

How to Implement Successful e-learning

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How to Implement Successful e-learning

“Using a simple model to explain what factors encourage learners to use e-learning, Kevin Lovell takes a look at how organisations can ensure their e-learning initiatives are successful”

Introduction

In the late 1990s, e-learning was the subject of much hype. John Chambers, CEO of Cisco Systems was famously quoted as saying “Education over the internet is going to be so big it will make email look like a rounding error”. Nearly ten years later, the 2006 CIPD Annual Learning and Development report reveals that only a quarter of L&D professionals believe e-learning has significantly altered their learning offerings and only 1% believe e-learning is the most effective way to learn. The impact of e-learning is not what Chambers predicted.

So why is the adoption so slow, despite the many advances which have supported the effectiveness and growth of e-learning?

From a content authoring perspective we have better tools which have enabled rapid development and we have honed our instructional design techniques. On the IT front, network bandwidths that dogged many a hopeful e-learning project have been substantially improved, also broadband internet is now widely available. L&D teams have begun to recognise that applying the ‘rules’ for classroom training to e-learning (intentionally or otherwise) doesn’t work – we now acknowledge the value of informal dipping-in to e-learning on a just-in-time basis, as opposed to completing an entire course within a fixed timeframe.

The fact is we are still playing cultural catch-up with e-learning. E-learning is a spin-off from the internet – a technology which developed at an unprecedented rate. The US Department of Commerce compared the time taken for a new innovation to be adopted by the first 50 million users: radio took 38 years; the PC 16 years; television 13 years; but the internet took just 4 years. In a few short years we

evolved a technological innovation that turned traditional models of training and development upside-down. The L&D community found itself with a whole new toolset which it often found threatening, felt it should be using, yet didn't fully understand how to use it. And if we're honest, we are still grappling with it.

Fundamentally, I believe we need to understand what makes learners engage in e-learning with enthusiasm (since there are undoubtedly occasions when this occurs) and what makes them give up before achieving their learning goals, or perhaps not even begin to use it.

The e-learning rollercoaster

Drawing on formal research and anecdotal experience, I have devised the 'e-learning rollercoaster' model to describe the interplay between the factors which make e-learning successful – or not.

Figure 1 illustrates the e-learning rollercoaster model, showing an instance of successful learning. The model comprises three factors: Personal, Environmental and Learning which we will explain briefly and go into more detail later.

Personal factors relate to an individual's knowledge, skills and attitudes which will help them be successful with e-learning; the more advantageous these factors, the higher the initial start point and the greater the potential for successfully achieving the learning goal.

Environmental factors are the organisational and physical climate in which the e-learning takes place. This may represent a potential barrier to the individual using e-learning: success at this stage depends upon whether environmental factors outweigh personal factors, or does the strength of an individual's personal factors give them sufficient 'momentum' to overcome any environmental difficulties.

Finally the **learning** factors represent the quality of the learning itself: whether the learning is intrinsically effective and sufficiently easy to use. Effective and rewarding learning feels like a downhill slope to a learner as they race towards their learning goal. However, dull learning that is hard to use, and poorly supported, feels like an uphill struggle and the individual may give up before completing it.

Figure 1 shows a successful e-learning rollercoaster profile: personal factors outweigh the environmental, and the downward slope leading to the learning goal indicates an effective learning pedagogy. Other figures show unsuccessful profiles where the learning goal is not achieved: Figure 2, where the environmental factors present an insurmountable barrier to the individual, even though the learning itself is effective; and Figure 3, where poorly designed learning leads to failure (note that some individuals might still succeed if their personal factors were high enough to propel them up the learning slope).

