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“What’s in it for me?” – Getting Learning from e-Learning

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INTRODUCTION

Information and communication technologies (ICT) are increasingly being exploited to support teaching and learning in higher education. Ostensibly, this is driven by an attempt to provide more flexible approaches to teaching and learning and to cater for a more diverse range of students. However, it has been fuelled primarily by the need for educational institutions to increase student numbers substantially without a proportionate growth in expenditure. Higher education institutions have invested heavily in software and hardware systems for e-learning. However, *in reality*, disappointment is common because the *potential* benefits of e-learning are rarely witnessed by learners and teachers.

Many e-learning policies and strategies have been technology-driven, concentrating on creating the technological infrastructure, providing communications systems and building collections of digital resources. Professional development has concentrated on developing teachers’ technical skills in working with ICT. As a result, ICT has been used mainly to supplement existing teaching practices rather than having any transformative effect. Both teachers and learners ask “What’s in it for me - what are the benefits to be gained from the time and effort expended?” This chapter explores why e-Learning needs to be considered as more than just a delivery mechanism if it is to be effective.

WHAT IS E-LEARNING? WHAT IS IT ALL ABOUT?

Although the term ‘e-Learning’ is used widely throughout the education and training sectors, it is employed in a very imprecise way to describe a wide variety of teaching and learning interactions and situations. The term has been applied to short instructional sequences, such as ‘How to use ...’ through to long-term postgraduate or post-experience activities for updating and refreshing professional practice. The only common characteristics are (a) that there is some form of educational intention and (b) that it involves the use of information and communication technologies (ICT), whether stand-alone or networked. In the context of UK post-school education, e-Learning was recently defined and described as “learning facilitated and supported through the use of information and communications technology ... e-Learning can cover a spectrum of activities from supported learning, to blended learning (the combination of traditional and e-learning practices) to learning that is delivered entirely on-line” (JISC, 2004, p. 10).

With such minimal requirements, the term can be used to describe activities involving many different teaching approaches and a wide range of contexts. So, e-Learning is not a single educational approach with an identifiable set of characteristics; it is just a means by which teaching and learning can be

conducted. This entails the application of technology to educational processes and there is a substantial body of evidence amassed over a long period of time demonstrating that in any educational situation it is not the technology *in itself*, but what teachers and learners choose to do with it that is of primary importance for the educational outcomes.

Despite rapid developments over the last few decades in the nature of technologies themselves and increasing access to ICT facilities throughout the world, research and evaluation studies continue to offer the same conclusions. Comparative studies of various media technologies applied to education normally discover 'no significant difference'. Key findings from two reviews of research on the effectiveness of educational technologies are quoted below: they are remarkably similar.

Schramm (1977) examined research conducted over several decades and found little evidence to suggest that any particular medium or technology could, in or of itself, account for enhancing learning outcomes. Rather, he affirmed "a common report among experimenters is that they find more variance within than between media – meaning that learning seems to be affected more by what is delivered than by the delivery system" (p. 273).

More than 20 years later, a review of existing research on distance education methods and technologies for the Institute for Higher Education Policy in the USA concluded that "many of the results seem to indicate that technology is not nearly as important as other factors, such as learning tasks, learner characteristics, student motivation, and the instructor" (Phipps and Merisotis, 1999, p. 8).

So, a better understanding of the nature of e-Learning can be achieved by examining what teachers and learners *actually do* with ICT, rather than by focussing on the technologies involved.

WHAT DOES E-LEARNING OFFER?

E-Learning can take place in campus-based institutions, where it is often combined (or *blended*) with other activities involving groups of learners. Learners can also engage in e-Learning in other settings – at home, at their place of work or while travelling between locations. Increasingly, there is a blurring of the former distinctions between

- full-time and part-time learners;
- 'school leavers', 'mature entrants' and 'lifelong learners';
- studying 'on-campus' or 'at a distance';
- 'work-based learning', 'professional development' and 'community learning'.

For a growing number of post-school learners, studying is not their *primary* concern. Many are in part-time or full-time employment and have domestic responsibilities. Studying has to be fitted into their busy lives.

E-Learning can introduce flexibility in terms of the time and the location at which learning activities are undertaken. It can also enable learners to work at the pace and in a manner that *they* find most appropriate. However, these and other advantages claimed for e-Learning are not new: they can equally well be applied to other forms of education designed for independent learners. Although the term 'distance education' is sometimes used to describe the application of technologies to extend classroom-based instruction to learners in remote locations, this represents only one form of distance education. Teachers and learners can be separated both in time and in place. In numerous parts of the world distance education has transformed educational practices and processes, enabling many thousands of people to learn independently rather than in campus-based locations.

