When Training Fails

…And What You Can Do About It

- Dennis E. Coates, Ph.D. -

Our first-line managers know the business, but in fact most of them need better people skills. There are times when you can sense the friction and the tension. Morale is low in some areas, and we've lost some of our best folks. We've never actually achieved the positive, high-energy culture we've been looking for, and it has affected our bottom line.

A few years ago we brought in a top-flight leadership effectiveness program. The trainers were fantastic and our managers raved about it. We were satisfied that it was money well spent. Afterward we noticed that a few managers showed some improvement, but the others weren't using the new skills. They were basically the same people doing the same things.

A year later I look around and I can't say there's any noticeable improvement. It's hard to believe that such a high-quality program has had so little impact. When I think about what it cost us, I'm very disappointed.

The preceding is a fair summary of the frustration expressed by executives and HR professionals over the years. It's a persistent theme, and what they're saying is that employees desperately need better leadership from their managers and that traditional training and development programs haven't delivered the results they hoped for.

HRD's Most Costly, Enduring Problem

The research indicates that this shortfall has existed for decades and that it isn't limited to leadership development. It has become known as the "transfer of training problem." Mosel (1957) reports "mounting evidence that shows that very often the training makes little or no difference in job behavior," concluding that skill mastery requires not just training, but a workplace environment that encourages using the skills: "rewards and punishments, incentives and deterrents in the job situation."

Baldwin and Ford (1982) claim that the failure of training programs to change behavior is widespread: "There is a growing recognition of a 'transfer problem' in organizational training today. It is estimated that while American industries annually spend up to $100 billion on training and development, not more than 10% of these expenditures actually result in transfer to the job." Broad and Newstrom (2001) cite less dramatic but no less shocking numbers: "Considering all types of training and low levels of transfer found by

HRD researchers, a generous assumption is that perhaps 50% of all training content is still being applied a year after training delivery. Considering our rough estimate of $50 billion spent on formal training per year, that means a loss of $25 billion a year to organizations for training not fully used on the job."

Brinkerhoff and Apking (2001) conclude: "Almost all organizational training is a marginal intervention and has only slight effects on performance improvement." Further: "If we define 'training impact' as simply the transfer of knowledge and skills to on-the-job performance, research indicates that impact of training is realized only for about 15 percent of all training participants." They aren't saying that training never transfers to on-the-job performance. There will always be self-starters and lifelong learners who believe in what they've learned and persist in spite of barriers to change. But these exceptions can't deliver the return on investment executives are looking for.

Mostly the experts are saying that the problem typically isn't the training itself, but what happens afterward. Newstrom's (1983) survey of trainers to identify and rank order the most serious barriers to transfer finds that the most significant shortfall was "lack of reinforcement on the job." Saari, Johnson, McLaughlin and Zimmerle (1988) claim that any form of follow-up is rare. Zenger, Folkman and Sherwin (2005) concur: "Talk to any group of laymen or professionals about what is broken in the current learning and development process, and most will tell you it's the lack of serious post-training follow-through."

When executives invest in training and development, they do so expecting that the programs will achieve lasting improvements in performance. So why have they failed to invest in the necessary follow-up reinforcement effort?

To be fair, this research has been reported mostly in human resource publications, which rarely capture the attention of executives. And while it makes sense that follow-up reinforcement is crucial to changing behavior, none of the researchers offers a scientific explanation of why. To modify the way they approach performance improvement, executives will need a compelling reason.

In the past, HR/learning professionals have not been able to provide those reasons. They are just as perplexed and frustrated as anyone that their best efforts haven't delivered a satisfactory return on investment.

However, a straightforward scientific explanation for why most classroom learning fails to transfer to permanent improvements in workplace performance does exist. It is found not in the journals of HRD, but in the recent discoveries of neuroscience.

The Core Insight: What It Takes to Change Behavior

What does it take to master a new skill? The answer lies in what happens in the brain when a new behavior pattern establishes itself. It's important to understand this insight, because it explains why even a highly rated, enthusiastically received developmental program can fail to achieve lasting changes in workplace performance.

