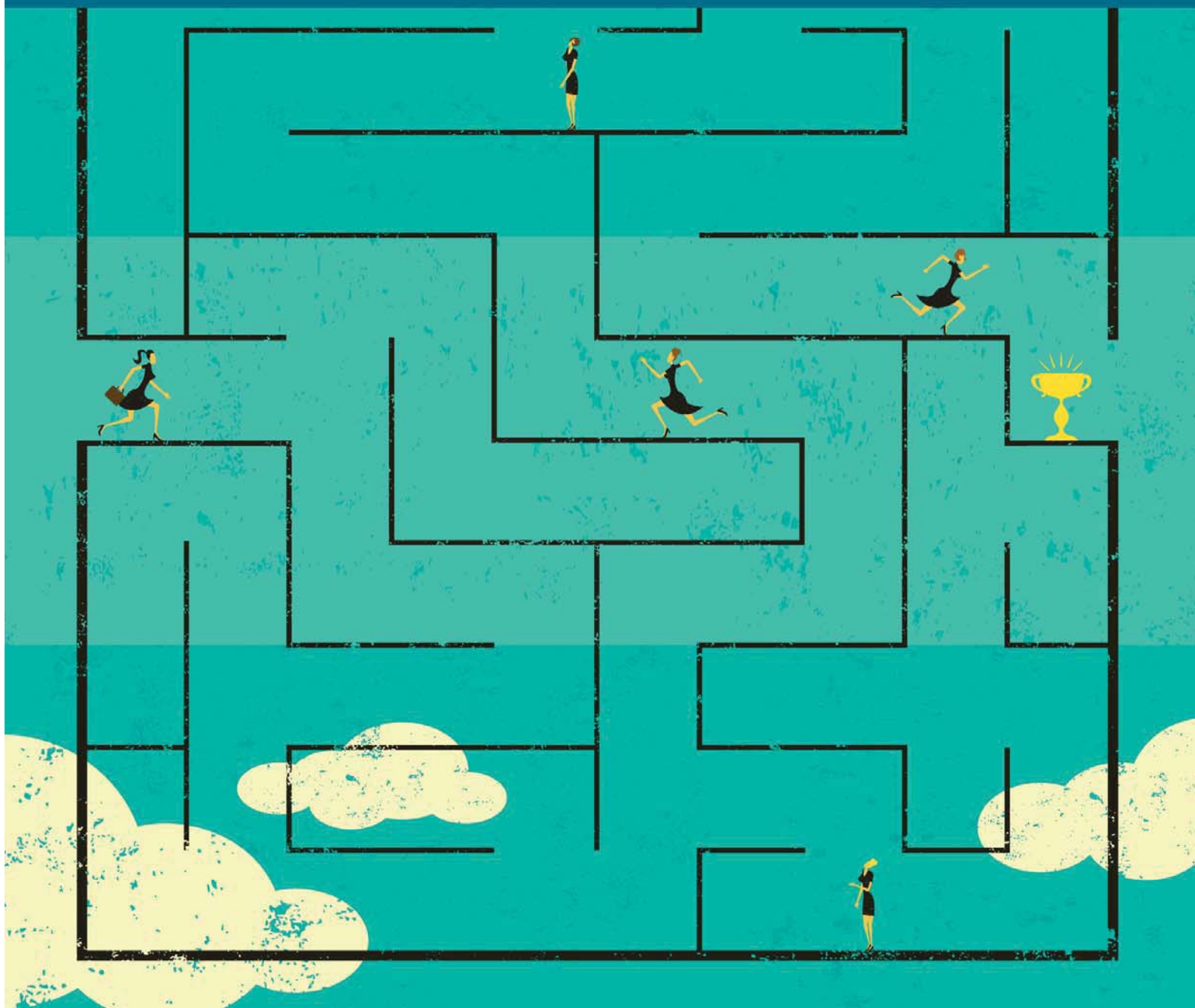


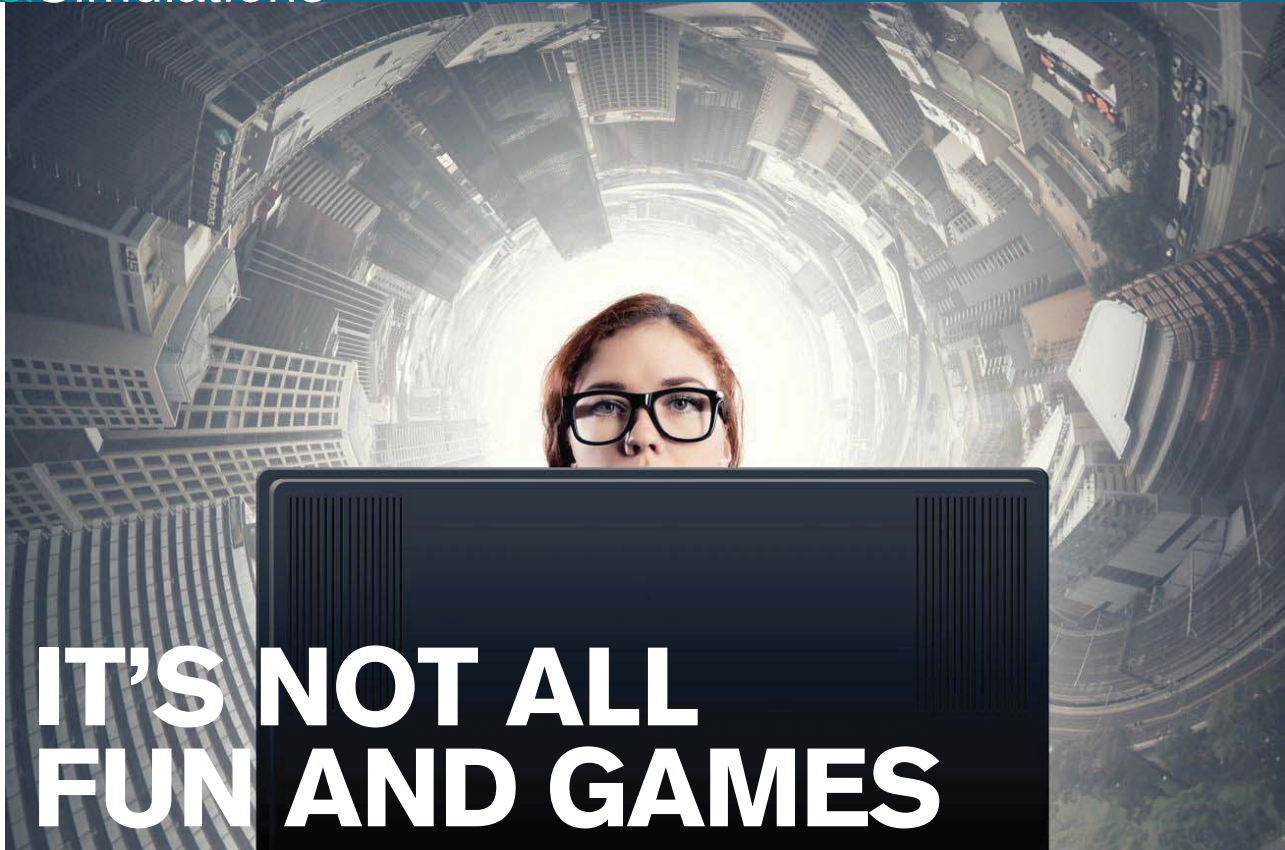
SPECIAL SECTION

**training**

FOCUS ON  
**Games  
& Simulations**

TRENDS+TECHNOLOGIES+CASE STUDIES





# IT'S NOT ALL FUN AND GAMES

Innovative training programs often use games and simulations. They can be new and exciting but may not appeal to all employees. Some tips that can up the engagement factor. **By Margery Weinstein**

It could be a highly immersive game with avatars and branching scenarios, or something as simple as a simulation used to train employees about workplace harassment. But not every employee

is enamored with learning delivered via games and simulations. Whether expensive and advanced, or off-the-shelf and simple, games and simulations are a waste of time and money if they don't engage and satisfy learners. Four Training Top 125 companies and two experts in the field offer tips for creating games and simulations that learners will want to jump into.

