

Online learning has come a long way since the late 1990s. As **Paul Tyrrell** explains, it is now just as likely to embrace concepts from games and other digital media as it is from traditional education

**H**ow many times have you been required to learn something from printed matter, library research or lecturing? Chances are, your time would have been better spent online. Whether you access public-domain material on the internet or the resources of a single organisation on its intranet, the information you will find is likely to be far more up-to-date than anything available in hard copy.

In its simplest form, e-learning refers to nothing more than the use of electronics to deliver knowledge efficiently, and the computer network is by far the most efficient delivery system invented. An online learning programme could consist of nothing more than regular e-mails sent to all the staff in an organisation – it could announce, for example, important changes in industry regulations, best practice or company policy, and provide links to further information. However, online learning is most effective when it is interactive; that is, when it tailors the learning experience to the user based on their inputs.

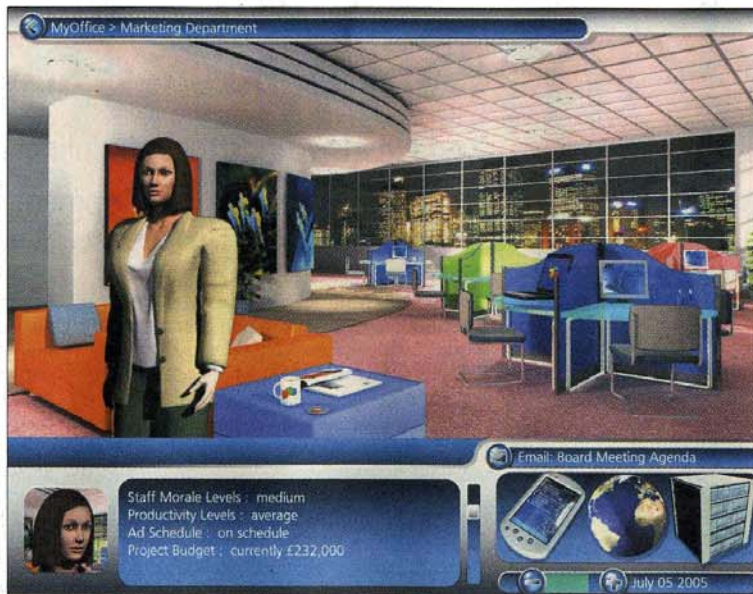
Continuous assessment makes the learning experience not only more engaging but also “auditable”. In organisations where staff are required to complete an online learning programme in a specific subject area, the software can notify the relevant training or HR manager of an individual’s progress and even highlight weaknesses that should be revisited.

Many organisations now use online learning applications to carry out health and safety inductions for new employees. Indeed, compliance is a key driver for the whole online learning industry, as interactive software provides a highly cost-effective way to ensure staff remain aware of complex regulatory environments. Increasingly, learning systems aimed at compliance issues are either linked to online resources or are themselves fully online, so that they can be updated instantly in line with changes in legislation or best practice.

These trends were behind the set-up in 2003 of Zensis, a UK company whose online learning products are aimed at the global life sciences market, and whose clients include AstraZeneca, Wyeth and Pharmion. Zensis offers training in subjects such as multinational drug development legislation, good manufacturing processes in drug products and vaccine registration. Its modules are continuously updated online and can be linked to a client’s learning management systems to provide an audit trail or alert training managers to the progress of individual users.

“One of the largest clinical research organisations in the world recommends that staff receive at least 60 hours of regulatory training every year,” says CEO Simon Burgess. “Clearly, not many individuals have that kind of time available in their working lives. And numerous studies have shown that users prefer to obtain immediate access to bite-sized chunks of training or so called ‘nano-training’, on demand. This just-in-time (JIT) training eliminates the waste associated with ploughing through an entire course for one critical piece of information. Some companies have found the cost of JIT online training is approximately 10 per cent of the cost of instructor-led classroom training.”

Jane Knight, founder of an independent UK consultancy called “The e-learning Centre”, agrees: “There has certainly been a move in recent years



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everyone has the latest information or is working on the latest version of a document. It also enables teams to develop their own ontology for project-specific information – and, by association, the most efficient way of doing things.

