

The Limits of DELIBERATE PRACTICE

Learning and development investments aim to translate into improved employee performance on the job. But it doesn't always work out that way.

ANALYSIS BY KENNETH M. NOWACK

A brief look at some recent learning and development industry reports would suggest employee skill building is at an impressive level.

Bersin by Deloitte's latest 2014 report on benchmarks, trends and analysis of the U.S. learning market said corporate training grew by 15 percent last year to more than \$70 billion (it was more than \$130 billion worldwide).

Moreover, Association for Talent Development's "2014 State of the Industry" report said organizations on average spent \$1,208 per employee on learning last year, while the number of hours used by employees increased to 31.5 hours from 20.3 hours the year before.

However, a recent meta-analysis reviewing learning effectiveness suggested the average effect sizes of this money spent were modest at best, which raises a question about the return on investment and overall value of corporate learning programs.

Eduardo Salas, a professor of organizational psychology at the University of Central Florida and a program director at its Institute for Simulation and Training, cites studies from ATD showing that, without follow-up, 90 percent of new skills are lost within a year. What's more, only 10 percent of what's invested in training programs results in em-





ployees actually transferring what they've learned back to their jobs.

To maximize return on investment in efforts such as coaching, training and leadership programs, it is critical to encourage talent to directly transfer what they learn into practice back on the job. A necessary condition of enhanced expertise in skills and performance is known as "deliberate practice."

What Is Deliberate Practice?

In a 2006 book, "The Cambridge Handbook of Expertise and Expert Performance," co-edited by Anders Ericsson, a Swedish psychologist and professor of psychology at Florida State University, the authors conclude that great performance comes mostly from two things: deliberate practice and obtaining immediate, concrete and constructive feedback.

Two authors in the Cambridge Handbook, Janice Deaking and Stephen Cobley, analyzed diaries of 24 elite figure skaters to determine what might explain some of their performance success. They found that the best skaters spent 68 percent of practice doing really hard jumps and routines while those who were less successful spent about 48 percent doing the same difficult jumps.

It's what you do with the raw talent that really seems to matter, the study suggests. Ericsson and others use "deliberate practice" to mean focused, structured, serious and detailed attempts to get better. That means it has to be challenging and difficult — practicing the most difficult tasks — to result in enhanced skills and effectiveness.

How Long Do You Have to Practice?

Research by Phillippa Lally from the University College of London in the U.K. suggests that new behaviors can become automatic, on average, after 18 to 254 days of deliberate practice, but it depends on the complexity of what the new behavior is as well as your personality.

Lally studied volunteers who chose to change an eating, drinking or exercise

behavior and tracked them for success. They completed a self-report diary, which they entered on a website log and were asked to try the new behavior each day for 84 days.

For the habits, 27 chose an eating behavior, 31 a drinking behavior, 34 an exercise behavior and four did something else, like meditation. Analysis of all of these behaviors indicated that it took 66 days, on average, for this new behavior to become automatic and a new "habit" that seemed pretty natural.

Therefore, creating new habits requires tremendous self-control and deliberate practice to be maintained for a significant period of time before they become more "automatic" and performed without any real self-control. So adopting a new physical workout routine or learning to become a more involvement-oriented leader might take quite a while for anyone to truly become "unconsciously competent."

Deliberate Practice Isn't Everything

Still, research from a 2010 issue of *Psychological Science* suggests that deliberate practice is important but not enough alone to explain individual differences in skills. According to the research, across a wide range of piano-playing skill levels, deliberate

These results challenge the view advocated by Ericsson and others that basic capability and skills such as working memory capacity are unimportant for expert performance. Although it seems reasonable to predict that anyone who engages in thousands of hours of deliberate practice will develop a high level of competence in any field, it appears that our basic skills and abilities may actually limit the ultimate level of performance that can ultimately be attained.

Intentions Don't Mean Change

There is a large gap between intentions to change behavior and actual behavior change. Recent research suggests that attempts to change people's intentions alone may not always result in successful maintenance of behavior over time.

So if goal intentions aren't that useful, what is?

The use of "implementation intentions" is much stronger at actually ensuring deliberate practice, resulting in successful long-term habit and behavior change.

Habit change guru and Stanford University professor B.J. Fogg has developed a comprehensive "tiny habits" model to explain the factors associated with deliberate practice of either existing behaviors

Having raw talent is wonderful, but it's what you do with it that really seems to matter.

practice accounted for nearly half the variance (45 percent) in sight-reading performance in the authors' study.