Scientists have been telling us for over a decade that learning involves physical changes in the brain. Eric R. Kandel received the Nobel Prize in Medicine in 2000 for his pioneering work in this area. Kandel and Hawkins (1992) reported that "stimuli that produce long-term memory for sensitization and classical conditioning lead to an increase in the number of pre-synaptic terminals." They found that when the release of neurotransmitters between nerve cells goes up, eventually additional dendrites grow, multiplying contacts with neighboring cells. Their conclusion: "Our brains are constantly changing anatomically as we learn." Scientists continue to replicate and support these findings, and learning professionals have integrated them into mainstream educational texts (Sousa, 2000).

There's a huge difference between conceptual learning and mastering a new skill. It's the difference between *knowing how* to do something and *being able to do it* routinely and comfortably on the job. In a busy workplace, people can't reinvent their behavior every time they need to get something done. They have to rely on ingrained behavior patterns. The challenge is to replace well-established problem behavior patterns with more effective ones.

To appreciate how hard it is to accomplish this, you need to understand the following about how the brain establishes new behavior patterns:

   ■ A skill is a set of behaviors executed automatically and consistently. What enables a skill is a specific network of brain cells. The function of these physically interconnected neurons is to efficiently trigger the chain of perception, analysis and decision-making needed for a specific pattern of cognitive, verbal and physical behavior.

   ■ During the past decade, brain scientists have discovered what happens in the brain when a person learns and how these neural networks establish themselves. They found that ***repeating a specific behavior pattern over and over stimulates the involved brain cells to grow extensions (dendrites) to connect with each other.*** With enough repetition, all the related brain cells eventually connect, and the new behavior becomes an ingrained pattern. What felt awkward in the beginning eventually feels comfortable and natural.

   ■ It takes a fair amount of time for this brain cell growth-and-connection process to complete itself, which explains why it takes so much practical application and reinforcement to master a skill. While it doesn't take long for the brain to store an

image, a fact or a concept, laying the groundwork for a behavior pattern can take many months of diligent repetition.

   ■ Interpersonal skills—which form the core of leadership, teamwork, sales and service performance—are especially complex. This makes them more difficult to ingrain, and an even longer period of repetition and reinforcement is needed.

   ■ The challenge of establishing a new behavior pattern is made more difficult by having to replace existing problem work habits that are already ingrained—the result of decades of reinforcement. When participants return to the workplace, at first their new skills feel awkward, and initial efforts don't yield the desired results. After repeated frustration and without a supportive environment, most people give in to the pressures of work and fall back on their old, comfortable habits.

These are the realities of changing behavior, developing skills and improving individual performance. With this perspective, it is no mystery why so many first-rate training courses have failed to produce behavioral change.

The implication for training and development is sobering: ***if you want to improve an employee's performance, you have to "rewire" the neural network that enables the old behavior pattern.*** As we've said, even in the best case this means the desired behavior may have to be repeated and reinforced for many months.

Do you play golf or tennis? Are you a good swimmer? Have you ever worked with a coach to improve your technique? How long did you practice what your instructor was telling you before you could do it correctly without thinking about it?

If you're one of the millions of fans who follow the career of golfer Tiger Woods, you may remember that 2004 wasn't one of his best years. Even though he had already achieved greatness at an early age, at the beginning of the season Tiger made a number of changes in his swing. The changes were designed to make the world's best golf swing even better. But then Tiger struggled all year, winning only one tournament and finishing fourth in total winnings.

However, at the end of that year his game came together for him, and he won two post-season tournaments back-to-back. In 2005 he won his fourth Masters. He placed second in the U.S. Open and won the British Open, leading the field from start to finish. He finished the year with six victories, ranked first in the world with about $10 million in winnings. In 2006 he repeated this pace of winning, dominating the PGA tour.

The point is that ***excellent instruction is only the beginning***. Tiger Woods hits golf balls all day long nearly every day. And yet, he had to invest an entire year of persistent effort before he ingrained the new patterns that improved his game. Another point is that Tiger could not have made this effort without a strong internal motivation to change. His desire to have the best possible swing, to compete, to win the major championships and to be the best golfer in the world are what kept him at the practice tee. And he had great coaching. It's common knowledge that he has invested as much as a million dollars a year for a swing coach who will keep him on track.

