MODERNIZING E-LEARNING FOR THE MOBILE AGE

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UL’s dedicated team of scientists, engineers and researchers is creating New Science advances in a variety of ways. From software platforms and safety scorecards to learning programs and safety culture processes, we are helping organizations respond to today’s workplace challenges.
WHY MODERNIZING E-LEARNING FOR THE MOBILE AGE MATTERS

There is growing recognition that building a culture of safety can be a highly effective way for businesses to mitigate risks related to workplace injuries, illnesses and fatalities. It can also save companies 20 to 40 percent in related costs, based on OSHA estimates. Although there are many contributing factors, employee training can play an important role in helping to strengthen a business’s safety culture. However, not all forms of training are equally effective; studies show that e-learning is the most efficacious way to promote content retention. Continuing to modernize quality interactive e-learning is imperative in helping companies better safeguard their workers. Until recently, there hasn’t been a blended learning approach for employee health and safety that would address both foundational e-learning and ongoing, moment-of-need learning events that are primed for mobile exchange.

CONTEXT

Since 1970 in the U.S., worker injury and illness incidents have declined by 69 percent, while workplace fatalities have been reduced by 68 percent. Even with this improvement, the past five years have seen an average of nearly 3.9 million injuries and illnesses and just fewer than 4,600 fatalities per year in American workplaces. In addition to the loss of life, injuries and illnesses, the direct impact of these incidents to businesses encompasses workers’ compensation premiums, legal expenses related to litigation, increased regulatory penalties and compliance costs. There are also indirect costs, including diminished organizational productivity, decreased worker morale and damage to a company’s reputation or brand image. Employee training can help companies reduce the risks and minimize both the direct and indirect costs of worker injuries, illnesses and fatalities.

Interactive e-learning is a rapidly growing segment of corporate training, projected to grow by 7.9 percent per year and reach $51.5 billion globally by 2016. A key reason for this growth is that e-learning is less time-intensive than classroom instruction, taking about half the time to complete, and employees can take the courses whenever it is convenient for them. E-learning also provides a more consistent delivery approach that ensures all employees receive the same information, and it can deliver instruction in a way that is more appealing to today’s workers by incorporating videos, games and a “next generation experience.” E-learning is also less expensive because it eliminates labor and travel costs for trainers and learners. Most importantly, however, students’ average content retention rate for e-learning is about 40 to 250 percent higher than it is for classroom instruction. In addition, driven largely by the growth and acceptance of using mobile devices at work, mobile learning (m-learning) has seen a significant growth in demand as a method of learning delivery. Before now, there was no comprehensive approach to blending e-learning and m-learning to help companies fully address all employee health and safety training needs.

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WHAT DID UL DO?

UL is innovating a fully blended learning ecosystem to better support companies interested in building or strengthening a culture of safety to meet today’s needs. At the heart of our approach are safety and health e-learning programs, tailored to meet specific business needs. We believe that e-learning is central to two of the five moments of learner need: when workers learn for the first time and when they want to learn more or require refresher training. For the other key moments of learner need — when workers are trying to remember, when conditions or needs change, or when something goes wrong — we are developing m-learning applications that leverage the growing proliferation of smartphones and tablets to address these situations, whenever and wherever they happen.16

Our online health and safety training typically focuses on creating awareness and comprehension of basic regulatory compliance information along with general hazard recognition and mitigation skills. Our program was uniquely designed by a collaborative team of internal health and safety subject matter experts and adult learning professionals to encourage active participation and support the transfer of knowledge and practice to relevant, real-job circumstances. To do this, our courses:

- Include interactive exercises every three to five minutes to reinforce major learning points with practical real-life examples, case studies and reinforcing feedback to learner responses
- Engage visually through the use of real-life images, video and relevant graphical or animated representations
- Are clear and devoid of jargon, with scenarios targeted to specific groups of employees, such as construction or office workers, to make the training content easy to read, comprehend and retain
- Are limited in duration, focusing only on critical information for greater convenience and to avoid information overload
- Are easy to use, with simple and intuitive navigation features to minimize barriers to new or returning users
- Offer accessible help, allowing learners to work independently, by providing easy access via phone or email to safety experts and support staff17