Figure 1: The e-learning rollercoaster, successful learning

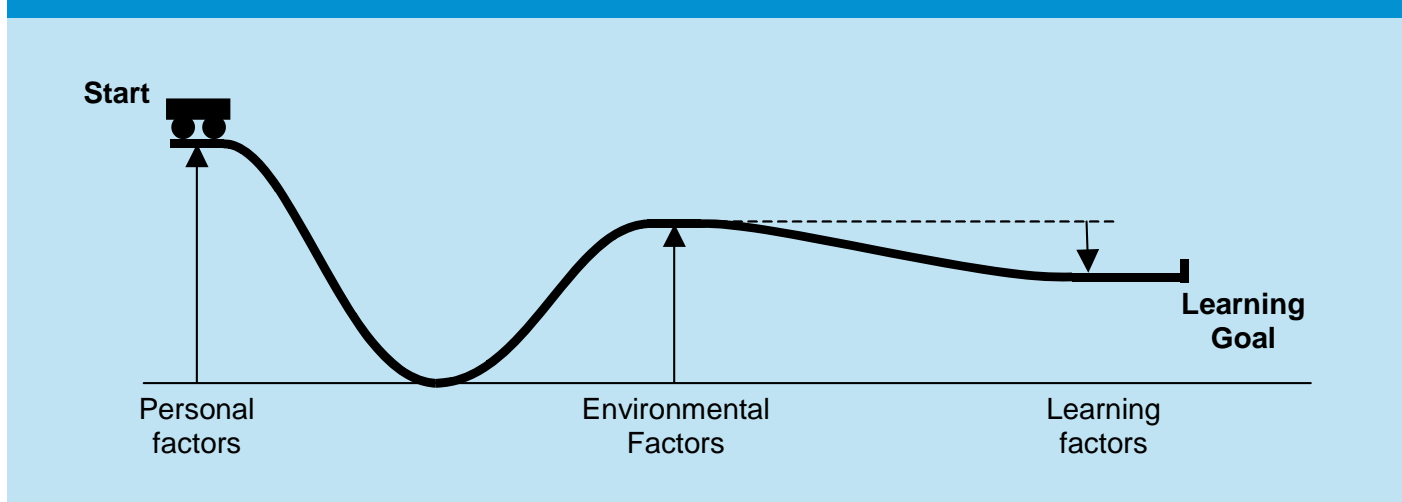
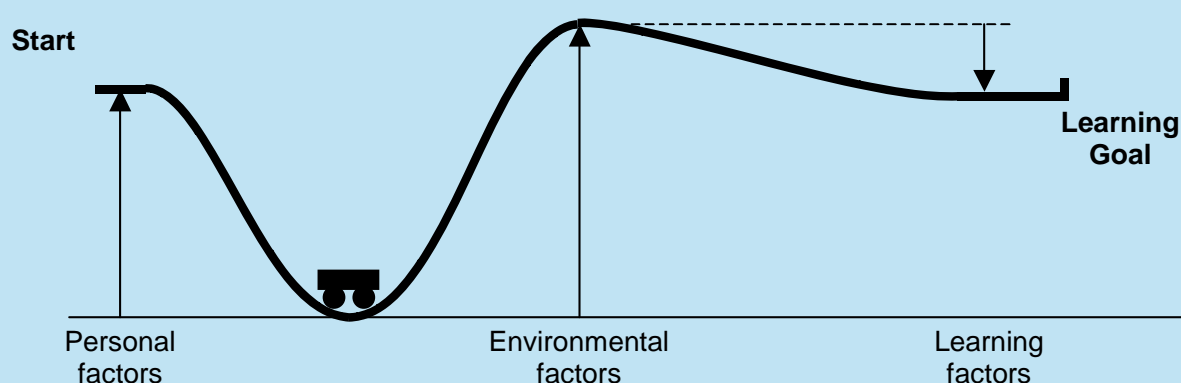


Figure 2: Unsuccessful learning - environmental barrier outweighs personal factors



The model reflects the independence but also the interrelation between the three factors: how, for example you might implement first class learning materials but the initiative could still fail due to an adverse environment. Note also that weak learning materials might still be successful if there are strong personal factors in the target audience, combined with a conducive environment. Of course, in practice such measurements are impossible to make when planning an e-learning initiative – all we can do is try to influence the various factors in the right direction.

Now let's look at each of the three factors in more detail, with a view to understanding how we can influence the design of an e-learning implementation to increase the chances of success.

Personal factors

Just over half of the respondents to the CIPD 2005 Annual Training and Development survey said their organisations had used e-learning, yet e-learning still only accounted for around 10% of the total training time. Consequently, it is still true to say that any training programme that includes e-learning is likely to encounter a significant proportion of new or inexperienced e-learners.