Remember, interpersonal skills are more complex than sport skills, so they take longer to ingrain. A well designed three-day or even a week-long course may do a good job of

introducing new skills—that is, create knowledge and familiarity. But given what needs to happen in the brain, these courses are simply incapable of establishing new behavior patterns.

Clearly, the development process needs to continue well beyond the classroom. What's needed is an extension of these programs into the workplace: a structured, supervised framework for applying and reinforcing desired skills over time. What's needed is for performance improvement to become a routine aspect of work itself.

Making ongoing reinforcement a permanent feature of learning and performance improvement programs is an achievable goal. An ingrained skill is like walking, running or riding a bicycle. Once the brain cells are physically connected, the only thing that can disconnect them is the atrophy of old age, injury or death. Like building a new Interstate highway next to an old country road, new patterns can replace old ones. If you do the work to replace old behavior with a more effective one, the newly ingrained pattern will be virtually permanent.

In summary, there's a physical limit to how fast a person can ingrain an improved skill or work habit. It takes more than assessment and more than training to make permanent changes in behavior. However, when you integrate behavior-based assessment with behavior-based training, when you follow this with ongoing on-the-job reinforcement, when you motivate learners by holding them accountable, when participants receive effective coaching, and when you then implement these and other solutions in a systemic way, you can and will achieve permanent improvements in individual performance.

Train-to-Ingrain: A Reinforcement-based Solution

Traditionally, an HRD event or intervention is designed to fix a performance problem:

PERFORMANCE PROBLEM

 - Developmental program

IMPROVED PERFORMANCE

In the best case, the selection of the developmental program is based on one of the many instructional design models, which attempt to diagnose the performance problem before prescribing a solution. In the worst case, a program is selected based on marketing, politics, consensus or somebody's opinion. In any case, these events or interventions rarely include a program of follow-up reinforcement and so fail to achieve lasting improvements in performance.

5

So if assessment or training—conducted as a singular program, event or intervention—can't be counted on to change behavior, then what can? What must you do differently? How much time and expense will be involved?

Train-to-Ingrain isn't a single program, event or intervention. It's a new contextual framework for conducting such programs. It's an ***ongoing process*** in which efforts to ingrain new skills and improve an individual's performance become a routine aspect of work. At the heart of Train-to-Ingrain is the imperative to ***provide enough follow-up reinforcement to achieve permanent, measurable changes in behavior, improved workplace performance and positive impacts on the bottom line.***

PERFORMANCE PROBLEM

  - Assessment

    - Developmental program

      - Coaching

        - Ongoing development

          - Follow-up feedback and assessment

            - Accountability

IMPROVED PERFORMANCE

Follow-up reinforcement is the "missing link" of most training and development programs. Quite a bit of supervised application, feedback, encouragement and coaching is needed to ingrain a new pattern of behavior, so this can only take place during day-to-day work. And if new behavior patterns aren't reinforced on the job, participants will eventually fall back on their old, comfortable ways of doing things.

Effective follow-up reinforcement has four elements:

1. Coaching
2. Ongoing development
3. Follow-up feedback and assessment
4. Accountability

1. Coaching. During the several months that it will take to make a new behavior pattern feel familiar, comfortable and automatic, along the way a typical learner will experience moments of uncertainty, awkwardness, failure or embarrassment. It makes a big difference to have someone who can advise and encourage—a performance coach. But who will best fill that essential role?

Executive coaches are experts in people skills. They can be a very high-quality one-on-one resource during the period in which skills are ingrained. Although they're rarely able to observe learners in action, they can be an invaluable sounding board. However, because of the expense involved, professional coaches are usually hired only for executives.

For the rest of the organization, coaching must come from internal resources. Trainers may have good coaching skills; but they're usually busy preparing and delivering programs, and there aren't enough of them to go around. Mentors are a possible coaching resource, but they lack oversight and authority. What they say and do may not be in synch with the priorities of bosses.