## Quick Tips

- Put learners in the driver's seat of the experience, having the simulation or game unfold based on their choices or responses.
- Embed learners within the simulation or game by having them create avatars.
- Strive for technical accuracy, making the simulation or game look as close to the real experience as possible, so learners will see and feel the relevance to their work.
- Make lessons learned memorable by having dramatic outcomes within the simulation or game when right or wrong decisions are made.
- Use games learners are familiar with and already enjoy, such as Jeopardy! and then add questions or content related to their work.

## GIVE LEARNERS CONTROL

Simulations that are most effective are those that take employees out of the lecture, top-down format, and put them in the front seat of the learning experience. At Training Top 125 company PAREXEL, a provider of support services to the biopharmaceutical and medical device industries, simulations are used both in live, face-to-face classroom settings and in self-paced, online training. In the in-person classroom format, learners sometimes are divided into groups that compete against each other in a game show format. When this approach is used,

the simulation is technologically simple, maybe just relying on a PowerPoint format. But when the games and simulations are online, they become more technologically complex and immersive. “We have created simulated work environments that learners interact with online to assess their abilities to apply learning provided in previous e-learning and instructor-led trainings,” says Vice President of Learning and Development Albert Siu, Ph.D. “Additionally, we regularly embed system and tool simulations and interactive video activities into both our synchronous and asynchronous learning programs.”

A simulation allows learners to make mistakes with no consequences before trying their skills out on the job. It also allows employees to help create the training by their reactions to the content. “By introducing games in a controlled environment, we can use them to maximize retention and reduce the amount of lectured content,” says Siu. “Experiencing a system or tools hands-on helps visual and kinesthetic learners

to make the most out of their learning experience. Examples of these are the simulations we create for our new system launches, using tools such as Articulate Storyline or Adobe Captivate.”

To really put learners in the driver seat—and as far from the static lecture format as possible—Siu says you can use avatars, or characters, within the online simulations that learners create to represent themselves. “We like to include avatars when possible, so learners can have some control to customize their gaming experience,” he says. “The more the game involves learners in the process and adapts to their decisions, the more empowered and motivated they become.”

Indeed, it is the ability of a game or simulation to make employees active participants, rather than just listeners or observers, that is the key to success. “What makes training most engaging is how involved learners are in the learning event, either by being entertained or being actively involved,” says Star Fisher, senior associate with Caveo Learning.

## Games and Simulations Uncovered

BY PARADIGM LEARNING

The use of serious games is quickly becoming a more mainstream method for achieving key objectives in a variety of business initiatives. Applications designed for the military, education, health care, and government have produced many positive outcomes and kicked off the infiltration of serious games in the broader corporate world.

Serious games are best defined as games used for purposes other than pure entertainment. They incorporate elements of game design in order to enhance the level of engagement of the target user above and beyond that which can be achieved with non-game approaches. These elements include, but are not limited to:

- Interactive problem solving
- Adaptive or branching storylines
- Specific goals and rules
- Ongoing feedback
- Sensory stimuli

Many serious games also incorporate technologies used in today’s entertainment gaming industry, such as computer-generated animation.

Currently, the most prevalent use of serious games is for training purposes. Organizations are using serious games to train employees on broad and diverse topics from teamwork to strategic planning. Serious games also are used for job-specific

skill development, such as training on aircraft repair and patient triage. Serious games can be used in situations that are too cost-prohibitive or risky to accomplish in a real-world situation—for instance, the military uses serious games to train its members on complex and/or dangerous situations.

