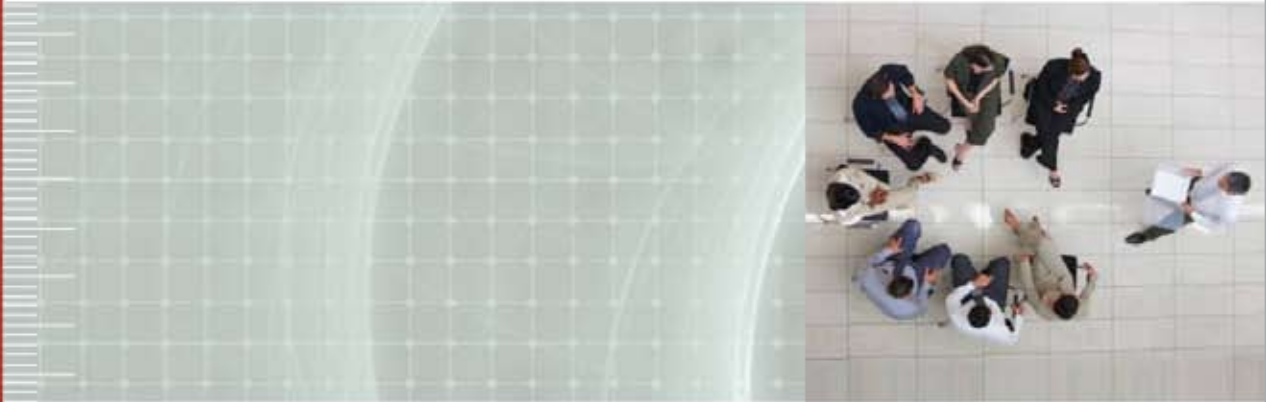


S T **^** G E N



**LEARNING  
TO LEARN**

**TABLE OF CONTENTS**

PART I: INTRODUCTION ..... 1  
 Organizational Learning ..... 1  
 Two Kinds of Learning ..... 2  
 Moving Forward..... 3

PART II: ATTITUDES TOWARD LEARNING ..... 4  
 Knowers vs. Learners ..... 4  
 Which Attitude Do You Favor?..... 6

PART III: FEEDBACK ..... 7  
 Increase Strengths or Minimize Weaknesses? ..... 7  
 The Feedback Loop ..... 7

PART IV: THE PATH TO MASTERY ..... 9  
 Only Deliberate Practice Makes Perfect ..... 9  
 Staying Engaged ..... 10  
 Orientation Toward Long-Term Practice ..... 11  
 Designing a Deliberate Practice ..... 13

PART V: THE NEXT LEVEL..... 14  
 Thinking About Thinking ..... 14  
 Conclusion ..... 16

PART VI: RESOURCES ..... 18  
 Learning Assets ..... 18

PART VII: REVIEW QUESTIONS ..... 19

## PART I: INTRODUCTION

In today's hyper-competitive marketplace talent has become a key driver in organizational success. Though the correlation between talent and success may now seem obvious, that has not always been the case. In 1997, McKinsey & Co. released a groundbreaking study that reported an explicit and empirical connection between top performers and superior corporate achievement. The conclusion was that talent will be the most important corporate resource over the next 20 years. <sup>1</sup>

To this end, learning is the critical imperative in cultivating and optimizing the talent that is key to significant and sustained competitive advantage. In the McKinsey study, entitled *The War for Talent*, only 3% of those surveyed in large companies agreed with the statement: "We develop people effectively." If large organizations are often ineffective in developing their people, it follows that mid-size companies—with far fewer resources than large enterprises—may struggle even more.

Since the publication of *The War for Talent* study and the Harvard Business School Press book of the same name, many businesspeople have come to believe that talent is more important than capital, strategy, or research and development prowess.<sup>2</sup> Jack Welch, former CEO of GE and a well-known advocate for learning, explained, "At the heart of this culture is an understanding that an organization's ability to learn, and translate that learning into action rapidly, is the ultimate competitive business advantage." During his twenty-year tenure as CEO of GE, the company's total market capitalization jumped from \$14 billion to \$410 billion, making GE the most valuable company in the world when Welch left his post in 2001.<sup>3</sup> Experts inside and outside of GE attribute much of that success to the company's focus on learning and development.<sup>4</sup> In fact, Welch dedicated more than 50% of his time to talent-related issues.<sup>5</sup>

Today, companies like Google are leading the way in linking talent and business performance and have deliberately built cultures that attract and foster the best and the brightest. As just one example of Google's commitment to learning,



the company allows engineers to take 20% of their time to explore interests and activities outside their job descriptions. From this seemingly counterproductive initiative, engineers have created Gmail, AdSense, and several others of the company's most successful recent offerings. Ranked No. 1 by *Fortune* magazine in 2007 as the best company to work for, Google is a testament that the ongoing development of talent is a primary driver of success.

Most successful organizations—from large businesses to small enterprises—recognize that learning can be a strategic advantage. However, most employees in mid-market companies have yet to learn about learning itself. The purpose of this module is to help high-performing leaders leverage learning into a potent and sustainable competitive advantage.

***“Learning is almost synonymous with life itself. The learning process is the process by which we grow and transform ourselves from who we are to who we want to be.”***

—David Kolb

## ORGANIZATIONAL LEARNING

Organizational learning has become a buzzword in the business world, and many leading companies aspire to be “learning organizations.” As a result, there has been a popularization of terms like *experiential learning*, *action learning*, *collaborative learning*, *participatory learning*, and so forth. But what—if anything—unites each of these approaches? What does “learning” actually mean? The aspiration to learn something implies that there is something desirable to do or understand that is not within one’s capability of doing or understanding. In other words, the very desire to learn presupposes a gap between aspiration (what *you desire* to do) and ability (what you actually *can* do).

