasingly results-oriented management culture, head counts and smile sheets will no longer suffice. Understanding fluency, measuring it and applying methods to produce fluent skills and knowledge can be the crucial difference in making training more cost-effective. [7]

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