Initiatives from customer attraction and retention to performance management quickly are realizing the benefits of serious games and the broader trend of gamification. In the 2013 “Playing to Win: Gamification and Serious Games in Organizational Learning” survey conducted by ATD, 25 percent of responding organizations indicated they are using gamification for training and development. Additionally, analysts have posited that the serious games and gamification market will grow from \$421 million in 2013 to \$5.5 billion in 2018, an annual growth rate of 67 percent (MarketsandMarkets global research). Clearly, we are on the verge of a revolution in the way businesses approach traditional challenges.

CEB’s 2015 Global Assessment Trends Report, which includes survey results from more than 1,400 HR professionals globally, indicates that training will be the HR area most likely to receive an increased budget this year. Given this trend and the explosive growth in the serious games market, it is highly likely that many corporate training programs will be leveraging elements of gamification to some degree in the future.



## STRIVE FOR TECHNICAL ACCURACY AND REALISM

In the world of aviation, putting the learner in the driver's—or pilot's—seat is essential. A simulation where mistakes can be made without crashing a plane literally gives trainees a safe place to test out their skills, notes Anthony Gagliardo, executive director of the Association of Collegiate Training Institutions (ACTI). “Games are applied in a manner consistent with the modern and advanced equivalent to a child memorizing multiplication tables,” he says.

For instance, Gagliardo says the 38 collegiate and private aviation training institutions that are a part of ACTI make use of a visual air traffic and radar

simulation. “With large wraparound displays, these systems can involve many students and instructors simultaneously in a single scenario,” he says. “On a simpler level, pilots-in-training also use low-fidelity game-based flash card systems and matching exercises designed to aid in memorization of fundamental information.”

Gagliardo says realism is the key to creating a game or simulation that learners will feel is relevant to their work. “First and foremost, technical accuracy is key. Without this veracity, the tool loses credibility rapidly and becomes a joke within the workplace,” he says. “It’s been my experience that our audience places a higher premium on a tool that is technically accurate

## Amelia: An AI Resource for Training

From the “spinning jenny” that exponentially increased the speed of yarn production in the 18th Century, to Henry Ford’s assembly line that reduced the time it took to build a car by 79 percent, automation has been an essential part of human progress. Automated manufacturing processes, which were revolutionary 100 years ago, now seem so mundane that we’ve stopped giving them a second thought. Yet the automation of more complex processes that require “human” interaction and emotional intelligence—more commonly known as “artificial intelligence” or AI—still seems like science fiction.

However, it’s closer to reality than you may think. Take, for example, Amelia, an artificial intelligence cognitive agent created by IPsoft who understands and responds like a human. She can “read” and comprehend complex manuals within a matter of seconds and learn from her human colleagues to help improve customer service, increase efficiency, and maximize revenue. Her potential to positively affect the way business is done is almost endless. In turn, Amelia allows human experts to reallocate their time and energy toward more creative, higher-value pursuits.

For Training and HR professionals, Amelia has the potential to absorb many time-consuming and repetitive processes. For instance, Amelia could help employees navigate selection and enrollment of training courses. This is an area that has been explored by companies such as Royal Dutch Shell that invest significant resources in learning programs aimed at making employees more productive in their roles.

Induction programs for new employees similarly could



include dialogue with Amelia to support a wide range of “How do I?” questions. While many organizations have assembled reference materials to cover the most frequently asked questions, cognitive technology could cut through the frustration of not being able to find new information quickly and help new team members become more effective in a shorter period.

Like humans, Amelia has the unique ability to learn. Different from other programs, databases, and AI platforms, she can gain new and useful knowledge by observing the

actions of her human co-workers. Just like any smart person, she learns from what she sees and draws on that experience to help a colleague another time.

Unlike humans, however, Amelia is always working, allowing for constant support and instant updates. With these updates, her quality of answers, responses, and solutions reflects the latest knowledge, not delayed knowledge. In other words, she provides the most accurate information at any given time. She also boasts a cognitive engine that guarantees consistency in answers—even with questions that are asked in various ways and in multiple languages.

