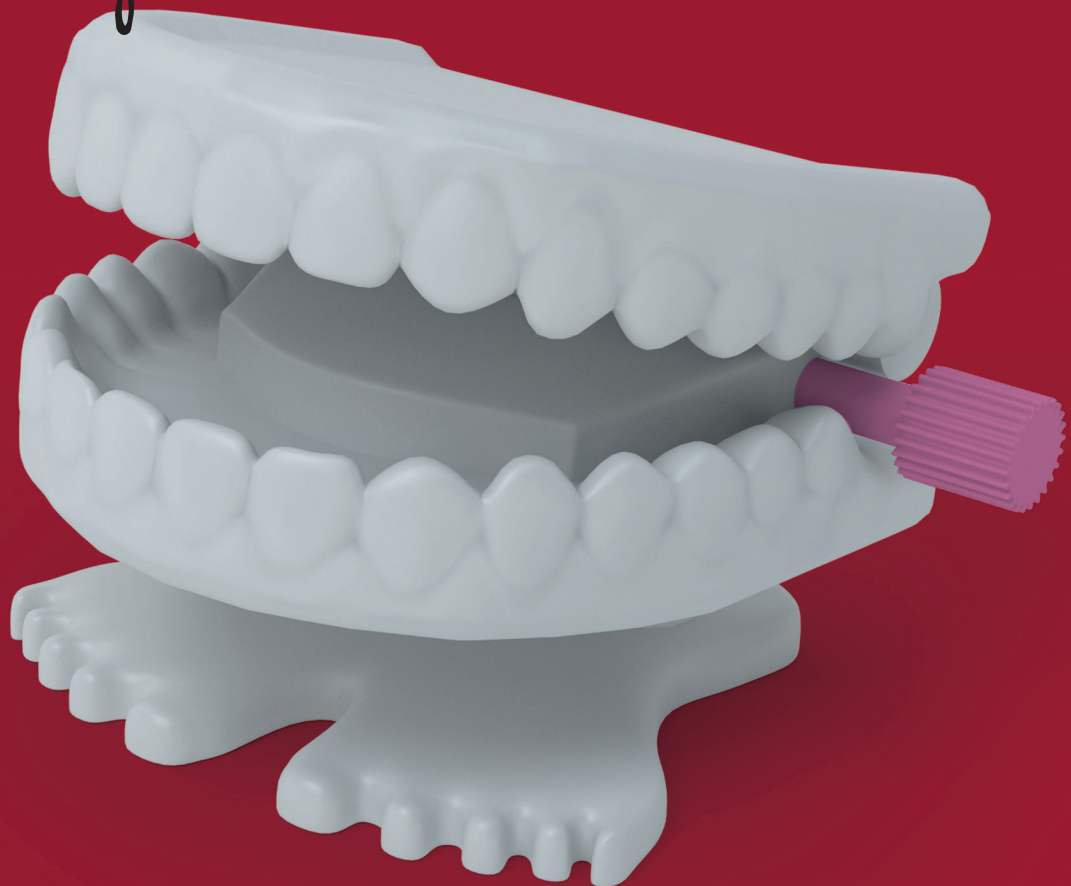




The bite-size revolution

*How to make
learning stick*



Mind Gym

Transform performance by changing the way people think.

At Mind Gym we believe
it's the people that matter
most, because when you
help individuals flourish, the
companies they work in will
flourish too.

Using ground-breaking psychology, our tools and solutions equip people to achieve more by thinking differently. They're usually bite-size and run over weeks or months, so individuals go on a journey of discovery, putting into practice their new skills along the way.

This is how smart businesses get more, with less, forever, and how we've boosted the performance of millions of individuals, in hundreds of companies, across the globe.

Is your company powered by Mind Gym?

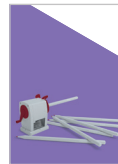
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The return of the manager

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Paying attention

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Contents

In a nutshell	Page 4	
Bite-size is best: a business case	Page 6	
What's going wrong?	Page 10	
What makes learning stick?	Page 12	
Bite-size in practice	Page 18	
Conclusion	Page 22	
The Mind Gym way	Page 24	
References	Page 32	
A few facts about us	Page 38	

In a nutshell

From sermons and religious ceremonies to Ancient Greek plays, from piano lessons to pop quizzes, from the school curriculum to TV documentaries, we learn things in bite-size chunks and have done so for thousands of years.

Why should training at work be any different? Well, it shouldn't. When it comes to changing behavior and achieving business goals, bite-size is most definitely the right size.

Here's why

The traditional approach to training, where we focus our time and energy on the event and helping people learn, isn't working. It's expensive, time consuming and, most of all, has little impact: fewer than 15 percent of participants successfully apply what they learn.¹ No wonder personal development is often put on the back burner.

The bite-size approach focuses not on helping people learn but on helping them solve problems in the real world. Transfer, not the event, is the hero. And it targets not just the learners but their managers, peers and the cultural context in which they apply what they learn, so it's almost impossible not to put new skills into glorious practice.

Breaking things down into smaller pieces makes them easier to digest



Here's how

For individual learners, the bite-size approach is a continuous cycle consisting of three phases:

Engage

Learners who are psychologically engaged take in more and are more likely to apply. A bite-size offer is marketed in a way that whets learner's appetites: they don't need to be cajoled into attending.

Participate

Drawing on scientific principles about the way people learn, bite-size sessions get to the learning outcome faster, appeal to self-interest and break down abstract business goals into practical tools which can be put into practice immediately.

Activate

Meaningful content and built-in sustainment activities mean it takes less mental effort to put learning into action. The distributed, bite-size cycle is cleverly designed to make transfer almost automatic.

Meanwhile, the bite-size approach engages and mobilizes participants' managers to maximize transfer, makes the most of positive peer pressure to reach "tipping point," and draws upon leaders to win buy-in and sustain behavior change. All of which makes bite-size much more than a flash in the pan.

A distributed bite-size approach results in 17% greater transfer without blowing the development budget. It gets to the same end result (if not better²) as a week of traditional training. What's more, it provides the ideal balance between choice and scale. Participants can select their unique learning journey from a menu of learning bites that are relevant to the desired business outcome. It's quick, nimble and can be tailored around participants' hectic work schedules.

Clearly, bite-size is much more than just shorter courses. Calling upon numerous academic studies and psychological research, as well as our own experience working with 61% of FTSE 100 companies, we reveal how the bite-size approach makes learning stick.

Discover what puts the bite into bite-size.

Turn over to find out more ›

Bite-size is best

Bite-size learning makes good business sense – it produces 17% greater transfer, is 30% cheaper and delivers almost twice the ROI of a traditional approach.

If there was any other business process which could be changed to save 50% of people's time without any adverse effects, it would be done immediately. Training, so far, is the exception. Here's how bite-size delivers more for less:

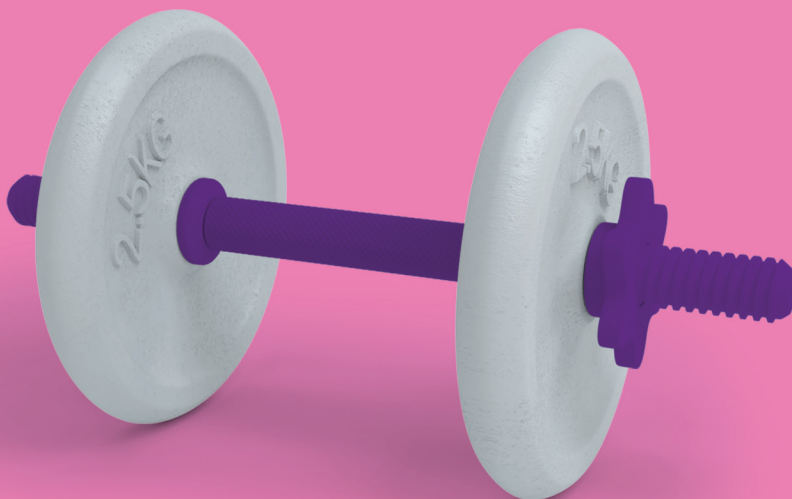
It capitalizes on the Pareto principle: the vital few for the busy many

In 1906, Italian economist Vilfredo Pareto observed that 80% of the land was owned by 20% of the population.³ Since then, the “80-20” rule has been observed in all sorts of domains: 80% of revenue comes from 20% of customers, 20% of patients use 80% of healthcare resources and so on. Training is no exception. By focusing on the most relevant 20% of learning and practice, the bite-size approach yields 80% of the results. Any longer spent in training and the return on time invested starts to diminish.

Learning is little and often

Short, regular periods of high intensity exercise get you fitter quicker than endurance training; eating little and often keeps you slimmer and, likewise, distributed bite-size training helps you to remember and apply much more^{4,5} (see figure 1). It's easier to create long-term memories when you learn things in chunks rather than all at once;⁶ that's why you never spent six hours in math class.

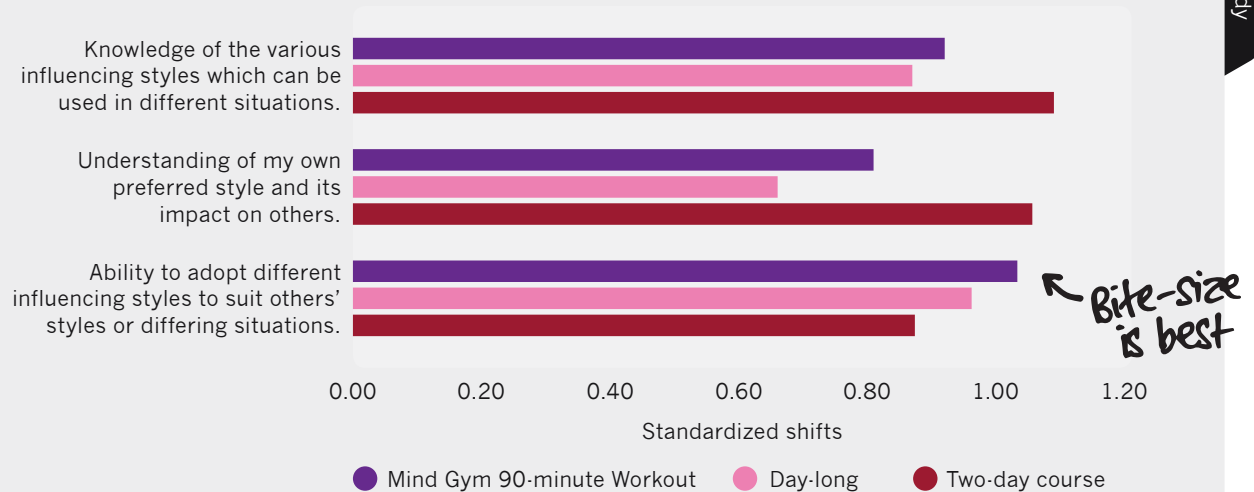
Think gym versus health spa.
A short workout once a week for a couple of months is better for your health than a crash weekend of acai berries and reflexology – even though they both take up the same amount of time.