***The simplest definition of learning (and one that unites the various learning schools and approaches) is “the process of closing the gap between our aspiration and our ability.”***

Regardless of what learning approach is being used, learning is always a process of making sense of new information and experiences that lead to enhanced understanding and ability.

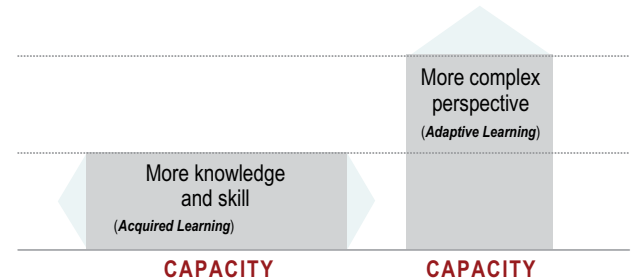
## TWO KINDS OF LEARNING

Few people realize that there are two fundamentally different approaches to increasing ability.

### Acquired Learning

The first approach, *acquired learning*, occurs through training and experience that imparts new knowledge and skills. Most organizational training and development programs aim to deliver this type of learning. Psychologists refer to acquired learning as “horizontal development” because it broadens our existing knowledge base and skill set and increases our ability to successfully execute tasks. To draw on a familiar metaphor, acquired learning can be compared to loading additional data and applications onto a computer, thereby extending the system’s capabilities.

## HORIZONTAL DEVELOPMENT VS. VERTICAL DEVELOPMENT



### Adaptive Learning

The second approach, *adaptive learning*, is new to many people. Another computer metaphor can help illustrate this kind of learning. When upgrading a computer’s operating system from, for example, Windows 98 to Windows XP, the new system includes the capabilities of the previous system (much of the same data and applications are retained). But the new operating system also transcends the old one by opening the door for additional, more expansive, capabilities that were simply impossible with the older system.

As demonstrated by the last twenty years of developmental psychology research coming out of Harvard University and other leading institutions, human beings also have operating systems—referred to as *meaning-making systems*. These also come in different versions of increasing complexity and capability that are analogous to the evolution of Windows 95, 98, and XP. “Meaning-making systems,” are essentially, a set of fundamental assumptions, beliefs, and ways of interpreting experience.

Barring a life crisis of some kind, developmental researchers have found that few adults ever upgrade their meaning-making systems from the equivalent of Windows 98 to Windows XP. They may successfully engage the horizontal acquisition of new skills and knowledge, becoming better at *what* they do, but they tend not to deliberately engage in the vertical adaptation of new perspectives and capacities that might fundamentally shift *how* and *why* they do what they do.

In the last decade, though, academics and organizational experts have opened what *Good to Great* author Jim Collins calls “the black box” of developmentally advanced leadership and have created a reliable roadmap to initiate and sustain adaptive learning. Leaders today do not need to wait for random adversity to push them to greatness. They can choose to train in more controlled conditions, with feedback and support, to safely accomplish what in the past had been a riskier and far less predictable journey.

Unlike *acquired learning*, which simply adds new knowledge and skill to an existing meaning-making system without changing any of the underlying fundamental assumptions or beliefs, *adaptive learning* transforms and expands the mind itself by helping it evolve to the next level of complexity. Just as athletes know the burn of pushing their muscles to make them stronger, leaders who train their minds will become intimately familiar with the discomfort and soreness of stretching beyond their mental limits. The disorienting effect *adaptive learning* often precipitates explains why most people engage in this growth only when they literally have no other choice. It also provides a compelling performance advantage for the leader who elects to take on this challenge in return for the leverage and profound rewards a more sophisticated operating system provides.

***“The illiterate of the future are not those who cannot read and write, but those that cannot learn, unlearn, and re-learn.”***

—Alvin Toffler

## MOVING FORWARD

This module provides a comprehensive overview of the latest learning theories and practices that will assist individuals and their organizations in the process of *acquired learning* (new knowledge and skills) and the task of significantly upgrading capability through *adaptive learning* (a transformation and expansion of the meaning-making system). The discussion begins in Attitudes Toward Learning with an investigation of



the “nature vs. nurture” question (ie: whether elite performers are born or made), and describes attitudes that can either promote or undermine development. The Feedback section explores the mechanics of how people learn from experience and suggests guidelines to anticipate and leverage efforts for maximum results. The next section, The Path to Mastery, explains *acquired learning* and the latest research behind “deliberate practice” leading to mastery. And finally, the module concludes with The Next Level, a presentation on *adaptive learning*, including practices that can help “upgrade” an individual’s capabilities into the top tier of adult development.

## PART II: ATTITUDES TOWARD LEARNING

The age old question: nature vs. nurture? Where does talent come from? Are great men and women born or made? Research conducted by leading psychologist Carol Dweck has shown that regardless of the baseline ability *nature* bestows on an individual, *nurture* (effort and attitude) can produce extraordinary gains in ability. Dweck, a Stanford University psychology professor who has achieved international recognition as a sought-after performance consultant, has demonstrated conclusively that nurture can indeed trump nature.

This does not necessarily mean that with enough effort one can become the next Michael Jordan or Mozart. Michael Jordan would naturally have always been a much better player than most, but he never would have been the great player he became without his legendary attitude and effort. While the media often showcases the great performers and recount their beginnings as child prodigies (eg. Mozart composing symphonies at six and Tiger Woods shooting a 48 over nine holes as a three-year-old) the less fantastic but more important reality, according to Dweck, is that attitude toward success plays a far greater role in long-term success than raw talent itself.

In one particularly intriguing series of studies, Dweck discovered that students' (and adults') attitudes toward their own learning can be shifted by as little as a word or sentence of feedback from an authority figure. Students praised for their effort took on greater challenges and performed better than their classmates over time, while those praised for their ability avoided more difficult assignments and performed worse on subsequent testing.

