BetterUp

LEARNING TO DOING
TO BEING

The Science Behind Lasting Transformation
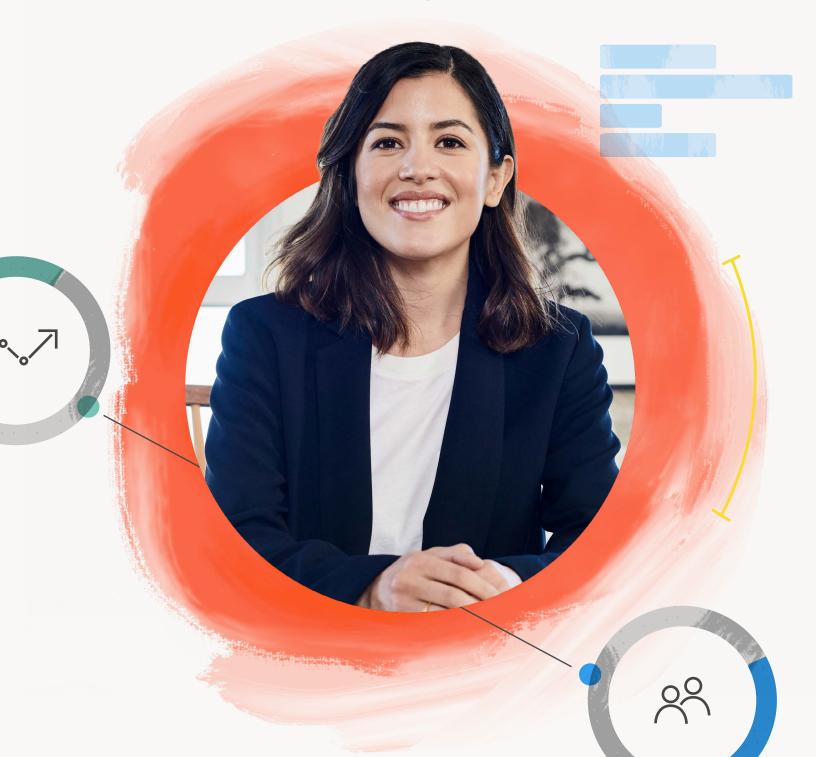
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INTRODUCTION

American corporations today spend an estimated $160B annually on learning and development initiatives.

Yet employees forget up to 75% of the material taught – meaning up to $120B of that investment is wasted.[1,2] It's no wonder that 70% of organizational transformations fail[3] – organizational transformation starts with individual transformation. If we can't nail the latter, we have no hope in achieving the former.

Given how much we know about the science of change, why do organizations invest repeatedly in learning and development programs that don't work?

Two significant challenges impede the application of evidence based practices to L&D programs.

The first is the sheer quantity and variety of research applicable to these efforts. Fields ranging from behavioral economics to psychology to computer science to education all have much to teach about how to do learning right. Keeping up with the latest findings in any one field is challenging enough, let alone keeping up with them all.

The second significant challenge is understanding how all of these principles fit together. How does one align concepts like self-efficacy, from psychology, with those of reinforcement learning, from computer science? Rationalizing these diverse findings side by side requires an understanding of many traditionally siloed fields. If busy HR leaders lack the time to keep up with the findings, they certainly lack the time to try to combine them into a coherent whole.

One positive trend this past decade has been the increased focus of L&D leaders on behavior change. The industry now broadly accepts that learning without doing stands little chance of achieving organizational impact. Behavior change is no small feat, as anyone measuring it well knows. But even behavior change stops one step short of successful transformation.

If learning is the first step in individual transformation, and doing is second, it is being that is the third and final phase in a completed transformation.

Being represents the attainment of a new mode of existence, one that seamlessly incorporates the complex new skill or skills attained through learning and doing.

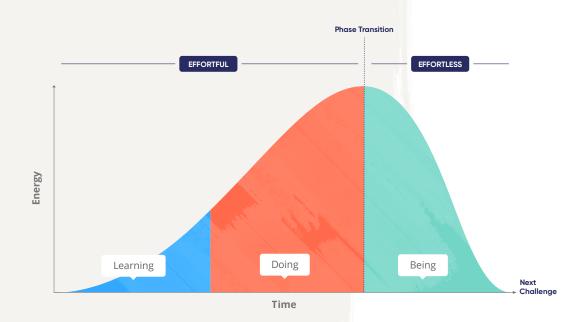Significant effort must be applied to achieve this state of being. Once it is attained, however, the skills acquired become a stable component of oneself such that the effort invested in obtaining that new way of being can now be directed elsewhere.