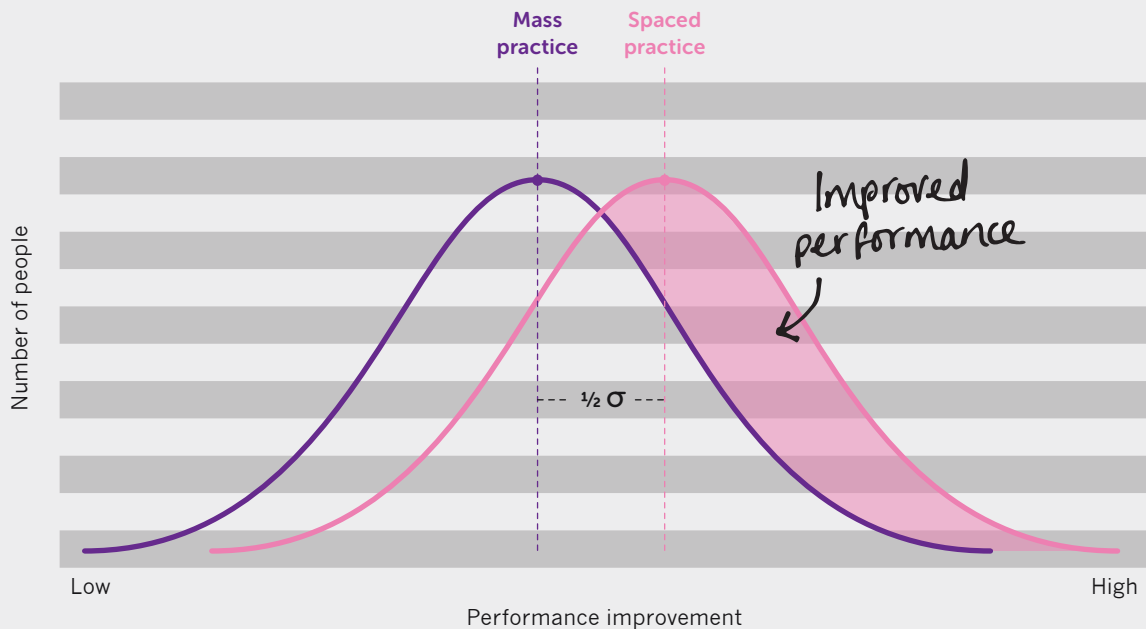
Bite-size is the right size

BBC

The BBC independently compared the impact of a 90-minute session with a day-long intervention. The bite-size session delivered a greater improvement than the day long course.



With added distribution



It's easier to attend

The flexible and convenient nature of bite-size means it can be tailored according to your schedule. It can even be slotted on the end of a regular meeting – everyone's already there so why not do some learning together?

Because it's only 90 minutes, there's usually no need to seek the boss's permission or find suitable cover, and there's less likelihood of cancellation because learners can't afford the time away.

Fewer cancellations, greater participation, reduced cost per head, and therefore a better return. Plus if it can't be done in person, bite-size training can be delivered virtually – saving even more on transportation, venue rental and travel time.

Opportunity cost is recovered through discretionary effort

Taking people out for days at a time means lost productivity and a significant opportunity cost. A bite-size approach is much less disruptive – rather than finding someone to cover the work or losing the opportunities altogether, people simply make up for lost time.

Targeted just-in-time deployment cuts waste and maximizes benefits

What if a division of a company suddenly faces a challenge that's very different from the rest? Or a change in strategy refocuses a function's efforts and therefore its capabilities? How can learning respond? A traditional approach is too slow – long periods of analysis and design mean that learning misses the boat. A bite-size, rapid prototyping approach means just-in-time design and development, making the intervention context-relevant and contemporary. Just as an ant colony is optimized by a just-in-time food delivery, bite-size learning's flexibility and easy implementation allow companies to deal with problems quickly – without major disruption.

Bite-size is cheaper. No seriously, a lot cheaper

It's commonly accepted that learning three things from a day's course is a good result. But consider the four or five things on average taken from a series of bite-size workshops, then bite-size gives you a better result for half the cost of employees' time. And that's without taking into account the savings in venue rental, travel, refreshments, and so forth. Overall this equates to almost double the return on investment (see figure 2).

Value proposal		
	Traditional approach	Bite-size approach
Program	1 day's training	2 x 90 minute learning session 1 x 30 minute transfer task 1 x 30 minute booster session
Costs		
Cost of time of 20 ppt @ \$107,410*	\$8,913	\$4,456
Facilitator/trainer costs	\$4,000	\$5,500
Travel and expenses	\$2,000	\$500
Total costs	\$14,913	\$10,456
Benefits		
Improvement in performance	5%	6%†
Utility value (20 ppt.)**	\$107,410	\$128,892
ROI	620%	1270%

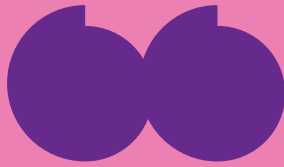
Bite-size is cheaper too!

Figure 2. Illustrative comparison of benefits: costs for a traditional day's learning vs. bite-size distributed programme

* Bureau of Labor Statistics, Occupational Employment and Wages, Management occupations, May 2011, 241 working days per year.

** Utility is calculated by taking salary x performance improvement.

† ½ of one standard deviation greater transfer and therefore performance improvement (Donovan & Radosevich, 1999)



Mind Gym is a revolutionary part of our L&D program. Bite-size is changing everything.

Michael Molinaro

Chief Learning Officer
New York Life



What's going wrong?

Despite our best intentions, behavior change after learning remains remarkably low. There are seven reasons why.

① We believe that longer = better

Prevailing wisdom dictates the longer we spend in training, the better. Not only is this false, it's irrational. Just as travelers prefer reaching their destination faster, learning quality should be judged by outcome, not length. But when budgets are set by hours of training per employee, it's a hard habit to break.

② The event is the hero

We invest the majority of our time, energy and money into the event itself: we schedule it, calculate the costs, log who turns up and measure reactions. But according to research conducted by evaluation guru Robert Brinkerhoff, development programs fail because of poor event design less than 20 percent of the time. More than 80 percent of the time, failure is due to poor upfront engagement and poor sustainment afterward.⁷ A bite-size approach reduces this risk by making transfer the hero of the program.

③ We design for the outlier

Training designers cater for the slowest learner, the biggest skeptic and the greatest collaborator. Learning becomes bloated, lethargic, crammed with answers to every imaginable question or so facilitative that everyone wants to shake the trainer and say, "Just tell us the answer." Business management author Dale Dauten astutely commented, "Meetings tend to move at the speed of the slowest minds in the room – in other words, all but one participant will be bored, all but one mind underused."

④ We say that people are different, but we treat them all the same

Everyone shows up and goes through the same agenda – no matter how different their prior experience, individual personalities or current work challenges. It's the reverse of the Pareto principle; each individual spends just 20 percent of the whole day on things that matter to them.

⑤ We only target the learner

Like schools hell-bent on imparting the knowledge necessary to pass an exam instead of preparing pupils for later life, training sessions focus only on the individuals doing the learning – with little consideration for the wider social and cultural context in which participants will apply what they learn. As a result it's more difficult for people to transfer that learning when they get back to work.

⑥ We stick with what we know

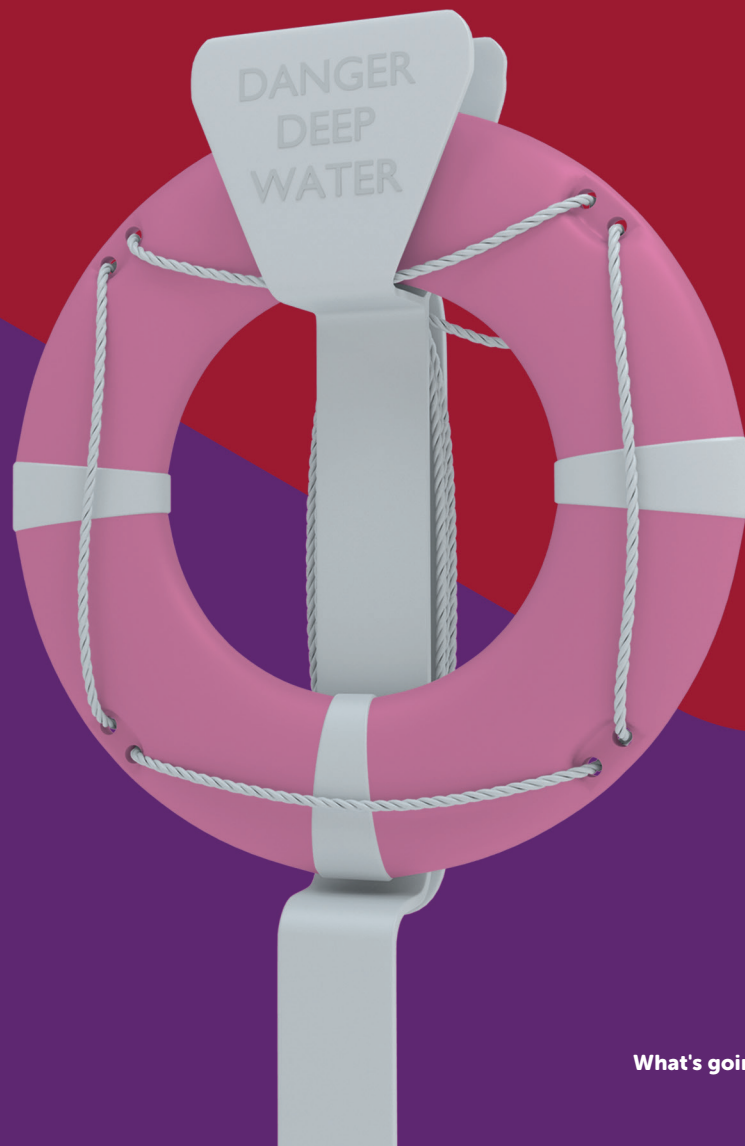
Until the 1990s, most training followed an instructor-led, behaviorist approach, focused on helping people successfully complete tasks. This was followed by a learner-centered, cognitive approach, using simulations and role plays to help people apply their learning in daily life. More recently, the learning world has favored a social learning approach that encourages communities of practice and collaboration. But no matter what's in vogue, there is no single best approach. We need a fourth generation, integrative model which draws on the best parts of each method to meet the needs of the particular group and situation.⁸

⑦ We miscalculate the cost

The cost of change – administrative, political or otherwise – is sometimes cited as a barrier to moving to a bite-size approach. But typically this calculation ignores the most significant cost – the participants' time. As demonstrated earlier, the reduced participant time and greater impact of a bite-size approach delivers double the ROI of traditional approaches.



We need a fourth generation, integrative model that draws on the best parts of each method to meet the needs of the particular group and situation.



What makes learning stick?

Turn learning into action by tapping into the scientific principles of behavior change.

What's the difference between a bite-size Snickers bar and a normal Snickers bar? Simply that one is smaller than the other. Some people think bite-size learning is the same: that it involves taking a day's worth of content and chopping it into smaller sections. This is a misunderstanding. The bite-size methodology is about much more than shorter courses (although miniaturization does play a part).

The bite-size methodology is based on rigorous psychological and business research about the way

people learn and, importantly, what makes that learning stick. After all, it's only when learning translates to action that a return on investment is realized.

The methodology has two core components: the individual participants' learning journey, and the broader social and cultural context in which they apply that learning as illustrated in figure 3 and which we will now explore in more detail.