At UL, we are pioneering employee health and safety m-learning because we recognize the growing use of personal devices in work settings. A Gartner survey projects that 38 percent of companies globally will stop providing devices to their workers and shift
Our experience shows that transferring an existing PC-based training module to a mobile device will result in a poor user experience because mobile devices do not lend themselves to higher levels of interactivity.19 At the same time, dynamic workplaces make it increasingly important to support workers on the job in the “moment of need” with relevant, accessible and context-driven content. Specifically, today’s well-trained, skilled workforce requires learning as an ongoing performance support mechanism via always-accessible mobile devices. Our developing approach to m-learning is driven by four core principles:

- “Mobile” is not a device, but a way of making learning experiences portable.
- Mobile should not simply be a desktop made smaller; rather, it should be treated as a different medium that requires a different design approach.
- Simpler, lighter content is required to provide a better m-learning experience.
- M-learning is only one component of a comprehensive and effective learning program.

We will not try to replicate everything we do via e-learning with our m-learning offerings. Our experience shows that transferring an existing PC-based training module to a mobile device will result in a poor user experience because mobile devices do not lend themselves to higher levels of interactivity.19

IMPACT

Our approach has helped a variety of companies achieve substantial health and safety performance improvements. Included among these are the Coca-Cola Bottling Company Consolidated, United Water, AECOM and HOLT CAT, which achieved the following results:

Coca-Cola Bottling Company Consolidated

In January 2009, we implemented UL’s PureSafety Safety Management System, the Content Editing System (CES) and the Content Creation System (CCS) to provide training to the Coca-Cola Bottling Company’s 4,600 employees at 54 locations across 11 states, primarily in the southeastern U.S. The system has improved the training accountability of the management teams and is recognized by the Executive Safety Committee. Employees have responded positively to the quality of the lessons, the ease of use of the system and the flexibility of being able to access the system from any computer. In conjunction with other safety programs, the UL e-learning solution has produced nearly a 25 percent drop in workers’ compensation claims and a 40 percent drop in auto liability claims.20
United Water

United Water has been a leader in the water services industry for over 140 years, serving 5.7 million people in 21 states. With its acquisition of Earth Tech’s North American Contract Operations in 2008, United Water acquired a relationship with UL Workplace Health & Safety and its PureSafety software solution. Over the next four years, United Water would expand its use of UL’s employee training from 64 courses to 100, extending health and safety training to almost 60 percent of its 2,300 workers.21

AECOM

This global provider of professional technical and management support services makes extensive use of UL Workplace Health & Safety’s online training library and its content development team to design custom courses. To date, UL and AECOM have jointly developed eight e-lessons. AECOM’s training encompasses both awareness and performance-level components. Awareness training, primarily using UL courses, is designed to provide employees with basic regulatory compliance information along with general hazard recognition and mitigation skills. AECOM also uses performance training that is delivered in the classroom to teach specific hazard mitigation and life-saving skills. For these classes, learners are required to physically demonstrate their capabilities to earn related certifications. Together, these programs helped AECOM reduce OSHA-recordable incidents by 10 percent and injury-related work days by 52 percent in 2011 and 2012.22

HOLT CAT

For this authorized Caterpillar heavy equipment and engine dealer with 1,800 employees in Texas, we implemented UL’s PureSafety Safety Management System, including custom course content creation, incident management tools, access to a library of more than 700 course titles (including many in Spanish) and course completion and exam tracking capabilities. In the four years following the implementation, the company’s injury incidence rate dropped by almost two-thirds. HOLT CAT management believes that the greatest benefit, however, is employee buy-in for safety principles and long-term behavioral changes. According to Noe Cisneros, HOLT CAT director of safety, security, and environmental culture: “We now have 1,800 safety practitioners who can speak intelligently about the different types of exposures we face. They can articulate specific issues affecting their roles in the company, model their behavior and apply what they have learned in day-to-day operations.”23

We believe that our cutting-edge approach to employee health and safety training — combining foundational e-learning and ubiquitous m-learning to offer interactive content as part of a blended, needs-based learning ecosystem — provides the most effective worker training and gives companies the best set of tools to build a strong safety culture.
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SOURCES


7. Ibid.

8. Ibid.


11. Ibid.


WORKPLACE HEALTH & SAFETY ARTICLES

LEADING INDICATORS

SCORECARD

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UNIFYING HEALTH AND SAFETY MANAGEMENT

CULTURE

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