Today, Amelia is being tested to validate how cognitive engines outperform more static approaches. Cognitive technologies and artificial intelligence already are being implemented to revolutionize not only the way we work, but the way we live by affecting daily tasks, legislation, and the way we organize. With Amelia, we’ve only started to enter the beginning of the future.

rather than one that is game-like or has fantastic graphics/production value.”

Part of making a game or simulation realistic is to make the outcomes for right and wrong responses memorable, says Gregg Collins, head of Instructional Design for the Corporate Learning Group at Training Top 125 company NIIT, a global talent development corporation. “The outcomes of bad decisions need to be vivid and memorable. This is worth calling out specifically because traditional training development processes often strive to take the drama out of the content,” says Collins. “A big part of what makes games such effective learning tools is that they do the opposite. Game designers know—as learning designers should know—that emotional impact helps cement lessons in memory.”

Training Top 125 company Tenaris, a supplier of steel tubes for the energy industry, uses the game and simulation format to train employees at its Induction Camp, a four-week program that brings together approximately 60 newly hired global trainees from all over the world in Argentina, headquarters of TenarisUniversity. Emphasis is placed on the technical accuracy of the simulation, which replicates a process from the initial request for a quote from the customer to the delivery of the final product. “It, therefore, allows participants to deeply understand the Tenaris Commercial and Production Cycles and the complexity of the decisions involved in each stage,” says Maria Laura Garcia, TenarisUniversity School of Management dean.

## LEVERAGE FAMILIAR GAMES

One way to engage learners is to ask them to play a game they’ve played before—albeit with a twist that makes it educational. That’s what Training Top 125 company New York Community Bancorp, Inc., does. “Our organization utilizes a wide variety of games and simulations to enhance our training programs. We have a trainer tool kit that contains more than 85 customized games and activities,” says Second Vice President, Instructional Design Manager Joelle Divine, who says such games include Family Feud, Fighting the Gremlins, Who Wants to Be a Millionaire? and Jeopardy!

Divine says the game becomes more effective when matched carefully to the content—clearly, not all games are right for all content. “Since we utilize a trainer tool kit, which lets our trainers select appropriate games based on content, key learning

## The Power of Video

BY TODD LENHART, PRESIDENT, SNI  
(WWW.SHAPIRONEGOTIATIONS.COM)

Video is a top trend in training right now and one that easily can be incorporated into games and simulations. It’s easy and inexpensive to do with all the recent advances in technology, but it still needs to be done right to be effective.


Video doesn’t lie. Once participants see themselves, the power of that experience can affect their ability to make changes. The trainer also can coach them with more precision and help them get more out of the session. There’s more accountability for learning when video is part of the equation.

Here are some tips to help make the most of your next video initiative and make it a powerful training tool:

- **Make sure to have good quality audio/video systems in place.** Even your phone is likely capable of this, but don’t just take it out and start shooting. It’s worth taking a few minutes to check video settings, background lighting, and audio quality.
- **Think through the pre-work portion of the exercise before jumping in.** If you have someone playing the role of the other side, they need to be well-versed on the material. Otherwise, the training won’t be “real” enough. Sometimes, you can even hire an actor to learn the material and play that role.
- **Try to use a real-world scenario in your role-play.** It gives participants the experience of walking through it so that when they go into the actual meeting, they’re much better prepared.
- **Remember that even a small amount of video, say five to 10 minutes, is like a lifetime when it comes to coaching.** A short snippet of a participant role-playing tells the trainer a lot about how he handles himself.

Using video in role-play may be becoming more widespread, but be sure to think through a process before trying it on your own. The power of video is something to harness and leverage to your advantage. It can bring about true change when used the right way.

points, class size, experience, etc., we can offer a variety of ways to complete the training,” she says. “We also have specific games and simulations that are required for certain topics and content.”

