Change the Game with Lean Learning

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In today's business environment of unprecedented change and the resulting "change fatigue," employees are finding it difficult to learn more, learn it quickly and deeply, apply what they learn immediately, and share what they've learned with colleagues. They struggle to gain the knowledge they need to sell and support new products with only a short time-to-market; to absorb new technologies; and to keep pace with reorganizations that are placing employees and the executives they serve in new roles—not to mention responding to a daily influx of new strategic business initiatives. Struggling to match the pace of change because they can't absorb information at the speed and volume that the current business environment demands, employees paradoxically require less learning so they can do more and perform better.

As a change agent and learning executive, it's important to understand why this is happening—why isn't traditional learning effective now? Even more important, what can you do about it?

Why traditional instructional design falls short

"While people generally predict that concentrated learning in one block of time is more effective, neuroscience research is clearly showing that it is far better to break up learning interventions to facilitate successful long-term learning."[1]

Typical design and development approaches, like the ADDIE (Assess, Design, Develop, Implement, Evaluate) model, use a phase-by-phase "waterfall" development process to create learning programs that address end-to-end knowledge—much more than is required for learners. Learning courseware covers

overview topics, describes concept basics, aims to ensure participants gain a deeper understanding of the material, and then attempts to facilitate application of concepts learned. It's usually wrapped with a pre- and post-assessment to test and assess knowledge acquisition, and is delivered as a curriculum, mapped to a job or role, and pushed out through a learning management system (LMS).

The problem with this approach (see Figure 1, next page) is that it takes too long to develop and does not meet the individualized needs of the audience. With products, policies, and processes constantly changing, it's nearly impossible for learning management systems to keep content up-to-date. Since this content is typically mapped to a job or role, learners don't get the individualized information they need to successfully apply it. Because they have to register for, download, or attend the entire curricula, they don't get the piece of information they need at the point they need it. If they are at a higher or lower level of baseline knowledge than what the training is designed for, they end up getting more or less than they actually need to be proficient. This is not only ineffective for the learner, but it also results in a lot of wasted effort from the learning organization.

The explosion of LMS implementations in the late 1990s and early 2000s made it easy for organizations to default to computer- or web-based training (CBT/WBT) as the standard mode of training; blended learning became popular. Learning organizations that built teams or partners of WBT developers to support the business and learning metrics became centered on completions or number of training hours delivered. But was training actually effective? Recent research continues to show that the most effective training occurs at the point of need because it ensures that learning was successfully transferred.
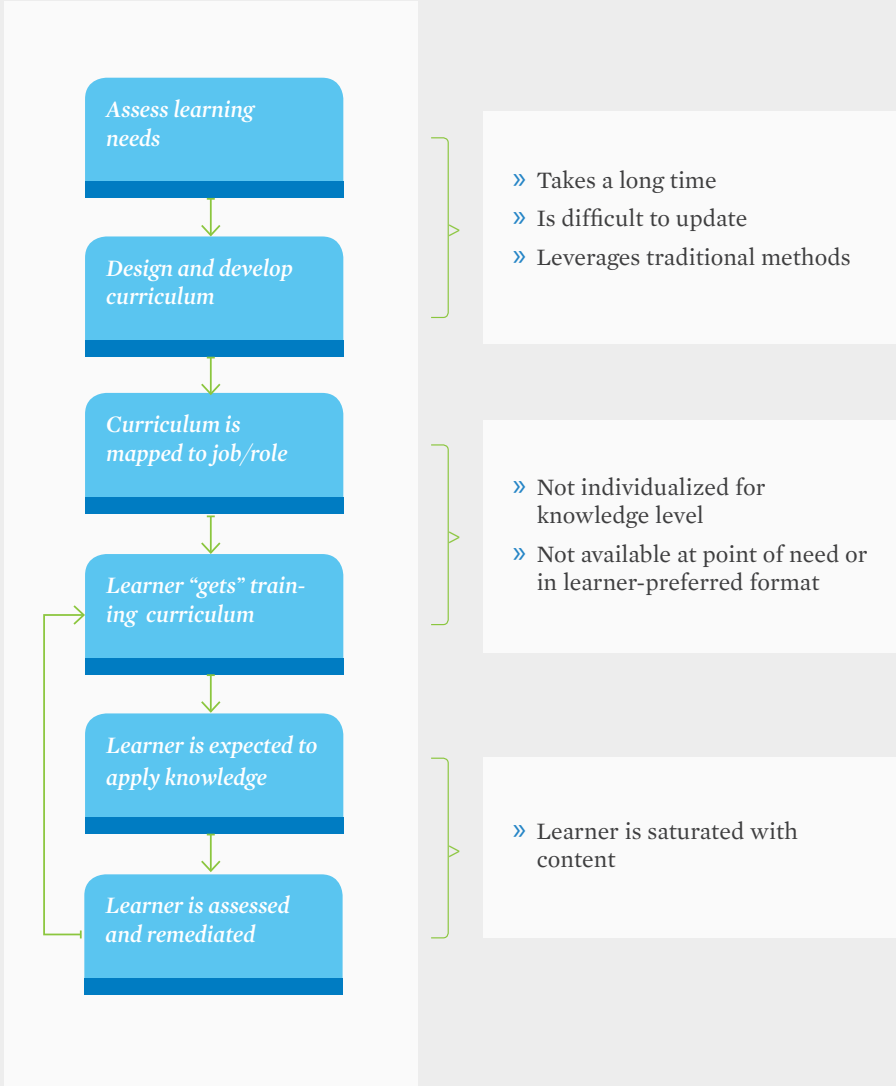