These personal factors reflect the attributes which are important in achieving the transition from a learner who is used to (and expecting) trainer-led classroom training, to a self-directed learner using technology. I have identified five such factors:

- **Motivation.** Because e-learning relies upon learners taking responsibility for their own learning, its success relies heavily on the strength of the individual's desire to learn. A key lever to enhance motivation in adults is an awareness of their own learning needs: once a learning need is acknowledged, adults invariably become much more self-propelling in terms of identifying their own learning goals and the means of achieving them. Organisations, and line managers in particular, have an important role to play in communicating the business needs, relating it to the skill or competence of the individual, then helping the individual to assess their skill or competence against that required by the business: any shortfall represents a learning or development need.
- **Personal organisation.** E-learning places far greater demands upon an individual's time management skills than classroom based training. Learning in a noisy office is subject to many interruptions: the ability to divert phones, use quiet periods, create space in one's schedule for e-learning, and become generally more opportunistic in finding the time to learn can be decisive in whether e-learning works for an individual. What works for one person might be quite different to what works for another: some people require long periods without interruption, others are happy to snatch five minutes and break off at a moment's notice; some may be able to divert phones or ask colleagues to field calls while they learn, others may not be in such a position. Whatever the issues, organisations need to manage the change to e-learning. Part of this is to empower their

staff to change their behaviour, and help define the new bounds for acceptable behaviour (this comes under the cultural environment described later).

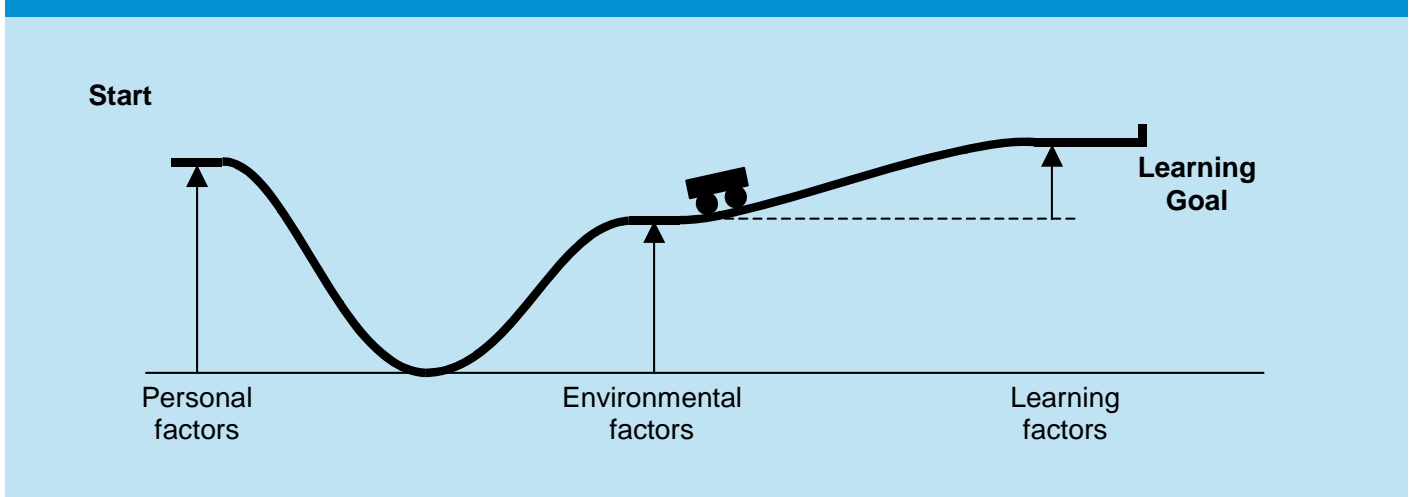
E-learning places far greater demands upon an individual's time management skills than classroom based training

- **IT skills.** One would expect this to be a crucial factor and yes, it is important: however my research shows that a high level of IT skills is not such a determinant factor. E-learning does require a basic 'entry level' of IT skill, but provided the learner can log on, use a mouse and find their way around a keyboard, their success has far more to do with their motivation to learn than their depth of IT skills.
- **Past experience of e-learning.** First impressions do count. Research by ASTD and The Masie Centre (If We Build It, Will They Come?) showed that the take-up of e-learning is heavily influenced by learners' first experiences of e-learning: if good they are very willing to use it again; if bad, future take-up is severely reduced. It's clear that a good first experience is vital, not just for the immediate training project at hand, but also for the ones that will follow it.