The bottom line is that **no one can take the place of the learner's direct manager**, who is responsible for directing, motivating, observing, evaluating and improving the employee's performance. The direct manager has the authority to tell employees what to do and what not to do. By default, the manager creates the work environment in which skill application occurs. He or she alone decides whether an employee will even have the opportunity to use newly learned skills.

The involvement of the direct manager is crucial. **Whether an employee changes a work habit depends on whether the direct manager accepts the role to coach and develop the employee on the job.** If some managers feel inadequate to this task, coaching courses are available to augment their skills.

2. Ongoing learning. Since it takes months to establish a new behavior pattern, the key is to think of performance improvement as an ongoing process, a routine aspect of work itself. Ideally, people learn from experience on the job, improving their skills continuously.

Books, articles, audiotapes and videotapes are helpful resources. Beyond that, trainers can give participants structured challenges that require them to analyze their workplace experiences. "Brown bag" lunch meetings with trainers, co-participants and others are good venues for reviewing videos and discussing the difficulties of applying new skills. When distance or time make these discussions impractical, virtual meetings are possible. Online forums give mentors, co-participants and team members a convenient venue to share experiences, information, advice, feedback and encouragement.

Ideally, the resources used in training continue to be helpful references during reinforcement. Using leadership development as an example, the Vital Learning Leadership Curriculum materials contain numerous follow-up exercises, worksheets, guides and references specifically designed for continued learning and reinforcement. The online instructional units and videos that present positive behavior models are available to participants for up to a year for reinforcement purposes. Related books, tapes, videos and websites are recommended in the workbooks and online.

3. Follow-up feedback and assessment. You have to practice a new skill a long time before becoming comfortable with it. Along the way, you need to know how you're doing. If you're like most people, you aren't the best judge of your own behavior. You don't see yourself the way others see you, so it's hard for you to know how your actions are affecting others. For the most objective viewpoint possible, you need a mirror held up to your behavior. You need feedback from the people who work around you.

Because of a boss's frequent contact and authority, the direct manager is usually in the best position to give verbal feedback in the workplace. Other valuable feedback may come from team members or mentors.

Since most people are either unskilled or uncomfortable giving feedback, the most effective way of gathering and presenting this input is 360-degree (multi-source) assessment. Because surveys are administered before and after training, scores can be compared to show how much improvement has taken place. Post-training surveys can be repeated periodically for a year or more after training. This keeps participants informed of progress and motivates them to persist.

4. Accountability. Training programs are a big investment, and executives want to know if they're getting a payoff. They want evidence that participants are applying their new skills on the job—that the value of their improved performance exceeds the cost of their training. This is the impetus behind what's commonly known as "Level 3" and "Level 4" evaluations of training.

But trainers aren't the only role players who affect the outcome. If learners don't make a good-faith effort to change their behavior, the skills will never be ingrained. And because of their responsibility and authority, direct managers are in a unique position to influence what happens as learners try to apply skills on the job. Even executives have an impact, because they're the decision-makers who foster support and commit resources for learning and reinforcement. Realistically, all these roles have a significant impact, and everyone involved shares accountability.

The most powerful way to establish accountability uses the same technology mentioned above: pre-course and post-course assessment. 360-degree performance feedback identifies not what people know, but what how well they're doing their jobs. The behaviors that are the focus of the assessment are the same behaviors that are the focus of the training. The averages of scaled ratings create an objective pre-course measurement of skill levels, and the identical post-course assessment provides data about skills several months after training. Any improvements in performance are indicated by improvements in scores. The consolidated feedback is presented to participants, and a summary of skill scores is given to supervisors and HR staff. These measurements can also be used to calculate return on investment (ROI).

Accountability is solidified when the skills and techniques taught in training are integrated into the daily business practices of the organization. Too often we've seen well-intentioned development programs fail because the ideas presented in the classroom are not part of the organization's standards and practices. When operating standards mirror what participants are expected to follow once they are back on the job, you have maximum accountability.

This brief summary of the essentials of reinforcement clarifies why the direct manager has to get involved. No one else has the leadership responsibility, frequent contact and authority to guide the behavior of the developing employee in the workplace.