"It has been known for some time that distributing learning over time is better than cramming learning into one long study session (Crowder, 1976). Massing, defined as large blocks of learning in short periods of time, increases short-term performance, which guides learners to rate the learning impact of massing as superior to spacing (Baddeley & Longman, 1978; Kornell & Bjork, 2008; Simon & Bjork, 2001; Zechmeister & Shaughnessy, 1980). However, distributing learning over time leads to better long-term memory, which is the ultimate aim of organizational learning." [2]

According to neuroscientist David Rock, "Many corporate training programs are the mental equivalent of trying to eat a week of meals in a day." Recent research continues to show that the most effective training occurs in smaller amounts with more spacing between learning moments. Rock continues, "Long-term recall is far better when we learn information over several sittings." Furthermore, "people need to be making their own meaning, literally generating their own links, not just passively listening to ideas."

Figure 1: Traditional instructional design

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┌─────────────────────┐
│ Assess learning     │        ┐
│ needs               │        │    » Takes a long time
└─────────────────────┘        │    » Is difficult to update
          │                    │    » Leverages traditional methods
          ▼                    │
┌─────────────────────┐        ┘
│ Design and develop  │
│ curriculum          │
└─────────────────────┘
          │
          ▼
┌─────────────────────┐        ┐
│ Curriculum is       │        │    » Not individualized for
│ mapped to job/role  │        │       knowledge level
└─────────────────────┘        │    » Not available at point of need or
          │                    │       in learner-preferred format
          ▼                    │
┌─────────────────────┐        ┘
│ Learner "gets" train-│
│ ing curriculum      │
└─────────────────────┘
          │
          ▼
┌─────────────────────┐        ┐
│ Learner is expected to│      │
│ apply knowledge     │        │    » Learner is saturated with
└─────────────────────┘        │       content
          │                    │
          ▼                    │
┌─────────────────────┐        ┘
│ Learner is assessed │
│ and remediated      │
└─────────────────────┘
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Proliferation of tools and technologies adds complexity

Meanwhile, people now have tools to learn on their own. As a result, they are seeking knowledge elsewhere and through new mediums. Employees turn to search engines, online encyclopedias, blogs, tweets, and other social media outlets. They learn just enough, and learn as they go. They play with products to figure out how they work rather than reading manuals or taking classes. Or, they take part of the training and stop, figuring they will come back later to get the next part as needed.

Many organizations recognize that traditional instructional design alone cannot meet the needs of today's learner, yet attempts to move directly to new technologies have brought their own challenges. The proliferation of smart phones, tablets, and other technologies creates an undeniable competition for mindshare and timeshare of the learner. Couple that with user-generated content, lines blurred between training, knowledge management, communications, collaboration, gamification, etc., and these tools become a distraction to the end game: changing behavior and improving performance.

The tendency is to want to throw all of these tools at the problem—put training on a smart phone, leverage videoconferencing for training, transfer knowledge onto a tablet for field reps. The result is typically a confusing, complicated mess for the employee that is often difficult to scale or maintain and ultimately does not address the real problem.