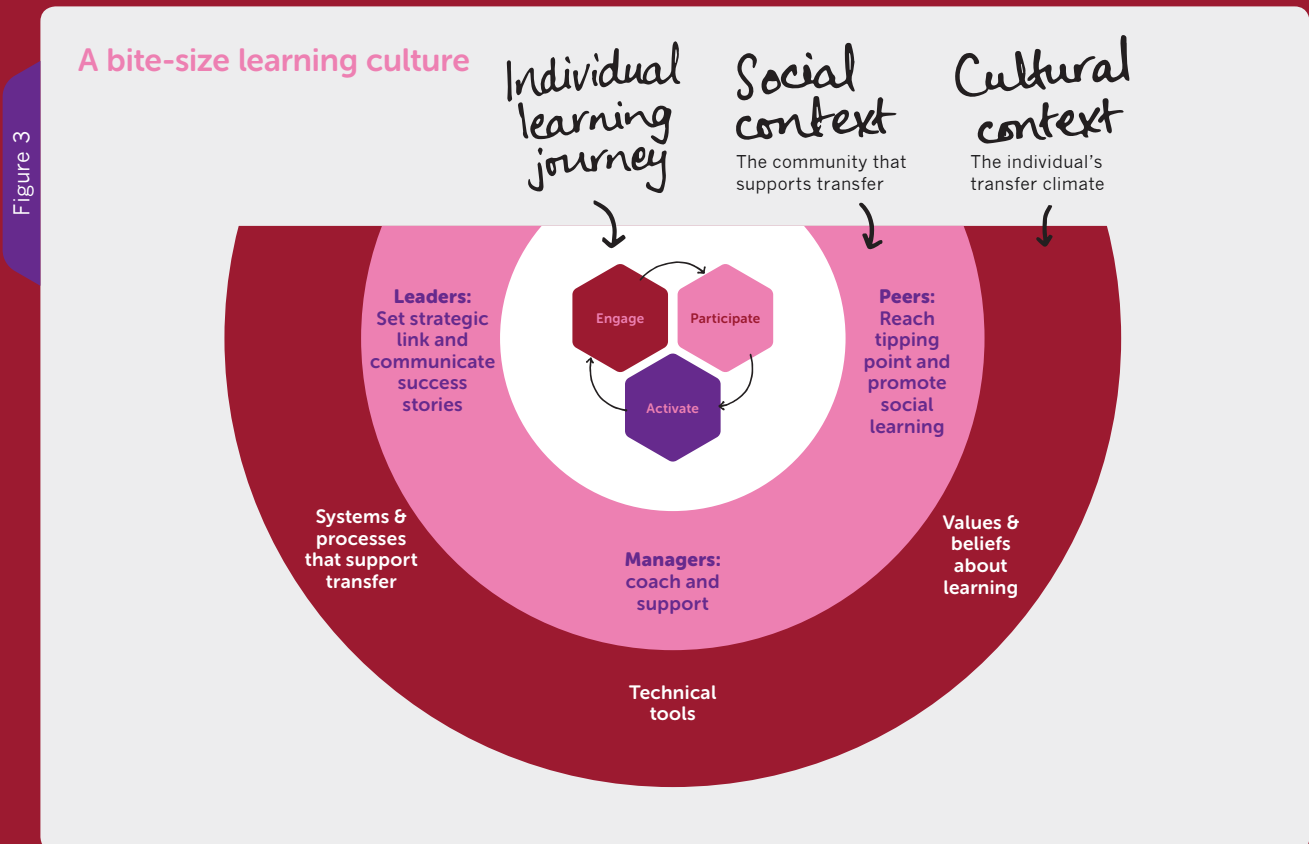


Figure 3. Individual, social and cultural levels targeted by the bite-size methodology

All about me: the individual learning journey

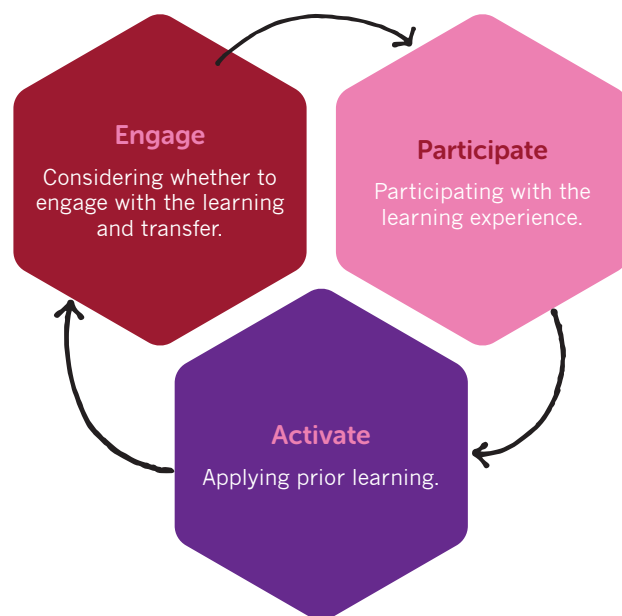
What practices lead to learning transfer? This was the question that Lisa Burke, associate professor of management at the University of Tennessee, Chattanooga, and Holly Hutchins, assistant professor of human resource development at the University of Houston, posed to various training professionals.

People at lower and middle levels of an organization tended to describe activities that occur after training. Executives most frequently answered with activities that occur during the earlier design phase.⁹

These are understandable responses; especially given Robert Brinkerhoff's finding that when development programs fail, more than 80 percent of the time it's down to inadequate upfront engagement and poor sustainment afterwards. But they are also ill-conceived, event-centric answers.

A huge breakthrough in counseling was taking a client-centred approach. We must do the same with learning and learners. To make learning stick, we have to move from a "before, during, and after," event-centric framework to one that is focused and based on participants. And that's exactly what bite-size does.

The bite-size learning framework is a continuous cycle of three distinct phases as illustrated below and explored further in the pages that follow.



01 Drive engagement

As many as 90% of learning participants have little idea why they're there or what value it adds to them or their organization.¹⁰

When a typical learner is asked why he or she is participating, the typical answer comes back: "Because it's Tuesday and my manager told me I had to." Some learners will see the personal gains: "Because I want to learn about influencing so I can persuade my kids more easily." Generally, few participants both understand how the learning will help them in their role and feel excited about what there is to discover.

According to Brinkerhoff, only the latter type of learner will drive ROI: "I'm here because my role requires influencing customers to buy. This session will help me do that. I'll also get better at persuading my teenage daughter." It makes sense that the more psychologically engaged learners are, the more likely they are to apply what they learn.¹¹

So how can learning leaders drive this type of engagement? By adopting a consumer-marketing approach. In the same way that Coca-Cola, Nike and Starbucks focus huge amounts of effort on appealing to and leading the interests of their customers, learning professionals need to invest as much energy into marketing their offer as they do in creating the offer itself. The best marketing leaves learners crystal clear about why the offer is relevant to them, and hungry to get into the thick of it.

Participation here doesn't need to be in an event; it could just as easily be informal learning, with no need to define boundaries.

02 Deepen participation

Unfortunately for fitness fanatics, being motivated to get stronger or leaner isn't enough – you also have to put in the hard yards. Likewise with training at work: to take away something of value, engaged learners need to completely immerse themselves in the content. Bite-size learning gives participants the physical and psychological energy to completely immerse themselves by taking away the boredom typically associated with long training sessions.¹²

Bite-size takes advantage of three scientifically grounded instructional design principles to develop an environment where people actively take part. Just like an intensive fitness class where attendees can't help but break a sweat – only with less Lycra.

i) Miniaturization

We don't need to spend hours in the training room to create a learning experience with a lasting impact. By combining short, sharp bursts of energy with just the right amount of reflection time, we trigger the light bulb moments that challenge the way people think and ultimately change the way they behave.

Bite-size sessions trim out all the fat – no bloated models or intricate scientific theories, just key facts and relevant information. We assume the “why it matters” and go straight to “how”; finding solutions to specific questions, without the hypothesizing. We tell first and discuss later. There's no time to play “guess the answer.”

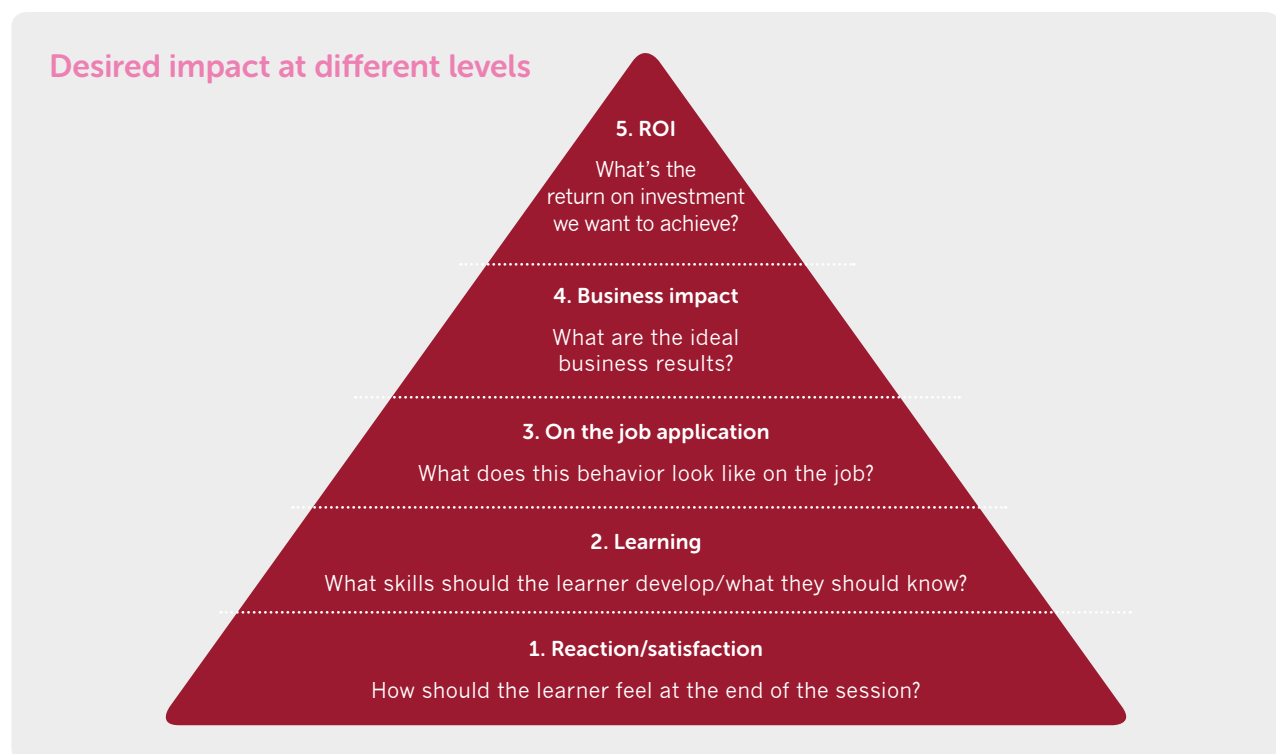
Bite-size sessions also take advantage of what we know about our natural energy ebb and flow, called “ultradian rhythms.” After 90 to 120 minutes, our alertness dwindles and we crave rest and recharge. We start staring out of the window and thinking about lunch.¹³ Anything we try to learn in this time is lost. Bite-size learning optimizes our natural learning rhythms, using the 90/20/8 rule.¹⁴ It goes something like this: no module ever runs more than 90 minutes, the pace is changed at least every 20 minutes, and people are involved in the content every 8 minutes. That's how you put the bite into bite-size.

ii) Contextualization

In bite-size, if content is King, then context is the Emperor. Our job as learning professionals isn't to help participants learn; it's to help them solve real-world problems. So the starting point for design should be what you want people to do when they leave. It doesn't matter how innovative the design or revolutionary the technology; if it's not useful, relevant or timely, it will deliver little or no value.

Of course, we can't ignore the business outputs we want to achieve. The trick is to find a balance between what learners need and what the business expects.

To make sure we're tapping into both business and individual drivers, we need to think about the desired impact at five different levels – from immediate learner reaction through to return on investment for the business (Figure 4). This approach stems from the work of Kirkpatrick on learning evaluation,¹⁵ and was developed by Jack Phillips.¹⁶



Understanding these levels helps us design training which resonates with the learner so that they go on to apply it, and ensures that the business needs at the top of the pyramid are met. This is exactly what happens in contextualized bite-size learning: we figure out the business context, recognize what this looks like from the learners' perspective, and break down abstract skills and competencies into practical tools and techniques. The result? An intervention that's focused and targeted, satisfied learners, and better business outcomes.

iii) Mass customization

Learners are more engaged when they feel that the learning is relevant and personalized. One size fits no one. But providing options for every eventuality would be overwhelming,¹⁷ not to mention time-consuming and costly to develop.

In a learning program, we can't (and shouldn't) offer all things to all people. Bite-size allows us to provide choice that resonates, while delivering at scale. It's called "mass customization" and mimics the Starbucks approach. Coffee drinkers feel like they have an infinite number of choices – soy or skinny, tall or venti, extra shot, extra hot, with cream – to create their perfect drink. In fact, they're simply combining options from a limited menu. This limit is crucial.

With bite-size, we can offer a diverse menu of learning bites that are directly relevant to organizational outcomes and learner types. Participants can then create their own program by picking the ingredients that are right for them, given their prior experiences and current challenges.

For Starbucks loyalists, it's the ability to create our own individual Starbucks drink (within the parameters of a trusted menu) that drives brand engagement and repeat purchase. Aren't those the same things we want for our learning interventions?

