

# E-learning in the UK: Perspectives from GEES practitioners

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## Abstract

This paper summarises the findings from a survey to establish the current use, re-use and development of e-learning materials by GEES practitioners based in universities in the UK. The research was funded and co-ordinated by the Higher Education Academy Subject Centre for Geography, Earth and Environmental Sciences. Motivations to develop e-learning materials in the GEES community primarily related to improvements in personal and teaching efficiency, but there were numerous barriers impeding the realisation of such benefits. Barriers included limited technical and pedagogic knowledge, a lack of significant departmental and institutional support, and concern over the time required to develop new materials. The subject specificity of e-learning materials was also found to be an obstacle to sharing and re-use.

## Introduction and context

This paper reports on a UK-wide survey of practitioners in the Geography, Earth and Environmental Sciences (GEES) relating to their experiences of e-learning as a teaching strategy. The paper has two main aims: firstly, to present a review of the use of e-learning approaches in the GEES disciplines in the UK; and secondly, to report on what support practitioners viewed as necessary to enhance their use of e-learning. The research is specifically focused on the UK and has been facilitated by the GEES Subject Centre.

At the UK level, there have been a number of initiatives within the higher education sector to promote e-learning as a means to empower and engage learners (Department for Education and Skills, 2005; HEFCE 2005). Universities in the UK are increasingly under pressure to 'do more with less'. In particular, an emphasis on teaching 'smarter' rather than 'harder' has emerged, which has highlighted e-learning, at least potentially, as an efficient teaching approach. Most, if not all, universities in the UK now have online material to support student learning, with many offering degrees, or at least specific elements of degrees, entirely online. Furthermore, the current generation of students entering University bring with them a wealth of online experiences and skills, being part of the modern day 'net generation' (Oblinger and Oblinger, 2005). It seems, therefore, that the trend towards e-learning and related initiatives in the UK, combined with increasingly technology-aware students, is creating a new set of expectations for technology to be part of teaching practice and the learner experience.

In this paper we define e-learning as "learning facilitated and supported through the use of ICT" (JISC, 2004, p.8). 'E-learning tools' can be defined as something you use to deliver course content, whilst 'e-learning resources' can be defined as the actual course materials.

The research presented in this paper compliments and supplements our previous research into the use of e-learning in the GEES disciplines. Two surveys in particular provide useful context for this paper (Fletcher, et al., 2007 and France, et al., 2004). The themes that can be drawn from these previous surveys are, in summary, as follows: 1) that academics in the

GEES disciplines require evidence that the time spent developing e-learning materials will derive tangible overall time savings and no loss in the quality of student learning; 2) that many academics have little or no experience of using e-learning technologies nor designing pedagogic strategies appropriate to that particular technology; and 3) that the level of support from universities for the development of e-learning materials is variable and uptake of e-learning approaches largely dependent upon the personal skills and interests of the academic. The research presented in this paper takes these themes and examines what support practitioners in the GEES disciplines in the UK would find beneficial.

The primary source of data presented in this paper was a questionnaire survey distributed to GEES academics in the UK. The survey consisted of 12 open questions and three closed questions. The questions were structured around the following themes:

- The rationale for and type of e-learning approaches used by practitioners
- The challenges of using e-learning experienced
- The support offered to practitioners for using e-learning in their teaching at various levels within their university
- The opportunities for and willingness to share e-learning materials with other practitioners
- The role that could be played by the GEES Subject Centre in supporting e-learning practice

The data have been analysed both quantitatively and qualitatively. All direct quotes from respondents have been anonymised in order to maintain assurances of confidentiality.

## Survey results

### *The rationale for and type of e-learning approaches used by practitioners*

The primary rationale for using e-learning could clearly be grouped into benefits for teachers and benefits for students. The use of e-learning was considered to be a response to the realities of modern higher education and a more diverse student population, with benefits for teachers being largely pragmatic rather than pedagogic. Examples of benefits included: accommodating increased student numbers; being able to deal with problems quickly through mass communications; being 'available' to students regardless of location (of either party); and providing a reduction to workload through avoiding frequently asked questions; and the provision of automated feedback within online assessment. The enhanced communication capacity was perceived as important, as "*students like it, especially when they can get a more personal (if online) response, rather than in a class discussion*". From a pedagogic perspective, it was commented that feedback from online exercises prior to a classroom session could inform the content and approach of the face-to-face teaching.