This paper will detail the phases of successful individual transformation, from Learning to Doing to Being, incorporating the latest evidence from fields across the behavioral sciences.
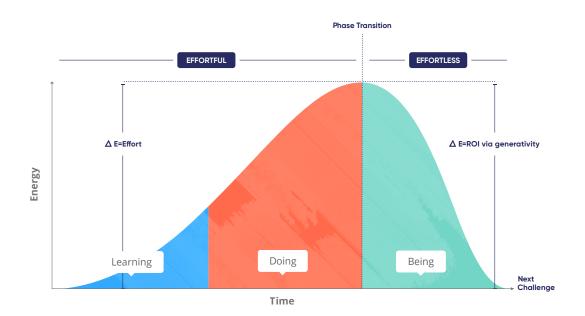
A VISUAL OVERVIEW OF LEARNING TO DOING TO BEING
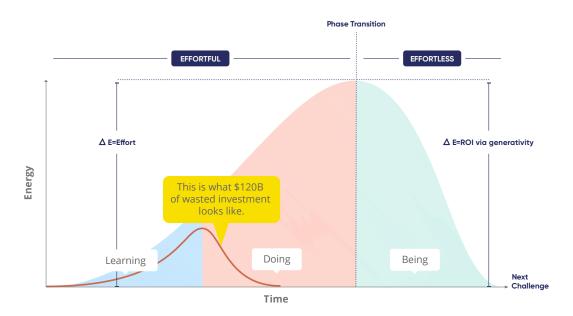
Just as ice must be heated to become water – a process known in chemistry as a phase transition – people must apply effort to achieve transformation into a new way of being. Learning requires less effort than Doing, which is why so many L&D efforts achieve only the inter-mediary outcome of knowledge retention without resulting in behavior change. Doing, by contrast, requires significant effort and practice until the complex skill acquired is now stably integrated into wide-ranging cognitive functions.

The beauty of successful transformation is that once it is attained, the energy invested can be redirected to other areas, including teaching and modeling the new skills acquired. This newly available energy is, in a sense, the source of the return on investment that organizations can hope to see from their transformed employees.

Phase Transition

EFFORTFUL   EFFORTLESS

Δ E=Effort   Δ E=ROI via generativity

Energy

Learning   Doing   Being

Next
Challenge

Time

Unfortunately, the vast majority of human capital efforts stop short of successful transformation. In these instances, the effort invested is wasted as the employee reverts to old practices.
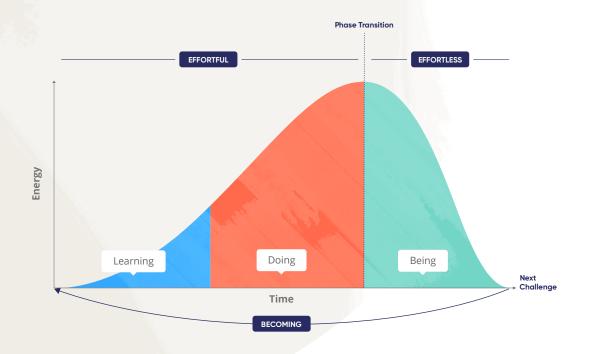
By contrast, through understanding the principles of Learning, Doing, and Being, leaders can not only achieve change but accelerate it, improving the ROI they see on their investments.

ON THE UNLIMITED POTENTIAL OF OUR SPECIES

Before we dive into those principles, it's important to understand an implied fourth phase to this model, that of *Becoming*.

Each successful individual transformation frees a person to begin all over again, reaching for still greater goals. At times a set of complex skills previously acquired – leadership skills, for example – will need to be revisited and refreshed to suit a changing context. This constant growth and change is encapsulated in the notion of Becoming.

The belief in the limitless potential of human beings, now increasingly accepted, should not be taken for granted.

The notion that adults have fixed capacities, with minimal room for growth, is equally plausible. It was the great humanists of the middle of the 20th century – Victor Frankl, Carl Rogers, Abraham Maslow, to name a few – who set the modern philosophical stage for this belief. The subsequent elaboration of self-determination theory in the 1970s and 1980s allowed for increasingly rigorous empirical testing of this philosophy.[4] Closer to the end of the 20th century, the founders of positive psychology leveraged rigorous experimentation to establish the scientific argument for this limitless potential.[5]

Roughly at the same time, a key supporting neuroscientific discovery for this work came in the form of Michael Merzenich's neuroplasticity research in the late 1980s and 1990s. This work provided the neurophysi-ologic evidence for robust cognitive development well into adulthood. By the turn of the 21st century, both psychological and neuroscientific evidence had substantiated the humanist philosophical arguments of fifty years prior.

Learning to Doing to Being describes, within this broader tradition, the step-by-step science of how humans pursue their own limitless potential – and how their employers can support them in this growth.

STAGE ——————————— **01**

LEARNING

The transformation journey begins with Learning.

The learning and development industry lacks a clear and coherent definition of learning. The goal of learning is to enable the deep integration of new knowledge across multiple cognitive domains. Learning is a necessary precursor to intentional behavior change, in the sense that intentional change requires an understanding of current vs desired practices.[6] At a minimum, learning bridges that knowledge gap.

Successful learning programs integrate into their design key evidence around both (1) how the generic brain best absorbs information, and (2) how individual learners differ in their readiness to learn.

The first principle related to (1) is that **learning must change the brain.** As described above, neuroscientist Michael Merzenich's discovery of neuroplasticity states that, in response to novel inputs, adult neurons can grow, strengthen, and even multiply.[7] The degree of change is addressed by the second principle, which is that **knowledge must be retained.** Most learning interventions fail because of the lack of reinforcement necessary to help learners retain

information. We forget 90% of what we learn in a single session within one month, and 60% within just one day. In the memory literature, this is described as the decay of semantic memory.[8] At the neurophysiologic level, most learnings are not driving significant enough change to stick. Hence, effort is wasted, and the learning has no chance of translating into doing.