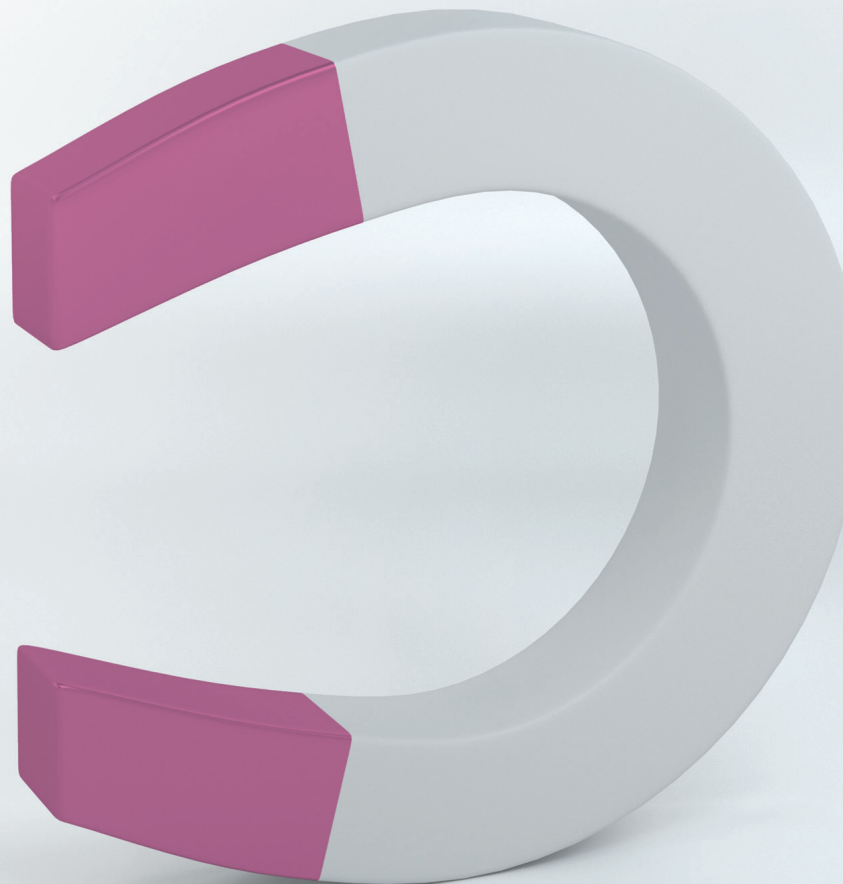
03 Trigger activation

We know that individuals who are psychologically engaged in training are more likely to apply what they learn. And individuals will exert more energy into something if they believe that they'll take away something valuable from it. One reason that many training programs fail is that the problems don't feel real¹⁸ – generic case studies that have nothing to do with anyone's job.

Bite-size learning provides meaningful content in the form of key takeaways and specific behaviors. By using real-life examples and building in tailored, relevant models and techniques, we help learners recognize the opportunities to transfer their learning. So when they get back to work, it's not as much of a mental stretch to apply what they've learned. In fact, it's almost automatic.

A distributed course of bite-size sessions also provides more opportunities to trigger activation. First we activate participants' prior learning on a topic before consolidating it with new tools and techniques that they take back to work and practice. Sustainment is therefore built into the experience, not tacked on as an afterthought.

*Bite-size makes
transfer, not the event,
the hero.*



In the real world: the social and cultural context

To make learning stick, learning leaders need a fundamental shift in the way they think about transfer and where they focus interventions: the emphasis should be on solving problems in the real world. We can't ignore the social and cultural context in which people put their learning into action.

Social context

No man or woman is an island – putting learning into action involves engaging with colleagues, clients, managers and direct reports. It's fine to give me a new sales approach, but what are the chances of me using it long-term if my manager has never heard of it? Interventions that focus solely on the learner miss important opportunities to strengthen transfer. A bite-size approach targets not just learners but those around them.

i) Managers

Managers adopt the role of coach or personal trainer. They provide encouragement and help participants to identify opportunities to use their new skills. Simply being interested and supportive helps: research found that the perception that managers support learning has a greater impact on transfer than individuals' personal motivation.¹⁹

ii) Peers

Peer pressure isn't necessarily a bad thing: if everyone around me is getting fit, I want in too. Peer support has a direct impact on people putting their learning into action.²⁰ The more people who are engaged in a program, the more likely it is that the desired behavior change will reach tipping point and become the norm across the organization.

Because bite-size learning allows organizations to target a greater proportion of the overall population – it's cheaper and more scalable – it's more likely to tap into the power of social learning and create a wider community of practice, in which learners swap and share best practice tips. Plus, a little healthy competition in the organizational locker room keeps motivation high.

iii) Leaders

Leaders should be there to ensure any program is aligned with the organization's strategic vision, and help to engage upfront and communicate throughout. Making clear the link between organizational strategy and the learning intervention has been shown to promote transfer²¹ as participants understand the organizational context of why the learning is relevant to them, and managers are convinced that this isn't "yet another HR fad" and therefore give it more support.

Take advantage of the bite-size distributed approach to build in opportunities for leaders to reiterate goals and share success stories, reinforcing the positive consequences of applying the learning.

Cultural context

Cultural characteristics of an organization can also facilitate or inhibit transfer. Psychologists call this the "transfer climate,"²² and it includes things like cultural attitudes towards learning, systems and policies that support learning and transfer, technical tools and shared rituals having to do with learning.

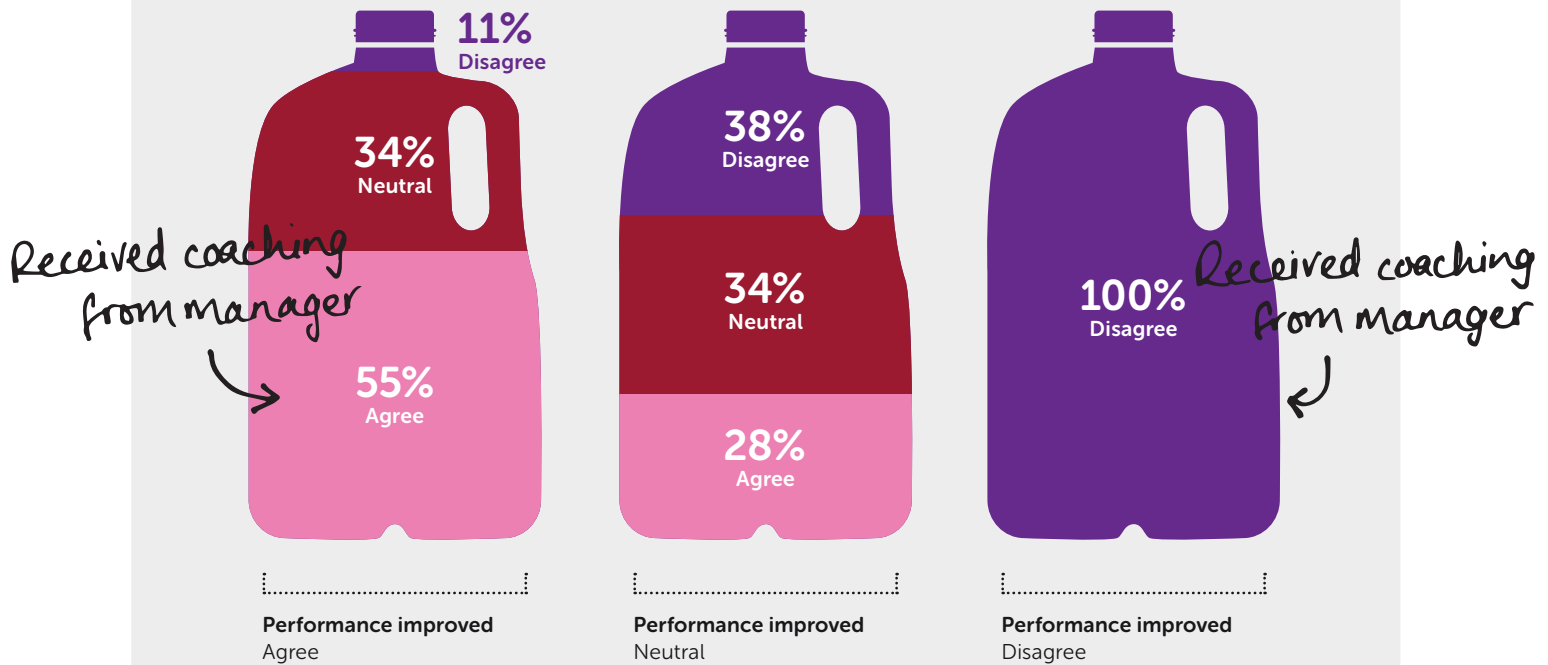
The Holy Grail of transfer climates is a culture of continuous learning, where employees believe that learning is essential to them and their work.²³ In this type of culture, transfer levels are likely to be high. But in practice, squeezed deadlines and scarce resources mean that learning is often put on the backburner, making continuous learning cultures difficult to achieve.

So instead of seeing transfer climate at a full organizational level, which would be out of scope for most learning interventions,²⁴ the bite-size approach views transfer climate as something that surrounds each individual participant, setting the scene "locally" that will best help them put their learning into action.

Manager support in national retailer

In a management development program with a national retailer, 55% of participants whose performance had improved had received coaching from their manager. For those participants whose performance had not improved, 0% had received coaching from their manager.

The absence of manager support doesn't stop transfer, but the presence makes it much, much more likely to occur.



How do you create learning that sticks?

Turn over to find out >

Bite-size in practice

There are practical steps learning practitioners can take to create learning that sticks.

Theory, like learning, is of little use until it is put into action. Mind Gym's decade of research and evaluation, plus experience with over one million participants, has revealed the practical things we can do to create learning interventions that stick.

The following is a list of bite-size programmatic design principles that are proven to boost transfer and, therefore, business results. By no means must every intervention check every box. Much like the bite-size approach itself, the most successful programs pick and mix the activities which are best suited to the participants and learning need.

All about me: the individual learning journey

To drive engagement:

Create personalized learning journeys

Perceived relevance is one of the strongest correlates with transfer.²⁵ Don't waste participants' time by getting them to do things that they don't need. Personalized learning journeys create relevance and build engagement because people feel the development is unique and useful to them.

Co-create the intervention

People are more committed to problems and solutions that they have been part of defining and executing. Involve people at some level in developing the intervention. If you're delivering a large scale intervention, at the very least convene a participant review board to make sure the intervention resonates.

Schedule learning after a challenging experience

Anxiety (and excitement) is strongly correlated with transfer. One Mind Gym client schedules their induction after their new joiners have worked (and sometimes failed) on a couple of difficult projects. This way the participants arrive with a huge hunger to learn.

Provide 360° feedback

Most people think they're above average. Well delivered 360° feedback creates a more accurate self-perception and a focus on where to develop. This, in turn, increases the extent to which participants feel the learning is relevant and useful to them.

Encourage a mindset of mastery

Develop open-mindedness and a focus on mastering a skill, as opposed to a focus on performance. When participants aim for mastery, they derive satisfaction from learning and honing their skill, instead of from winning or looking good in front of others. Mastery-oriented participants tolerate the initial awkwardness of learning a new skill and persist in the face of difficulties, making them much more likely to succeed in transferring those new skills than those with a performance orientation, who are more likely to quit early. If applying a new skill is seen as a task to be checked off a list, it won't stick.



Show how learning activities create personal success

What's the personal win? An intervention with a highly cynical group produced a 78% application rate at work because it focused more on what participants cared about (coaching their children) than on the corporate interest (time to value of new starters).

Once the skill was mastered in one area, people were happy to apply it in another. Psychologists call this "spillover."

Select participants

It's a well-established finding in goal setting that individuals are more likely to achieve their goal when they have bought into it upfront.²⁶ It's the same with learning: targeted interventions with engaged learners deliver a better return. Opt-in programs or those using nominations are more likely to attract engaged, motivated learners. Open programs may well deliver a positive reaction but a lower shift in business metrics, because participants are less likely to be engaged in how the training will benefit them.

