

The many faces of e-learning

By Clive Shepherd, independent e-learning consultant

As I write this article just before Christmas 2007, I find myself in a new part-time role as chair of the eLearning Network (eLN), an organisation that, in its current guise and formerly as The Association for Computer-Based Training (TACT), has been in existence now for twenty years. As a result, I have decided to devote this piece to a review of how e-learning has developed over the past twenty years and how well it is adapting to the extraordinary changes which we are currently witnessing in the ways we communicate and share information.

E-learning, as it is most commonly employed in corporations, is designed according to a long-standing tradition that goes back to the 1970s, long before the Internet, mobile communications and social networking. I would characterise traditional e-learning like this:

- used on a just-in-case basis;
- hard-wired in relatively large chunks;
- primarily expository;
- relatively unintelligent;
- designed using a simple tell-and-test model;
- desktop PC-centred;
- content-focused;
- interactive (in the sense of interacting with the content);
- self-paced;
- used on a self-study basis;
- packaged as formal courses;
- highly-engineered, ideally to win awards;
- intended for use on a stand-alone basis;
- and marginalised within the organisation.

I didn't choose these words to poke fun at traditional e-learning. Many of these characteristics are highly desirable in the right circumstances. But e-learning doesn't have to be like this. It could be this and much more. So why would we want it to be more? Well ...

- because a lot of people still find e-learning excruciatingly boring (according to SkillSoft's 2007 benchmark study *The Future of Learning*, 43% of respondents were less than complimentary about their training);
- and e-learning as it stands has a relatively narrow range of applications, in many cases just IT training and compliance (this when, according to the same SkillSoft survey, 64% said they had to carry out tasks when they were lacking in the necessary skills, and 66% said they could do a better job if they had more training);
- because we want e-learning to be more integrated into our overall learning and development strategies;

- and we want to bring the whole l&d community with us - to ensure they all have a role and are, as a result, committed to the change;
- and because it really could be much more effective in delivering learning and, as a result, improving performance.

I'm going to take the list of traditional e-learning characteristics above, look at them one by one and try to work out what alternatives we have. Are you ready?

Just-in-case or just-in-time

E-learning can be used on a just-in-case basis, but it can also be deployed **just-in-time**.

Of course there are circumstances, particularly when we're learning a completely new skill or we start in a new job, when we need to put time aside and set about obtaining the foundation skills and knowledge that will be critical to our future success. Equally, there are many more occasions when, in the course of our normal work, we find ourselves unable to solve a current problem, short of the necessary know-how, and keen to find some information that we can apply straight away.

Just-in-time learning, or 'performance support' as it is often called, can be accomplished face-to-face, over the telephone, using print media or online. Concentrating on the latter for now, options include electronic job aids, libraries of online books, short self-study modules and networking systems that allow employees to find and ask the appropriate experts.

According to the SkillSoft survey, 'being able to get at information as and when I need it' was respondents' number 1 preference. In the *Towards Maturity* survey conducted in 2007 by e-Skills UK, it was found that those employers which had achieved the biggest business impact from e-learning provided their employees with electronic job aids and access to e-books.

Hard-wired or modular

E-learning can be hard-wired in relatively large chunks. It can also be **modular**.

Hard-wiring content is a trainer-centred activity in a culture that increasingly demands a learner-centred focus. By creating e-learning materials in small chunks, you increase the range of contexts in which they can be deployed, including just-in-time access and use as 'sparks' in collaborative online activities. The materials become more digestible, more flexible and more learner-centred. In the SkillSoft survey, the ability to learn in bite-sized pieces, was respondents' number 4 preference.

Expository or discovery

E-learning can be primarily expository. It can also be **discovery-based**.

People do not resist change, but they do resist having change thrust upon them. Teachers and trainers must be mindful of this phenomenon, because in the end all learning is change. The good news is that, when a person gains an insight or an understanding through their own efforts, there is no resistance to overcome and the learning will be deeper. Carl Rogers once said that 'nothing worth learning can be taught', which is probably overstating the point, but emphasises the importance of guided discovery as a strategy for addressing more complex learning requirements.

Simulations, scenarios and games allow for safe practice without risk to life, limb and self-esteem. They encourage experimentation and reflection in an environment in which mistakes really don't matter - in fact they're welcome. No-one is suggesting (probably not even Carl Rogers) that discovery-based learning is the right strategy to apply for novices, but it will help employees to develop higher order skills, a better understanding of complex principles and processes; it might also influence a shift in attitudes.