It's time for a new approach

Traditional instructional design has reached the point where it must evolve to become more personalized, user-centered, nimble, and flexible. Enter what we call Lean Learning—a new instructional design strategy.

Lean Learning starts with the premise that requiring less learning helps people perform better. It's a holistic approach that delivers the right knowledge at the point of need in the way a learner needs it, based on individual knowledge level. It combines initial learning with ongoing performance support and knowledge sharing, and incorporates gaming and social technologies.

This approach allows each employee to grasp the particulars of his or her job in an individualized manner, time, and format. It requires less—but more targeted—content development time and effort. Because this approach delivers information at the point of employee need, as opposed to pre-determined mapping and in pre-packaged formats, Lean Learning is a more efficient method of learning that enhances existing training content and designs. Lean Learning gives the learner more autonomy to direct learning to meet his or her own needs. And it does this without abandoning the hard work that has gone into existing training content development, enhancing and allowing for incremental change over time.

> Leveraging lean techniques and technologies

Lean Learning deviates from the traditional "push" model of training, where content is developed, mapped to a job or role, and then pushed out via a LMS or curriculum map. While there is still information being pushed in a Lean Learning construct, it's only the information that's most relevant to a learner's role, level of knowledge, and point of need, making the content customized to each individual's requirements.

For these reasons, Lean Learning is never the same combination of mechanisms for two individuals or business groups. Not only does a Lean Learning method deliver information when necessary, but it's also vital to creating efficiencies on the content creation and delivery end of the process. Moreover, it optimizes the employee's time as content is received or pulled and consumed at uniquely opportune moments.

Lean Learning is not about the tools that deliver instruction as much as it is instruction that meets the training need. As such, there are as many combinations of instructional delivery tools that successfully support Lean Learning, much as there are different types of people in your workforce. However, certain delivery methods are an inherently natural fit for a Lean Learning environment because of their adaptability and potential for high employee engagement. A few that stand out as especially suited for Lean Learning include:

» **Gamification**: Gamification–the use of game mechanics in non-game environments to improve user experience and participation–is rapidly gaining interest as a solution for improving learning management, although much of that interest has been expressed within traditional educational settings. But the same incentives that inspire game players to strive for the next level in a computer game can also inspire employees to reach for a higher level of performance and engagement. According to Harvard professor and change management guru John Kotter, 70 percent of business transformation efforts attempted will fail. In light of this, Gartner believes new instructional methodologies like gamification could play an important role in revolutionizing training in a new economic era if properly applied.[3] By 2015, Gartner predicts 40 percent of Global 1000 organizations will use gamification as the primary mechanism to transform business operations.[4]

Gamification for business learning can take the form of online competitions that reward knowledge mastery in addition to the intrinsic reward of mastery itself; team-oriented quests that encourage group collaboration toward a common goal; or exercises that present opportunities for failure, but offer self-directed options for overcoming those obstacles. Another built-in advantage to gamification in the business setting is that game scores become a form of learning assessment, and can drive suggested learning activities within a portal. For all of its entertainment value, gamification in the corporate setting is very structured, but on a more individualized level that allows users to direct their professional development based upon their strengths and interests.

Beyond the motivational aspects, gamification follows the Lean Learning concept by allowing learners to test their knowledge level before taking training. Additionally, playing a well-constructed, learning-centric game can often be just as effective as training for certain kinds of content.

» **Social and collaboration methods**: As much as a Lean Learning environment supports user-centered content and mechanisms, it doesn't advocate that workers or work groups work in vacuums. Purposeful intra-team and cross-team collaboration to address organizational needs and problems can be a highly efficient path to innovative problem-solving. Mobile platforms and enterprise collaboration tools enable an organization to work in a leaner capacity, because they connect corporate masters of knowledge and a diverse range of perspectives with colleagues who may be on the other end of the knowledge spectrum. As a result, the organization can gain insights into gaps and connections that would not be apparent in the absence of a collaborative exchange.