However, working memory capacity — which is highly stable and heritable — accounted for a significant proportion of the variance (7.4 percent), according to the research, above and beyond deliberate practice. Working memory is our short-term memory, which is a cognitive ability to remember information over a short period of time.

or initiating new habits (See "Q&A: B.J. Fogg on 'Tiny Habits,'" page 25). An essential component is that deliberate practice has to start with some type of a "trigger" to prompt action.

A 2006 meta-analysis published in *Advances in Experimental Social Psychology* involving more than 8,000 participants in 94 independent studies revealed a midsize to large effect on the use of "triggers" on goal achievement in a variety of domains — interpersonal, environmental,

Q&A: B.J. Fogg on 'Tiny Habits'

Kenneth Nowack: Your research has led to a method used by thousands to form new habits. Can you describe the three steps that are the cornerstone of your program?

B.J. Fogg: The first is to select a behavior that is super simple. Take the bigger behavior and scale it way down. When the behavior is tiny, you won't need to rely so much on motivation or willpower. Second, find a way to trigger the new behavior with an existing routine. Brushing your teeth, making coffee or sitting down on the train can act as great triggers — these routines can remind you to a new tiny behavior. The third step is to “celebrate” immediately after you have completed the behavior. There are different ways to celebrate. The key is to find something that fire off a positive emotion inside you. For example, I might say, “Awesome!” and do a fist pump. Other times I say, “Good job!” out loud.

KN: I think all of us sometimes have great intentions to change behavior and initiate new habits, but we seem to lose motivation. Anything you can offer to help us stay motivated?

BF: All behavior types can be explained in a model written this way: B=MAT. I call it the 'Fogg Behavior Model.' This outlines three elements that must converge simultaneously: M is motivation to do the behavior, A is the ability (how easy or hard to do) and T is the trigger, which is the prompt or reminder. With this model, you can see that motivation is just part of what matters. If you can make the behavior easier, then motivation won't be the limiting factor. And that's what I advocate: Don't rely on motivation. Make the behavior easier, either by simplifying the behavior or getting more skilled at the behavior, or obtaining the tools or resources to do the behavior.

health — above and beyond just creating goal intentions.

Making the behavior as easy as possible initially and celebrating success are also key ingredients to ensure long-term behavior change success of deliberate practice, according to Fogg.

Don't Worry, Be Happy

Nevertheless, quitting after you have practiced incessantly but failed at something may actually be better for your health. Psychologists Gregory Miller of the University of British Columbia and Carsten Wrosch of Concordia University in Montreal have found that people who are able to feel comfortable quitting when faced with unattainable goals may actually have better mental and physical health than those who persevere and push themselves to succeed.

Their study found that persistent individuals experienced higher levels of an inflammatory protein called C-reactive protein, an indicator of stress, as well as increased cortisol. On the surface, this might not seem like a big deal, but chronic inflammation appears to be an independent risk factor for cardiovascular disease and other stress-related conditions.

Contrary to what we might have been taught, it appears that it might be in our best interests to “cut our losses” in the face of unattainable goals, stop our deliberate practice sessions and actually disengage to ensure optimum well-being and long-term health.

Implementing Deliberate Practice

Ideally, organizations should continue to select and promote employees with high levels of skills and abilities to maximize performance and expertise. Once such employees are on board, companies should continue to invest in both professional and career growth of such employees to maximize retention and engagement on the job.

PepsiCo Inc., for instance, has built in some of the latest applied research and principles of behavior change into their

leadership development initiatives to ensure greater return on investment for their efforts.

To get better, employees at all levels must possess the motivation and select the right “triggers” to leverage their strengths and practice new behaviors over time. Deliberate practice may not make an employee perfect, but here's a summary of what to know and keep in mind when developing employees in all organizations:

1. “Innate ability” can only be developed with challenging and structured deliberate practice along with immediate feedback, encouragement and support.
2. How many hours you practice is less important than the quality and type of deliberate practice. The “10,000-hour rule” varies among individuals and type of skills being developed and has little research to support this “popularized” target.
3. Deliberate practice is a necessary, but not sufficient, condition for elite performance. Other traits and genetic predispositions are arguably as important.
4. All skills, traits and abilities are shaped by the combination of environmental and genetic factors that interact with each other. Leaders are not necessarily born or made. We all possess differential skills and abilities. These might not limit our ultimate levels of performance on the job, but they will affect how rapidly we acquire expertise.

It may not be entirely possible to convert a “competent jerk” to a “lovable star” with even the most effective coaching and learning programs. But engineering deliberate practice on the part of executives and participant of such interventions are necessary for any demonstration of successful behavior change. **tm**

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