To deepen participation:

Craft intense experiences

Dinner in a blindfold. A "walk of life" in silence in the countryside. A 600-person beach-ball fight. A ritual burning of the old rulebook. Create experiences that bristle with intensity – they'll capture attention and increase memorability. In a review of 95 quasi-experimental studies on the link between training and health and safety outcomes, as the training became more engaging, learning increased and accidents reduced.²⁷

Hug the context

Use techniques that make the link between the learning, application and performance improvement impossible to ignore. Simulations, real plays, real case studies, action learning sets, project-based learning, online forums all have a positive relationship with transfer. But these techniques tend to encourage transfer only to the specific situation in which they are taught.

Bridge contexts

Use techniques that lead to transfer in lots of different situations: general principles, multiple illustrations, metaphor, and identify the similarities between situations. But be sure to balance this with hugging the context to maximize transfer. The balance is crucial: too many context-specific techniques and the intervention narrows its focus. Too many general principles and the focus of the intervention fails to receive the attention it deserves. Vary energy by shifting from context-specific to more general approaches and back again.

Tailor the learning to everyday experience

"Transfer load" is the amount of mental energy that someone has to expend to apply their learning. The more abstract the learning, the harder someone has to work to make it real and apply it. Reduce the load by basing the learning in everyday experience.

"Simple and close" beats "Complex and exact"

I-LED, Mind Gym's manager coaching framework has 94% recall rate among participants because of its simplicity, not because of its complex scientific origins. Simple, accessible, memorable concepts win every time.

Use a distributed approach

Distributed learning allows people to reflect, build confidence and become more aware of how and when they have applied their learning, which in turn builds momentum. As we saw earlier, the evidence points to distributed training resulting in better, longer lasting learning – delivering a 17% greater improvement in performance than massed practice.^{28,29}

Make it ok to feel foolish

Participants clam up if they feel exposed. In a session with an investment bank, no one said a word because they didn't want to look like a fool in front of their more junior or senior colleagues. When asked to share their views in pairs before contributing to the group, the ideas flowed. An environment where people do not feel judged by each other allows people to focus more specifically and more fully on the learning, ask deeper questions and be more willing to experiment with new ideas and approaches.

Use quality storytelling

Relevant stories with engaging punch lines increase engagement (but don't directly affect transfer). Use stories to create an emotional connection and build motivation.



To trigger activation

Make the transfer problem explicit

It's estimated that 70% of people try their new learning out, but backslide to old habits. If participants anticipate the challenges with transfer they become more resilient and are more likely to persist with their new skills and behaviors.

Incorporate transfer tasks into the workflow

Transfer tasks built into the workflow are four times more likely to succeed than “extra” activities the participants have to complete. Set assignments that are a natural part of the participant's daily activities and give them some choice over which transfer task they select.

Make transfer opportunities brutally obvious

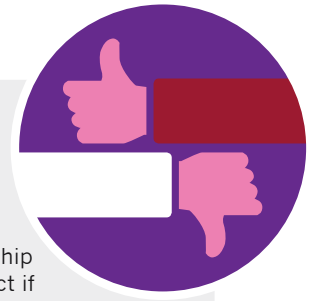
In one transfer study, only 20% of people transferred their learning. When a hint for transfer was provided, this shifted to 92%. Tune the environment so that people recognize the opportunities to apply their learning.

Use manager observations and coaching

Participants who receive coaching from their manager are much more likely to put their learning into action. Ensure managers help individuals to identify opportunities to apply new learnings, and use positive reinforcement which makes individuals more likely to repeat desired behaviors.

Use after-action reviews

One study showed that reviewing recent learning led to significant increase in an individual's leadership ability (with an even stronger effect if the person was smart, conscientious and emotionally invested).³⁰ So follow up and get people in the habit of reflecting on what's working and what's not.



In the real world: the social and cultural context

Make the most of managers

Engage the participants' managers

Engaged managers are likely to maximize transfer. But they're also likely to have a long list of other priorities that makes supporting learning something of an inconvenience. Market to them how their lives will be easier, and their teams will deliver better business results due to their people developing.

Educate the managers in supporting transfer

Managers need to see developing their people as part of their role as much as managing workflow, schedules or processes. Educating participants' managers in transfer increases their engagement, their ability to coach participants and their ability to support participants in overcoming obstacles to transfer.

Train the participants' managers

Often there is a gap in the participant's manager's own skills around performance management and coaching. In a customer service intervention with a retail bank, the development of the first-line leaders was also used as a face-saving way to get the second-line leaders up to speed too.

Use leaders

Use leaders to communicate at launch and periodically during the intervention

On describing movies, Sam Goldwyn said “start with a volcano erupting and get bigger”. So too for interventions that change cultures. Use leaders at the start to orient the strategic priority. Throughout the program, leaders should also highlight those individuals who have learned and improved performance most significantly. Do this on a sporadic rather than timed calendar. “Now-that” rewards have greater strength than “if-then” rewards.

Ensure intervention alignment

Launching a behavioral change intervention while communicating an unfavorable change to participant's terms and conditions or reducing headcount tends to reduce organizational commitment and engagement in learning. Interventions need to align rather than compete.

Unify peers

Use consistent terms and language across the population

The greater the number of peers engaged in a program, the more likely others will engage as a result of peer pressure. Providing people with common terms creates a sense of group identity which is then passed naturally to others. It also reduces the transfer load for individuals: the shared meaning acts as a social cue which makes it easier to apply the learning.

Put processes in place for peers to share learning and best practice.

Distributed interventions have the benefit of regular after-action reviews, in which peers get together and share how they've applied what they learned. Processes that force participants to engage with each other and have deeper conversations about their experiences lead to greater participation and therefore maximize transfer.

Craft a culture of continuous learning

Align and incorporate learning into other human capital management processes

The best interventions link recruitment, selection, performance management, succession and learning together. For example, one client integrated the skills taught in a management development program into the organization's performance review process so that individuals' bonuses were affected by their scores on management skills. Systematically interweaving development into the daily working practices of the organization creates alignment and demonstrates that learning is highly valued.

Develop an accreditation system

To demonstrate the importance of development even further, develop an engaging accreditation system where individuals provide evidence of their development in order to progress and gain recognition. Such a system drives learner engagement and participation by tapping into both performance and mastery motivations.

Create interventions that represent the best of the organization's brand

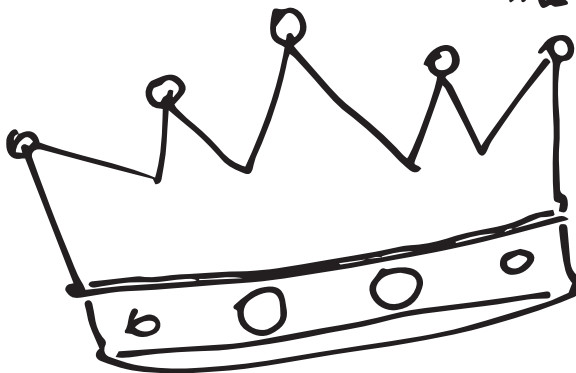
Consumers (otherwise known as learners) engage with a good brand. Treat learning interventions like marketing to customers, bringing the best of your brand to life. Or borrow an engaging brand from elsewhere.



Recognize high performers in learning

Recognize and celebrate those individuals who have successfully adopted new learnt behaviors and use them as a role model for future learners. A particularly interesting way of recognizing high performers is to invite them to be trainers. For one Mind Gym client the highest honor is to become a trainer on the onboarding program, as they are responsible for the firm's future.

If content is King,
then context is
the Emperor



Conclusion

The revolutionary bite-size approach breathes new life into how organizations develop their people.

Chief Executives are constantly looking for a new way to build a sustained competitive advantage. Many suspect it could be through their people but, disappointed by the impact of the traditional solutions, they don't know how. Likewise, many individuals have a strong desire to develop but little time to do it. Bite-size provides the answer.

By shifting focus from helping people learn to helping them solve problems in the real world, bite-size both appeals to employees' self-interests and provides the tangible results business leaders need.

**A bite-size approach offers fast, effective,
just-in-time learning that tackles the
seven barriers to making learning stick.**

See opposite to find out more ›



Bite-size overcomes the barriers to learning transfer

Barrier

Bite-size belief

We believe that longer = better



Quality over quantity.

A series of short, sharp learning bites get to the learning outcome quicker. The distributed approach – learning things in small chunks, little and often – is proven to deliver better, longer lasting learning and greater performance improvements.

The event is the hero



Transfer is the hero.

It's about helping people solve problems in the real world. Content is relevant and contextualized, and sustainment is built into the overall learning journey so that it's almost impossible not to apply what you've learned.

We design for the outlier



Design for the fastest mind.

Bite-size sessions don't have time for bloated theories or excessive hypothesizing. They trim out the fat and move at the pace of the swiftest mind in the room; everyone else has to keep up.

We say that people are different but we treat them all the same



Offer choice, at scale.

Bite-size avoids the sheep dip approach. Individuals can choose a unique learning journey that's tailored to their schedule by combining different learning bites, all relevant to the business need.

We only target the learner



Target the context in which people apply what they learn.

Engage participants' managers, involve all of their peers, use leaders and take into account the culture in which they work: that's how the bite-size approach makes it easier for people to put learning into action.

We stick with what we know



Use a variety of approaches.

The building blocks of the bite-size approach use different learning approaches to cement learning in different ways. From instructor-led workouts to learner-centered live actions to the social learning inherent in pledges and boosters, one size doesn't fit all.

We miscalculate the cost



Bite-size is cheaper.

A lot cheaper. Taking into account the most significant saving – participants' time – as well as lower transportation, venue, refreshment costs and so on, bite-size sessions offer double the return on investment of traditional training.