Matching content and audience to a familiar game is a formula that works well for games and simulations or “relevant interactive learning events,” says Fisher of Caveo Learning. “Using ‘Scattergories’ as an energizer will cause some to complain because it has no relevance to the actual learning—it is just a game,” she says. “Relevant interactive learning events will not receive the same resistance, because learners can see the value.” 

# PLAYING TO WIN

Competition in games and simulations-based training is a key factor in boosting employee and client engagement at Bellevue University, Passle Limited, and UCSF Benioff Children's Hospital. **By Gail Dutton**

## CASE STUDY #1

### Bellevue University: Virtual Internships

Media communications students at Nebraska's Bellevue University needn't quit their day jobs to complete their mandatory internship. Instead, Bellevue is pioneering a virtual internship using simulations.

"Approximately 70 percent of our students are above age 30. They don't have time for a real-world internship, but they need the resulting skills and knowledge," says Donna Hewlett, program director.

That's why she and her team developed a virtual internship. Development began in November 2014 and is being built out in three phases. "We're wrapping up phase one now, and expect to complete phase three by the end of 2016," says Ben Brocker, director of production. The first group of interns should enter the program in January 2016.

As senior 3-D artist Chad Brocker explains, "right now, the virtual internship looks like a corporate Website with a portal." Students will use it to gather material for assignments and interact with the members of the simulated company.

Phase two will transform the HTML material into 2-D, allowing "a bird's eye view of an office floor, so interns can walk to the people" with whom they're interacting, Brocker adds. In phase three, the 2-D world will evolve into an immersive platform populated with avatars.

The virtual internship will build the skills the advisory board of local entrepreneurs and employers says new employees need. They include the ability to communicate clearly, think critically, solve problems, manage themselves, and exhibit highly ethical behavior.

For media communications interns (and the IT students who may use this next), the internship is based at a simulated e-learning company. The simulation includes a full cast of characters (some with gender-ambiguous names), marketing materials, corporate mission, a Website, press and business documents, Yelp reviews, LinkedIn profiles, and

information about its target customers.

"The simulation has three components: acclimation, assignment, and evaluation," explains learning consultant Kirsten Osolind. "The acclimation module introduces the company's policies and procedures. The assignment module provides an overview of the project scope and defines the company. Interns must read and summarize tactical strategies that would be usual for a local e-learning company," and are expected to develop written and audiovisual presentations, blog posts, and status reports, and engage in outside learning activities.

"Company notices and e-mailed responses from executives vary based upon each intern's decisions," Osolind says. Interns receive points for increasing their influence among virtual executives and key constituents.

The virtual internship also includes a "learning tour" in which students talk with real companies and their customers. "This component deals with the tactical aspects of business," Osolind says. It focuses on overcoming hurdles and crafts assignments to develop interns' research skills. It includes an interim review.

The evaluation module concludes the virtual internship. "It begins with a written report and presentation, and moves to self-evaluation and a performance evaluation," Osolind says. Importantly, this phase also evaluates the virtual internship itself and asks students to provide tips to help future interns approach assignments and to adapt as the internship progresses.

Once the program begins, it will be adjusted and rolled out to other programs. As Hewitt says, "Participants will have a protected environment in which to learn, so by graduation they will be ready to enter the real work world."

## CASE STUDY #2

### Passle Limited: Blogging Competitions

Passle Limited encourages new clients to integrate its product into their routines through competition. For the Oxford, UK, knowledge management firm, this

means persuading its clientele of knowledge experts to blog more regularly.

“Many who set up a Passle account aren’t in the habit of blogging or using social media,” says Claire Trévien, social media and marketing manager. While Passle shows users how to use its software tools to create posts quickly and easily, “if we left it at that, our clients wouldn’t use it regularly.”

Therefore, Trévien creates one- to two-month-long competitions within firms to encourage employees to blog frequently. “We split clients from the same firm into two teams,” she explains. Individual members win points for themselves and their teams for each blog post, and extra points for the post with the most views.