The third key evidence-based principle informing successful learning programs is that **knowledge must impact widespread cognitive functions.** Even when knowledge "sticks," it may not penetrate cognition deeply enough to have broad impact. Optimal teaching results in the outcome of "learning transfer." This occurs when learning a principle in one domain or setting leads the user to be able to apply it elsewhere. Lessons from less effective trainings, however, remain confined to the specific area in which the learner was trained.[9] This has also been described as the difference between surface and deep learning. Is the cognitive change that happens "surface" – memorizing facts for recall – or is it "deep" – highly integrated across cognitive domains?

One can memorize and retain the capitals of U.S. states for one's entire life, but only deep learning translates into an impact on broader systems of belief and behavior.[10]

The final evidence-based learning principle relates individual learner readiness. It states that **individual mindset determines individual outcomes.** Not all learners, presented with the same materials, will be equally successful. These individual differences are described by theories of mindset and developmental readiness.[11] Developmental readiness[11] has been described as "the ability and motivation to attend to, make meaning of, and appropriate new knowledge into one's long-term memory structures."[12] It includes, first and foremost, self-awareness and clarity around the areas in which one seeks growth. In educator Martin Broadwell's model of learning, first described in 1969 but since adapted by educators around the world,[13] learners who are developmentally unready are "unconsciously incompetent" – they don't know what they don't know. They need to transition to a state of "conscious incompetence" – self-awareness of their own shortcomings – in order to be ready to change.

To more concretely illustrate these principles, and the practices they should inform, we introduce the character "Hannah." We'll follow Hannah's progress through all three stages of transformation.

1

INTRODUCING "HANNAH CAN'T FOCUS": STAGE ONE

Hannah is a mid-level manager in her thirties in marketing at a software firm.

She is well liked at her software firm and has been with the firm for three years. Her work ranges from fine to outstanding, but consistency of excellence is an increasing challenge.

Hannah finds this inconsistency stressful, and believes it occurs because she has too much to do. When focused on one thing, she delivers to the utmost of her ability. Too often, she is spread thin between too many projects and teams and lacks the "luxury" of focus.

Hannah's manager, Karen, has few complaints about Hannah's work, and values her on the team, but notes that Hannah often seems overwhelmed. Hannah denies feeling that way, so Karen doesn't push. Karen acknowledges that Hannah's efforts are not always appropriately focused. If they were, Hannah might experience more rapid career advancement. Karen asks that the company offer Hannah a coach.

At this point, although Hannah has a sense that she would like to improve her ability to be more consistent, she doesn't yet understand the nature of her challenge. As such, Hannah is "unconsciously incompetent." Her performance is lacking in specific areas, but she doesn't know what they are. In this stage, not only does the individual not understand or know how to do something, but he or she also does not recognize the deficit. The initial challenge at this stage is to gain awareness of the nature of the deficit.

Prior to meeting with her coach, Hannah digests BetterUp's pre-coaching materials to understand how and why people work with coaches. She reads about common areas of challenge for managers, including prioritization. She completes her whole person assessment, a 15 to 20 minute questionnaire that helps Better-Up identify areas of strength and challenge for individuals.

In her first meeting with her coach, Liam, Hannah shares that she would like to work on prioritization. She describes her struggles with focus and inconsistent performance. Liam curates a five-minute, evidence-based video tutorial describing the sources of "noise" that can lead employees to feel overwhelmed, an exercise on purpose that helps Hannah understand her reasons for wanting to work on prioritization, and a book excerpt on culling extraneous activities from one's life.
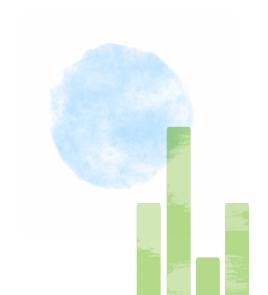
In their second meeting, Liam and Hannah review Hannah's whole person assessment results. Hannah is surprised to learn that she has significant strengths in relationship building, problem solving, and engagement. Her score on focus is unremarkable. Key areas of opportunity include energy, risk tolerance, and emotional regulation. Hannah observes that she tends to avoid uncertainty at work, preferring to make sure she is set up for success.

That week Liam offers Hannah resources to focus on understanding one's risk threshold. He asks her to complete an additional exercise on values that includes a section on identifying scenarios she works to avoid.

In session three, Hannah offers a realization that, based on her learning that week, she spends a fair amount of time mitigating risk at work. She fears getting fired, but she also fears simply "letting people down." This includes her boss, to whom she hates to say no, and her colleagues, who frequently seek her support. "When they ask me for help I want to help them. Being helpful, and reliable, are two of my most important values."

Liam reminds Hannah of her desire to work on feeling stretched too thin. They focus on the disconnect between Hannah's desire to be helpful and reliable, and the unsustainability of her current path. "If I keep this up, I won't be able to help anyone," she remarks. "I'll let everyone down."

Now, Hannah is at Broadwell's second stage, that of conscious incompetence. She doesn't know how to do something, but she recognizes the deficit and the value of a new skill in addressing it.