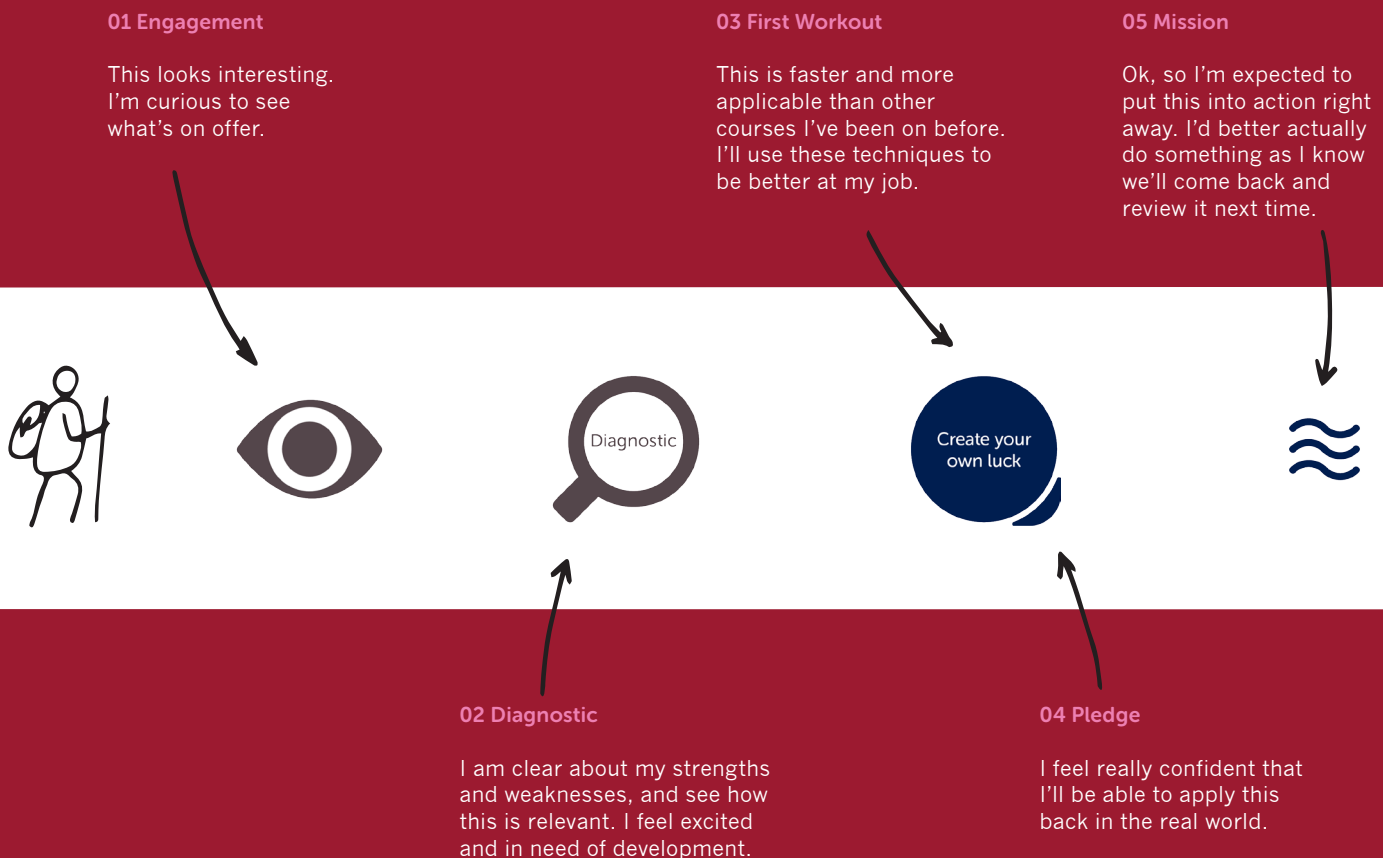
The Mind Gym way

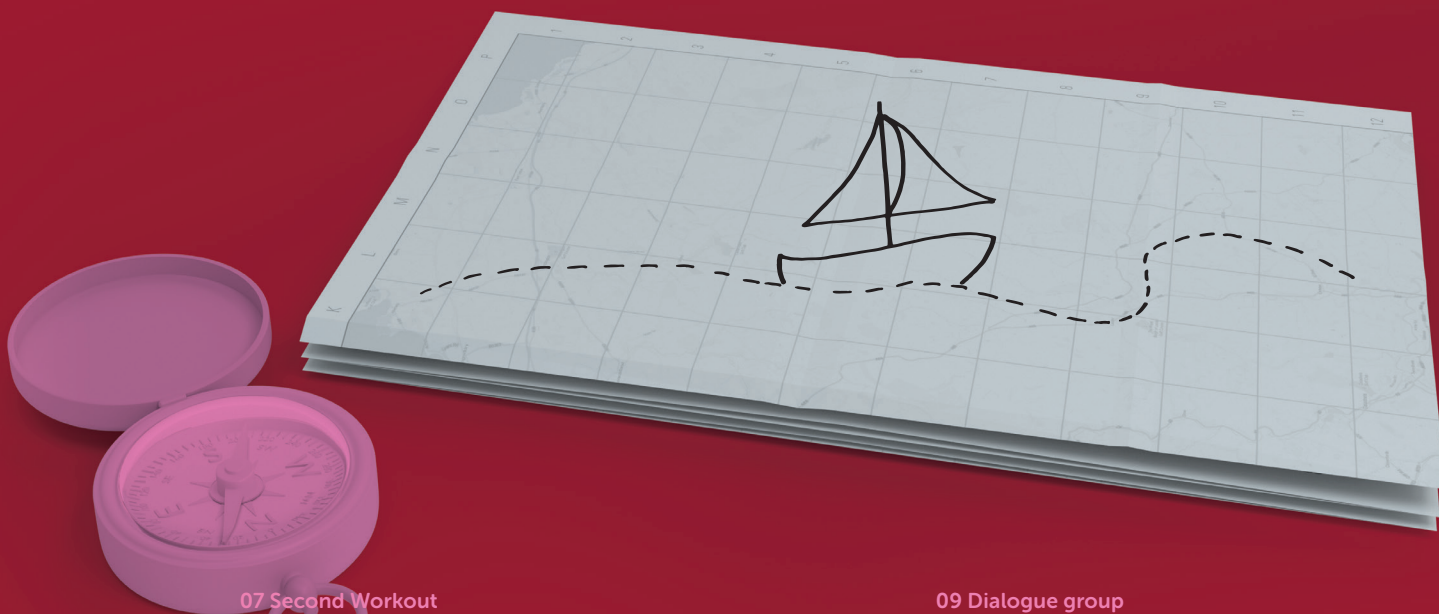
Create scalable learning interventions that are tailored to the individual and make a lasting change in behavior.

At Mind Gym, we believe that the individual journey is greater than the sum of its parts. By building bite-size, distributed programs – that take learners through an

Engage-Participate-Activate cycle – the overall experience becomes a journey of discovery, where application and behavioral change are quickly reached.

The typical participant experience will engage and energize learners:





07 Second Workout

This is another relevant topic. I'm so glad I didn't have to take a whole day out of the office to learn it – I'm busy enough as it is.

09 Dialogue group

It's great to have a chance to discuss the more difficult issues I face with the people who do the same job. I feel like we're all in it together.

06 Booster

It's good to hear how it went for others. I'm surprised that the Mission actually made work easier rather than being another thing on the to-do list.

08 Live action

It's helpful to practice with my own real life scenario – much better than the usual "fake" role plays. Getting feedback from my peers is rare and useful.



What makes up each bite-size component?



Diagnostic

One size fits no one; sheep dips are for sheep.

Even better than continuous learning is continuous learning that's specific to each individual's needs and the businesses competencies. The Diagnostic turns this core belief into technicolor action. Easy to set up and a delight to use, the online diagnostic brings personal insight to thousands in a matter of moments.

What it is

- An online questionnaire, easy to cascade at scale, easy to complete.
- A unique personal report for each participant identifying areas of strength and room for improvement.
- A tailored development journey, different for each participant.

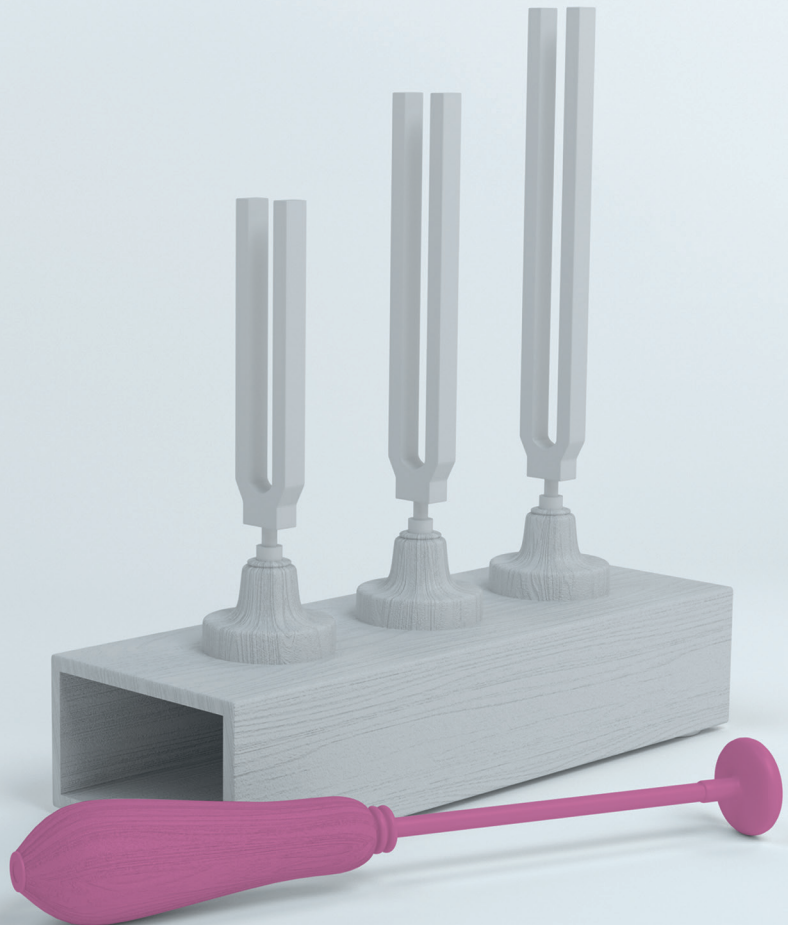
How is this different?

- **It's completely personal.** Recommended learning journeys are based on individuals' responses (or their 360° feedback) to a set of specific questions. Everyone's journey can be different because one size only fits one person.

- **It's online and hassle-free.** Rather than speak to everyone in turn, this journey planner is entirely managed online (and therefore anywhere in the world).
- **The data is rich.** Because it's all online, all the data can be extracted at the click of a button, giving you reams of data about individuals' performance, motivations and capability.
- **Employees are engaged.** People like to be treated as individuals, not sheep.
- **It's worth the money.** You'll get a better return on investment by targetting learning where it will deliver greatest impact.

What's the science behind it?

Individuals are more engaged with learning when they can see how it's relevant and useful to them. An overwhelming majority of studies have found a strong link between perceived utility and transfer.³¹ The Diagnostic ramps up the extent to which participants believe the learning will be useful because they can see how it fits with their individual development needs. It makes participants recognize the need for change, meaning that they'll arrive more motivated to learn.³²





Workout

Up to a day's traditional training compressed into an action-packed 90-minutes full of practical tips and techniques.

Based on what we know about the learner attention span, Workouts balance energy highs with reflection time, and are delivered in short, sharp 90-minute chunks. Fast-paced, face-to-face Workouts are for up to 20 people at a time and can be delivered anywhere in the world. They can be a stand-alone “shot in the arm” boost, or combined to transform performance as part of a larger distributed program. They can also be delivered virtually for up to 12 people.

What you get:

- 90 minutes of high energy, high impact learning where you never sit and listen for more than five.
- A new way of looking at old problems.
- Practical tips and techniques to put into practice straightaway.

How is this different?

- **How not why.** We assume the “why it matters” and go straight to “how.”
- **No time for introductions.** The trainer introduces themselves and then we get moving.
- **Think buffet, not set menu.** We share 10 techniques and hope each person takes two or three of the most useful for them.

- **No time for chit chat.** We talk about specific questions and find solutions, but the hypothesizing takes place outside.
- **We run nifty processes,** like Aronson's Jigsaw,³³ so that discovery and dissemination go hand in hand.
- **The journey's set.** We have a pre-prescribed journey with timings down to the minute, so trainers don't just go where the audience takes them. However there's always time built in for questions and to talk about how people will apply the techniques to help them solve their challenges back at work (and home).
- **Tell first and discuss later.** We don't ask the audience to try and “guess the right answer” when we already know it.
- **No reams of sheets and slides.** The takeaway is only a page long.

What's the science behind it?

The high energy environment of a Workout increases participants' psychological engagement, which means they learn more³⁴ and are more likely to apply what they learn.³⁵ Learning things in bite-size chunks makes it easier to create long-term memories.³⁶ Plus, Workouts use the 90/20/8 rule³⁷ to optimize our natural learning rhythms, so participants' attention doesn't dwindle.

A Workout provides the essential learning elements in a high energy yet safe environment. Individuals then translate these skills into a real-world commitment by making a Pledge at the end of a Workout.

What is a Pledge?

Turn over to find out ›



A public commitment to put good intentions into glorious practice – so there's always someone there to remind you.

Learning is only of value when it is put into practice. And we're more likely to apply what we've learned when the skills help us solve problems in our world. A Pledge does just that. It asks learners to anticipate how and when they will use their learning, and make a commitment that's real to them. This greatly increases the chances that learning into will be put into action.

What you get:

- 30 minutes spent specifically on how to use your newly acquired tools and techniques.
- A public commitment to put good intentions into glorious practice.
- An opportunity to anticipate and prevent any barriers that may get in the way.

How is this different?

- **Committing to something aloud** makes you far more likely to achieve it.³⁸ We make sure all promises are loud and clear.

- **No additional scheduling;** we run Pledges immediately after another session.
- **Application is tricky,** so we spend time anticipating future challenges and planning how to overcome them.
- **Look to the future.** We use visualization so you imagine yourself using new tools before you've even left the room.
- **Strength in numbers;** groups of peers commit to similar actions.