And yet, a common mindset among managers is to view employee development as the responsibility of the HR/training/learning department. This misunderstanding of a boss's leadership role will derail any attempt to ingrain skills. The impact of direct managers on performance improvement is equal to or greater than that of trainers. In fact, if the participant's boss doesn't get involved in setting expectations, giving feedback, encouraging and coaching, it will be nearly impossible to change an employee's behavior.

In most organizations today, nothing like this partnership exists. According to trainers, many managers are less than cooperative. Will bosses support the training? Indeed, will they even release the individuals for training? Will they contact participants during the course, disrupting their learning—or even worse, call them away from classroom activities? When the course is over, will the participants get a chance to apply the new skills, or will they return to an environment of business as usual? Will managers support all-important follow-up reinforcement programs? All too often, trainers' concerns turn out to be justified.

For this reason, Train-to-Ingrain defines a key role for direct managers, drawing them into a three-way partnership with trainers and learners that I call the Learning Triangle.
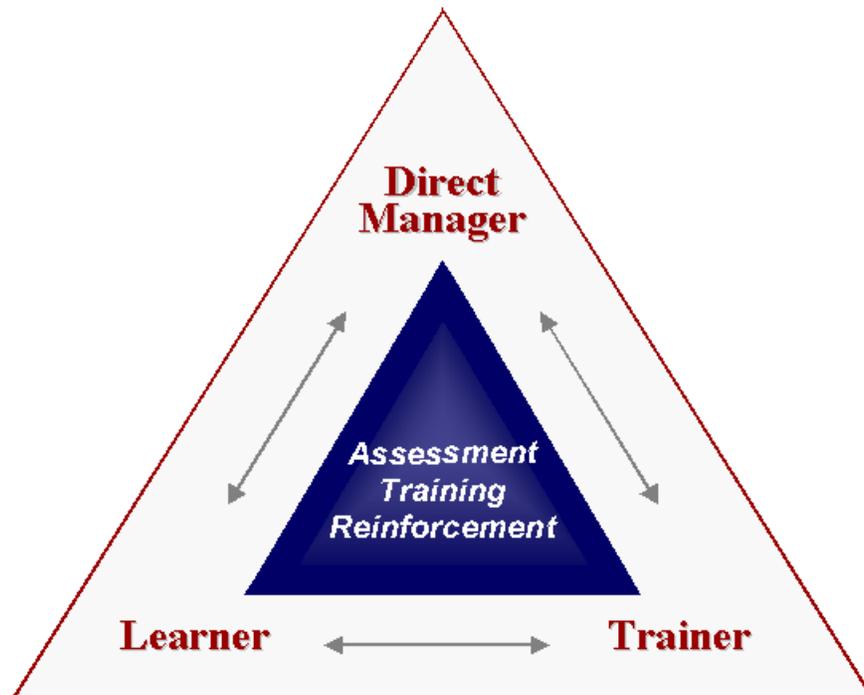
Changing behavior patterns and improving individual performance require physical changes in the brain. It's virtually impossible to achieve this without an ongoing program of follow-up reinforcement that involves the learner's direct manager.

Train-to-Ingrain isn't a rigid concept. It encourages an organization to evaluate eight critical areas within an organization that influence whether newly skills are ultimately permanently ingrained:

- COMMITMENT – Support follow-up reinforcement
- COACHING – Prepare direct managers for their staff development role
- FOLLOW-UP – Integrate program of reinforcement with assessment and training programs
- ACCOUNTABILITY – Measure performance improvement and calculate ROI

- TRAINING FOR TRANSFER – Incorporate learning strategies that promote application and reinforcement of skills
- LEARNING NETWORKS – Coordinate support for reinforcement
- FOCUS – Target training needs that will have a positive impact on business results
- CULTURE – Align the organization's policies and practices to support performance improvement

In most cases, an organization that wants to achieve lasting changes in workplace behavior can customize an approach that's compatible with its learning culture and work to install changes over the long term. In my article "The First Three Steps Are Easy" (2006), I explain that getting started involves some relatively simple actions that will produce immediate results. Following these successes, you can build on this foundation by carrying out your plan for optimizing all aspects of your organization that impact on learning transfer.

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