EVIDENCE-BASED PRACTICES THAT HELPED HANNAH IN THE LEARNING PHASE

Using our evidence-based principles, we can derive practices that yield deep, actionable learning. In Hannah's case, the key practices deployed in the Learning stage of her sessions with Liam included:

SUSTAINED MICROLEARNING OVER TIME

Spaced repetition[14] and micro-learning[15] address the forgetting curve and help support deep learning. Prolonged repetition, in small doses over long periods of time, enables lasting cognitive change.

SELF-ASSESSMENT

The whole person assessment Hannah completed before her sessions help to drive awareness of opportunities and open the transformation gap. Self-assessment can accelerate individual readiness by providing targeted evidence of deficits or opportunities for growth.

HYPERSONALIZATION

The whole person assessment, combined with one-on-one conversations, enabled Liam to personalize the sessions. Hyperpersonalization also facilitates deeper learning because it meets the learner where they are in terms of readiness/mindset, and in the challenge they actively face.
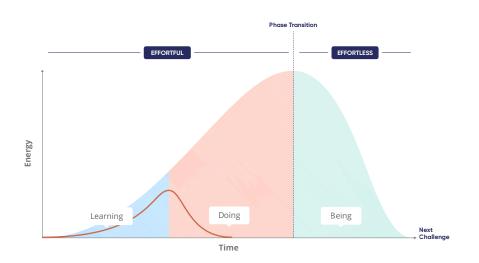
CONTEXTUAL LEARNING

Hannah was able to select and examine her challenges in the active, ongoing context of her work. Contextual learning means that learning is embedded with each user's readiness and context.This reduces the cognitive load on the learner, and allows for expedited learning and less wasted cognitive effort.[16]

VISUALIZING LEARNING SUCCESSES AND FAILURES

We can visualize the ways in which learning can be either impeded or accelerated through the application of these practices.
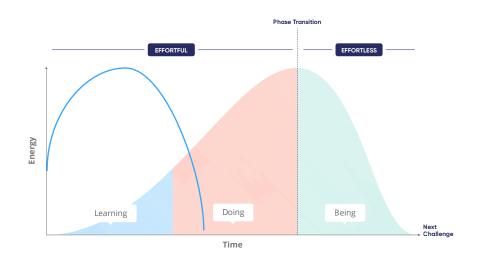
LEARNING FAILURE EXAMPLE: KNOWLEDGE NOT RETAINED

In this first example, the learner does not retain the knowledge taught long enough or deeply enough to translate that learning into action.

The effort fails before the learner is able to begin to practice. Repetition, in small doses over long periods of time, enables lasting cognitive change.

LEARNING ACCELERATION EXAMPLE: LEARNER HAS ALREADY IDENTIFIED CLEAR GOALS AND BEHAVIORS TO CHANGE

In this next example, the learner selected is in such an advanced state of readiness, having already identified their goals and having already achieved clarity on the necessary changes to make, that the transformation effort can effectively pick up at Doing and thereby accelerate the process.

While learners need not be in this advanced state of readiness to benefit from transformation, identifying those who are so clearly ready to grow will save time and expense.

STAGE ———————————— **02**

DOING

The growing field of behavior change is replete with noble but misguided attempts that ignore one or more of the key principles and practices of successful behavior change. Behavior change is most commonly highly effortful, and requires a combination of motivation, confidence, and ability. Successful change also requires repetition, and trial and error.

Behavior change can be significantly supported or hindered by one's context. This paper focuses on determinants of transformation that can be modified regardless of context. It treats context indirectly, in that context will inform individual factors like motivation. Context interacts bidirectionally with behavior change efforts.

Indeed, one major means of changing an unsupportive context is through the transformation of the individuals within that culture.

To succeed in the Doing stage, the following evidence-based principles should guide the approach:

First, **doers must be motivated.** Changing behavior is energetically taxing, and must be fueled by substantial motivation. One's degree of motivation determines the drive to turn learnings into behaviors.[17, 18, 19] Organizational context may influence one's degree of motivation to change.

Second, **doers must have adequate self-efficacy.** Anyone who wishes to change must believe that they can do so. This confidence in one's ability to change has been termed self-efficacy.[20] Self-efficacy allows a person to persist in the face of obstacles, and is critical for repeating behaviors often enough and consistently enough that they can become a new way of being. It is also part of a virtuous cycle of improvement, whereby successful change informs greater self-efficacy, which in turn supports still greater growth.

Third, **doers must have the mental energy to change.** Even given sufficient motivation, and confidence, one will not be able to start and or sustain change if one is struggling with stress, burnout, or other energetic deficits. These deficits need to be addressed and corrected through a primary transformation before the doer can address higher order goals.

Fourth, **doing entails constant trial and error.** Successful behavior change needs to allow for constant and rapid trial and error, a learning loop within the doing loop, as one optimizes behavior to achieve goals. Such "reinforcement learning," as originally described in computer science, describes learning through success and failure. It helps illuminate the ways we iterate – both cognitively and behaviorally – to increase our reward. Much of this may happen unconsciously, but manifests in conscious thoughts and in behaviors we select.

