

## LTSN-GEES Small Scale Learning and Teaching Projects 2001: 12 months on

Supporting good practice in learning and teaching is not only about sharing existing skills and resources, it is also about facilitating the development of new ones. At the end of July 2000, LTSN-GEES announced the first round of funding under its small-scale projects programme. The selection panel, consisting of the Subject Centre Director, Manager and the four Senior Advisors, then had the difficult task in December 2000 of choosing the few that could be funded out of the 17 excellent proposals submitted.

### The funding programme aimed to:

- Support curriculum developments and other innovations which will enhance the quality of the students' learning experience;
- Harness existing staff expertise and identify and encourage fresh talent;
- Offer opportunities for continuing professional development of teaching and support staff in the three disciplines;
- Disseminate good practice to the wider communities;
- Encourage collaboration and sharing of good practice between the three disciplines;
- Widen participation in the Subject Centre's work.

In the first year of project funding, LTSN-GEES provided a total of around £10,000 to support four learning and teaching development projects in the disciplines. These projects are now complete and their outputs are available for the communities' use. The projects were required to write brief final reports as articles for this publication, and these follow below.

**If you are interested in reviewing any of these outputs for our new Resource Database, please contact our Resource Co-ordinator, Yolande Knight (yknight@plymouth.ac.uk; Tel: 01752 233 560).**

*Please note that where appropriate, the outcomes and deliverables from all of these project outlined below will soon be made available to the GEES community through the LTSN-GEES resource database (see article on page 26).*

### Atmosphere, lithosphere, hydrosphere, biosphere: Cross-disciplinary virtual fieldwork

<http://www.brookes.ac.uk/bms/vfw/>

Roger Suthren, Allister Smith and Stewart Thompson (School of Biological and Molecular Sciences), David Elsmore, Adrian Parker and Simon Carr (School of Social Sciences and Law). All at Oxford Brookes University.

### Introduction

The aim of this LTSN-GEES funded project was to develop interdisciplinary virtual fieldwork (VFW) applicable to the whole HE community. At Oxford Brookes University, Geology, Geography and Environmental Sciences offer interdisciplinarity by provision of joint honours courses between all three disciplines, and by sharing key linking modules. Some of these modules include a fieldwork element, but there is considerable scope, through the use of virtual fieldwork, for students to be exposed to field settings of which they would not normally have first-hand experience. Whilst virtual fieldwork is no substitute for the 'real thing', it can make an important contribution to learning where real fieldwork is not possible for reasons of cost, disability or danger.

During this project, web-teaching and learning resources have been developed to deliver VFW across the disciplines of Geography, Geology and Environmental Sciences, by active collaboration between staff in all these areas. VFW is being integrated into specific modules, particularly

those which cross boundaries between the disciplines, for example: Oceanography; Sedimentary Systems; Glaciers & Glaciation; Quaternary Science.

The project has focused on field courses to areas in the UK and overseas in which project members have expertise. VFW has initially been developed to support and enhance existing courses at Oxford Brookes. However, all of the resources are available to be used by the UK Higher Education community, and the wider community, and may be accessed at: <http://www.brookes.ac.uk/bms/vfw/>

### Generic Templates

We have produced generic templates, which may be used by staff or students with little or no background in web authoring to develop new virtual field trips. A shell consisting of a simple set of locality pages linked to each other and to a field trip home page allows the addition of text and images in a word processing programme or html editor, to produce a virtual field trip quickly and effectively.

A Javascript routine allows the creation of scrolling panoramas by users with no programming expertise. This gives the user the ability to scroll panoramas within a web page, without the need for plug-ins. With a little more work, for which instructions are provided, the user can produce clickable panoramic image maps and Quicktime panoramas.

### Examples of Use

The use of the panoramas is exemplified in the **Oxford Rivers in Flood Virtual Field Trip (VFT)**. This is a virtual version of an existing field trip to examine the flood hazards presented by Oxford's rivers, and started as a printed 'Thematic Trail' written by Derek Elsom. The online version was originally developed for a geography module, and will soon be used in a first year environmental geology module. It uses scrolling panoramas taken at different times during recent flood events on the Thames and its tributaries.

