

Flexible e-learning is leading a revolution in the way we train our engineers

Forward-thinking organisations are using flexible learning solutions to lower training time and cost, while ensuring technical staff develop the skills necessary to lead the business forward.

In today's competitive market, successful engineering businesses understand that continuous learning is critical for success. In response, a shift away from traditional classroom-based training towards more flexible solutions has begun – a move being led by international organisations, which are reported to be 50 per cent more likely to use e-learning solutions than those based in one location¹.

The 2016-17 Learning Benchmark Report from Towards Maturity¹ highlights an increase in the use of learning technologies, with e-learning and live online learning seeing the highest rise (88 and 89 per cent respectively). Furthermore, it predicts that in the next two years there will be even more of a shift away from face-to-face training, citing that the use of virtual classrooms, for example, will rise from 39 to 69 per cent.

Personalisation is key

Today's learners want more personalised opportunities; for example, 91 per cent of staff like to learn at their own pace¹. With e-learning's adaptability to support individual learning styles and needs it's the perfect solution, as learners can choose to engage with a variety of interactive content formats, accessing training when and where they like.

"The most obvious benefit is how flexible e-learning can be," highlights Vio Krajacic, Learning and Development Manager for Bechtel's Global Infrastructure Business. "Online classes can be taken or retaken anytime, anywhere, depending on the employees availability.



E-LEARNING HAS SOME GREAT BENEFITS PARTICULARLY IN THE AREAS OF TECHNICAL AND FUNCTIONAL LEARNING.

Oonagh McPhillips, Head of Organisational Development, Ricardo

THE MOST OBVIOUS BENEFIT IS HOW FLEXIBLE THE LEARNING IS. ONLINE CLASSES CAN BE TAKEN OR RETAKEN ANYTIME, ANYWHERE, DEPENDING ON THE EMPLOYEE'S AVAILABILITY. IT REDUCES THE COST OF LEARNING AS EMPLOYEES AND FACILITATORS DON'T NEED TO TRAVEL.

Vio Krajacic, Learning and Development Manager for Bechtel's Global Infrastructure Business

Saving time and money

"It reduces the cost of learning as employees and facilitators don't need to travel – as an international company it's particularly useful for our employees in remote locations, or where we must be mindful of travel time and cost.

"But an unexpected benefit has been the cultural mix we've achieved in virtual classes," she adds. "We've had participants joining from every continent, bringing different cultures, types of projects and experiences. Participants have enjoyed the diversity of challenges and lessons learnt."

Certain topics are being seen as particularly befitting to e-learning, particularly IT, professional and industry-specific skills², as well as compliance training, with 68 per cent of businesses using technology to support mandated training programmes¹.

Develop specialist engineering skill sets

E-learning is particularly well suited for the engineering sector, helping technical staff to develop the specialist skills they need to be at the top of their field. Many engineering firms are now using e-learning to cover core engineering principles, allowing them to complement this with more company-focused in-house courses.

"Covering the core knowledge via e-learning allows us more freedom to focus our live events on specific areas where we want to put forward a business-specific perspective on designing or project approaches etc," highlights Paul Tymkow, Director of Learning and Knowledge at Hoare Lea. "A great benefit from e-learning is

THE BIGGER HORIZON IS THAT PEOPLE HAVE TO WORK TOWARDS UNDERSTANDING THEIR BREADTH OF LEARNING NEEDS ON THE ONE SIDE, AND THE MODES OF POTENTIAL E-LEARNING DELIVERY ON THE OTHER AND TO SEE THE EXTENT THEIR NEEDS CAN BE MET BY E-LEARNING.

Paul Tymkow, Director of Learning and Knowledge, Hoare Lea



that we can cover routine, standardised training on e-learning, but also some of the core engineering principles, such as engineering design," he adds.

Technical e-learning resources

A huge variety of flexible learning tools are now available to businesses, including everything from open education resources such as YouTube through to custom-made e-learning solutions. To support the engineering sector specifically, the Institution of Engineering and Technology (IET) has developed an e-learning solution of its own: the IET Academy.

Offering organisations access to high quality 'anytime, anywhere' technical and professional training, the IET Academy covers a broad range of engineering disciplines and provides trusted training content developed in partnership with leading UK universities and industry organisations on specific and often complex engineering subjects.