It's difficult to overstate the role social technologies play in this Lean Learning approach. Based on numerous case studies and in-depth research in four sectors, including consumer packaged goods, consumer finance, professional services and advanced manufacturing, McKinsey found that the potential value of social in these sectors is between $900 billion and $1.3 trillion annually—two-thirds of which will come from using social channels to improve the collaboration and communications of knowledge workers across the enterprise.[5]

Aligning the workforce with experts is a powerful means to leveraging collaboration for learning benefit. Research conducted by the Corporate Leadership Council has shown that learning is even more powerful when lessons of hands-on, practical experience are reinforced through informal discussion with people who have performed similar work. These veterans can forewarn of common obstacles, proactively provide advice, and help employees stay on track with their learning objectives and productivity goals. By using social technologies as a part of a Lean Learning rollout, it is important to realize that their use is less about content design and more about connecting people to enhance the content. This is a critical philosophical element of Lean Learning—the deconstruction of non-user-centered delivery methods to leverage Lean Learning tools, methods, and technologies.

» **Video**: Anything that helps employees perform better on the job has Lean Learning value, and the application of video in certain work environments certainly has the ability to enhance performance. For businesses with workforces that are positioned across large facilities, or for industries with a mobile, field workforce, video can facilitate efficient, on-demand learning. Content delivery is not limited to the classroom or through a desktop PC, and is instead delivered in small chunks to be consumed by employees at their convenience. For employees who are rarely at their desks—or don't have one at all—but carry mobile devices, they can easily find task instructions and resolve problems through videos downloaded to their smart phones or tablets.

To make this a truly Lean Learning mechanism, businesses should offer videos in short, well-organized formats and clearly tag them so that they're easily discoverable by search. Video can also be used to facilitate collaborative problem-solving. For example, virtual employees can capture footage of a challenging work scenario, and share it with their supervisor, internal experts, or colleagues to receive their feedback.

> Learning at the point of need

Consider the learner who is pressured to learn the features of a new product in order to sell or service a customer. She may not have time to enter an entire learning curriculum, or she may already know a bit about the product. Her immediate need is to become conversant about the product, and she needs to know the basic features. Through a simple yet effective game, she gets that basic knowledge quickly on her handheld device, at the store, and is motivated to do so with a competition that rewards her for playing. In instructional design terms, she has entered the lowest level of Bloom's taxonomy of cognitive learning (see Figure 2), where she simply needs to recall the product features and functionality in order to integrate them into her conversation. As she has time, and is challenged to understand more about the product, she must apply the knowledge in a real scenario (e.g., analyze the situation to solve customer problems). Lean

Figure 2: Bloom's taxonomy of cognitive learning
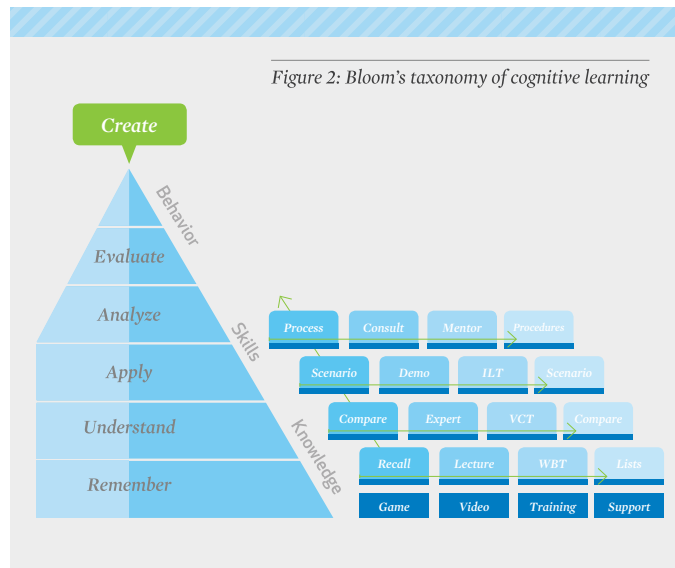
Learning provides a specific type of content that is available to learners who have different levels of knowledge, or need different types of information based on the nuances of their role. Modalities such as video, social, and performance support are used to deliver that knowledge depending on the learning objective and the required depth of learning. This targeted approach mitigates the pitfall of "too much technology, not enough methodology."

> And beyond…

As learners access the knowledge they need at the point of need, they also can contribute to the knowledge base. Giving subject-matter experts the ability to do this quickly and easily is another tenant of Lean Learning. Subject-matter experts can record quick, two-minute movies, create a short job aid, or become an online mentor or expert that others can call on for help or knowledge. Lean Learning takes into consideration the need to get knowledge from those who know into small, digestible bites, in formats learners can consume, through rapid development tools that don't require expert developers.