What's the science behind it?

"If..., then..." Implementation intentions have a significant positive influence on people reaching their goals.³⁹ And when people commit to something in front of their peers, they're much more driven to achieve it.⁴⁰ What's more, transfer is increased by situational cues that remind you of what you pledged to do differently.⁴¹

Having planned what we're going to do, it's time to go and do it. A Mission provides a framework for applying new skills back in the workplace, and outlines the observable behaviors managers must watch out for.

What is a Mission?

See opposite to find out ›



Mission

The Mission gives you a way to succeed by trying out what you've just learned... should you choose to accept it.

Creative, competitive, practical and fun, the Mission is a challenging task that requires individuals to put their new skills into practice straight away in order to deliver an answer or outcome.

What you get:

- A Mission to meet your specific organization, department or team needs.
- Set up in a snappy 15-minute briefing at the end of a session.
- A framework for applying new skills right away.

How is this different?

- **It's tangible.** Each Mission has at least one specific objective which requires tangible outputs using specific tools from the earlier session.
- **They reinforce existing tools.** Missions don't contain extra content, just a clear cut framework with which to apply the newly-discovered tools from the Workout.
- **Clear observation.** Completing the Mission requires observation from a manager or peer, and we provide a clear structure for their feedback.
- **They're not extra work.** Missions are designed to fit in with individuals' day jobs so don't add to existing workloads.

- **They offer choice.** Participants pick from three tasks: easy, medium and hard. That way, they have the autonomy to choose the task that matches their capability and confidence level.
- **Model excellence.** Successfully applying the skills covered in the session models great behavior to an individual's peers. New and shiny is contagious – everyone will be asking for their own Mission.
- **Competition never hurts.** Workbooks and progress charts can be used to track development and instill some friendly competition.

What's the science behind it?

A meta-analysis looked at which aspects of training design drive consistent transfer.⁴² The Mission addresses the key pieces of this jigsaw for participants – the opportunity to perform new skills in the workplace, a chance for follow-up and reflection on their progress, and support from their manager.

The biggest obstacle to transfer, according to participants, is not having the opportunity to use their new skills.⁴³ The Mission removes this obstacle by explicitly identifying the opportunities for transfer, while giving participants the freedom to choose the task that's best for them. Missions anchor the learning in participants' everyday work context, thus reducing the amount of mental energy it takes for them to apply their learning. A successful Mission will increase participants' motivation, cement their perception that training is useful, and encourage behavioral modeling throughout their peer group.

Why stop there? To continue the journey and stretch learning to the next level, individuals regroup to share successes, combat challenges and agree on next steps in a Booster.

What is a Booster?

Turn over to find out ›



Booster

Theory is neat, but the world is messy. The Booster explores what happens when we bring them together so we can make a lasting difference in our lives, not just our head.

It may have made great sense in the Workout but putting insights into action back at work tends to be far from straightforward. The Booster gives people the chance to review what happened when they gave it a go, and learn from each other's experience.

We tend to dismiss what went well too easily and so risk failing to repeat our successes. We can just as hastily exaggerate the consequences of our first attempt not going entirely to plan (it rarely does) and so give up. The Booster guides us to learn from our own experiences and those of our colleagues so we can do (even) better next time.

And vitally, because we know there'll be a public review coming, we're far more likely to give it a go. Who wants to be the only one in class whose dog ate their homework?

What you get:

- A facilitated session delivered either face to face or virtually, 3-6 weeks after the Workout or Mission.
- Context-specific discussions around individuals' real challenges and successes.
- A safe environment to share ideas and provide peer support.

How is this different?

- **A problem shared is a problem halved.** It's likely that peers have similar challenges, so the Booster allows colleagues to share solutions.
- **It's got the fear factor.** Knowing you've got to present what you've achieved increases the pressure to try.
- **A handy reminder.** The expert facilitator will recap the key points from the session to reinforce the goodness.
- **Time to try.** The Booster is a few weeks after the training session giving participants ample time to put their new skills to the test.
- **Catching the 15%.** Most people fail to apply what they've learned following training – in fact, 15% of people don't even try. Reinforcing the key messages grows the number of success cases.

What's the science behind it?

Robert Brinkerhoff demonstrated that about 15% of people don't apply anything after a training course, and 70% try to apply what they've learned, but give up before they experience success.⁴⁴ The fear factor of public review will encourage more people to try what they've learned, and also help those who have given up to get back on the horse. The Booster encourages peer support, which has a significant, positive effect on skill transfer.^{45,46} In a study of leadership development, using after-action reviews with structured reflection had a positive effect on performance.⁴⁷

This brings us back to the beginning of the bite-size cycle. In the rounds that follow, we continue to introduce new skills and explore new ideas in manageable, bite-size chunks (another Workout). This provides an on-going experience powered by learner engagement.



Live action

**What I hear, I forget. What I see, I may remember.
What I do, I understand.**

This observation from Confucius neatly sums up why Live actions work so well. When we practice new skills in a safe environment, and observe others doing the same, we really start to put what we've learned into our muscle memory. And when our practice is based around our own real-life work scenarios, we are much, much more likely to leave a session with knowledge that will stick, and with strategies we can rely on to work.

What you get:

- A 90-minute session for 20 people that is designed as a perfect match with specific Workouts.
- Lots of feedback on your skills, from a professional coach and from fellow participants.
- The opportunity to work closely with colleagues, tackling the same situations and learning from each other's approach and style.

How is this different?

- **People create own scenarios.** This means they can prepare for real conversations, accelerating the rate of learning transfer.
- **Shared journey.** Groups graduate together from a Workout into a mutually supportive practice session; testing and sharing insights before taking them out into the work environment.

- **Challenge.** By being observed, we experience a manageable level of pressure that is enough to simulate real world challenges without pushing people into panic.
- **Peer learning.** Enabling groups to share insights is crucial for virtuous learning cycles and a culture of performance excellence. We create a safe learning environment so this can happen.
- **Confidence.** We help people to build skills through carefully managed steps so they leave the session motivated and ready for action.
- **Other perspectives.** Live actions let people experience difficult conversations – on the receiving end. This creates valuable insights and greater awareness.

What's the science behind it?

Albert Bandura's Social Learning Theory, and its empirically proven principles, lie at the heart of Live actions. Two key elements are particularly relevant: that we learn about people and behavior primarily by watching others, especially if they are like us (often called vicarious learning); and that confidence in our ability to do something well is a deciding factor in our ability to achieve successful end results (called perceived self-efficacy).

Error management theory (Buss & Haselton, 2007) supports another key assertion from Bandura – that breaking down challenges into small, manageable chunks, and getting regular and insightful feedback at each stage of effort, is an instinctive part of our evolution. Anyone who has taught themselves a new piece of computer software by trial and error will know this effect. The same goes for our behavior; we just need permission (and safety) to try out new things and learn from our mistakes (and successes) in order to keep growing.

Mind Gym can help with the most complex business challenges using our bite-size approach. For more information please visit:

www.themindgym.com

References

- 1 Brinkerhoff, R. O., Apking, A. M. (2001). *High impact learning: Strategies for leveraging business results from training*. Cambridge, MA: Perseus.
- 2 Litman, L., Davachi, L. (2008). Distributed learning enhances relational memory consolidation. *Learning and Memory*, 15 (9), 711 – 716.
- 3 Pareto, V. (1971). *Manual of Political Economy*. New Jersey: AM Kelley.
- 4 Donovan, J. J., Radosevich, D. J. (1999). A meta-analytic review of the distribution of practice effect: Now you see it, now you don't. *Journal of Applied Psychology*, 84(5), 795-805.
- 5 Mitchell, G. (1993). *The Trainer's Handbook: The AMA guide to effective training*. New York: Amacom, American Management Association.
- 6 Squire, L.R. (1992). Memory and the Hippocampus: A synthesis from findings with rats, monkeys and humans. *Psychological Review* 99: 195-231
- 7 Brinkerhoff, R. O., Apking, A. M. (2001). *High impact learning: Strategies for leveraging business results from training*. Cambridge, MA: Perseus.
- 8 Saks, A. M., Haccoun, R. R. (2008). Is the "Third-Generation Model" New and Is It the Holy Grail of Adaptive Learning? *Industrial and Organisational Psychology-Perspectives on Science and Practice*, 1(4), 480-483
- 9 Burke, L. A., Hutchins, H. M. (2008). A study of best practices in training transfer and proposed model of transfer. *Human Resource Development Quarterly*, 19(2), 107-128.
- 10 Brinkerhoff, R. O., Apking, A. M. (2001). *High impact learning: Strategies for leveraging business results from training*. Cambridge, MA: Perseus.
- 11 Noe, R., Tews, M., McConnell Dachner, A. (2010). Learner Engagement: A New Perspective for Enhancing Our Understanding of Learner Motivation and Workplace Learning. *The Academy of Management Annals*, 4, 279-315
- 12 Armstrong, S., Sadler-Smith, E. (2008). Learning on demand, at your own pace, in rapid bite-sized chunks: The future shape of management development. *Academy of Management Learning and Education*, 7, 571-586.
- 13 Rossi, E. (2002). *The Psychobiology of Gene Expression*. New York: W.W. Norton
- 14 Pike, R. (1994). *Creative Training Techniques Handbook*, 2nd Edition. Minneapolis: Lakewood Books.
- 15 Kirkpatrick, D. L., "Techniques for Evaluating Training Programmes," in *Evaluating Training Programmes*. Alexandria, VA: American Society for Training and Development, 1975: 1-17.
- 16 Phillips, J. (2003). Return on Investment in Training and Performance Improvement Programmes, (2nd ed.) Woburn, MA: Butterworth-Heinemann.
- 17 Schwartz, B. (2004). *The Tyranny of Choice*. Scientific American. April 2004. Pp. 70-75.
- 18 Lambert, L. (1994). *Nine Reasons that Most Training Programmes Fail*. In Schneier, C., Russell, C., Beatty, R., and Baird, L. (Eds.), *The Training and Development Sourcebook* (pp. 45-48). Amherst, Massachusetts: Human Resource Development Press.
- 19 Foxon, M. (1997). The Influence of Motivation to Transfer, Action Planning, and Manager Support on the Transfer Process. *Performance Improvement Quarterly*, 10(2), 42-63.
- 20 Chiaburu, D. S., Marinova, S. V. (2005). What predicts skill transfer? An exploratory study of goal orientation, training self-efficacy and organisational supports. *International Journal of Training and Development*, 9(2), 110-123.
- 21 Lim, D. H., Johnson, S. D. (2002). Trainee perceptions of factors that influence learning transfer. *International Journal of Training and Development*, 6(1), 36-48.
- 22 Blume, B. D., Ford, J. K., Baldwin, T. T., Huang, J. L. (2010). Transfer of Training: A Meta-Analytic Review. *Journal of Management*, 36(4), 1065-1105.
- 23 Tracey, J. B., Tannenbaum, S. I., Kavanagh, M. J. (1995). Applying Trained Skills On The Job – The Importance of the Work-Environment. *Journal Of Applied Psychology*, 80(2), 239-252.
- 24 Holton, E., Baldwin, T. T. (2003). *Improving learning transfer in organisations* (1st ed.). San Francisco.
- 25 Clark, C. S., Dobbins, G. H., Ladd, R. T. (1993). Exploratory Field-Study Of Training Motivation – Influence Of Involvement, Credibility, And Transfer Climate. *Group & Organisation Management*, 18(3), 292-307.
- 26 Locke, E. A. (2004). *The Blackwell Handbook of Principles of Organizational Behavior*. (2nd ed.). Malden, MA: Blackwell Pub.