Finally, for successful behavior change, **repetition is key.** With sufficient motivation, self-efficacy, and psychological resources, one can fuel repeated efforts at behavior change, strengthening neural networks until these behaviors become habitual. The most simplistic neurological model of how this change plays out in the brain is in the form of motor loops strengthened through repetition. [21, 22]

2

"HANNAH CAN'T FOCUS": STAGE TWO

Hannah's newfound self-awareness allows her to set crisp goals for the next phase of her coaching. Goal-setting marks the transition from the learning to the doing phase. It represents a crystallization of focus and a willingness to commit to change. Hannah's goals are to become more:

- Comfortable saying "no" to lower priority tasks
- Consistent in her workplace performance.

Hannah's whole person assessment indicates a moderate to high level of motivation to achieve her goals, but her self-efficacy score is lower, indicating a lack of confidence. Her stress and burnout scores are elevated.

For the first five weeks in the "Doing" (aka growth) phase, Liam focuses Hannah on small challenges to experiment with saying "no," and physical renewal practices, such as meditation and rest, which target stress and burnout. He also works with her to develop resilience.

Hannah describes how uncomfortable the word "no" makes her feel. She and Liam differentiate between saying no and being unhelpful. Liam reminds Hannah of her strength at building relationships, and encourages her to lean into that even as she resists taking on more work.

Small successes in behavior change garner greater confidence (self-efficacy) for Hannah. Wins in self-care and stress relief open up greater psychological reserves for more challenging work.
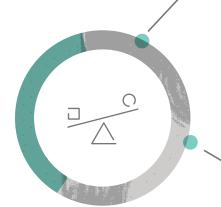
In week six, Liam challenges Hannah to devote just 80% of her focus to a lower-priority task that normally would receive 100% of her focus. Hannah feels uncomfortable. "Why would I do less when I can do more?" The experience is extremely unsettling for Hannah, and she can't resist completing the assignment to her utmost.

The following week, Liam compassionately holds Hannah accountable. The strength of their relationship, built up through regular weekly sessions, creates a psychologically safe space for Hannah to share her insecurities and acknowledge her failure. They discuss her need to push for 100%. New themes of perfectionism emerge as a thread throughout Hannah's career. Hannah identifies the alignment of her perfectionistic tendencies with her failure of letting others down.

The next week Liam asks Hannah to attempt the 80% task again, this time on a higher-stakes project. Hannah succeeds and is delighted. "No one even seemed to notice all the ways I could have done that better! It was just good enough," she tells Liam. Now Hannah is at the third stage of competence, conscious competence. In this stage she is newly able to achieve her goal, but doing so requires significant conscious focus and effort.

Liam and Hannah work together for eight more weeks. Each week, Liam gives Hannah challenges that stretch her toward achieving her goals. By the time Hannah repeats her whole person assessment at her reflection point, she no longer struggles with guilt over saying no. She doesn't believe relationships will be worse for it. She also now enjoys the consistency of performing more evenly, and has not experienced any negative consequences for delivering at 80%. Liam notes and reinforces these changes that Hannah observes in herself.

EVIDENCE-BASED PRACTICES THAT HELPED HANNAH IN THE DOING PHASE

In the Doing phase, Hannah successfully changed specific behaviors that aligned with her goals. Her experience underscores that behavior change is effortful, and requires a combination of motivation, confidence, and ability. Key practices deployed in the Doing stage of Hannah's sessions with Liam include:

GOAL SETTING

This well-studied practice helps identify outcomes that one is motivated to achieve. Goal setting should include goal identification, and strategies for mitigating obstacles.[23] This practice often marks the first transition from learning to doing.

ACCOUNTABILITY, REINFORCEMENT, AND FEEDBACK

This counterpoint to goal-setting facilitates consistency of practice and identifies barriers to change.[24] Mistakes must be embraced and examined as part of reinforcement learning. Hannah failed to reduce her level of effort in one instance, for example, and Liam held her accountable. Coaches also offer reinforcement for the gains achieved.

ASSESSMENT AND, IF NECESSARY, BOLSTERING OF ENERGY, MOTIVATION, AND SELF-EFFICACY

The whole person assessment measures stress, burnout, self-efficacy, and motivation. Weaknesses in these areas can be shored up in coaching and other interventions.[25] After her assessment, Hannah and Liam focused on these prerequisites.

CHALLENGE CALIBRATED TO THE ZONE OF PROXIMAL DEVELOPMENT

The behavioral challenge at any moment should stretch the individual just enough to create growth, but not too much so as to stress one's available resources and create a set-back. The challenge should also not be too slight, so as to slow the process. This ideally calibrated level of challenge is called the "zone of proximal development." With Hannah, Liam carefully and consistently presented her with tougher challenges.