Lean Learning in action: A day in the life of a retail employee

Industries that have a need for dynamic product and process information are prime candidates for a Lean Learning approach. As an example, retail employees with access to a Lean Learning system could quickly attain a conversational level of knowledge, giving them the confidence to engage with customers. As they become more aware of the knowledge needed to interact effectively with customers, they can then seek the levels and depths of information as they need it— moving upwards in ability and laterally in depth. An integrated, multi-disciplined Lean Learning program can provide on-demand information to support an associate with troubleshooting, improving and displaying product knowledge mastery for customers, and meeting established learning objectives, among other tasks.

Walk in the footsteps of a Lean Learning retail associate with the following example:

1. POINT of NEED: Begins shift → Requires baseline information for day's activities

» Upon arrival at work, clocks in for shift with smart phone in pocket and always at the ready. Logs in to company portal/ application (which is integrated with corporate social collaboration sites and feeds like Facebook, Twitter, and LinkedIn) via smart phone.

» Notified via supervisor or on smart phone about a contest and game to learn new product features.

» Plays 120-second games during downtime on handheld device.

» Leverages new knowledge to engage in conversations with customers.

AN APPROACH ROOTED IN BOTH RESEARCH AND REAL-WORLD NEED

On the surface, a Lean Learning approach can sound logical and simply right in theory, but how realistic and practical is it in the real world? Research and well-supported educational theory validate a Lean Learning system that delivers information precisely at the point of need. For example, the 70-20-10 leadership development model is premised upon the belief that leadership is learned through doing. There's plenty of evidence to support that belief, including a study by the Corporate Leadership Council concluding that on-the-job learning has three times more impact on employee performance than formal training.

As the 70-20-10 name implies, the learning model calls for 70 percent of development to consist of on-the-job learning, supported by 20 percent coaching and mentoring, and 10 percent formal, instructional training. The model builds on research showing that human beings retain information most effectively when they gain it in a practical context. To emphasize the value of experience, however, is not to slight the importance of formal learning, which is what organizations have traditionally relied on exclusively for training their employees. But research shows that formal learning is most valuable when it supplies technical skills, theories, and explanations that apply directly to what is learned through experience—and when it is both valued and quickly integrated within the work environment.

Another educational theory, Bloom's cognitive taxonomy, supports the idea of a custom, user-centered learning experience. This theory states, in part, that the learner's objectives should point the educator (or "business," for this discussion) toward the instructional strategies, while the instructional strategies will dictate the medium that will actually deliver the instruction, such as eLearning, self-study, gaming, or video tutorials.

2. POINT of NEED: Begins role-specific job activities and experiences a problem → Requires exception or error handling information

» Encounters an obstacle in work process.

» Pulls on-demand performance support tool designed to support this work process.

» Downloads and reviews relevant job aid through an online forum.

» Finds that the job aid links to a specific task-based 20-second video about the area with which she is struggling.

3. POINT of NEED: Interacts with customer → Requires real-time data to facilitate service and transaction

» Uses a tablet to support the customer's comparison of product features with pictures, how-to videos, and links to product reviews; shows a store map with product locations.

» Tablet also features a game that enables employee's learning the names, faces, and technical expertise of coworkers on the floor, and a live feed of work schedules so she knows who is on the floor for expertise collaboration (e.g., "Shopping for stereos? Let's go see Josh!").

» Checks customer out on the spot using tablet equipped with credit-card reader, and emails receipt, product information, and manuals directly to customer.

4. POINT of NEED: Encounters downtime → Requires self-directed learning opportunities to reinforce predetermined learning objectives and maximize productivity

» In 15 minutes of downtime, returns to the learning activities list, selects and views "Reducing shrink in 10 days," a three-minute video illustrating top causes of shrink and a demonstration of immediately implementable practices that lead to its reduction.

» Reads user-focused email content, which is consumable in 60 seconds and is contextual per industry, role, or location.

» Over lunch in the break room, games on a new product line as part of a manager's internal competition, which encourages learning of new product specs in a bid for top ranking among peers; a leaderboard is posted in the break room on an LCD screen, along with other company news and upcoming events.

» Competes in another game to win prizes for advanced knowledge; begins advising customers on purchases.