Dumb or intelligent

E-learning can be relatively dumb. It can also be **intelligent**.

By and large, the discipline of artificial intelligence failed to deliver on its promise. Unfortunately, with its demise, we have seen little or no progress in the degree to which e-learning materials are personalised around the unique characteristics of individual learners. We're still at one size fits all stage.

Computers are capable of delivering highly adaptive, personalised learning, but in this respect we've hardly begun. It does not take rocket science to maintain a digital profile of each learner, in the same a teacher does, and to use that information in simple ways: to point them to the material that is the most relevant, to suggest material that would remedy any problems they are encountering, to point the learner to next steps. Amazon does this, without an enormous amount of coding, so why not e-learning developers?

Now I know there is a less complex option and that is simply to allow the learner the maximum amount of choice, to do whatever they want, however they want. And choice is a wonderful thing, but only to the extent that the learner has any idea of what it is that they don't know.

Tell-and-test or try-and-see

E-learning can be simple tell-and-test. It can also be **try-and-see**.

Most e-learning is deductive in its format, taking the learner from the general to the specific. Deductive learning insults the learner by assuming they have no existing knowledge. It then insults them further by assessing their learner by asking them to retrieve information that has is still in short-term memory.

Inductive learning, on the other hand, leads the learner from specific cases towards the general. It is more motivating because it builds on prior knowledge and includes that important element of

discovery. Inductive e-learning is more conversational in tone, using exploratory questions and short cases to create a dialogue between author and learner that's similar to the interaction that you'd encounter in a face-to-face relationship with an expert instructor. E-learning authors may require some encouraging to adopt this approach, but this an effort well worth taking.

Desktop or mobile

E-learning can be designed for use only on desktop PCs. It can also be **mobile**.

The growth in mobile technology has been even more dramatic than that of PCs and the Internet, witness the fact that while one billion people in the world have access to the Internet, three billion have mobile phones. As phones, cameras, media players and PDAs become ever more indistinguishable and bandwidth increases through 3G and beyond, mobile devices provide an unmissable opportunity for those organisations whose employees live life on the move. Mobile learning materials might be short and simple, in the form of podcasts, videos, PowerPoints and reference guides, but they are no worse for that.

Content or context

E-learning can be content-focused. It can also be **context-focused**.

Content - facts, rules, principles and concepts and so on - are really hard to learn. If you're lucky they may find their place on a permanent basis in semantic memory, but this is likely to require significant rehearsal. On the other hand, context, in the form of examples, stories and real-world experience, can be stored in episodic memory almost effortlessly.

Learners crave relevance, things that they can relate to. Unfortunately, subject matter experts, who provide the main source for much e-learning content, are not clued up on this issue and will only provide you with their stories and examples if you specifically ask for them. Most designers don't press the issue and the e-learning ends up as dry as a bone.

To emphasise the point, in the e-Skills survey, job-related assignments were cited by learners as by far the most useful way of making their learning stick. In the same survey, only **45%** of respondents felt the e-learning they received was directly relevant to their jobs and that they were able to quickly put into practice what they learned. The same percentage felt e-learning had made a positive impact on their performance - what happened to the other **65%**?

Interactive or passive

E-learning can be interactive. It can also be **passive**.

Historically, e-learning designers would never have dreamed of putting out materials that weren't laden with interactions; that's because the focus was on developing instructional experiences, which is after all what you would expect instructional designers to do.

But learning materials really don't have to be interactive - I've never encountered a person who can't claim to have learned from a book, a radio programme, a film or a TV documentary. More and more organisations are realising that so-called 'passive' materials, such as PDFs, blogs, web pages, YouTube movies, narrated PowerPoints and podcasts, can form an important part of a holistic approach to organisational learning. That's because interaction does not have to be hard-wired into all components in a blended solution - learners can initiate their own interactivity or respond to stimuli presented in alternative ways, perhaps through forums or in live online sessions.

Self-paced or live

E-learning can be self-paced. It can also be **live**.

Self-pacing is a highly-valued characteristic of traditional e-learning, but we wouldn't want all aspects of our lives - let alone our learning - to be asynchronous. Live events facilitate social interaction between learners, they bridge distances, they achieve results more quickly and they permit all sorts of activities (not least the dreaded role-play) which are simply not possible asynchronously.