COACH RELATEDNESS

For Liam to successfully hold Hannah accountable, he first created a psychologically safe, supportive relation-ship.[26] Within this context, Hannah was able to admit her failure, and discover new knowledge about herself. There are no reliable organizational alternatives to this type of unconditional support for growth. Such a supportive environment is also critical for enabling rapid, constructive trial and error.
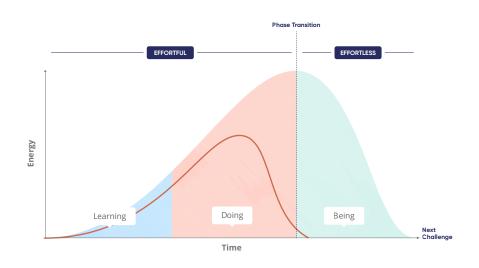
LONGITUDINAL REPETITION

Behavior change does not happen overnight, particularly for complex skills like leadership behaviors. Repetition allows for habit formation.[27]

VISUALIZING DOING SUCCESSES AND FAILURES
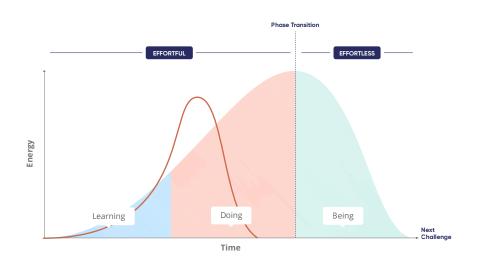
We can visualize the ways in which doing can be either impeded or accelerated through the application of these practices.

DOING FAILURE EXAMPLE: INSUFFICIENT PRACTICE
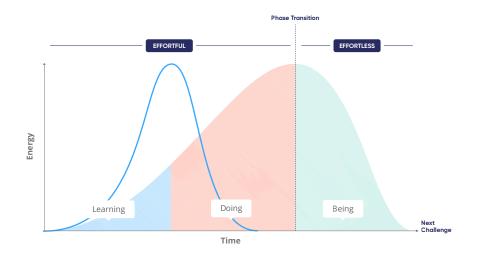
In this first example, the doer does not practice sufficiently. They put in some energy but not enough to achieve transformation. The energy they do invest is ultimately wasted.

DOING FAILURE EXAMPLE: LEVEL OF CHALLENGE IS TOO GREAT

In this second example, the level of challenge presented to the doer is too aggressive. It exceeds their level of skill, and creates frustration and – ultimately, failure.

DOING ACCELERATION EXAMPLE: HIGH MOTIVATION

Phase Transition

EFFORTFUL   EFFORTLESS

Energy

Learning   Doing   Being

Next Challenge

Time

In this third example, the doer is exceptionally motivated. This level of motivation allows the doer to power through the transformation more rapidly than a less motivated individual might.

STAGE ──────────── **03**

BEING

The state of "Being" represents the culmination of one's transformation. Energetically, being is the point where engaging in the newly acquired behaviors feels effortless rather than effortful, a marker of flow.[28] As the energetic demands of the transformation wind down, the employee can now direct that energy elsewhere, including back to the organization. Generative exercises such as coaching, teaching, or mentoring channel that energy to the direct benefit of others, all while reciprocally solidify the employee's new state of being.

The first key evidence-based principles for Being is that **lasting change is supported by an awareness of the change achieved.** New ways of being become integrated into who we are when we achieve metacognition – a conscious awareness and understanding of the change we have achieved.[29] Self-reflection and self-inquiry practices like mindfulness and journaling can facilitate the development of metacognition by focusing conscious effort inward toward the formulation and integration of a new sense of self. Such deliberate rewriting of one's prior narrative based on new behaviors can solidify the new state of being.[30, 31] In the words of John Dewey, "We do not learn from experience, we learn from reflecting on experience."[32, 33]

The second key principle for Being is that **successful change frees up mental energy.** This comes about, first and foremost, because the hard work and practice of "Doing" has changed the brain. With those changes in place – new, increasingly rapid circuits built across wide-ranging cognitive domains – engaging in the new behaviors requires simply activating existing structures rather than building them de novo. Conscious attention is no longer required.[34] Being is also the point where engaging in the newly acquired behaviors begins to feel more and more effortless rather than effortful, a marker of flow.[35]

A third sense in which successful transformation makes more energy available is that the transformed individual's positive experience of transformation may result in positive emotional contagion with those with whom they work. Positive emotions, like negative emotions, can be transferred within teams. Teams who experience greater collective positive emotion demonstrate more effective collaboration and better results.[36]

3

"HANNAH CAN'T FOCUS": STAGE THREE

In their fourth month of coaching, Liam and Hannah review her whole person reflection point results. Her greatest gains were in the areas of self-efficacy, calm, and resilience. Hannah reflects with pride on these gains.

For homework, Liam asks Hannah to write a story to herself of five months ago telling her about the work ahead. Hannah's letter expresses compassion for the struggles of the old Hannah. She paints a hopeful picture of a future in which Hannah has more control over her schedule, and fewer fears about others' judgements. She encourages the old Hannah to

believe in her strength and to trust Liam. She casts her challenges not in terms of focus or prioritization but on perfectionism and the need to please.

For the duration of their coaching relationship, Liam and Hannah turn her energies to using her new abilities to help her team. Several of Hannah's direct reports have felt overwhelmed and stretched thin. Hannah recognizes that they have modeled their behaviors after hers. Liam focuses on helping Hannah share her learnings with others, coaching them toward their own transformation.

At this point, Hannah has reached — or soon will reach — Broadwell's fourth level, that of "unconscious competence." She's had so much practice with a skill that it can be performed easily, and she may be able to teach it to others. The return of investment to the company grows as Hannah continues to become more productive and effective, and as her new state of Being positively impacts co-workers and outcomes.