Players start with 500 points, but lose points if they don’t post. “Even creating a single one- or two-line post is enough to retain the points,” Trévien says. “It’s all psychological. The points don’t mean anything in the real world, but people don’t like losing things, even if those things are fictional,” she points out. “This is a surprisingly good incentive.

“Each week, I write the clients telling them who is the most valued player for the week and which team won,” she continues. The e-mail also includes tips—such as sharing posts on social media—to improve their scores.

“They get incredibly competitive,” Trévien says. “Established professionals will banter on e-mail about how their team is going to ‘crush’ the other. It makes the whole thing fun and gets them accustomed to using Passle, so it becomes a habit.”

At the end of the competition, “we visit the firm and present the winning team and individual with small trophies. There’s also a raffle, so others have a chance to win something.”

That chance makes the competition interesting even for those who aren’t leading, so it encourages participation. “Small forms of recognition are just as important as bigger ones,” Trévien says. Therefore, Passle is beginning to integrate badges and rewards for certain activities, such as writing a specific number of posts.

Passle has conducted competitions with groups ranging from two to 50. “We found smaller teams work better because the people are more likely to know each other,” Trévien says. “It’s easier to bond as a team and prod your colleagues to post if you’re only tracking four or five people, rather than 15.”

For example, FinTech Collective’s staff of four used Passle competitions to increase its Web presence in 2014. Within about six months, the young venture capital group created more than 500 posts.

Typically, the numbers of posts peaks during competition and then declines gradually, though remaining above pre-competition level. For example, within one month, Critchleys, a Top 100 UK accounting firm, increased its posts per accountant from an average of 1.15 per year to 4.82 per year, well above the industry average of 0.25 per accountant per year. “Its Twitter

following increases by 20 percent,” Trévien notes. “One year later, the accountancy is still blogging several times per week.”

### CASE STUDY #3

## UCSF Benioff Children’s Hospital: Chatter Gamification

Better staff engagement equals better quality, according to Arup Roy-Burman, M.D., medical director of the Pediatric Intensive Care Unit (ICU) at UCSF Benioff Children’s Hospital. That’s why he added gamification to training for the hospital’s nursing staff.

The immediate objective was to encourage nurses to collaborate using Chatter, the hospital’s internal social media platform. The long-term goal was to improve patient care.

The hospital based its gamification strategy on three key elements: performance, achievement, and collaboration. Game elements, therefore, supported real-time feedback, recognition, leader boards, communication, and competition.

A two-week pilot gamified the use of Chatter by awarding points to staffers for uploading their profile photo, posting, and commenting. It involved approximately 125 pediatric ICU nurses, divided into the day shift team and the night shift team. “They’d rather be with patients than a computer, so we had to make it fun for them,” Dr. Roy-Burman says.

While they competed for an ice cream party, “the real incentive was the social competition,” he notes. Rankings were displayed on leader boards that were visible to nursing staff, but never to patients. As the competition expanded to additional units, the hospital deployed a fresh leader board for each week, as well as an overall leader board. “When nurses saw their rankings, productivity increased around those metrics,” recalls Jeff Dolan, VP of Sales for LevelEleven, which gamified Chatter.

The next phase focused on increasing peer recognition. Before the contests, nurses didn’t give or receive recognition for jobs well-done, “so we developed a recognition app,” Dr. Roy-Burman says. “Nurses had 200 characters per week—use them or lose them—to say something nice about someone. These kudos appear on colleagues’ Chatter profiles and can be deleted or kept as long as the user wants.”


After the Chatter and recognition contests, “posts increased more than tenfold, comments 118-fold, and 57 percent of the ICU nurses in the pilot were using the platform,” Dr. Roy-Burman says. Peer recognition also increased. In the Pediatric ICU, for example, 76 percent of the nurses have been recognized by their peers—56 percent of them multiple times, building morale. Importantly, the improvements in collaboration and recognition have held steady for at least one year.