Leaders who understand learning can consider what kind of climate they encourage in their organizations, and what values they model when it comes to the respective merits of hard work and effort. Even the best-intentioned praise, like "Our salespeople are rock stars!" or "Our R&D people are a bunch of geniuses!" (both emphasizing fixed traits) can trigger



the unintended consequence of posturing, defensiveness, and risk aversion over time. With as little as an ill-chosen sentence of praise or blame, innovation (of ideas) can harden into preservation (of identities). Armed with this knowledge, managers can choose to highlight and reward the sustained effort, frequent mistakes, and cooperative teamwork that are the hallmarks of any long-term success.

### KNOWERS VS. LEARNERS

Your beliefs about nature (innate ability) vs. nurture (developed ability) lead to different attitudes toward the "learning gap" (the difference between your aspirations and your abilities).<sup>6</sup> Fortune 500 management consultant and former MIT professor Fred Kofman refers to these two attitudes as the Knower and the Learner.

Those who approach the learning gap with a "Knower" attitude generally have a closed mind because they assume that they already have the answers and are therefore incapable of any significant improvement. This tendency not to admit that they don't know something, according to Kofman, is the hallmark of Knowers. Yet, as he points out, it's difficult (or even impossible) to seek and acquire new knowledge unless people are aware—and can admit—that they do not know.

## THE KNOWER

## THE LEARNER

INTELLIGENCE AND EFFORT	Believes that intelligence is essentially fixed and additional effort does little to enhance it.	Believes that intelligence is essentially fluid and can be significantly increased through effort.
ATTITUDE TOWARD LEARNING GAP	Is blind to or denies a learning gap; therefore, is often close-minded toward new ideas and approaches.	Recognizes and accepts a learning gap; therefore, is open-minded toward new ideas and approaches.
FEEDBACK	Places little value on feedback that is inconsistent with their perspective.	Actively seeks out feedback, especially perspectives that differ from their own.
WHEN COMPETENCY IS CHALLENGED	Is preoccupied with preserving the appearance of their own competency; reacts defensively when challenged.	Readily acknowledges own incompetence; embraces challenge as an opportunity to learn and improve.
EXPERIENCE OF MISTAKES AND SETBACKS	Experiences mistakes and setbacks as frustrating failures—or proof of inability—and often misses the learning opportunities in them.	Experiences mistakes and setbacks as natural part of the learning curve—or as confirmation of effort—and persists in the face of frustration.

On the other hand, those who approach the learning gap with the “Learner” attitude are willing to admit that they don’t know. This awareness and admission of the learning gap allows them to approach situations with an open mind and a sense of ease and even enjoyment as they learn new ways of understanding and doing things. These two very different attitudes can be analyzed in terms of how they are oriented toward effort, challenges, mistakes, and even others’ success. These differences are summarized in the chart on this page.

Knowers tend to privilege natural talent as more important than effort. In fact, many believe that great athletes, artists, academics, poets, politicians, and leaders are “born,” not made.

Studies suggest that people who have a predominant Knower attitude were often praised as children for being smart or getting the right answer rather than for their willingness to make an effort and persevere with a difficult task or problem. This left them and the adults they became with the sense that their very identity and self-worth were on the line every time they attempted a task at which they might not quickly succeed.

For this reason, Knowers tend to approach the learning gap with thoughts such as: *I already know this. My ability isn’t lacking. There’s no point in exerting effort, because if I really had to try to succeed, then it would mean I wasn’t as good as I (and everyone else) thought.*

Rather than risking exposing their own learning gap, Knowers strive to preserve the *appearance* of competence. But this backfires in the long run. By holding on to the false sense of security of what they know (and who they are) in the present, they unwittingly sacrifice what they could know (and who they might become) in the future.

Conversely, people who adopt a Learner attitude tend to equate effort with improvement and assume that, in time, they will learn to succeed at the tasks with which they currently struggle. Therefore, they view “doing badly”—and the inevitable frustration that comes with it—as normal and to be expected. Learners don’t regard setbacks as failures but as the inevitable twists and turns along the path to increased ability.

Whereas Knowers are preoccupied with preserving the appearance of competence, Learners aren't afraid to be wrong; they wear "I don't know" as a badge of honor and tend to approach challenges with questions like: *What can I learn? How might I do things differently? To whom might I look for inspiration and guidance?*

Learners actively seek out and commit to opportunities that expose their learning gap, with the belief that their abilities are not static but fluid, and with the confidence that their abilities will increase through effort and practice.

#### WHICH ATTITUDE DO YOU FAVOR?

Although for simplicity Knowers and Learners have been presented as two distinct types of people, in reality, most people hold an attitude toward learning that falls somewhere on the continuum between the two extremes. As Dweck's study of the students showed, people's attitudes toward learning may vary with different circumstances, learning contexts, and even the feedback they receive in a given learning situation.

The previous section introduced two kinds of learning: *acquired learning* and *adaptive learning*. Acquired learning involves adding incremental knowledge and skills to one's existing way of thinking (meaning-making system). Adaptive learning involves the transformation and expansion of one's meaning-making system itself, which represents a massive increase in ability. With a Learner attitude, acquired learning is relatively easy, and adaptive learning—given sufficient time and effort—is well within reach. However, with a Knower attitude, acquired learning is more difficult, and adaptive learning can be unlikely or even impossible.