- 27 Burke, M. J., Sarpy, S. A., Smith-Crowe, K., Chan-Serafin, S., Salvador, R. O., Islam, G. (2006). Relative Effectiveness of Worker Safety and Health Training Methods. *American Journal of Public Health*, 96(2), 315-324.
- 28 Briggs, G. E., Naylor, J. C. (1962). Relative Efficiency of Several Training Methods as a Function of Transfer Task Complexity. *Journal of Experimental Psychology*, 64(5), 505-512.
- 29 Donovan, J. J., Radosevich, D. J. (1999). *A meta-analytic review of the distribution of practice effect: Now you see it, now you don't.* *Journal of Applied Psychology*, 84(5), 795-805.
- 30 DeRue, D. Scott; Nahrgang, Jennifer D.; Hollenbeck, John R.; Workman, Kristina (2012). A Quasi-Experimental Study of After-Event Reviews and Leadership Development. *Journal of Applied Psychology*.
- 31 Clark, C. S., Dobbins, G. H., Ladd, R. T. (1993). Exploratory Field-Study Of Training Motivation – Influence Of Involvement, Credibility, And Transfer Climate. *Group & Organisation Management*, 18(3), 292-307.
- 32 Ruona, W. E. A., Leimbach, M., Holton, E., Bates, R. (2002). The relationship between learner utility reactions and predicted learning transfer among trainees. *International Journal of Training and Development*, 6(4), 218-228.
- 33 Aronson, E., Patnoe, S. (2011). *Cooperation in the classroom: The jigsaw method* (3rd Ed.). London: Pinter & Martin, Ltd.
- 34 Burke, M. J., Sarpy, S. A., Smith-Crowe, K., Chan-Serafin, S., Salvador, R. O., Islam, G. (2006). Relative Effectiveness of Worker Safety and Health Training Methods. *American Journal of Public Health*, 96(2), 315-324.
- 35 Noe, R., Tews, M., McConnell Dachner, A. (2010). Learner Engagement: A New Perspective for Enhancing Our Understanding of Learner Motivation and Workplace Learning. *The Academy of Management Annals*, 4, 279-315
- 36 Squire, L.R. (1992). Memory and the Hippocampus: A synthesis from findings with rats, monkeys and humans. *Psychological Review* 99: 195-231
- 37 Pike, R., (1994). *Creative Training Techniques Handbook*, (2nd Ed.). Lakewood Books, Minneapolis.
- 38 Gollwitzer, P., Sheeran, P., Michalski, V., Seifert, A. (2009). When Intentions Go Public, *Association for Psychological Science*, 20, 612-618.
- 39 Gollwitzer, P. M., Sheeran, P. (2006). Implementation Intentions and Goal Achievement: A Meta analysis of Effects and Processes. In P. Z. Mark (Ed.), *Advances in Experimental Social Psychology* (Vol. Volume 38, pp. 69-119): Academic Press.
- 40 Fishbach, A., Henderson, M. D., Koo, M. (2011). Pursuing goals with others: Group identification and motivation resulting from things done versus things left undone. *Journal of Experimental Psychology: General*, 140(3), 520.
- 41 Rouiller, J. Z., Goldstein, I. L. (1993). The Relationship between Organisational Transfer Climate and Positive Transfer of Training. *Human Resource Development Quarterly*, 4(4), 377-390.
- 42 Grossman & Salas (2010). The transfer of training, what really matters? *International Journal of Training and Development*, Vol. 15, Issue 2, 103-120.
- 43 Lim, D. H., Johnson, S. D. (2002). Trainee perceptions of factors that influence learning transfer. *International Journal of Training and Development*, 6(1), 36-48.
- 44 Brinkerhoff, R. O., Montesino, M. U. (1995). Partnerships for training transfer: Lessons from a corporate study. *Human Resource Development Quarterly*, 6(3), 263-274.
- 45 Fecteau, J. D., Dobbins, G. H., Russell, J. E. A., Ladd, R. T., Kudisch, J. D. (1995). Influence of General Perceptions of The Training Environment on Pretraining Motivation and Perceived Training Transfer. *Journal of Management*, 21(1), 1-25.
- 46 Chiaburu, D. S., Marinova, S. V. (2005). What predicts skill transfer? An exploratory study of goal orientation, training self-efficacy and organisational supports. *International Journal of Training and Development*, 9(2), 110-123.
- 47 DeRue, D. Scott; Nahrgang, Jennifer D.; Hollenbeck, John R.; Workman, Kristina (2012). A Quasi-Experimental Study of After-Event Reviews and Leadership Development. *Journal of Applied Psychology*.

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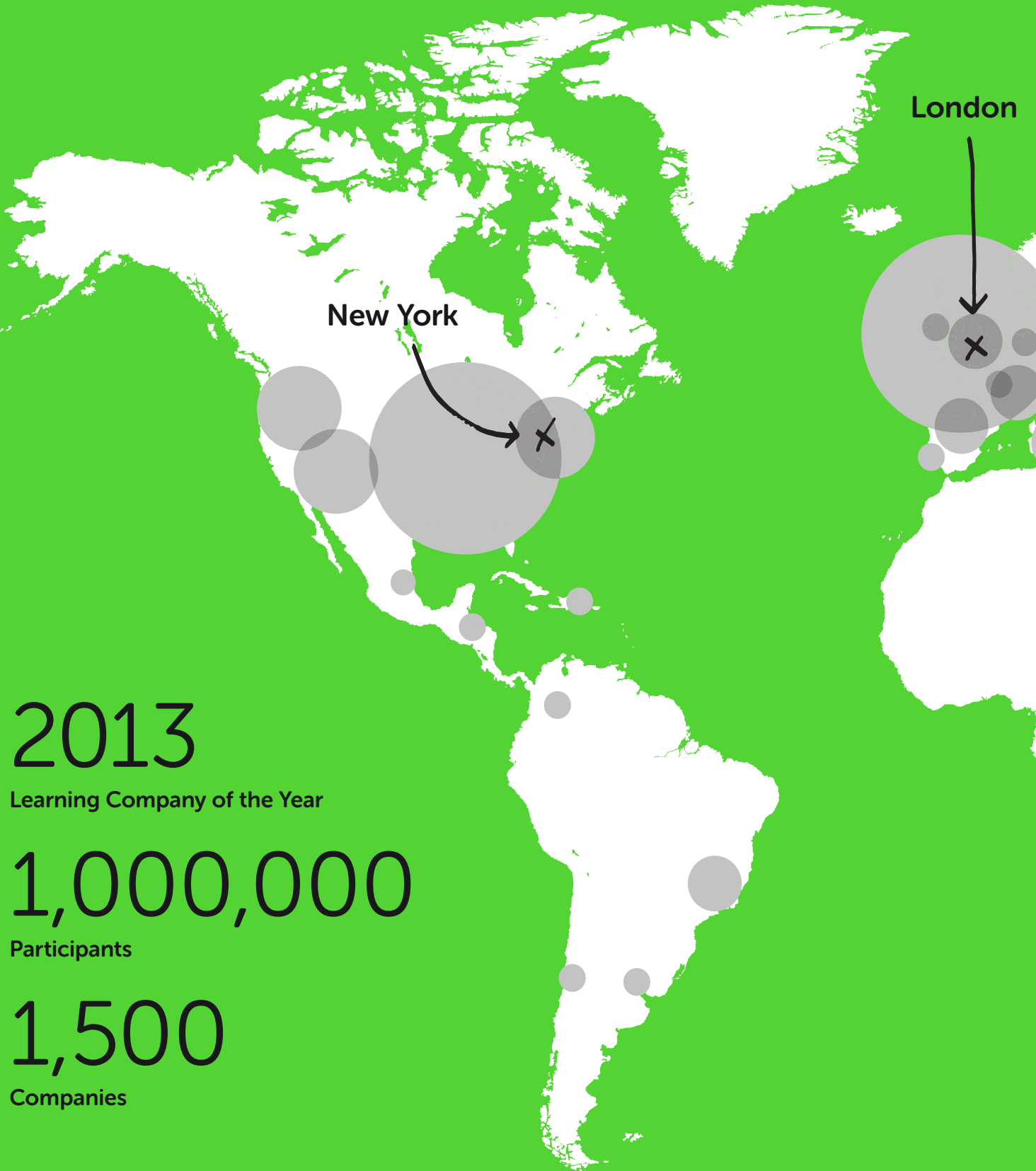
Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across its entire width, providing a guide for handwriting or typing. The paper itself is a clean, off-white color.

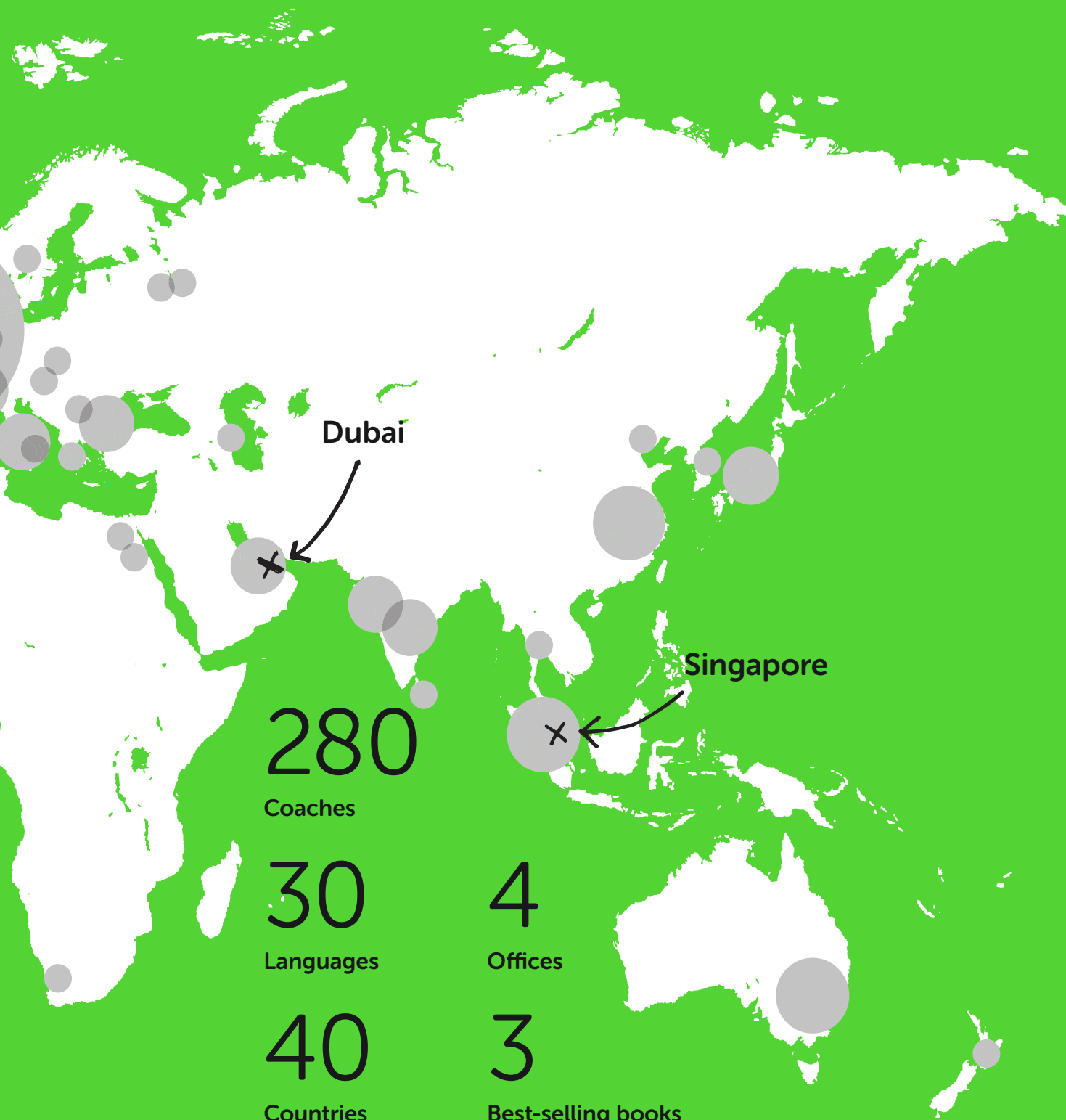
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A few facts about us





Coach location & numbers



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