- **Accessibility to other forms of training.** There is evidence to suggest that if familiar forms of training are easily available, as an alternative to e-learning, then learners without past e-learning experience will invariably choose the familiar option. The more easily accessible e-learning can be made in comparison to the alternatives, the greater the chances they will use it. Perhaps not such a great influence as the factors mentioned above, but it can be significant for learners in small, remote locations where classroom training is not readily available.

There has been an interesting debate about the extent to which age is a factor in the acceptance of e-learning. My research indicated that older learners, despite having much lower IT skills, achieved far more than their younger colleagues. Post learning interviews revealed that the reason was motivation. The learning subject matter was IT-related: those with lower IT skills acknowledged their learning need and enthusiastically engaged with the e-learning (compared to a classroom, e-learning also allowed them to learn at their own pace without the intimidation, as they saw it, of other more able delegates). Meanwhile those with higher IT skills did not have such a strong learning need, so naturally ceased the learning once they realised there was little in it for them. It was just coincidence that in general younger learners had better IT skills.

Figure 3: Unsuccessful learning - ineffective learning combined with environmental factors outweighs personal factors



Environmental factors

These factors are concerned with whether the learner will use, or even be able to use the e-learning offered. They represent a potential barrier to the use of e-learning, and are considered relative to the personal factors. For example, two learners may be in the same office, doing the same job, with the same line manager (and so have the same environmental factors), yet one may complete the e-learning and the other won't, because the first had more advantageous personal factors (for example, greater motivation). Again, I would identify four contributory factors:

- **Cultural environment.** Is the cultural environment where the learning takes place supportive of e-learning? Are learners empowered to take steps to manage their learning effectively? Is management supportive of staff learning in the workplace (or other designated places)? I'm talking about adjusting the norms of acceptable workplace conduct to accommodate e-learning. Examples like staff knowing to avoid disturbing colleagues whom they know are e-learning, and the e-learners knowing that it's reasonable to expect, say, a 30 to 60 minute interruption-free timeslot now and again for e-learning self development. The details will vary according to what's appropriate for each organisation, but the principle is about creating an e-learning friendly culture.
- **Management support.** Following on from the cultural environment, management support is also a strong influencer. My research has shown that e-learners receiving line management support performed significantly better than those who did not. This support may come in many guises: ring-fencing appropriate time for e-learning; making an effort to secure the necessary resources; offering use of their (quiet) office at certain times for e-learning; or helping them to get started – the common theme is that the support is genuine and tangible.

However, management support is required at all levels, from the board down. Because of the way e-learning differs so much from traditional models of training, the culture change required to fully embrace e-learning is significant. Clearly it won't happen overnight, but lack of support (and certainly resistance) will slow the process down and reduce the chances of success.

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- **Physical environment.** As you would expect, the physical nature of the place of learning makes a difference, though perhaps not as much as you might expect. Whilst a quiet, pleasant atmosphere with space is desirable, e-learners can perform surprisingly well despite noisy, cramped offices, shared desks and frequent interruptions. This would indicate that strong personal motivation is capable of overriding an adverse physical environment, but also note that personal motivation is itself influenced by the cultural environment: once again my evidence shows that the 'soft' people factors carry more weight than the 'hard' equipment factors.
- **IT infrastructure and access.** Having said that, we do come to a factor which really can make or break an e-learning project. There absolutely must be an adequate IT infrastructure: enough PCs to allow free access to e-learning; hardware that can support acceptable performance; access to the e-learning that is not unduly complex or subject to breakdowns. Learners will suffer some inconvenience in getting to the e-learning but if, after two or three attempts, they can't get to it, all but the very keen ones will give up. In terms of access, keep it simple: remove as many logins and passwords as possible; keep all interfaces intuitive; and in case of problems make it very easy to access support. If you can make the support proactive (for example, if a learner hasn't logged on within five days of registering, call them to find out if there's a problem), so much the better.