***“Keep learning. Don't be arrogant by assuming that you know it all, that you have a monopoly on the truth. Always assume that you can learn something from someone else.”***

—Jack Welch, former GE CEO





### PART III: FEEDBACK

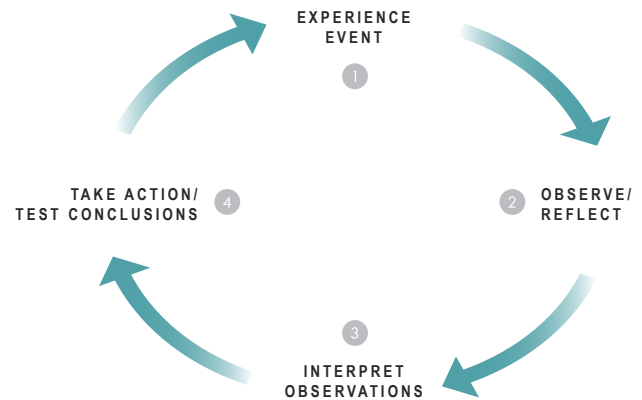
A quick review of the literature or even the latest talk in today's organizations reveals two distinct schools of thought regarding learning and development. The first focuses on increasing strengths, while the second focuses on eliminating weaknesses. It's important to realize that both approaches have merit; the optimum balance of focus varies depending on the circumstance and the context.

#### INCREASE STRENGTHS OR MINIMIZE WEAKNESSES?

Over the past two decades, a major trend has emerged toward emphasizing strengths. Richard Boyatzis's work on Intentional Change Theory,<sup>7</sup> the increasingly sought-after Appreciative Inquiry<sup>8</sup> methodology, and Marcus Buckingham's hugely popular books *Now, Discover Your Strengths* and *Go Put Your Strengths to Work*<sup>9</sup> all emphasize the benefits of leveraging strengths rather than fixating on problems and weaknesses. This movement reflects an important shift away from a historical overemphasis on criticism and deficit-based thinking. Like any good idea, when taken to the extreme (in this case, overfocusing or exclusively focusing on strengths), this orientation may neglect the important benefits of the approach it attempts to counterbalance. Individuals and organizations will certainly benefit from amplifying what works and developing existing strengths. However, this does not mean that weaknesses should be ignored altogether. In fact, ignoring weaknesses can leave one vulnerable. A single blind spot in a fundamental competency can derail success despite tremendous talent in other areas.

***"It is only human to want to practice what you can already do well, since it's a hell of a lot less work and a hell of a lot more fun."***

—Golf champion Sam Snead



A primary way that elite performers achieve success is by intentionally practicing what they can not do well, or even at all. This points to the fact that to achieve the highest levels of ability, a balanced approach must be taken: developing strengths while also working to improve weaknesses.

#### THE FEEDBACK LOOP

David Kolb, professor of organizational behavior at Case Western Reserve University, asserts that learning is a major determinant of growth and development and one's approach to learning determines *how* one grows and develops. Understanding how learning works and how different people approach learning can dramatically improve effectiveness for individuals, their teams, and their organizations.

Decades of research on learning shows that people learn through a series of specific steps in which information is interpreted to make meaning. As the illustration on this page summarizes, the four steps are:

1. Experience an event.
2. Observe and notice the results of what happened. (This is often referred to simply as feedback.)
3. Interpret the experience and the feedback, make generalizations, and assign meaning.
4. Take new actions informed by conclusions. These new actions, of course, result in new experiences and feedback, and the iterative cycle repeats indefinitely.

Kolb was the first to articulate this Feedback Loop (or learning cycle, as he calls it) in his groundbreaking work on experiential learning. For more than two decades, Kolb's work has been the basis of much educational theory, the field of action learning, and, more recently, the field of organizational learning.<sup>10</sup>

At a glance, the Feedback Loop might appear unremarkable, even ordinary. After all, who doesn't learn this way? On closer inspection, though, many individuals and organizations, rushing through their lives and their work, rarely find the time to complete the Feedback Loop at all. Rather than moving through the four steps of experience, observation, interpretation, and new experience, many simply move from experience to experience to experience, with no real learning occurring. This reactive relationship to action, reflection, and correction leaves leaders and teams overtaxed and underprepared to face the challenges ahead of them. Completing the Feedback Loop in a regular and disciplined way allows them to benefit from their successes and failures and to translate that learning into a sustained performance advantage.



## PART IV: THE PATH TO MASTERY

What might a focused learner, one who applies the findings of Dweck, Kofman, and Kolb, actually accomplish? In his recently published 900-page manual, *The Cambridge Handbook of Expertise and Expert Performance*, K. Anders Ericsson and colleagues set out to find the answer. Compiling the findings of more than a hundred leading scientists who have studied high performance in a wide variety of fields from the arts to the sciences, athletics, and music, Ericsson found that gifted performers are almost always made, not born, and that the journey to superior performance is for neither the faint of heart nor the impatient.

Becoming an elite performer requires struggle, sacrifice, and honest—often painful—self-assessment. Depending on the scope and difficulty of the skill to be learned, it will take months and probably years to achieve a high level of proficiency or mastery (on average, studies suggest it takes a decade of focused effort to attain world-class expertise). The term “practice,” as employed in this section, refers to any approach one uses to intentionally set out to improve any area of competency through an ongoing effort involving experience, feedback, and learning.

### ONLY DELIBERATE PRACTICE MAKES PERFECT

Ericsson demonstrated that not all practice makes perfect. Instead, practice simply makes permanent. Only a specific kind of practice—deliberate practice—develops top-level performance. Virtually every master that Ericsson tested modeled some variation of the same three key behaviors:

1. Setting specific goals
2. Obtaining immediate feedback
3. Concentrating as much on technique as on outcome

And while a decade can seem like an unacceptably long time to invest in mastering a given skill—it is a remarkably brief investment to attain world-class ability. After all, how many people hack away for several decades at golf, tennis, or leadership, never really showing much improvement, and



even backsliding from days gone by when they were really “on their game”? How much richer might their experience be were they to accept the challenge and possibility suggested by deliberate practice?

The first key to deliberate practice is to set short- and medium-term goals that give something to aim for as performance is incrementally improved over time. Specific goal setting is the first key to addressing the inevitable performance plateau.

