

Higher Education institutions face a growing challenge to develop and adapt their provision to the circumstances of the 21st century, and to allow greater flexibility for today's large and diverse student body. In addition, there is the fast pace of change - including technological, political, social and economic - which impacts on higher education from the external environment. Taking into account these influences, Flexible Delivery has been interpreted in the widest possible sense, to encompass not only modes of study, but also methods of delivery, together with underpinning support and infrastructure.

GEES - specific resources

E-learning in Geography, Earth and Environmental Sciences (GEES)

<http://www.gees.ac.uk/projtheme/elearning/geesel.htm>

This page provides a selection of resources exploring the use of technology in GEES learning and teaching.

GeographyWeb project

www.colorado.edu/geography/extra/geogweb/geogweb.html

The GeographyWeb project at the University of Colorado has created internet-based instructional materials and course homepages for Geography departments.

Virtual Learning Environments in Geography, Earth and Environmental Sciences

<http://gees.ac.uk/events/2003/vle03/vleevent.htm#programme>

A series of downloadable (ppt) presentations from members of the GEES HE community, shown at the above event in 2003.

Selected papers and articles on e-learning within GEES

Cornelius, S., Medyckyj-Scott, D., Forrest, D., Williams, A. and Mackaness, W. (2008) 'The Virtual Placement: An Alternative to the Traditional Work Placement in the Geographical Sciences?', *Journal of Geography in Higher Education*, 32:2, pp287 — 302

Elsner, P. (2005) GIS teaching via distance learning experiences and lessons learned, *Planet*, issue 14, June 2005, pp. 28-29. <http://www.gees.ac.uk/pubs/planet/pl14/pe.pdf>

France, D. & Fletcher, S. (2007) E-learning in the UK: Perspectives from GEES practitioners, *Planet*, issue 18, June 2007, pp. 3-5. <http://www.gees.ac.uk/pubs/planet/pl18/df.pdf>

Hill, A. & Solem, M. (1999), Geography on the Web: changing the learning paradigm? *Journal of Geography*, vol. 98 (3), pp. 100-107.

Kankaarinta, I. and Masalin, T. (2001), Groupware: a dynamic internet tool for geography

and environmental education, in L. Houtsonen and M. Tammilehto (eds), *Proceedings of the IGU-CGE Helsinki Symposium on Innovative Practices in Geographical Education*, Department of Geography, University of Helsinki, pp. 115-120.

Lynch, K., Bednarz, B., Boxall, J., Chalmers, L., France, D. and Kesby, J. (2008) 'E-learning for Geography's Teaching and Learning Spaces', *Journal of Geography in Higher Education*, 32:1, pp. 135 – 149.

Newman, J. and Jones, R. (2008). E-Learning or a-Gimmick? Evaluating the use of rich media in Geography fieldwork. *Planet* 20, pp47-50. <http://gees.ac.uk/pubs/planet/p20/jn.pdf>

Nie, M. (2008). Podcasts to support student learning in the GEES subjects. *Planet* 20, pp56-59. <http://gees.ac.uk/pubs/planet/p20/mn.pdf>

Rich, D., Pitman, A. and Gosper, M. (2000) Integrated IT-based Geography teaching and learning: a Macquarie University case study, *Journal of Geography in Higher Education*, vol. 24 (1), pp. 109 -115.

Robertson, M. and Fluck, A. (2004), Capacity building in geographical education: strategic use of online technologies, *Geography*, vol. 89 (3), pp. 269-273.

Skinner, E. (2004) Using a Virtual Learning Environment (VLE) to create a community of learners studying people and place, *Planet*, issue 12, April 2004, pp. 10-12. <http://www.gees.ac.uk/pubs/planet/p12/es.pdf>

Solem, M. (2000), The virtual Geography department: assessing an agent of change in geography education, *Journal of Geography in Higher Education*, vol. 24 (3), pp. 353-364.

Shepherd, I.D.H. (1998), *Teaching and Learning Geography with Information and Communication Technologies*, Geography Discipline Network, Cheltenham.

Stott, T. & Huddart, D. (2005) Blended learning? Design and evaluation of a level 3 undergraduate fluvial geomorphology course, *Planet*, issue 15, December 2005, pp. 20-25. <http://www.gees.ac.uk/pubs/planet/p15/ts.pdf>

Turney, C., Robinson, D. & Lee, M. (2004) Bringing the mountain to the student: developing a fully integrated online volcano module, , *Planet*, issue 12, April 2004, pp. 12-16. <http://www.gees.ac.uk/pubs/planet/p12/ct.pdf>

Winterbottom, S. (2007) Virtual lecturing: Delivering lectures using screencasting and podcasting technology, *Planet*, issue 18, June 2007, pp. 6-8. <http://www.gees.ac.uk/pubs/planet/p18/sw.pdf>

Generic resources

Chickering, A.W. & Ehrmann, S.C. (1996) Implementing the Seven Principles: Technology as lever. *American Association for Higher Education Bulletin*. October 1996, pp. 3-6. Available at: <http://www.tltgroup.org/programs/seven.html>

Higher Education Funding Council for England HEFCE (2005) *E-learning strategy*. Available at: http://www.hefce.ac.uk/pubs/hefce/2005/05_12/

Littlejohn, A. (ed.) (2003) *Reusing Online Resources: a sustainable approach to e-learning* (London, Kogan Page) <http://www-jime.open.ac.uk/2003/1/index.html>
Introduction and commentary available online as a special issue of the *Journal of Interactive Media in Education*.