EVIDENCE-BASED PRACTICES THAT HELPED HANNAH IN THE BEING PHASE

In Hannah's case, key evidence-based practices deployed in the Being stage of her work with Liam included:

METACOGNITIVE STRATEGIES AND SELF-REFLECTION

This is the deliberate, disciplined reflection on one's thoughts and growth.[37] Hannah did this as she reflected upon her gains in her letter exercise and in her whole person model re-assessment.

REWRITING ONE'S OWN NARRATIVE

Hannah did this with her letter, deliberately rewriting her story to make it a hero's journey ending in a new way of being.[38]

GENERATIVE PRACTICES

These include teaching, mentoring, and coaching, to solidify one's growth and to release new energy in the service of others.[39] Liam focuses on helping Hannah share her learnings with others. The social motivation to teach others positively impacts the process of encoding new learnings into the brain.

LEARNING TO DOING TO BEING SUMMARY CHART

The following chart summarizes the core evidence-based principles and associated practices for Learning, Doing, and Being. It also offers questions to ask to align development programs with these principles and practices.

STAGE: LEARNING

Principles	Practices	Questions to Ask
Knowledge must be retained and deeply integrated	Microlearning sustained over time	Are the learnings structured in short doses over time?
The learner must be ready	Contextual Learning	Will the learning happen in context?
	Hyperpersonalization	Is the experience personalized?
	Self-assessment	Have we built in a self-assessment of readiness criteria at the start?

STAGE: DOING

Principles	Practices	Questions to Ask
The doer needs motivation	Goal Setting	Is the doer setting clear goals?
The doer needs confidence (self-efficacy)	Assessment and bolstering of motivation, self-efficacy, and mental energy/stress	Have we built in assessments of motivation, self-efficacy, and mental energy/stress?
The doer needs mental energy	Accountability, reinforcement, and feedback	Do we have a mechanism to increase motivation, self-efficacy, and energy if it is low?
Doing entails trial and error	Coach relatedness	
	Zone of proximal development	Is someone providing accountability, feedback, and reinforcement?
		Is that someone appropriately connected to the doer?
		Are the practice challenges appropriately calibrated?

Doing entails repetition	Repetition over time	Is there sufficient repetition over time?

STAGE: BEING

Principles	Practices	Questions to Ask
Reflection solidifies change	Self-assessment	Is the self-assessment repeated?
Transformation frees up energy	Self-reflection practices	Have we built in self-reflective practices to solidify change?
	Mentoring, coaching, teaching	Have we created opportunities for mentoring, coaching, or teaching?

CONCLUSION

Successful individual transformation passes through three stages: Learning, Doing, and Being.

At each stage, key evidence-based principles from a wide variety of disciplines inform practices that support progress. By deploying these practices, learning and development leaders can facilitate more consistently successful transformations for their people.

Each transformation, when complete, frees up the individual to coach and mentor others working toward the same goals. The individual is also able to begin to contemplate his or her next transformation. Successful growth reinforces one's self-efficacy, building confidence in one's ability to achieve change. What results is an upward spiral, a virtuous feedback loop in which each success inspires additional growth, opening the space for a fourth stage, that of Becoming.

Learning and development leaders, as stewards of their workforce's opportunities for growth, have the privilege of driving these efforts to help each employee grow personally and professionally. If our potential is limitless, then so, too, is the return such efforts can drive for the sponsoring organization.

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6 Some traditional definitions of learning equate learning with behavior change. However, learning can occur without behavior change as well; although it is a necessary precursor to intentional behavior change. See Lachman, S.J. (1997). Learning is a process: Toward an improved definition of learning. *The Journal of Psychology,* 131(5), 477.

7 Merzenich, M. (2013). *Soft-wired: how the new science of brain plasticity can change your life.* San Francisco, CA: Parnassus Publishing. Merzenich developed the theory in a series of studies at the end of the 20th century.

8 Wood, R., Baxter, P., & Belpaeme, T. (2011). A review of long term memory in natural and synthetic systems. *Adaptive Behavior,* 20(2), 81–103.

9 Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological Science in the Public Interest,* 13(2), 74-101.

10 Hattie, J., & Yates, G. (2014). *Visible learning and the science of how we learn.* London: Routledge.

11 Some adult development theories go further, framing readiness as part of discrete developmental phases that inform our openness to others' ideas, our readiness to evolve, and our awareness of our own shortcomings. See also Kegan, R., & Lahey, L. L. (2009). *Immunity to change: How to overcome it and unlock potential in yourself and your organization.* Boston, MA: Harvard Business Press for one of the more popular models of adult development today. Their model has been increasingly applied to leadership training in the workplace, for example McCauley, C. D., Drath, W. H., Palus, C. J., O'Connor, P. M., & Baker, B. A. (2006). The use of constructive-developmental theory to advance the understanding of leadership. *The Leadership Quarterly,* 17(6), 634-653.