However, studying independently requires learners to develop planning and self-management skills to maintain their own motivation, to set priorities and to focus on study tasks amidst a variety of competing demands (White, 2005). It also requires the educational processes to be made more explicit than in classroom-based contexts, because traditional teaching and learning relies upon tacit assumptions and informal communications to elucidate and clarify the *actual* nature and expectations of the curriculum. Students often learn more from their peers about what is really necessary to successfully complete a course than they do from the official documentation and formal staff-student contact sessions.

So, e-Learning can offer learners greater flexibility in terms of where and when they study. It might also provide them with choices in terms of the pace and breadth or depth of their study. For some, it might enable or facilitate participation in educational opportunities from which they would otherwise be excluded. For teachers, e-Learning has the potential to transform teaching practices, enabling them to enhance the variety and complexity of teaching/learning processes and transactions (Garrison and Anderson, 2000; Laurillard, 2002) and possibly to reach a more diverse range of students. Sadly, many teachers concentrate more on the technological tools than on the educational issues involved.

TEACHERS AND E-LEARNING

Grounds for disappointment

Although in many countries there has been a very significant investment in computing equipment and infrastructure to support teaching and learning, much disappointment has been expressed about the resulting impact on teaching and learning practices (e.g. Zemsky and Massy, 2004). Unfortunately, in many cases, teachers have adopted ICT simply as a *supplementary* delivery mechanism for their existing teaching – they have not considered how appropriate their practices are for a more diverse and distributed body of learners, nor how well they are preparing students to continue learning effectively in their careers and throughout their lives in knowledge-based societies.

When considering how ICT can be used to support post-school education, some teachers think primarily about *content* or *materials*. They see ICT in terms of its capacity to store and deliver teaching materials, or its potential for finding and

retrieving dispersed resources such as documents, data, pictures, etc. that have been created and 'published' by individuals or organisations located locally, nationally or internationally. Other teachers might think of ICT primarily in terms of the *communication* that it can facilitate and the *dialogue* that can be enabled – either synchronously or asynchronously. Of course, ICT can usually support both of these kinds of activities, but the particular perspective of any individual teacher is likely to be determined by a wide range of factors that are not directly related to the potential capabilities of the technology available. These will include the teacher's prior exposure to or experience of technologies for education; the academic culture of their discipline, department or institution; their existing conception of teaching and the related practices, etc.

Many of the professional development activities aimed at preparing teaching staff for the adoption of ICT have been technology-led. They provide instruction on how to use ICT systems and software, without considering the pedagogic and contextual factors that help inform *why* it might be appropriate and advantageous to use ICT.

Models and conceptions of teaching

Researchers have investigated the teaching approaches of professors and lecturers in higher education and their underlying conceptions and models of the teaching process (Kember & Kwan, 2000; Martin *et al.*, 2000; Trigwell *et al.*, 1999). Teaching tends to be conceptualised in terms of two broad categories; either as the *transmission of knowledge* or as the *facilitation of learning*. Those teachers who hold the first of these conceptions concentrate on conveying knowledge for students to assimilate and absorb. Their teaching practices emphasise presentational methods that provide students with the necessary knowledge, skills and procedures. In contrast, teachers whose focus is upon the facilitation of learning are much more likely to pay attention to the needs of individual learners, helping them to develop not only their understanding of the subject, but also their capacity to become autonomous or self-directed learners. The practices appropriate for such teachers are ones that guide learners as they actively share, explore, transform and construct their understanding.

When technology is used to mediate teaching and learning practices it does not, *in itself*, change the model of teaching. For example, delivering a lecture using ICT does not make it anything other than a lecture. It might make it accessible to learners in varying locations and at different times, but fundamentally it remains a lecture. Similarly, including opportunities for on-line group discussion within a course is unlikely to promote co-operative or collaborative working, particularly if the teaching adopts a largely transmissive approach and assessment is only of the products of individual students' work. Learners will gain little from group work and discussion other than the clarification of uncertain or misunderstood ideas or concepts. To achieve such an aim, the course would need to adopt an active, constructivist approach with ample opportunities for dialogue to take place. Group activities could be used to promote critical thinking through the exploration of multiple perspectives, or with problem solving and inquiry, or with developing inter-personal skills. In an e-learning context this would require opportunities for peer interaction, either face-to-face or through on-line communication (synchronous or asynchronous). It would also require the

assessment of collaborative *processes*, not just of the *product*. Of course, students would need to understand what they were doing these activities for, i.e. *why* they were expected to interact with their peers and *what learning benefits* they could derive from the process.