Rovai, A. & Jordan, B. (2004) Blended learning and a sense of community: a comparative analysis with traditional and fully online graduate courses, *International Review of Research in Open and Distance Learning*. <http://www.irrodl.org/index.php/irrodl/article/view/192/795>

Salmon, G. (2000) *E-moderating: The Key to Teaching and Learning Online* (London, Kogan Page)

Salmon, G. (2002) *E-tivities- The Key to Active Online Learning* (London, Kogan Page)

Walker, M. (2003) *Lessons in E-learning* (York, Higher Education Academy) Available at: http://www.heacademy.ac.uk/assets/York/documents/resources/resourcedatabase/id456_lessons_in_e-learning.pdf

Useful web pages

Computer-aided Assessment (CAA) Centre <http://www.caacentre.ac.uk/>
The CAA Centre project is no longer running, but their website still holds useful information and resources covering computer-aided assessment.

EDUCAUSE Learning Initiative - 7 Things You Should Know About...
<http://www.educause.edu/7495&bhcp=1>

This series provides concise information on emerging learning technologies and related practices. Each brief focuses on a single technology or practice and describes: What it is; How it works; Where it is going; Why it matters to teaching and learning. The numerous items in the series include (of particular interest to GEES) Location-Aware Applications; Lecture Capture; Geolocation; Second Life; Data Visualization; Haptics; Twitter; Digital Storytelling; Google Earth; Mapping Mashups; and Remote Instrumentation.

Embedding Learning Technologies (ELT) <http://www2.plymouth.ac.uk/ed/>

The materials and resources to support the embedding of learning technologies into learning and teaching practice as used by the University of Plymouth as a result of the EFFECTS project. Includes information on the nationally accredited ELT award within the SEDA professional framework for teachers in FE and HE.

Joint Information Systems Committee (JISC) - Effective Practice with e-Learning guide.

http://www.jisc.ac.uk/whatwedo/programmes/elearning_pedagogy/elp_practice.aspx

This guide is built around a sequence of 10 case studies illustrating practitioners' solutions to day-to-day challenges.

Learning Technology Dissemination Initiative <http://www.icbl.hw.ac.uk/ltdi/ltdi-pub.htm>

Includes:

- Harvey, J. (ed.) (1998) LTDI Evaluation Cook Book. Edinburgh: LTDI. Available from: <http://www.icbl.hw.ac.uk/ltdi/ltdi-pub.htm#Cookbook>
- Videoconferencing Case Studies
- Evaluation Studies
- BrITe Ideas (list of ideas of how IT can be used to enhance learning and teaching)
- AssessIT (A leaflet to assist academic staff in the use of learning technology to support assessment)
- Stoner, G. (ed.) (1996) Implementing Learning Technology. Edinburgh: LTDI
- UseIT (A leaflet covering issues and ideas relevant to people thinking about using CBL)

LTSN Generic Centre/ALT Starter Guides http://www.alt.ac.uk/alt_occasional.html

A series of starter guides addressing issues for new lecturers and learning technologists on how to use existing tools within their roles. Subjects covered include: using the WWW in learning and teaching; Virtual Learning Environments; Computer-mediated communication; using CAA to support student learning; evaluating learning technology resources.

LTSN Generic Centre e-Learning Series

http://www.heacademy.ac.uk/resources/detail/e-Learning_Series_Guides_1-5

These e-learning guides are the first set of guides on e-Learning aimed at specific audiences within UK higher education. They address issues that are key to senior managers, teachers, support staff, learning technologists, heads of department and students.

LTSN Generic Centre Learning Environments and Pedagogy (LEAP)

<http://search2.openobjects.com/kbroker/heaportal/heaportal/search/search.lsim?ha=1211&sr=0&sf=&nh=10&qt=leap&sm=0&cs=ISO-8859-1&mt=0>

The LEAP Project commissioned case studies from a wide range of institutions which look at how different pedagogies are being employed across different virtual learning environments (VLEs).

TechDis <http://www.techdis.ac.uk/>

TechDis aims to improve provision for disabled staff and students in higher and further education through the use of technology. Resources are available for staff in the form of databases and a helpdesk.

The Intute: Virtual Training Suite <http://www.vts.intute.ac.uk/>

The Intute: Virtual Training Suite provides free online tutorials to help students, lecturers and researchers how to get the best from the Web for education and research and to improve their Internet information literacy and IT skills.

The Students' Online Learning Experiences (SOLE) Project <http://www.sole.ilrt.org/>

The SOLE project undertook an independent evaluation of students' usage of virtual learning environments (VLEs) in higher and further education with the aim of drawing out the effectiveness of VLEs in supporting different subject areas, different national agendas (such as that of widening participation) and student learning in general.

Videoconferencing Cookbook <http://www.vide.net/cookbook/cookbook.en/>