» Serves as expert and answers IM/texts from colleagues in other stores; helps diagnose product issues.

» Accesses company news and updates and reviews a list of suggested learning activities, which are tailored for her role, developmental goals, and prior assessment results.

5. POINT of NEED: Experiences skill gap during shift → Requires expertise alignment for practical learning

» Experiences skill gap with a new store system and makes a Skype call to a regional system expert; receives a demonstration of needed functionality.

» Supervisor is prompted by mobile phone to have a service chat with the employee; engages in 10-minute chat about how to scan for customers who appear to be looking for something, and proactively approaches them to help.

» Supervisor records service discussion with three clicks on her mobile phone; event is captured in both the supervisor and employee's learning management system with suggested videos and additional Lean Learning resources.

» Supervisor subsequently notices the employee engaged in excellent service interaction with customer and awards the employee with three clicks on a mobile phone; the employee receives service kudos badge.

» Supervisor views a dashboard showing correlation of sales and return customers to service kudos and interactions.

» Supervisor scans a Quick Response (QR) code on time clock before finishing the shift and contributes feedback before time is captured. For example, the supervisor could be prompted with the question, "Based on your experience today, what is one useful tip or learning experience you can share with your colleagues?" Responses are collated weekly as content for a "Maximized Minute" email delivered on Fridays and shared in an app-based newsfeed.

Getting there

So you're thinking that this all makes sense. Now what?

> Don't abandon what you have (at first)

Most learning departments aren't currently organized or constructed to instantly switch to a full Lean Learning philosophy and structure. At first, Lean Learning can be complementary—it's a new instructional design that takes into consideration the pace of and the amount of change learners are experiencing in today's world. By re-examining learners' individual needs, deconstructing traditional design, and incorporating lean components, Lean Learning instructional design can be a solution that provides value.
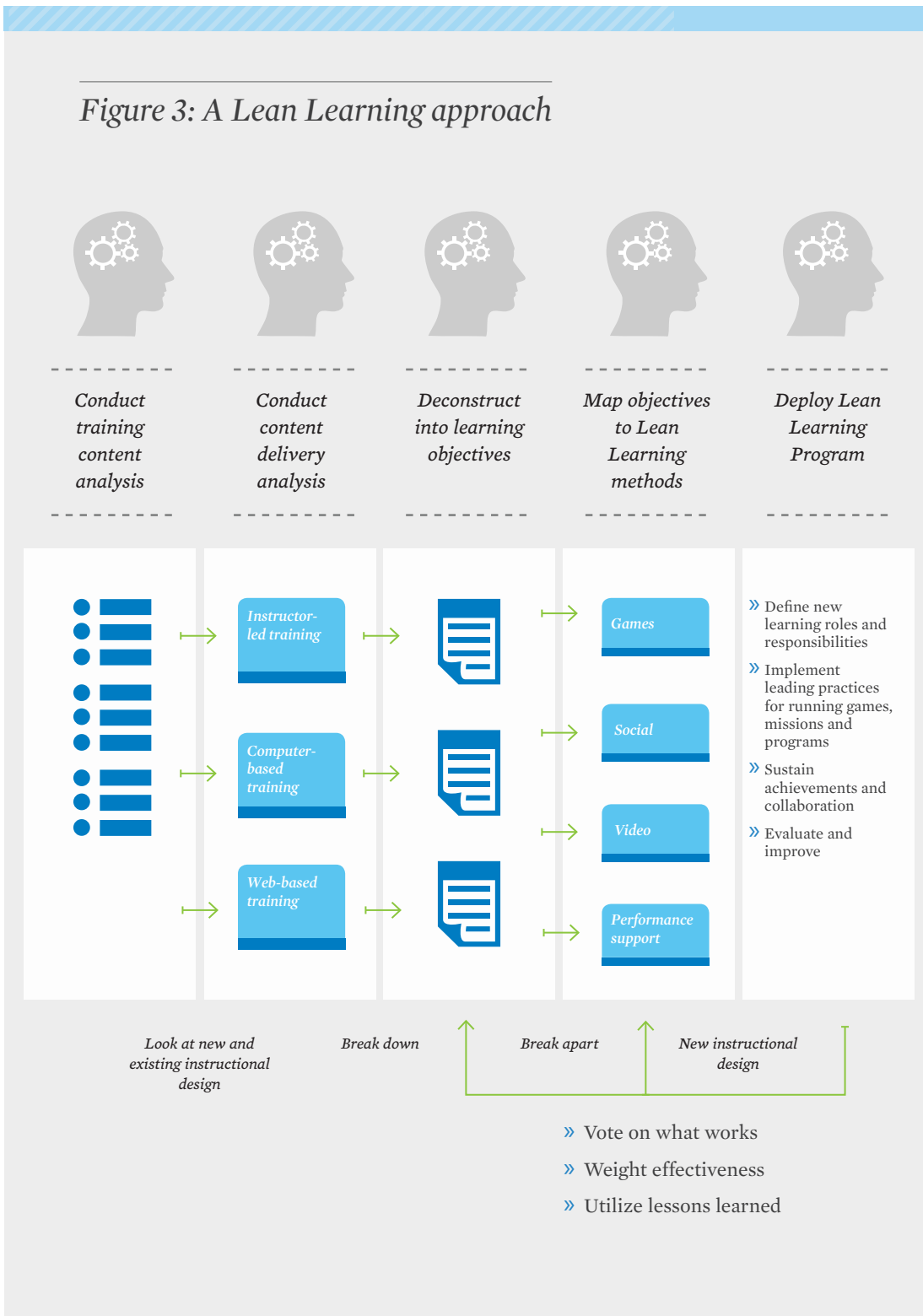
> A thoughtful approach