In the **Physical Geography of the Brecon Beacons VFT**, students are introduced to various themes relating to the landscape evolution of the Brecon Beacons, and undertake a range of exercises to develop their understanding of how to interpret landscapes and sediments from different areas. It is intended for use as a basic study resource for students following courses in Geography, Physical Geography, and Geology. This VFT has been partly developed by a disabled, final year Geography student, and addresses issues of accessibility to field courses in mountainous areas. It is a good example of how student project and research work may be integrated with the development of web-based courseware.

The **Virtual Plant Community Sampling and Analysis VFT** uses 'virtual quadrats' to quantify the distribution of plants. The aim was to develop a simulated botanical field sampling exercise to demonstrate the use of MATCH, the widely used plant community identification programme. MATCH contains descriptions of hundreds of UK plant communities based on the main species present and their relative abundances. The descriptions provide a standard against which any field study may be compared to give a percentage similarity between the test sample and named MATCH communities. Past experience introducing students to the MATCH programme revealed several difficulties, starting with the problem of plant identification in the field, and then in preparing the data for analysis in MATCH.

This project uses chalk grassland, a widespread community which students encounter in local field studies. The species list and their respective relative frequencies as listed in MATCH were installed on the computer as the basis of the simulation sampling exercise. The exercise uses an iterative process of random number generation. The results of the five repeated iterations are imported into an Excel spreadsheet that can then be exported to MATCH for analysis and comparison with the standard community type listings.

Each plant species is associated with an image and web page including characteristics useful for its identification. To date the project has achieved the entry of the community listing and the programming of the random number generator to produce the test samples. Identification pages for each species have been included but these will need further standardisation of layout and information, and good pictures need to be included for some of the approximately 140 plant listings. The MATCH analysis programme still needs to be linked to the sampling exercise. In the future, the simulation will be extended to cover many more of the standard community types.

**The tropical-subtropical marine VFT** has focussed on the various modern environments of calcium carbonate-dominated sedimentation in the Florida Keys, and on the role of organisms and sedimentary processes in the formation and modification of these sediments. This project integrates field photographs (on land, and from boat and snorkelling trips), aerial photographs, remote-sensing images and topographic maps. This VFT will be used in interdisciplinary modules such as Oceanography, and a future new module, Sedimentary Systems. Further development on this theme will include reef VFTs in the US Virgin Islands and in Fiji. Interactivity has been introduced, using self-assessment quizzes built into the web pages.

### Project Evaluation

The group has met regularly to discuss and demonstrate developments and progress. This has proved to be a very useful cross-disciplinary forum within the University. The group will continue to develop the virtual field courses, funded by a Brookes Virtual pilot project. The evaluation of the effectiveness of the resources developed during the project has still to be carried out, and this will start next term, as we begin to use the new VFTs in our modules. As is our current practice, students will be actively involved in testing and evaluating course materials.

Please note that where appropriate, the outcomes and deliverables from all of these projects outlined below will soon be made available to the GEES community through the LTSN-GEES resource database (see article on page 26).

#### Reflective Learning in Geography, Earth and Environmental Sciences

**URL to be confirmed:** this will be made available via <http://www.gees.ac.uk/Projects/projs01.htm>

Project team: Margaret Harrison, Carolyn Roberts and Christopher Short, School of Environment, University of Gloucestershire

### Introduction

Recent developments in higher education, including the development of transferable skills, a learning outcomes approach to curriculum design, subject benchmarks and the introduction of personal development planning, have stressed in varying ways the importance of reflection in student learning. As a result, the LTSN-GEES funded project on reflective learning was both timely and relevant. The project sought to investigate the appropriateness and application of reflective learning in the GEES disciplines in HE institutions in the UK, to trial test a range of reflective learning approaches, and to produce an on-line guide to reflective learning.

### Questionnaire and Responses

A questionnaire was drafted, piloted, amended and dispatched to all LTSN-GEES departmental contacts early in 2001. The questionnaire consisted of a series of closed and open questions. Respondents were able to tick more than one box in most closed questions. A response rate of 29% was considered good, although one would clearly like to know what the other 71% thought. It is interesting to note that around 30% of all responses came from interdisciplinary/multidisciplinary GEES Departments/Schools.

