

# ANOTHER LEVEL



The introduction of gamification techniques into training for workplace and facilities managers is triggered by students' changing relationship with the internet; the utility of their smartphones; and their desire for personalised, on-demand learning. *Martin Read* reports

**T**he ways in which organisations assess the fitness for purpose of employees, as well as how employees go about maintaining that fitness, are being influenced by the way on-the-job learning continues to be turned inside out by the internet.

Many of these changes involve gamification techniques of the kind increasingly finding their way into business management. Right now, many providers of training are taking their content and converting it for a variety of formats so that students can essentially compete with others, or themselves, to reach knowledge acquisition targets. Short, sharp modules are the key, with firms in this space eulogising the greater knowledge retention rates that they say result from such an approach.

Digital workplace learning solutions provider International Workplace calls such short modules 'spaced learning' to be accessed 'little and often'. When the firm's managing director David Sharp, in his role as an IWFM awards judge, was considering the attributes shared by the best-performing FMs across the years, "I came up with the idea of testing their 'DNA', to see

if there was something in their skills, attributes and attitudes that made them all successful."

An associated workshop "got me thinking in a much more granular way about how we identify, promote and measure desired personal development outcomes."

This approach has underpinned development of Workplace DNA, a continuous learning service based around a cloud-based digital platform and born of an acceptance that the way students learn has fundamentally shifted. It's more about acquiring knowledge at the time and point of demand, with employers using engagement and impact as the new metrics of choice.

Workplace DNA uses structures such as leader boards – an option for employers when setting up the service up – to introduce a gamified element to the learning experience. The system notes a user's engagement with the product's learning resources, reporting the user's progress in the form of a 'DNA score' – "a simple measure of engagement that reflects their knowledge and understanding of workplace management".

The trick here is that the DNA score isn't always headed upwards; failure to keep up with resources

and complete learning modules will result in the score 'degrading' over time. Learners can hit a 'Boost my DNA' button, which, using artificial intelligence, recommends fresh content, based on the student's engagement to date and, crucially, the employer's training priorities. They can also rate news and resources as they go.

**Complementary to classroom**  
Over at Xenon, director Chris Morris believes the greatest potential for gamification comes in continuing a learner's education beyond the classroom.

"One of the risks of training courses is that delegates forget everything once they're back at work. Instead, trainers could introduce a concept in the classroom then provide a genuinely enjoyable smartphone game, which reinforces those concepts in the learner's mind. The idea being that the learner continues to play the game, for fun or to kill time on their commute, and so continue developing their understanding without feeling like it requires any effort on their part. This is where gamification, if designed and implemented well, can be really powerful. Combining classroom, practical, e-learning, gamification and other tools (augmented reality, for example) can create a diverse, engaging learning environment which caters for different preferences amongst delegates," Morris explains.

Ho Chee Kit, senior director at C&W Services Singapore, agrees. The company sees its safety app – see 'a rewarding experience', top right – as complementary to classroom training, which "enables face-to-face teaching and learning of complex topics, areas of study which require hands-on demonstrations and the opportunity for trainees to get immediate feedback using visual



**CHRIS MORRIS**, director at the Xenon Group



**HO CHEE KIT**, senior director at C&W Services Singapore



**MATT HYETT**, smart places products manager, VINCI

aids and on-site equipment."

Smartphones, by comparison, enable in-the-field revision of safety measures and procedures and "byte-size learning while on the go". "This is where smartphones can really excel," agrees Morris. "We can use them for a variety of assessment methods – multiple choice tests or assessed interviews over video link, for example. Smartphone-based assessment also allows learners to do coursework on the move, which can be difficult with large written assessments."

**Making it meaningful**

While points and reward mechanisms can be useful in

**A REWARDING EXERCISE**

Adding a reward component to training has been made easier through the use of apps. In 2018, Cushman & Wakefield Services Singapore launched its "Safety on the Go" app to improve health and safety awareness among service staff.

It comprises a safety procedure field guide, a hazard identification module, back-end trend analysis of hazard type and causes per site to enable decisions on how to improve site safety, and a quiz for users.

Staff that perform poorly on the quizzes get one-to-one coaching before retaking the quiz. "Leaders can communicate with a large community at one time and users can likewise report hazards on the go as they spot them," explains Ho Chee Kit, senior director at C&W Services Singapore. "What is of tremendous value is that hazards can be reported and rectified quickly."

"Many studies document the benefits of using apps to engage users because of the high usage of mobile devices," Ho says. "The rewards (in the form of vouchers) are an added sweetener to sustain engagement levels, up to a point of course."

Monetary rewards are not, however, necessary. Employees are just as motivated by recognition from peers,

management and clients for their commitment to safety culture, says Ho. The team is currently working on a rewards and recognition framework using a combination of good job cards, nominations for annual safety awards and participation in national design considerations for new buildings to motivate and reward behaviours.