According to recent surveys by the ASTD and Training Magazine, some 10% of all formal training in the USA takes place synchronously, using web conferencing technology (sometimes referred to as 'virtual classrooms'). The UK, while not suffering the same geographic constraints as the USA, is catching up (the e-Skills survey predicted a 33% growth in use of virtual classrooms over the next three years). Live online events can be relatively low-fi, using simple chat rooms and instant messaging, progressing through the use of webcams and voice-over internet protocol (VOIP), to the fully interactive environments found in virtual classrooms. And this technology is versatile in that it can accommodate all forms of learning interaction, from one-to-ones to small group workshops to webinars.

Self-study or collaborative

E-learning can be self-study. It can also be **collaborative**.

Self-study is certainly flexible but for the majority of learners, it is not going to constitute a preferred option for anything more than a few hours of study. The longer or more complex the requirement, the more learners need interaction with tutors or coaches and with their peers. Collaboration certainly increases delivery cost but it also significantly increases completion rates and levels of enjoyment. In the e-Skills survey, two of the largest predicted growth areas over the next three years were the provision of tutor support (+28%) and online collaboration between learners (+24%). The survey also found that those organisations experiencing the greatest impact from e-learning were those who made the most use of collaboration.

Formal or informal

E-learning can be packaged into formal courses. It can also be **informal**.

At least **80%** of what we learn does not originate from the classroom, e-learning courses or any other types of formal training. Much of what we learn occurs at our own initiative, through informal interactions with our peers, or on the basis of our work experiences.

With our increasing dependence on online connectivity, much of this informal learning takes place online, through web searching, reference to intranet-based resources and social networking. To the extent that you regard any of this as e-learning, then it can now be claimed that e-learning is much more significant as a contributor to workplace learning than the classroom.

In the e-Skills survey, informal learning appeared on the radar of **79%** of organisations. Generally, the more opportunities organisations offer their employees, the greater the impact. Interestingly, **80%** of learners were either currently using technology to share knowledge with others or were interested in doing so if the opportunity arose. Remember, 'Nobody knows everything and everybody knows something.'

Award-winning or good enough

E-learning can be award-winning. It can also be simply **good enough**.

When you have a large audience, a lead time measurable in months and a sizeable budget then you can probably afford the luxury of formal e-learning development using the less-than-flexible ADDIE process (Analysis, Design, Development, Implementation and Evaluation) and a team of professionals at your disposal. Most training requirements fail to meet these criteria because they're addressed at hundreds of people, not thousands; they're needed next week and with a meagre budget. Until recently, if you suggested e-learning in situations like these you'd be laughed at. Not now, because rapid tools and rapid processes provide a valuable alternative, whether you do the job in-house or use one of the new breed of rapid developers. Given that, according to Clark Quinn, most e-learning is under-designed and over-produced, you can expect reasonable returns from rapid e-learning. You may not win an award but you may just get the job done.

Stand-alone or blended

E-learning can be used on a stand-alone basis. It can also be **blended**.

Believe it or not, computers can't do everything. They're auditory and visual, but they're not really kinaesthetic (only a small percentage of the population want to give them a hug). They connect us with people who're distant from us, but they don't provide the richness of communication that can be obtained face-to-face. They can connect us to information that's relevant to our work, but only for a minority do they represent an authentic work environment.

Blended learning combines media and social contexts. It does this to exploit the advantages of individual approaches (e-learning, the classroom, one-to-one instruction, etc.) while minimising the limitations. Blended learning is not a compromise: used appropriately it produces better results more efficiently and that's an outcome that's worth working for.

Marginalised or pervasive

E-learning can be marginalised within the organisation. It can also be **pervasive**.

When e-learning is used in the broad variety of ways that we've discussed here it becomes pervasive in an organisation - perhaps almost invisible. It involves l&d professionals of all sorts; not just designers, but coaches and instructors. It supports employees in all aspects of their work, whether that's reflecting on everyday work experiences, responding to problems on a just-in-time basis, or developing to take on future responsibilities. It's driven from the top-down to meet organisational needs for performance and from the bottom-up to respond to the desire of all employees to do the best job they can.

Perhaps if I was to ask again in ten years time, what words we would choose to characterise e-learning (on the unlikely basis that we're still using that term), then just maybe some of these would make the top ten: just-in-time, modular, discovery-based, intelligent, try-and-see, mobile, context-focused, passive, live, collaborative, informal, good enough, blended, pervasive. Let's hope so.