It’s not just weekend warriors or burned out executives who face the performance plateau. Ericsson’s research shows that even those revered for their expertise (eg. doctors, stock analysts, and therapists) often get worse, not better, as they gain more experience in their professions. In fact, when Ericsson reviewed the objective performance of those three professions, he found that in many cases, less experienced practitioners out-performed the veterans. The only exception to this rule—also providing the clue to the power of deliberate practice—was the surgeons. Unlike all other doctors, whose effectiveness steadily deteriorated the longer they’d been out of medical school, surgeons continued to improve because of specific goal setting and the immediate feedback

they received every time they went to work. Compared to a radiologist who rarely sees the connection between her diagnosis and the long-term health of her patient, a surgeon learns in short order whether his actions result in success and makes the ongoing corrections to his practice to ensure continually improving results.

The last and, for business leaders, the most challenging component of deliberate practice is the emphasis on technique as much as outcome. Most organizations today regularly engage in the first two behaviors Ericsson outlines—goal setting and specific feedback—but stumble when it comes to the third. How many organizations would risk their profits or competitive success in an effort to improve their basic approach?

By focusing on technique rather than outcome, Tiger Woods rebuilt his own “business model,” his golf swing, not once, but twice. One might question the judgment of dismantling the very thing that had given him such success in favor of rebuilding an already unmatched technique. Yet, it is this rigorous approach to learning and improvement that makes Tiger so impossible to equal.

Not all mid-market companies experience the relentless scrutiny of a top-ranked athlete or a publicly traded enterprise, but most face consistent stakeholder pressure to perform. Displaying the foresight as a leader to emphasize a company’s technique, even as its results temporarily suffer, can be the unlocking move to taking a mid-market company to the next level.

### STAYING ENGAGED

Even after adopting all three keys to deliberate practice, engagement of that practice plays a critical role in how successful one will ultimately become. Ericsson cautions that the only way to engage in the sustained and at times tedious effort that creates expertise is to be driven by passion. Passion provides people the necessary energy to achieve exceptional levels of ability. Mihaly Csikzentmihalyi, a well-known peak



performance researcher, found that when he interviewed professionals across domains, they described their “love of the game” in consistently reverential language. He coined the term “flow” to describe the effortless “zone” of peak performers that, for many, provides the ultimate reward for the countless hours of drudgery invested. While it is easy to think of tennis players, wide-receivers, violinists, and other performers when thinking of the “zone,” it is equally valid to consider the hyperfocus of engineers, programmers, or salespeople as another expression of similarly rewarding performance states.

Over decades of interviews and research, Csikzentmihalyi catalogued criteria that contribute to engagement. Among these, he introduced what he calls the Challenge–Skills Equation (CSE), which states that in order to remain highly engaged, a learner must strike an optimal balance between how hard it is to do something and how good she is at doing it. Too difficult, and it becomes impossible to establish any sort of momentum. Too easy, and there’s not enough challenge to hold her interest.

In an organization, one might see the CSE in play when a department slumps after failing to attain a succession of stretch goals (the challenge exceeded available skills), or when a group becomes complacent and never reaches beyond their

easily met quotas (challenge falling short of available skills). Of course, as learning is continually shaping the learner, the “sweet spot” in the CSE is constantly shifting, too. This requires leaders to adeptly deploy the Feedback Loop so they can fine-tune the balance between tasks and training and keep their teams and their organization poised at the cusp of optimum engagement.

A second key to engagement, according to Csikzentmihalyi, is what he calls “autotelic” experience. Translated into everyday language, autotelic simply means something that provides its own inherent value or reason for doing it. Put even more simply, for people to engage in years of practice, it had better be enjoyable. While a small percentage of people are willing to sacrifice short-term enjoyment for a delayed payoff (regularly flossing one’s teeth comes to mind), the majority of people, if they are to stick with something long enough to get meaningfully proficient, need to find reward along the way.

While a business executive might find abundant motivation in attaining the company’s annual goals, for example, the actual employees he is trying to align and motivate will likely require satisfaction on a more immediate and personal level. Further, they will find the greatest engagement when that satisfaction is linked to a stimulating challenge that stretches, but does not overwhelm existing skills. As the workforce shifts toward younger generations whose expectations for individual meaning and autonomy are more pronounced than their predecessors, managers will need to become increasingly skilled at adjusting these levers of learning and engagement if they are to meet their long-term goals.

### ORIENTATION TOWARD LONG-TERM PRACTICE

Having applied deliberate practice and ensured that it is anchored in a sustaining passion, many people continue to possess a distorted expectation of what the sustained path to mastery “should” look like. In his popular book *Mastery: The Keys to Success and Long-Term Fulfillment*, George Leonard

warns against what he calls “the endless peak moments fantasy,” whereby learners climb an unbroken staircase of breakthroughs, “eureka!” moments, and sustained successes (note how well this aligns with the Knower’s assumptions).



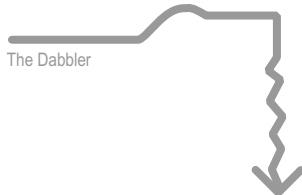
The Endless Peak Moments Fantasy

Measuring less glamorous experiences against this faulty yardstick prompts many to prematurely abandon what might have been a perfectly effective regimen, often just before it was about to pay off. (This behavior partially explains the “flavor of the month” trend in consulting and business advice, whereby tremendous initial enthusiasm for the Next Big Idea gives way to disappointment and even contempt when promised results do not materialize quickly.)

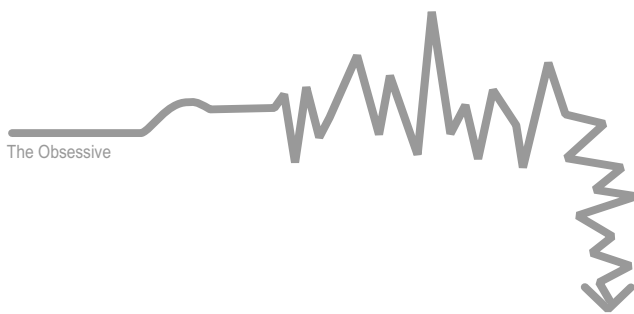
Without the knowledge that “the endless peak moments fantasy” is exactly that, many Knowers hit a plateau and assume one of three things:

1. The approach or practice must be faulty.
2. They themselves do not possess that basic ability.
3. The goal wasn’t actually the right one in the first place.