Questionnaire results reveal that reflection occurs throughout undergraduate programmes but is seen as particularly important at Level III. A wide range of activities are used to promote reflection, ranging from work placement diaries, dissertation sessions, tutorials, fieldwork activities

and qualitative work. Analysis of the written responses to the open questions which asked about the relevance of reflective learning has been most enlightening and thought-provoking. The questionnaire itself generated some fervent responses; emotions ran high. Three respondents seemed to be passionately opposed to a study of reflective learning, while many respondents were obvious advocates of reflection and some 'wished' their colleagues would be as well. Knowing how to operate in a Department/School with diverse staff opinions is a challenge many academics face!

Several respondents did supply examples of good practice and some of these were used as the basis for workshops at the Time to Reflect conference on February 5th 2002 (reviewed by Hugh Rollinson in this issue of PLANET on page 31). Other examples will appear in the on-line guide soon to be made available.

### Trial test of reflective learning exercises

The University of Gloucestershire runs a modular degree scheme and the trial test of reflective learning exercises took place in a Level II module on research methods. Seventeen programmes of study are offered in the School of Environment, including Environmental Science, Geology, Geography, Environmental Management, Community Development, Heritage Management, Landscape Architecture and Garden Design. The module: EL202 *Investigative Methods* is taken by all major and joint students studying in the School. Students take two units within the module, each unit running for six weeks. Pilots of various reflective learning exercises occurred in Semester Two of 2000/2001; in fact some units already incorporated reflection; others had to be developed. This development opened up a healthy debate within the project team and module teaching team as to the merits of the implicit or explicit promotion of reflection in learning. By Semester One of 2001/2002 all units have offered some element of reflection.

### Project outputs

- Conference paper presented at the 2<sup>nd</sup> skills conference at the University of Hertfordshire in July 2001. The paper: Reflecting on Reflective Practice: The case of Geography, Earth and Environmental Sciences can be seen at: <http://www.herts.ac.uk/envstrat/HILP/confproc/proc2/2ndconfpapers.htm>
- The one day conference: Time to Reflect? Promoting reflection among students and staff at the University of Gloucestershire on 5<sup>th</sup> February 2002. Various items of publicity were produced linked to the conference, and there is a review in this issue of PLANET of the event (page 31)
- An article submitted to the *Journal of Geography in Higher Education* (JGHE), entitled: "Reflecting on reflective learning: the case of Geography, Earth and Environmental Sciences";
- An on-line guide to Reflective Learning – this guide is currently being set-up.

### Conclusion

The project team has learnt that reflection usually thrives in a supportive open environment where staff and students can share with one another their thoughts and ideas. Reflection does contribute to improved student learning but reflection takes time and sadly in many instances educators must first find ways of giving themselves and students time to reflect.

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**POPWEB: a web-based introduction to studying pollen and plants.**

<http://www.geog.qmul.ac.uk/popweb/default.htm>

Jeff Blackford, Matthew Boulton, Jim Innes, Abby Kelly, Edward Oliver and Lawrie Wright, Department of Geography, Queen Mary, University of London

**Introduction**

POPWEB is a web-site aimed at undergraduate students studying palynology and/or aspects of biogeography for the first time. The site includes information concerning the current habitats, associated soils and spatial distribution of around 20 plants common in the United Kingdom. Also included are illustrations and descriptions of the pollen of each plant and notes on identifying the selected plants in the field, thereby bringing these two sets of information together for the first time.

**Rationale and aims**

The web-site arose out of the needs of two courses at Queen Mary, University of London, namely a second year option *Plant Geography* and a second or third year option *Palaeoecology*. These courses are available for students studying Geography, Environmental Science and Biological Sciences, and are often taken by students with little background in plant ecology. We identified a need for a learning tool that could provide an integrated resource covering both plants and pollen, so that students could more readily identify plants and pollen, understand their associations and biogeography and understand and interpret the changes in pollen diagrams. An earlier version of the site ran on the internal web at Queen Mary with the data required specifically for these two courses. With funding from LTSN-GEES, this has been upgraded and updated and is now intended to be of more general use to students at a similar stage, but not necessarily studying those specific courses. The aims of the web site are therefore:

- 1) To provide basic background information regarding a selection of common plant types,
- 2) To aid in the identification of those plants in the field,
- 3) To aid in the identification of pollen grains,
- 4) To help students interpret pollen data,
- 5) To encourage students to learn more about the plants and pollen records.