E-learning can "*maximise opportunities for offering teaching support to students who may be dispersed in time and place. It increases flexible delivery of teaching and learning, increases opportunities for collaborative working and groupwork, and widens accessibility*"

A secondary rationale for the adoption of e-learning techniques related to the preferences and interests of the academics involved. Many respondents demonstrated an interest in technology generally, which produced a willingness to apply it to teaching. However, there was a suggestion that respondents tended to see e-learning solutions to their practical problems, rather than more conventional alternatives, due to this prior interest in technology.

There was a general acknowledgement amongst respondents that e-learning is “*increasingly what learners expect to feature within their learning experience and resonates with their growing use of electronic media for interaction and communication*”. Benefits to students were much more pedagogic in their emphasis as the following quote illustrates:

*Without exception [e-learning packages] offer a committed teacher tools that are better suited to teaching and learning than chalk and talk. Indeed, I will go so far as to argue that web-delivery, with tutor support done properly, is, in many senses, better than face to face [teaching]. Mostly, this arises because the tools permit students to learn at their own pace and in a style that suits them (or at least with additional options). Even 'lecture notes on the web', an idea subjected to scorn by dedicated e-learning specialists are, in my view, a massive advance for many (for example, those with dyslexia or non-native language speakers).*

It was considered that the use of e-learning approaches facilitated active participation in lectures through reductions in pressure from note-taking, and through confidence derived from formative exercises prior to the classroom session. It was also thought that the use of e-learning accommodated different learning styles, helped to develop time management skills, gave students employability skills in terms of technological literacy, provided self directed learning opportunities, and was inclusive of disabilities and language barriers. It was noted that some students chose not to participate in the e-learning opportunities, which had the potential to create significant difficulties, as there was often little alternative non-technological support offered.

### **The challenges of using e-learning**

The main obstacle to using e-learning approaches was the investment of time required in learning how to use new software, to develop new materials, and to design appropriate pedagogic strategies. There was some scepticism over the actual time savings made through using e-learning approaches, with respondents feeling constrained by their own technical limitations and expectations and by the lack of recognition by their institution for the additional time required.

*I sometimes think that the time that is supposedly 'saved' by using e-learning is artificial/illusory.*

Challenges also related to student attitudes to e-learning, such as de-motivation through reduced personal contact, the potential for non-participation in the learning process, and the adoption of a “*passive 'entertain me' mentality*”, preferring the “*sage on stage*” learning method. It was also acknowledged that some students were “*technophobes*” or had “*techno-fear*” and would not engage with e-learning approaches. The increased opportunities for communication, however, were described as “*sometimes difficult to*

*control as expectations increase*”. More pragmatically, there were concerns related to the ownership of the content of e-learning approaches, copyright issues over material used in e-learning and the re-use of material elsewhere, and compatibility issues between different hardware and software.

### **The support offered to e-learning practitioners**

The main source of formal support for e-learning cited by respondents was within their own university, although informal support also came from their academic departments. The majority of respondents were ‘self-taught’, with early adopters of e-learning approaches often asked to run workshops for colleagues.

*Institutionally, my university is quite good in terms of support. But this is still only enough to get many people started... Support staff would need to be increased significantly, in order to increase the number of people regularly using and creating 'higher order' e-learning materials for their teaching.*

The GEES Subject Centre was also seen as providing support, although this tended to be through published articles, workshops and conferences, rather than practical support or training. Overall, there was more structured support at institutional level. However, a significant increase in departmental and institutional e-learning-dedicated support staff appeared to be needed.

### **The sharing of e-learning resources**

The electronic format of e-learning resources is what makes those resources convenient to share and adapt for re-use. Respondents felt that sharing and reuse would be particularly useful given the concerns over the time commitment required to create new e-learning materials. Indeed, one respondent commented that “*this is a vital step if e-learning is to realise its potential but it is not a trivial one*”. Scope for sharing materials “*both within and between institutions*” and “*developing materials collaboratively*” was considered as “*entirely possible*”, and widely recognised amongst respondents. In particular, it was considered that first year generic material was most suitable for sharing, but that as the focus of study became more specialist and specific to individual academics, opportunities for sharing and adaptation reduced. This was likened to generic problems with the transferability of teaching materials as “*the same problems apply as with paper-based learning resources. No textbook (or e-learning resource) ever quite captures the slant a particular lecturer wants to present*”. It was also acknowledged that most shared e-learning material would need to be adapted prior to its use in an alternative context.