Leonard summarizes four orientations toward the ups and downs of long-term practice, and he argues that only one will result in eventual expert performance. Learning and recognizing these patterns in one’s own practice can be essential in navigating the contours of the climb.



Leonard calls the first orientation the *dabbler*. The dabbler begins with great enthusiasm and love of novelty. He is shocked when he falls from his initial learning “peak.” When the excitement subsides, he feels deflated, rationalizes not continuing, and looks for the next new thing.



The second orientation is described as the *obsessive*—someone who focuses on a quick fix to close the learning gap. A person with this orientation demands immediate, short-term results and underestimates the value of long-term practice. In a valiant attempt to accelerate learning, the obsessive makes robust progress for a short period and then derails or runs out of steam. Long-term success tends to elude her because she pushes herself too hard, which leads to costly mistakes and/or burnout. If an obsessive learner manages to avoid this pitfall, she will eventually lose interest when she arrives at the inevitable learning plateau—that is both boring and (temporarily) devoid of improvement markers.



The third orientation is described as the *hacker*. The hacker gets the hang of things initially but is satisfied with staying on the learning plateau indefinitely. Practicing just enough to get

by, he is unable (or unwilling) to stay on the uncomfortable “learning edge” and challenge himself sufficiently to reach the next level.



Leonard refers to the fourth orientation as the *master*. A person holding a master orientation stays with her practice for an indefinite period of time. The master understands that the road to success is paved with many high points, difficult times, and boring plateaus.

One of the most helpful insights from Leonard’s work in this arena is the realization that all learning includes plateaus where one simply has to get out and push if he wants to get to his destination. Unlike the dabbler, obsessive, and hacker, who, each in their own ways, are derailed by their Knower mindsets (the dabbler by eschewing practice as a sign of lack of natural ability, the obsessive by refusing to tolerate mistakes and setbacks, and the hacker by preferring to remain in the comfort zone rather than risk vulnerability), the master becomes so by embracing his status as a Learner—by *not* knowing what the path of practice might bring, but trusting that it will eventually lead to the goal.

If Ericsson’s deliberate practice (which incorporates Kolb’s Feedback Loop) offers the *approach*, and Dweck’s and Kofman’s Learner mindset offers the *attitude*, Leonard’s awareness of the process itself offers the *perspective* needed to keep one’s bearings on the ongoing path to mastery. Taken in combination, these research findings suggest something truly momentous—you are not limited by genetics, by upbringing, or by “talent.” Instead, you can acquire approaches and attitudes and adapt new perspectives that can allow your full potential to be reached.

## DESIGNING A DELIBERATE PRACTICE

Designing a deliberate practice requires thought and planning. Aspects of your learning gap will need to be identified for the setting of specific goals. Standards or benchmarks against which progress can be gauged will also need to be established. As the British scientist Lord Kelvin stated, “If you cannot measure it, you cannot improve it.” Discipline is central to deliberate practice. In order to succeed, it’s essential to make a long-term commitment.

### Level-Setting Expectations

It’s important to acknowledge that practice takes time and energy. Deliberate practice requires setting aside a few hours a week on an ongoing basis. This may seem difficult at first. But a well-designed practice can be incorporated into many existing activities. It is also crucial to not demand too much from your practice too quickly. Achieving high levels of ability is a long-term process. The benefits typically start to accrue and become strongly evident only after many months of diligent effort.<sup>11</sup>

### Feedback and Coaching

Achieving high levels of proficiency in any field requires both confirming (positive) and constructive (challenging) feedback. According to Ericsson’s research, elite performers seek out honest feedback of both kinds and choose to work with coaches who will push them to be their very best.

A good coach, mentor, or teacher can be a valuable source for both confirming and constructive feedback, while providing a judicious blend of support and challenge.<sup>12</sup>

**Learning Asset:** “The Making of an Expert,” by K. Anders Ericsson, Michael Prietula, and Edward Cokely. *Harvard Business Review*, July 2007



## PART V: THE NEXT LEVEL

While acquired learning is necessary for a quantitative increase in your knowledge and skills, it's sometimes necessary to make a qualitative shift—an “upgrade”—in your meaning-making system itself. This requires a kind of learning that changes not just what you know and do but how you think. As its name suggests, adaptive learning allows people to go beyond knowledge and skills so they can begin to question and evolve mental models themselves.

As seen in the previous section, acquired learning can be extremely effective at increasing your ability to better understand and “play the game.” However, only adaptive learning can improve your ability to rethink or even reinvent the game itself. Marshall Goldsmith conveys this dynamic succinctly in the title of his best-selling book *What Got You Here Won't Get You There*.<sup>13</sup>

Stagen refers to this dynamic as the “Performance Paradox.” Simply put, the very thinking (winning formula) that produced an individual’s current level of performance is now the biggest obstacle to achieving the next level. This requires a different kind of learning: not simply adding new knowledge and skills but, rather, thinking altogether differently.

### THINKING ABOUT THINKING

The earlier Feedback section stated that learning involves having experiences, observing and reflecting on the feedback received (including the results achieved), forming interpretations and conclusions, and then changing behaviors and repeating the Feedback Loop. Harvard’s Chris Argyris uses a simple metaphor to illustrate a deeper application of the Feedback Loop. Imagine a thermostat set to 68 degrees that will automatically turn up the heat whenever the temperature drops below 68. The question is, “*What’s the action necessary when the room temperature falls below the desired 68 degrees?*” The simple binary response for the thermostat would be to turn up the heater. But when an additional step is taken by actually thinking about thinking, one might ask “*Is*



*68 degrees the optimum temperature for this room?*” In other words, “thinking about thinking” asks questions not only about objective facts but also about the reasons and motives behind those facts.