In summary, my findings lead me to the conclusion that provided the physical environment and IT infrastructure do not pre-sent insurmountable barriers, it is the 'soft' factors

like the cultural environment and management support (which in turn strengthen personal motivation) that determine whether e-learning is successful.

Learning factors

Finally we consider how the nature of the learning itself influences the likelihood of success of an e-learning initiative. As you might expect, this majors on the learning products and associated services, but it also reintroduces some personal factors. This reflects the importance of the interaction between the learning and the learner, which is so vital in the achievement of the learning objectives.

- **Quality of the courseware.** There are many attributes to good quality courseware. It needs to be engaging and interactive with a variety of types of interaction (not just repetitive page turning). The course content must be relevant to the role the learner performs, otherwise they will lose interest, also any terminology used and tasks included in the course must be authentic. Can the learner take a pre-assessment test, which eliminates content they already know (few things irritate learners like making them wade through masses of unnecessary material)? Finally, does the courseware give the learner feedback on their work: does it test understanding (both knowledge and skill as appropriate); do any tests give feedback on the right or wrong answers; and does it allow them to track their progress? Not all of these features may be necessary (or feasible) for every learning programme, but this list has outlined areas for consideration.
- **Quality of the learning support.** Learners, particularly those new to e-learning, need to be supported: it's not enough to point them at e-learning courseware and assume the learning will happen. They need an introduction to e-learning (if they haven't used it before), then answers to questions they have on the course, and for higher order learning the opportunity for exchanges or collaborations between learners.

Whatever medium (or combination of mediums) is used to deliver the support, it needs to answer queries quickly and effectively, be available whenever learners are learning, offer access to an expert tutor, offer access to a wide range of relevant information to help answer

questions or solve problems, and promote learner-learner exchanges and collaboration. Adult learning theorists are agreed that exchanges and in particular collaboration are important to effective learning, and that this becomes especially important as you move from learning practical skills and processes to softer skills involving human interaction and complex judgement (at which point e-learning probably ceases to be an effective learning medium). However, numerous studies also show that such virtual interactivity only occurs when it becomes integral to the learning.

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Support can make the difference between a learner dropping out or completing e-learning, since it has the potential to re-motivate a learner. Just as customer service activities have the potential to turn a dissatisfied customer into an unexpectedly delighted one, e-learning support has a similar potential to boost a learner's motivation level. My experience of learner support is that most learners see their question as a major problem, so they are pessimistic about getting their question answered. If you can answer their question (and do it fast) you exceed their expectations and also boost their confidence in the whole e-learning concept. As an added bonus, you may also have added an element of human contact – something which many e-learners miss, compared with face to face training.

- **User confidence in using the support.** Will the learners fully use the various support channels to ask questions? In asking questions, learners are exposing their perceived weaknesses to the trainer and anyone else who's listening (such questions are invariably begin with "I know this is a silly question, but ..."). Depending on how comfortable they feel about exposing a weakness to the audience present, they may or may not ask the question. E-learning support through distance communications such as bulletin boards and live chat can be quite threatening to learners who are unfamiliar

with this technology, because they do not know who will see their question. Unless they are confident, rather than risk exposing their weakness to an unknown audience, they simply will not use the facility. Therefore two strategies are relevant to ensuring the support facilities will be used: first, use technologies the learners are familiar with (e.g. telephone); second, offer training and guidance on unfamiliar support technologies, so they understand how it works and who sees or hears what is said or typed.

I would also add a fourth factor, [Learning style](#), which is a personal characteristic, though important to the effectiveness of the learning-learner combination. My research is insufficient to comment in detail on this point, however we must acknowledge that personal learning styles vary, and the design of courseware and learning support needs to accommodate a range of learning styles.

Summary

When implementing e-learning it's all too easy to focus on the IT aspects of the programme: issues of bandwidth, PC performance, which Learning Management System to choose etc. all loom large in the equation. By comparison, the less tangible human aspects invariably fall by the wayside. I hope this paper has demonstrated the risks of ignoring the human factors.

When it comes to the chances of success for e-learning, personal motivation outweighs IT skills, and the cultural environment is more important than the physical environment. To ignore the human factors is to place serious risk upon the chances of success for the programme.

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