E-learning should now be a part of all forward-thinking organisations learning and development strategies. A blended approach to learning will help organisations to support the development of their technical employees in a way that suits them best, allowing companies to cover core competences while opening up the opportunity to develop focused training around company-specific objectives.

CASE STUDIES

A look at some of the ways engineering firms are beginning to embrace the e-learning revolution...

Bechtel

Bechtel has fully embraced flexible learning. For more than 10 years the organisation has been offering online courses through its 'Bechtel University' recently adding new virtual, live classes to its L&D offering. This year it is working on its first massive open online courses (MOOC), which has the advantage of being able to accommodate very large groups of participants.

"Almost half of all Bechtel learning is done online," highlights Vio Krajacic, Learning and Development Manager for Bechtel's Global Infrastructure Business. "In terms of our courses, which are 'live' instructor-led, approximately 20 per cent are done virtually and we're aiming to increase this figure to 30 per cent by the end of the year.

"Currently, most of our project management tier II courses are delivered virtually," she continues. "Frequently, we deliver the course with two facilitators in separate locations, along with a host in another location, with up to 30 participants at a time representing each of Bechtel's global business units, from six continents across the globe. Additionally, the participants take the courses at their project locations, minimising time away from project work."



Ricardo

Ricardo currently works with e-learning conservatively, with less than five per cent of business training undertaken online. It currently focuses on using e-learning for compliance and project management training, however, the organisation is interested in engaging with online programmes offering engineering and technical training.

One example of the company's use of online training has been the sharing of its 'lunch and learn' events, where short training courses, held in-house over lunch breaks, are recorded and shared online.

"We run a minimum of one lunch and learn per month, where subject matter experts from across the business deliver 60-90 minute long talks on a specific topic or project," explains Oonagh McPhillips, Head of Organisational Development. "We have a room for the event, bring in lunch for the physical attendees and then many others join remotely via Skype.

The sessions are recorded but originally we weren't sure of the value of doing so. However, we started posting them on our learning management system and discovered that it was brilliant for our overseas staff, particularly those in the US or Japan working in different time zones. Many employees would watch these, or download them as podcasts to listen to later.

We also found that staff would discuss the events with colleagues, leading to more people going onto the system later to watch them," she adds.

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Vio Krajacic, Learning and Development Manager for Bechtel's Global Infrastructure Business

Hoare Lea

Hoare Lea first began to look into e-learning roughly ten years ago when approached by the Chartered Institution of Building Services Engineers (CIBSE) to become part of a steering group for its online learning system. Having provided comments on the shape, form and content of the system, it was developed by CIBSE and now used by the company.

The organisation also records the majority of its in-house training events and puts the material on its intranet's 'learning realms'; online training zones focused on IPD and CPD. More recently, it has begun developing a rich media online training platform.

"We're recording 90 per cent of our events and putting together content that will include the slides from the event, handout materials and other relevant information," highlights Paul Tymkow, Director of Learning and Knowledge.

Tymkow is aware of the growing number of resources out there and also plans to look into the external solutions open to the company.

"We know that there's a lot of proprietary material out there we're yet to explore and see what might be useful for us. We plan to take a strategic approach into the breadth of our learning needs, look at which might be best addressed from an e-learning point of view and which from a live view."



I THINK FLEXIBILITY IS ALL IMPORTANT. IT'S IMPORTANT THE STAFF HAVE THE ABILITY TO GO BACK AND LOOK AGAIN OVER TRAINING, TO DIP IN AND OUT OF LEARNING IN ORDER TO REINFORCE AND REMIND YOURSELF OF THE TOPICS COVERED.

Paul Tymkow, Director of Learning and Knowledge, Hoare Lea

The IET Academy is an e-learning solution to meet companies' training and development objectives, tailored for engineers at all career levels. The Institution of Engineering and Technology (IET), Europe's largest professional engineering institution, has developed a wide range of technical and professional courses in partnership with some of the UK's leading universities and industry organisations, to ensure the highest standard in future engineering e-learning and development.

If you would like to learn more about the IET Academy please get in touch on academy@theiet.org or visit www.theiet.org/academy



The IET is an authoritative and trusted source of Essential Engineering Intelligence®.

¹Unlocking Potential: 2016-17 Learning Benchmark Report from Towards Maturity

²Docebo eLearning Market Trends and Forecast 2017-2021

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