"Rewards should be sustainable, without raising too high a level of expectation to a point where employees are only motivated extrinsically," says Ho. "Organisations need to look at empowering employees, fostering organisational awareness and intrinsic motivation, [and] a culture of high-performing teams that take personal responsibility in their learning and career development."

Training employees in this way also yields a lot of useful data related to health and safety. Too few hazard reports indicate a site suffering from a poor safety culture. Too many hazards suggest a dangerous site and likely inadequate safety behaviours.

"Through these trends analysis, we are developing a safety profile of each team leader and work activity. With these baseline data, the future of predictive analytics of any potential accident is possible."

driving engagement, "there is a risk that people will take a standard task, slap a points mechanism on it, call it gamification and expect stellar results," says Morris. In reality, game mechanics are more complex. Successful video games combine multiple drivers to promote engagement. They may appeal to a sense of higher purpose (story-driven games) or allow gamers to develop skills (sports games). The same applies to gamification in training. There need to be more drivers than simply earning points or rewards."

Any competition needs to be



meaningful. A leader board may be useful over the short-term, but attaching the game to a higher purpose will, says Morris, lead to better engagement. Donating to a winner's chosen charity can be effective, or rewarding students with social recognition or giving them opportunities to work on interesting projects.

And different mediums will suit different topics and learners. Morris says factual learning benefits from quizzes, word games or board games with points systems and leader boards, while scenario-based adventure games, where learners make decisions that will have an impact on the overall story, could serve to demonstrate more complex themes as well as develop analytical and evaluative skills."

**The virtue in virtual**

Into this latter field comes the use of virtual reality, bringing gamification into a wholly immersive training environment. VINCI uses VR in its safety training for construction workers. Matthew Hyett, the firm's smart places products manager, recently developed a VR application for construction firm Taylor Woodrow in which employees wear a headset to move around a simulated construction site dominated by an excavator, interacting with the driver to learn the communication signals they need to safely pass the machine without risk of injury.

Hyett was also involved in creating an energy management game for Lord Rupert Redesdale, Energy Managers Association founder, and Paul Lynch, head of VINCI Facilities Energy Management. Players enter the VR simulation and navigate five scenarios: a corporate office, plant room, petrol forecourt, a BMS display with anomalies in the graph data, and finally a bird's-eye view of a rail depot to determine where

**"THE LEARNER CONTINUES TO PLAY THE GAME, FOR FUN OR TO KILL TIME ON THEIR COMMUTE"**



**DAVID SHARP**, MD at International Workplace



**NICK WEBB**, instructional design & development lead, International Workplace

would be best for solar power.

The energy awareness game could be tailored to educate a client's end-users or for training FM teams on better energy management. Talks are under way with a client to roll out energy management gamification to identify the best facilities or energy manager across its property portfolio.

Elements of fun and competition against peers, as well as reward, says Hyett, make the lesson resonate. "It's interactive, you're actually involved and you learn from your mistakes as they can be pointed out in a real-world context as opposed to in a sentence or one-word answer."

Hyett says awareness that others are learning alongside you is key. "Even with the VR H&S training with the headset on, people have markers around them and they're on a big screen so everyone can see them."

"It's not necessarily what people want – to be monitored – but you get feedback from everybody around you saying, 'You've got to think like the excavator operator would think. What can he see? Is that safe?' Everyone around you can pitch in."

Back with International Workplace and its Workplace DNA idea, any gamification is optional. "The important thing is outcomes, not what people score," says the company's Nick Webb. "It's a

continuous process. We want to encourage people to interact with the system every day, every week."

The company intends to use news stories relevant to a learner's training as well as podcasts to firm up levels of engagement. What's key is to drive content at users without overloading them.

"The Boost my DNA button links up to our machine learning recommendation engine, showing other people in a similar role doing similar studies."

**Mixing modes**

Xenon's Chris Morris doubts that gamified learning environments will ever truly supplant the classroom, "just as e-learning didn't when it first gained popularity. There will always be value in interacting with subject matter experts and sharing knowledge with peers, he says, but "gamification and smartphone learning should be seen as tools to add an extra dimension to any training package".

As conclusive evidence of its efficacy has still to be proved, over-reliance on gamification in training could have a detrimental effect such as an employee fixating on winning rewards and neglecting other aspects, or competition between employees growing hostile. However, says Morris: "I can say that wherever we've implemented variety and interactivity into our training, it has always produced better results."

"Ultimately, it won't be the competition that motivates employees; it'll be the leaders whose job it is to inspire action. That sums up gamification for me – it's not a silver bullet, it's one of many tools to be used by skilful leaders."

Ho agrees. "Gamification is a powerful tool to provide useful information and yield tremendous returns to enhance safety culture and standards; but it is only a tool."

As mobile platforms grow in functionality, so to are further gamified elements of workplace training likely to develop. **F**