

E-learning in health sciences and practice - Where are we?

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Background

Commissioned by the Higher Education Academy Health Sciences and Practice Subject Centre (HEA HS&P), this research explored the implementation of electronically-delivered learning in health sciences across Higher Education Institutions (HEIs) in the UK. At the time the uptake of e-learning in the health sciences and practice field varied (Moule, 2007) for a variety of reasons, including the availability of resources, organisational strategy and commitment of staff (Gilchrist and Ward, 2006).

Aim

The project aimed to survey e-learning implementation in health sciences and practice disciplines throughout the UK in a two year study.

Methodology

National survey of e-learning implementation using an adapted tool developed by the Joint Information Systems Committee (JISC) (Managed Learning Environment Study survey tool (<http://www.mlestudy.ac.uk/>)). Descriptive statistics were analysed using SPSS vs 13. This was followed by case study visits to sites seen as either 'early' or 'late' adopters to collect data through interviews and focus groups, thematically analysed.

Sample

- Survey completed by n=25 (28%) departments/HEIs.
- Case study visits to nine HEIs involving 41 students and 35 staff.

Findings and discussion

Survey findings suggest that e-learning use is variable and affected by a number of factors such as funding, IT skill levels and support, demand and the role of local champions. The pre-dominant engagement is with instructivist learning approaches such as the provision of course information and web-resources (Table 1), managed through a virtual learning environment. Though some universities are exploring the use of new technologies to support pedagogy, e-mail and discussion board use are the mainstay of provision (Table 2). It is also interesting to note that development has been project based and relies on local champions given time to develop initiatives (Table 3). This project based approach adversely affects long term sustainability.

Case study data was analysed to reveal four key themes (Table 4) that suggest a number of factors at policy, institutional, department and individual levels affect the implementation of e-learning.

The study findings were used to develop guidance for e-learning implementation included in the final report that will be available on the HEA HS&P website (<http://www.health.heacademy.ac.uk/projects/miniprojects/completeproj.htm>).

Conclusions

There is an under-exploitation and under-development of technology to support e-learning in the sector. The 'newer' technologies such as mobile, Web 2.0, social networking are used in isolated cases only and some technologies, such as Second Life, with the potential to enhance learning for health sciences students weren't mentioned.

E-learning development is often linked to committed enthusiasts finding the time and energy to engage in new technologies. Given the scope and potential of e-learning it is important that the pace of development increases and spreads beyond institutional 'champions'. This can be facilitated through continued review and development of technologies that support student learning and the staff experience. To achieve this it is important that those factors facilitating and inhibiting development are explored and investments in development are appropriate.

Resourcing of development needs consideration and mechanisms are needed to facilitate the wider dissemination and sharing of learning from Centre of Excellence in Teaching and Learning (CETLs) and those HEIs engaged in more innovative and good practice. The HEA subject centres may have a role to play in this through means such as the Special Interest Group for E-learning (<http://www.health.heacademy.ac.uk/sig/e-learning/e-learning>), as might other bodies and groups such as the Council of Deans and Heads of UK University Faculties for Nursing and Health Professions.

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Table 1 Uses of e-learning applications

	Number	Percentage
Access to course material	25	100
Access to web based learning resources	25	100
Problem based learning	20	80
Peer support	19	76
e-Asseessment	17	68
Collaborative working	17	68
Assignment submission	17	68
Formative assessment	17	68
Access to multimedia resources, including simulations and games	15	60
e-Portfolio	14	56
Online student presentations (individual and group)	7	28
Learning design	7	28

Table 2 E-learning technologies used

	Number	Percentage
e-mail	24	96
Discussion boards	21	84
CD-ROMS	21	84
DVDs	20	80
Online videos and sound	16	64
Blogs	11	44
iPods	8	32
Wikis	7	28
Mobile phones	4	16
Other	4	16
SMS Texting	2	8

Table 3 Support for e-learning application development

	Number	Percentage
Project funding	17	68
Allowing academic staff development time	14	56
Funding as a service	13	52
Allowing support staff development time	10	40
Career enhancement	6	24
Contractual obligation / part of job specification	8	32

Table 4 Main themes from qualitative data

Theme	Sub-theme
Facilitating factors	Support of key leaders. Motivation from staff and students for use, planning implementation of e-learning, relevance of use as a support to learning, skilled support of local 'champions'. Availability of appropriate IT Training
Inhibiting factors	Unable to access computers in HEIs and clinical settings. Diversity of IT skills amongst staff and students. Lack of resources to support development. Staff and students reluctant to use technology.
Innovative technologies	Mobile technologies. Web 2.0 - wikis, blogs.
Pedagogy	Technology mainly providing a repository function. E-learning being used as a support function to existing style. Theory is instructivist, though some move to constructivism.

References

- Gilchrist, M., Ward, R. (2006) Facilitating access to online learning. In Glen, S., Moule, P. E-learning in nursing. Basingstoke:Palgrave. Chapter 6, 93-111.
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