12 Avolio, B. J., & Hannah, S. T. (2008). Developmental readiness: Accelerating leader development. *Consulting Psychology Journal: Practice and Research,* 60(4), 331. Note that this definition includes five subdimensions: 1) Self-awareness/clarity; 2) Leader complexity; 3) Goal orientation; 4) Developmental efficacy; and 5) Meta-cognitive ability. 1) and 2) map

most precisely onto the Learning Phase; 3) and 4) will be discussed as part of Doing; and 5) relates most closely to Being. Developmental readiness should be considered first and foremost, however, before selecting an individual for a learning opportunity, and so we categorize it in this first stage.

13 Broadwell, M. M. (1969). Teaching for learning (xvi.). *The Gospel Guardian,* 20(41), 1–3a.

14 Hattie, *Visible Learning,* Effect size 0.71. See also Lacerenza, C.N., Reyes, D.L., Marlow, S.L., Joseph, D.L., & Salas, E. Leadership training design, delivery, and implementation: A meta-analysis. *The Journal of Applied Psychology,* 102(12), 1686–1718.

15 Hattie, *Visible Learning,* effect size 0.88.

16 Hattie, *Visible Learning.* See also Grossman, R., & Salas, E. The transfer of training: what really matters. International *Journal of Training and Development,*15(2), 103–120.

17 Motivational Systems Theory nicely integrates many of the psychological theories of motivation relevant to successful behavior change. See Ford, M.E. (1992). *Motivating humans: Goals, emotions, and personal agency beliefs.* Newbury Park, CA: SAGE Publications, Inc.

18 Kanfer, R. (1990). Motivation and individual differences in learning: An integration of developmental, differential and cognitive perspectives. *Learning and Individual Differences,* 2(2), 221-239.

19 Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: a meta-analytic path analysis of 20 years of research. *Journal of applied psychology,* 85(5), 678.

20 Bandura, A. (1977). Self-efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review,* 84(2), 191–215.

21 Neal, D., Vujcic, J., Hernandez, O., & Wood, W. (2015). The Science of Habit: Creating disruptive and sticky behavior change in handwashing behavior. Washington D.C., USA. USAID/WASHplus Project.

22 Thaler, R., & Sunstein, C.R. (2009). *Nudge: Improving decisions about health, wealth, and happiness.* New York, NY: Penguin Books.

23 Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist,* 57(9), 705-717.

24 Kluger A., & DeNisi A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin* 119(2), 254–84. Also see Hattie, *Visible Learning.* Effect size 0.75.

25 Vanhove, A. J., Herian, M. N., Perez, A. L., Harms, P. D., & Lester, P. B. (2016). Can resilience be developed at work? A meta-analytic review of resilience-building programme effectiveness. *Journal of Occupational and Organizational Psychology,* 89(2), 278-307.

26 Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology,* 21(2), 95-103. See also Hattie, Visible Learning, Effect size 0.72 for student-teacher relatedness.

27 Neal et al., *The Science of Habit.*

28 Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience.* New York: Harper & Row. As skills are acquired, flow may be experienced intermittently during the "doing" phase as well.

29 Hattie, *Visible Learning.*

30 Wilson, T. D. (2011). *Redirect: the surprising new science of psychological change.* New York, NY: Little, Brown and Company.

31 Pals, J. L. (2006). Narrative identity processing of difficult life experiences: Pathways of personality development and positive self-transformation in adulthood. *Journal of Personality,* 74(4), 1079-1110.

32 Note that despite widespread attribution to Dewey, some say this quote is not, in fact, Dewey's, and its precise origin is obscure.

33 Victor Frankl's theory of self-transcendence took this one step further to describe the meaning-driven pursuit of new ways of being that go beyond the self; and the continual nature of that pursuit. Once one has transcended the old self, it's time to begin the endeavor of transcending the new self. In this sense, Learning to Doing to Being is a continual process of growth.

34 This has also been described in classic learning models whereby skills become automatic and effortless. See Ericsson, K. A. (2006). The Influence of Experience and Deliberate Practice on the Development of Superior Expert Performance. In K. A. Ericsson, N. Charness, P. J. Feltovich, & R. R. Hoffman (Eds.), *The Cambridge handbook of expertise and expert performance* (683-703). New York, NY, US: Cambridge University Press. See also Neal et al., *The Science of Habit.*

35 Csikszentmihalyi, *Flow: The Psychology of Optimal Experience.*

36 Barsade, S. G. (2002). The Ripple Effect: Emotional Contagion and its Influence on Group Behavior. *Administrative Science Quarterly,* 47(4), 644–675.

37 Hattie, *Visible Learning,* effect size of 0.69 for meta-cognitive strategies.

38 Wilson, *Redirect: the surprising new science.*

39 Lieberman, M.D. (2002). Education and the social brain. *Trends in Neuroscience and Education, 1*(1), 3–9.In medicine, the training mantra "See One, Do One, Teach One," likewise enshrines the practice of teaching as the final stage of learning. In addiction recovery circles, serving as a sponsor to others is similarly employed to both the benefit of the sponsor and the sponsee. See Pagano, M. E., Zeltner, B. B., Jaber, J., Post, S. G., Zywiak, W. H., & Stout, R. L. (2009). Helping Others and Long-term Sobriety: Who Should I Help to Stay Sober? *Alcoholism Treatment Quarterly,* 27(1), 38–50.

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