Implementing Lean Learning involves reviewing existing or new needs for learning content and proposed delivery methods, and then deconstructing those items into small topics or competency-based Lean Learning objectives (see Figure 3, next page). This is different than creating a full course with learning objectives—which is one-size-fits-all and not focused on the needs of the individual. Think very small topic objectives: one piece of information or related data on one topic.

Once the Lean Learning objectives are identified, map them to the Lean Learning methods—games, social, video, live performance support, and the like. Then deploy them quickly and measure the results. Perform regular lessons-learned checkpoints as deployment is underway to rapidly repurpose and redeploy. As you continue to repeat this approach, over time, employee engagement will increase and momentum for Lean Learning will ramp up.

> Start small…but start!

Start small by picking one learning event, deconstruct it, remap it to Lean Learning components, and then deploy the content. Once momentum increases, work to implement more advanced Lean Learning

Figure 3: A Lean Learning approach

| Conduct training content analysis | Conduct content delivery analysis | Deconstruct into learning objectives | Map objectives to Lean Learning methods | Deploy Lean Learning Program |

Instructor-led training

Computer-based training

Web-based training

Games

Social

Video

Performance support

» Define new learning roles and responsibilities

» Implement leading practices for running games, missions and programs

» Sustain achievements and collaboration

» Evaluate and improve

Look at new and existing instructional design

Break down

Break apart

New instructional design

» Vote on what works

» Weight effectiveness

» Utilize lessons learned

components like providing access to knowledge in Lean Learning formats; connecting experts together (or even with external customers) through social technologies; creating "Choose Your Own Adventure" games for new processes or policies you want to deploy; or establishing an on-demand searchable video library to help with performance support. Try things out and determine what works best. Eventually, it is likely that you will be able to transform an entire process—like HR performance management, for example—to Lean Learning.

Leaning in

Lean Learning has huge potential to drive business forward more efficiently. The practice of Lean Learning is largely about "unlearning" some key concepts embedded within our culture—namely that more isn't always better. Learning is not an industrialized process; it's an organic one.

Lean Learning is a philosophy as much as it is a methodology. It's a mindset that informs business decisions, provides relief to workers, and promotes higher performance to the entire organization.

About Slalom Consulting

Slalom Consulting brings together business and technology expertise to help companies drive enterprise performance, accelerate innovation, enhance the customer experience, and increase employee productivity. The firm delivers award-winning solutions in areas such as organizational effectiveness, business intelligence, mobility, and cloud through a national network of local offices across 11 North American cities.

Founded in 2001 and based in Seattle, WA, Slalom has rapidly grown to more than 2,000 consultants. The company has earned recognition from Microsoft as Partner of the Year five times, including 2012 Microsoft Office 365 Solution Partner of the Year, and has also been recognized as one of the Top 10 Best Firms to Work For by *Consulting* magazine. For more information, visit slalom.com.

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