Respondents were asked to consider how effective sharing and re-use of e-learning materials could be encouraged. A central resource base which would both develop new material and facilitate the organisation of shared materials was identified. This central base would need to manage copyright and ownership issues; acknowledge and reward resource developers; and provide a searchable database. More broadly, it was also noted that there may also be scope to ascertain the actual (as opposed to perceived) benefits of e-learning and promote successful practice in e-learning through staff development events. The GEES Subject Centre was cited as an obvious potential provider of these resources.

### **How could the GEES Subject Centre further support e-learning practice?**

Support from the GEES Subject Centre to develop and use e-learning teaching strategies was generally welcomed by respondents. The opportunity to discuss and exchange ideas with other practitioners was the primary source of support cited as potentially useful.

*I have learnt much more when I have had the opportunity to engage/meet with other practitioners and share experiences.*

Other potential mechanisms of support suggested included short practice guides, case studies of practice and 'good ideas', short training events, an online journal of good practice, an online discussion forum, and development of guidance on the issues of re-use and sharing for support staff.

The specific e-learning services that respondents considered the GEES Subject Centre well placed to provide included an image/video/animation bank (70%) (an image bank is currently under development at the Subject Centre), a shared learning resource repository (55%) (JORUM – a UK online repository of learning and teaching materials is now available), and a question bank (48%). There was consensus that “a good starting point would be lots of good quality shared images” and that centralisation may help alleviate some of the copyright issue concerns. However, it was commented that any resource bank “must be easy to search [and be] time efficient”; the host must be able to “guarantee the quality of the deposited material”; and the security of the resources must be considered, “especially question banks [in order] to prevent student access”. It is interesting to consider the extent to which existing search engines are providing this service already, albeit without access to material stored within university systems.

In terms of the reality of committing GEES Subject Centre resources to sharing and re-use, respondents were not entirely positive about whether it would be an effective use of resources. “Raw materials” such as video clips, images, animations, etc. would be welcomed, but it was thought that specific learning materials, for example, would become outdated very quickly and that in most instances it would be “better to start from scratch”.

### **Conclusion: Implications for the GEESs community**

In order to consider fully the implications of this research for the GEES community, the conclusions of the survey presented in this paper are incorporated into, and combined with, the conclusions arising from the previous surveys on e-learning use in the GEES disciplines in the UK, undertaken by the authors. The synthesis of conclusions suggests three main implications for the GEES community.

Firstly, it would appear that, at present, it is technological innovation that is driving the use of e-learning rather than a pedagogic rationale. This is a concern as, in the view of the authors and most of the relevant literature, e-learning, is a distinctive teaching approach with its own pedagogy (e.g. JISC, 2004). The specific pedagogic conditions and constraints of an e-learning approach need to be considered carefully before its adoption, and evidence from the research presented here suggests that this is not the case. The implication for the GEES community

is that the pedagogic considerations of e-learning require greater attention. This research has shown that a national body (in this case the GEES Subject Centre) would be well placed to deliver such support.

Secondly, there are significant barriers to the uptake of e-learning both for staff and students. In terms of staff barriers, time to produce or adapt materials is a key constraint. Many staff are concerned that they lack the skills and knowledge to develop appropriate and effective e-learning materials, both in terms of technology and pedagogy. There is a need to investigate opportunities to share and re-use e-learning resources and to facilitate their use or reuse in pedagogically appropriate ways. Student barriers (as perceived by academic staff) relate to the potentially de-motivating effect of learning something new, which in this case, is an e-learning process and the potential lack of skills of students to effectively participate in this process. Little research exists in relation to student attitude to e-learning in the GEES disciplines at present, but this requires further investigation in order to ascertain the validity of this concern.

Thirdly, there is the encouraging observation that support for e-learning within the GEES community is emerging at a variety of levels, including within specific academic groupings within universities, at institutional level, and nationally through the work of organisations such as the GEES Subject Centre in the UK. If e-learning is to play a serious role in educating future generations of GEES students, then this support must not only continue, but be enhanced further.

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