This success encouraged the hospital to integrate its newsletter into Chatter to drive discussions between nurses

and management and, therefore, improve quality of care. “One nurse says it’s like a continuous staff meeting...without needing to be there,” Dr. Roy-Burman says. Now 43 percent of nurses say they read the newsletter weekly, and 67 percent engaged with it at least once per month. “This gives us a metric to start with,” he says.

Because nurses now are engaged on Chatter, it has become a platform to deliver microlearning and quality assessments. For example, nurses can assess their own procedure against best practices for

specific medical procedures, and if they are unsure about the steps, can click for instant instructions. Chatter also has become a vehicle to share videos of best practices and new techniques.

Gamification dramatically increased the use of Chatter. When the pilots concluded, the 340 (of 4,228) nurses who participated in the gamification were responsible for 60 percent of Chatter comments and 50 percent of Chatter posts. Chatter gamification since has rolled out to other units and to UCSF’s main hospital. 

## Design Thinker Simulation Builds Innovation Skills BY MARLA LEPORE

To improve their organizations’ competitive footing, senior leaders increasingly are hungry for cultures of innovation. A primary challenge for those tasked with operationalizing that ambition is building a shared understanding of what “innovation” is and how to do it well.

Such was the situation facing an organizational development (OD) consultant at a technology giant. Given the responsibility of researching and introducing innovative practices throughout Global Supply Chain Management, the consultant was excited to discover the discipline of design thinking, a concrete approach for innovation pioneered by design consultancy IDEO.

His focus quickly shifted to the next challenge: how to make this complex methodology practical to teach, learn, and apply in a demanding business environment with thousands of employees. To maximize impact, he needed a solution that was not only engaging and effective, but also repeatable and scalable.

After an exhaustive search, he found ExperiencePoint’s Design Thinker simulation. An expert-guided innovation simulation built in collaboration with IDEO and based on ExperiencePoint’s platform, Design Thinker gives participants hands-on experience using design thinking to build innovation confidence and competence.

“Innovation can be a nebulous topic,” the consultant says. “Design Thinker gave us something to sink our teeth into—a reference point and common language of applying a designer’s vocabulary to business problems.”

During the four-hour experience, a facilitator leads competing teams through a simulation of IDEO’s process, with points allocated to focus attention on key, counterintuitive innovation concepts and behaviors.

“Because design thinking isn’t like traditional problem solving, it’s natural for people to trip up,” says Greg Warman, principal at ExperiencePoint and head of the company’s

innovation product line. “Design Thinker offers the right amount of safety—immediate feedback for learning without jobs or company resources at stake.”

For the OD consultant, however, the stakes were high. As a foundational element of a “Culture of Innovation” program, the training had to deliver business results. As such, it concludes with an application exercise connecting the skills and techniques learned with the participants’ real work and projects.

“This isn’t about training for training’s sake. People are extremely busy, and they have goals and metrics they’re trying to achieve,” says the OD consultant, adding, “we constantly have to show leadership: This is the value we’re bringing. This is how much money we’ve saved the organization. These are the executives who are vouching for it.”

Not only have 80 percent of employees surveyed said their ability to innovate has improved because of design thinking, the training is delivering tangible value. The company now has applied design thinking in a variety of projects, netting more than \$100 million in savings.

Additionally, numerous ideas have been documented with financial, cultural, and operational value. With large-scale, cross-functional brainstorming becoming common, the company has been able to measure process improvements (in one case, a 20-step process was reduced to three), as well as value-oriented metrics in its quarterly scorecard.

“Experience is the best way to learn, but left to the workplace, it’s slow, risky, and unpredictable,” Warman says. “We apply technology in a purposeful way to stimulate meaningful conversations and stretch people out of their comfort zones while giving them a safe place to make mistakes. When you engage people both emotionally and intellectually, you’re able to achieve the learning moments that provoke new ways of doing things.”