This same framework can be applied to a middle manager who operates according to guidelines defined by her executive team. If she finds herself out of compliance with those guidelines, a surface-level approach would simply inform her to change her behavior to regain compliance. However, a further-reaching perspective would inquire into whether the guidelines themselves are actually promoting behaviors that are in alignment with achieving her organization’s stated goals.

Behind all actions lie assumptions and beliefs that are referred to in organizational learning literature as “mental models.”<sup>14</sup> Argyris refers to mental models simply as “reasoning.” Because “thinking about our thinking” involves reflecting on and changing the reasoning behind behaviors, it can allow for seeing problems—and solutions—in new ways.

This is important because, though applying the Feedback Loop can indicate whether one is on course toward the objective, it cannot indicate whether it is the right objective



to be moving toward in the first place. Only thinking about your thinking—questioning the assumptions and conclusions behind the objectives—can answer that question.

***Self-questioning allows individuals and organizations to adapt to an environment of rapid change and uncertainty.***

In his seminal *Harvard Business Review* article entitled “Teaching Smart People How to Learn,” Argyris uses business problem solving to illustrate these dynamics.<sup>15</sup> He points out that many organizations too narrowly define learning as mere problem solving, which involves identifying and correcting errors in the external environment.

Of course problem solving is important, but for real progress to occur, managers and employees must also look inward. They must critically reflect on their own behavior and the reasoning behind it, identify the ways they often inadvertently contribute to the problems, and then change how they think and act.<sup>16</sup> In particular, they must learn how the very way they think about problems (including their unconscious beliefs and unquestioned assumptions) may actually be a major source of the problems in the first place.

### **Deepening the Feedback Loop**

Feedback is the central dynamic that allows learners to experience the results of behavior, reflect on the results, interpret observations, and try new behaviors. Deeper feedback is about reflecting on, interpreting, and applying new *reasoning*. In other words, deep feedback involves thinking *about* your thinking. In many workplaces, this is uncommon until a failure occurs.

Failure forces reflection on assumptions and interpretations. This is why some of the smartest and most successful people are often such poor learners. They have not had the unique opportunity for introspection that failure provides. Argyris’s research confirmed another common yet rarely discussed phenomenon: When highly accomplished people do fail—or



simply underperform—they can be surprisingly defensive. Instead of critically examining their own behavior, high performers often take a defensive stance and cast the blame outward (in Kofman’s framework, this would be a typical “Knower” response). While professing to be open to feedback and new learning, their attitude and actions suggest different priorities, namely: a need to avoid embarrassment, threat, or feelings of vulnerability or incompetence.<sup>17</sup>

**Learning Asset:** “Teaching Smart People How to Learn”—article by Chris Argyris in *Harvard Business Review*, May 1991

### **Adaptive Learning**

Deliberate practice is crucial for both acquired and adaptive learning, but the practices serve different purposes. Practices that emphasize acquired learning introduce and reinforce new knowledge and skills, while those that emphasize adaptive learning aim to increase the complexity of the mind that holds the knowledge and skills.

***Adaptive learning practices involve a “next-level” psychological dynamic that helps us to see a much larger perspective.***

Robert Kegan calls this dynamic a “subject–object move.” While this phenomenon is the topic of dozens of books and thousands of pages of academic texts, this section will attempt to briefly summarize it here: Humans are said to be “subject to” many assumptions, beliefs, motivations, and behaviors in the same way that fish are subject to water. That is, humans are so identified with them that they are not aware of their existence. When thinking develops to a higher level of mental complexity, people become objectively aware of those aspects of themselves to which they were formerly subject. This requires the ability to observe—with some degree of dispassion—that with which they were previously identified.

Naturally, this process takes a long time. To achieve a subject–object move, one must find ways to obtain an objective self-view and become aware of aspects that have previously been outside of awareness.

### **Gamefilming**

After years of study and field experience, Stagen has developed a process known as “*gamefilming*,” a metaphor borrowed from sports. When athletes are on the field, they are *subject* to their experience, which is another way of saying that they are unable to observe or effectively evaluate their performance *objectively*. High-performance athletes often film their performance for later review. When they watch this “game film” alone or with their coaches, they can view their performance with an objective perspective; this allows them to analyze aspects of their performance that were previously outside of their awareness. Similarly, professionals engaged in business activities are subject to many aspects of their own behavior. Stagen promotes gamefilming practices that enable professionals to gain a more objective view of their performance, including:



### **Mental Replay**

This practice of mentally reviewing important interactions and significant events is a way to objectify important aspects of the self and leverage insights into more desirable results.

### **Performance Journaling**

This practice uses a worksheet to sharpen awareness around key issues, especially subtle and nuanced dynamics that were previously unrecognized.

### **Walk the Talk**

This practice is a method used to increase credibility and personal integrity by heightening awareness of gaps between espoused values and priorities and actual behavior.

## **CONCLUSION**

This module has provided a comprehensive overview of the latest learning theories and practices that will help individuals and organizations engage acquired learning (new knowledge and skills) and adaptive learning (expanding meaning-making systems).

It addressed the “nature vs. nurture” question and explored how most elite performers are made (not born), based on two different attitudes toward learning that help or hinder the process. An overview of the mechanics of the learning process revealed that all learning follows a predictable, repeatable

pattern (loop) that can be leveraged for maximum results at any level of system. Recognizing that acquired learning progresses through discrete phases of increasing expertise, it was shown that individuals are able to accelerate the process through deliberate practice. In this last section of the module, the specific contours of the path from current-level to next-level (in terms of adaptive learning) were described for individuals.<sup>18</sup>

Having become familiar with the state-of-the-art in learning, you are in a uniquely powerful position to leverage and accelerate your own process. By bringing a Learner attitude, committing to a developmental path, and engaging deliberate practices for acquired and adaptive learning, you are taking a significant step toward moving to the next level of individual, team, and organizational performance.