Case studies have revealed that some teachers in higher education have exploited the adoption of ICT and reduced contact hours as an opportunity to relinquish almost all responsibility for providing support to learners. They have interpreted the term 'student-centred learning' as meaning that students make all decisions about what, where, when and how they study in order to achieve the assessment requirements that are teacher-determined. Lea *et al.* (2003) found that students "expressed anxiety about an approach that lacked structure, guidance and support in the name of being student-centred" (p. 331). The poor experience for students reported by Lea and her colleagues suggests that the teachers concerned espoused a very *transmissive* model of teaching. ICT had enabled them to deposit all their teaching resources in an electronic repository, from which learners were expected to retrieve whatever they considered necessary for assessment purposes. The teachers had not considered how students were expected to develop effective and appropriate learning approaches and strategies.

'Scaffolding' (Bruner, 1985) is an essentially student-centred approach that is particularly important in any e-learning context. It is aimed at building upon an individual's existing understanding and skills in a constructive way. This metaphorical term has been used to describe interactional support and guidance provided by teachers to facilitate a learner's development and which enables them to perform at increasingly challenging levels. Scaffolding can be progressively withdrawn until the learner becomes sufficiently competent to act independently.

LEARNERS AND E-LEARNING

What are students' expectations of post-school education?

Most students have spent many years within an educational system that provides a social environment that is both place and time dependent, i.e. schools and colleges. They have learned the acceptable and effective modes of behaving in such settings, which usually require them to remain in a largely dependent condition – somebody else takes responsibility for *when* they attend, *what* teaching will take place and *how* it will be conducted. In classrooms, the teacher at the front of the class is the main source of instruction. Teacher-student interactions are normally initiated by the former, unless a learner is seeking clarification or assistance. Communication between learners is permissible only when sanctioned by the teacher.

So when learners enter higher education, they are accustomed to didactic – i.e. teacher-centred and classroom-based – instruction and few have any expectation that the learning context will be significantly different. Hardly any will have much experience of self-managed or self-directed learning, so they might discover a dissonance between their expectations and those of the academic staff. In a study of entrants to part-time higher education courses, Kember (2001) found

that novice students frequently held a set of beliefs about teaching and learning that could be labelled didactic/reproductive. The research discovered that

... students who commence higher education with didactic/reproductive beliefs can find the process difficult and even traumatic. They are uncomfortable with teaching approaches which do not correspond with their model of teachers presenting information to be passively absorbed by students. (p. 217)

They expressed a preference for lectures, were uncomfortable with discussion groups and had difficulties with assignments that asked for more than the reproduction of material. Students who have spent most of their lives as dependent learners will not *magically* turn into self-directed learners upon entering higher education, especially if they have limited contact with their teachers and more experienced students. New entrants' expectations of learning need to be explicitly explored and addressed if they are to adjust to the different demands and practices of post-school education. The transition can be particularly difficult for learners when e-learning forms the main (or the only) component of their tertiary education.

While many learners will be familiar with *operational* aspects of using ICT, they are less likely to have developed expertise in using technologies for educational purposes. Familiarity with using a Web search engine does not signify sophisticated information handling skills, just as e-mail use is insufficient grounding for participating in rigorous on-line debate and discussion. To what extent do teachers' and learners' have the same expectations of learning with ICT?

What are their approaches to studying?

Extensive research on how students undertake learning tasks has identified qualitatively distinct approaches which result in different levels of understanding. Marton and Säljö (1997) described these as *Surface* and *Deep* approaches to learning. Learners tend to focus their attention either on the text itself (i.e. *surface*) or on what the text is about (i.e. *deep*). While the intention of surface level processing is memorisation and reproduction, the intention of deep level processing is for meaning and understanding. It has been demonstrated that the outcomes from studying are related to a student's *conception of learning* and their *approach to study*. However, the approach adopted is not a fixed attribute of the learner – it tends to be context-dependent. So, a student's approach to a study task will be determined largely by their construal of the (often implicit) assessment requirements for the task. They adopt a surface approach if they feel their factual recall will be tested; or a deep approach if understanding will need to be demonstrated.