Public websites designed to facilitate social networking, such as Friendster and Myspace, are also being emulated by organisations – social structures have always given rise to commercial opportunities, and networking technologies mean they can be leveraged much more effectively. For example, a company called Socialtext combines features of wikis and blogs to “form groups flexibly, and build lightweight structure on the fly, as part of getting their job done – without needing design or coding skills.” Users of this open-source technology include Dresdner Kleinwort Wasserstein and Kodak.

Nevertheless, e-learning for the individual still has its place, with learning games and simulations at the technological cutting edge. “The younger, so-called ‘Digital Generation’ has grown up with highly interactive computer games and needs similar stimulation in learning materials,” suggests Jane Knight in her excellent “Guide to E-learning”, published and continuously updated at [www.e-learningcentre.co.uk](http://www.e-learningcentre.co.uk). She suggests e-learning games can be particularly helpful in communicating material that would otherwise be boring or difficult to understand.

Simulations, by contrast, are used to train people in an authentic way, where learning on the job could be highly risky or costly. They are especially popular in areas where role-playing is important, such as negotiating skills. For example, Learning Beans, from PIXELearning, allows companies to create relevant business scenarios based on their own environment and circumstances.

A leading producer of this type of software is STT Global, whose products are typically used to train users on enterprise systems such as SAP, PeopleSoft and Siebel. STT creates bespoke simulations by “recording” the way a trained individual interacts with a business application and then using the relevant screen views and procedures to create an interactive lesson.

Personal, handheld technology is already acting as a delivery system for e-learning – for example, many organisations have systems that enable field workers to access a company database remotely via a mobile phone and refresh their memory on procedures or specific technologies. Indeed, the use of mobile phones in e-learning has its own nickname, “m-learning”. As phones become more advanced, so the opportunities for m-learning will increase, with interactive applications available for download to flash memory or streamed via 3G. The ability to pinpoint a phone’s position could also be used to link content to location.

However, no matter how good your e-learning technology, it may not be appropriate in all situations. At e-learning, a UK consultancy that advocates a balanced approach to training with both e-learning and traditional teaching methods, managing director Chris Horseman points out: “If we teach you how to be more assertive online without any classroom support, you will end up with a range of strategies and skills, but you’ll have to be very brave to use them in a room full of angry people.”

## The junction between games and learning

towards rapid e-learning, comprised of small 15-20 minute chunks rather than the monolithic courses we used to see,” she says. “Accordingly, there has also been a move towards technologies that support this type of learning, especially in the workplace.”

Podcasts and weblogs are two technologies that have proliferated in response to our on-demand culture – chiefly in the areas of entertainment and amateur journalism, but increasingly in e-learning.

A podcast is simply a digital audio recording suitable for playback on a portable electronic device. It removes the need for lecturers and students to be in the same place at the same time. Indeed, a recording can be made on one side of the world and distributed quickly as an e-mail attachment. Equally, it allows the user to learn at his convenience – by listening to his iPod during a commute, for example.

A weblog, or “blog” is an online journal that can be edited and updated by individuals or like-minded groups. In recent years, it has proven its value as a knowledge delivery system in the public domain, with many blogs responding faster than traditional media to both general news and industry-specific developments. The technology is not instantaneously interactive in the same way as software purpose-built for online learning, but it does allow readers to publish addenda to specific items of content, thereby refining the information it provides.

In large organisations, blogs have proven particularly useful in disseminating advice and warnings from one side of the organisation to the other, reducing duplication of research and leveraging intellectual property.

Other, more advanced methods of internet-based collaborative learning include the “wiki”, an application that enables a website to be edited by any of its visitors. The term is derived from a Hawaiian term meaning quick, fast or informal. The technology has been embraced by public websites, such as Wikipedia, the online encyclopedia, which is particularly informative on modern cultural phenomena that would be unlikely to get a mention in reference books.

Many organisations have used wikis on their intranets in recent years, typically to assist with project management or build databases for technical and procedural information. The simplicity of a wiki system means that even non-technical personnel can contribute to the sites it builds. Therefore, it can make group e-mails a thing of the past – if a new development needs to be disseminated throughout a project team, an individual can simply edit the relevant wiki on the intranet.

A wiki helps to remove doubts about whether

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