## PART VI: RESOURCES

### LEARNING ASSETS

#### Articles

- “Teaching Smart People How to Learn,” by Chris Argyris. *Harvard Business Review*, May 1991
- “Skilled Incompetence,” by Chris Argyris. *Harvard Business Review*, October 1986
- “The Making of an Expert,” by K. Anders Ericsson. *Harvard Business Review*, July 2007
- “GE’s Talent Machine: The Making of a CEO.” *Harvard Business Review*, October 2003
- “The War for Talent.” *Fast Company*, Issue 16, July 1998

#### Books

- What Got You Here Won’t Get You There: How Successful People Become Even More Successful.* Marshall Goldsmith, 2007
- The Power of T.E.D. (The Empowerment Dynamic).* David Emerald, 2006
- The Fifth Discipline: The Art & Practice of the Learning Organization.* Peter Senge, 2006
- The War for Talent.* Harvard Business School Press, 2001
- Mindset: The New Psychology of Success.* Carol Dweck, 2007
- Conscious Business: How to Add Value Through Values.* Fred Kofman, 2006
- Action Inquiry: The Secret of Timely and Transforming Leadership.* Bill Torbert and Associates, 2004
- The Cambridge Handbook of Expertise and Expert Performance.* Ericsson, Charness, Feltovich, and Hoffman, 2006
- Managing Corporate Lifecycles.* Ichak Adizes, 1999
- In Over Our Heads: The Mental Demands of Modern Life.* Robert Kegan, 1994

#### Audio

- Learning to Learn* – audio module

#### Supplement

- Stagen Current Level to Next Level* supplement

## PART VII: REVIEW QUESTIONS

1. What is meant by learning, and what activity does it involve?
2. How do acquired learning and adaptive learning differ?
3. Contrast the primary differences between the Knower and Learner attitudes.
4. Which learning attitude do you tend to favor? In what situations is it more difficult for you to bring or maintain a Learner attitude?
5. Describe the Feedback Loop (also known as the learning loop).
6. Describe deliberate practice.
7. Define the Performance Paradox.
8. Describe the “Challenge–Skills Equation” and its implication for optimal learning.
9. In your own words, explain the main difference between the Socially-defined and Self-authoring meaning-making systems.
10. What is a “subject–object move” and how does Gamefilming relate to it?

## ENDNOTES

- 1 Talent is shorthand for a key employee who possesses “a sharp strategic mind, leadership ability, communication skills, the ability to attract and inspire people, entrepreneurial instincts, functional skills, and the ability to deliver results.” Source: McKinsey & Co. 1997 study involving seventy-seven companies and 6,000 managers.
- 2 “The War for Talent.” *Fast Company*, Issue 16, July 1998.
- 3 Source: GE.com (Jack Welch’s biography).
- 4 “GE’s Talent Machine: The Making of a CEO.” *Harvard Business Review*, October 2003.
- 5 *The War for Talent*. Harvard Business School Press, 2001.
- 6 This presentation draws heavily from Dweck’s research; however, for simplicity and consistency, we use Kofman’s terms Knower and Learner.
- 7 Boyatzis based his Intentional Change Theory on thirty years of research with more than 12,000 individuals.
- 8 Appreciative Inquiry was developed more than twenty years ago by David Cooperrider, professor of organizational behavior at Case Western Reserve University. The approach involves identifying past examples of peak performance, examining the factors contributing to success, and crafting a vision and plan for the future based on that “positive core.”
- 9 Buckingham’s books are based on The Gallup Organization’s research on 1.7 million people. In a survey of nearly 200,000 employees working in nearly 8,000 business units within thirty-six companies, the more employees reported that they have the opportunity to do what they do best every day (playing to their strengths), the better the business unit scored on productivity, customer loyalty, and employee retention. Source: Buckingham and Clifton, 2001. *Now, Discover Your Strengths*, page 5.
- 10 Kolb earned his Ph.D. from Harvard University and began his work on experiential learning theory at MIT in the late 1960s; he has continued to refine the theory since his appointment at Case Western Reserve University, Weatherhead School of Management, in 1976.
- 11 “The Making of an Expert,” by K. Anders Ericsson, *Harvard Business Review*, July 2007 and *The Cambridge Handbook of Expertise and Expert Performance*, by Ericsson, Charness, Feltovich and Hoffman, 2006.
- 12 “The Making of an Expert,” by K. Anders Ericsson, *Harvard Business Review*, July 2007
- 13 *What Got You Here Won’t Get You There*, by Marshall Goldsmith, 2007.
- 14 Peter Senge popularized the concept of mental models in his groundbreaking book on organizational learning, *The Fifth Discipline*. Senge’s mental models concept was in large part inspired by Argyris’s research on what he called Model I and Model II, “espoused theories of action” and “theories in use.” Later, William Torbert expanded on this concept by combining it with Susanne Cook-Greuter’s stages of ego development framework to create what he calls “Action Logics” in his groundbreaking book *Action Inquiry: The Secret of Timely and Transforming Leadership*.
- 15 “Teaching Smart People How to Learn,” by Chris Argyris. *Harvard Business Review*, May 1991.
- 16 “Teaching Smart People How to Learn,” by Chris Argyris. *Harvard Business Review*, May 1991.
- 17 “Skilled Incompetence,” by Chris Argyris. *Harvard Business Review*, October 1986.
- 18 See Stagen *Current Level to Next Level* supplement for more details of the “Individual Path” as well as descriptions of the “Team Path” and the “Organizational Path” from current level to next level.