As assessment practices (or students' expectations of them) determine the learning approach adopted, it is vital that course assessment is suitable for the desired outcomes. In e-learning contexts, assessment methods such as multiple-choice quizzes can easily be overused, leading students to employ strategies that are inappropriate and ineffective for developing their understanding.

PEDAGOGY AS THE CRUCIAL DRIVER

While it is increasingly possible for learners to get access to digitised learning resources and materials (written words, sounds, pictures, etc.) and to communicate with other dispersed people (synchronously or asynchronously), those opportunities – in themselves – are not sufficient. While technologies can *enable* worthwhile learning to happen, they do not *cause* it to come about; it is teachers that drive (wittingly or unwittingly) what happens in the educational process, not the technology. However, it is taking some teachers a long time to realise that just because they deliver resources via ICT does not mean that quality learning will take place.

Learners' use of on-line resources

Research on students' actual use of electronic resources and on-line communication paints a very different picture from that envisaged by many designers of e-learning courses. In the UK, large sums of money have been spent on building collections of resources suitable for post-school teaching and learning and on developing systems for storing, retrieving and delivering suitable resources. Many of these initiatives have been driven by a 'collections-based' approach (Calverley and Shepard, 2003). The educational context and rationale for students' use of on-line resources ('user-focussed' strategies) have not been considered sufficiently, resulting in disappointing levels of access and use by learners (Rowley *et al.*, 2002). While many learners frequently search the Internet for information related to their studies, the dedicated electronic information systems for the higher education community were little used. Seeking information from the Web using a familiar search engine such as Google™ does not yield results from specialised databases and dedicated collections. Most students have not developed adequate *information literacy* skills to enable them "to locate, evaluate, and use effectively the needed information" (American Library Association, 1989, p.1)

Simply making resources available for students to use is not sufficient to ensure their uptake. It has been found that students' use of on-line resources is more closely related to the pedagogic design of courses and to assessment requirements, than to the increased availability of information sources and communication opportunities *per se* (Kirkwood, 2005; Kirkwood, 2006). Despite what many teachers would like to believe, assessment defines the *de facto* curriculum – when studying, learners actually give their time and attention to those aspects that they perceive to be necessary in order to pass their assignments and complete the course successfully (Kirkwood, 2003). Components of a course, including on-line resources, that are perceived to be integral and contribute to the achievement of core course and/or personal outcomes (i.e. are *constructively aligned* - Biggs, 1999) will get more attention than those that appear to be peripheral or optional. If students have insufficient time to study everything that is recommended, they must select what to omit – and whatever is not assessed is very likely to be ignored.

Learners' use of on-line tuition and discussion

Teachers frequently report low levels of student participation in on-line tuition and discussion activities. Sometimes participation is made compulsory (i.e. a necessary activity for successful course completion), but students still do not take part to the extent and in the manner expected. For example, Fung (2004) reported that her research of computer conferencing on a postgraduate distance education course found

... no evidence ... that any collaborative group learning had taken place among the students ... and the formation of a learning community was not observed. From this perspective, the intention of promoting collaborative learning among distance learners through on-line discussion was not really successful. (p. 147).

On-line communication can enable learners (particularly those who are not on-campus) to discuss and explore information, ideas, problems, strategies and so forth to develop mutual understanding and/or solutions. Further, on-line working can be used for task-focussed collaboration. However, it is unlikely that just making two-way communication available will be sufficient to achieve worthwhile teaching and learning outcomes, especially when it is just added on to an existing course intended for individual study (Fung, 2004). It will never replace informal exchanges that occur whenever students can meet face-to-face. Dialogue with other students must be an integral part of the e-learning design and connect with the pedagogy of the course. If, for example, team working and collaborative problem solving are important outcomes for a course, students will be totally unable to achieve these without participating in dialogue with their fellow students.

CONCLUSIONS

Learners will only make effective use of e-learning opportunities if they know *why* it will be of benefit and *how* it will help them achieve the assessed learning outcomes. Most adopt a form of cost-benefit analysis to decide whether or not a learning activity will aid their progress. Educators must ensure that those decisions are well-grounded by an understanding of the course outcomes. E-Learning is not simply a matter of delivery mechanisms: teachers need to reconsider the nature and circumstances of their learners, their subject and their pedagogic approach in order to *transform* their teaching and assessment activities to take advantage of the potential offered by e-learning.

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KEYWORDS

Pedagogical integration; Conceptions of teaching; Conceptions of learning; Approaches to study

BIOGRAPHICAL INFORMATION

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