**Features**

- A glossary of terms, accessible as a window from any page
- Photographs of the plants
- Notes on identification of the plants
- European distribution maps
- Description of the Quaternary history of the plant
- Notes on pollen features
- Links to Uppsala University pollen image collection
- SEM images of pollen in some cases
- Notes on associated soil types
- Notes on common plant associations
- Links to other substantive relevant web sites

**Use of POPWEB**

POPWEB has been used at Queen Mary (QM) in four different ways. First, prior to field visits to managed forests and heathland, students use the site to learn some basic information about the species they will find and how to identify them. Second, on return from the visits, the site is used as one of a number of information sources for the write-up. Third, those students who continue on to study *Palaeoecology* are instructed to

look at all the species on the web site and learn the form and diagnostic features of the pollen types featured. This exercise, which does not have scheduled class time, runs alongside the microscopic observation and drawing of a small number of pollen types. The class time required to cover all the pollen types through microscopic work would be too great. This is followed by a group analysis of sub-fossil pollen data from northern Scotland. Finally, the ecological, palaeoecological and distribution data are used to help students interpret the group pollen diagram. References are included to encourage further reading.

**Evaluation**

Second year QM Geography and Environmental Science students were questioned directly regarding the five aims above. In addition, observations were made about the quality of coursework produced and the competence of the group in the field and laboratory. Respondents were anonymous, and were asked to grade the questions below on a scale of 1-5, with 1 being "strongly positive" and 5 being "strongly negative".

- 1) *Did the site provide relevant background information?*  
Grade 1, 12%; Grade 2, 71%; Grade 3, 10%; Grade 4, 7%; Grade 5, 0%  
Comments included a positive remark about ease of use, but some students thought some terminology too difficult.
- 2) *Did the site aid in the identification of plants in the field?*  
Grade 1, 10%; Grade 2, 33%; Grade 3, 48%; Grade 4, 10%; Grade 5, 0%  
Comments spanned both positive and negative views, including the admission that the students had not actually used the site prior to the field visits.
- 3) *Did the site help in the identification of pollen grains?*  
Grade 1, 33%; Grade 2, 30%; Grade 3, 33%; Grade 4, 5%; Grade 5, 0%  
The self-reliance of students in the laboratory was notably greater than in previous years and the identifications seemed more accurate, although this is hard to quantify.
- 4) *Did the site help you to interpret the pollen diagram?*  
Grade 1, 50%; Grade 2, 31%; Grade 3, 14%; Grade 4, 5%; Grade 5, 0%  
Most students found the site useful for completing the exercise, but some then failed to go on to further reading.
- 5) *Did the site encourage you to learn more about plants and pollen?*  
Grade 1, 17%; Grade 2, 26%; Grade 3, 34%; Grade 4, 20%; Grade 5, 3%.  
For many students, it seems that the site replaced, rather than led to, traditional reading. Many students used it as their sole source of further information for interpreting the pollen data.

Overall, the responses and observations suggest that the site is promising, but our management of the use of it by different student groups needs to be changed to encourage use before fieldwork and additional reading.

**Further work**

The LTSN-GEES-funded project has established a template-based web-site, managed using Dreamweaver, which is useful in its present form but which is also almost infinitely expandable. The current aims are to increase the number of species, improve the referencing, link directly to on-line journal papers and include more general notes on the field and laboratory procedures of plant and pollen studies while still remaining focused on introductory-level teaching needs.

**Contacts and site address**

Any comments on the site are welcome, including what users would like to see added. Please contact Jeff Blackford ([j.j.blackford@qmul.ac.uk](mailto:j.j.blackford@qmul.ac.uk)) in the first instance. The web-site was designed by Matthew Boulton, (if you have technical questions please direct them to him at: [mafue@hotmail.com](mailto:mafue@hotmail.com).) The web site itself can be seen at: <http://www.geog.qmul.ac.uk/popweb/default.htm> or via a link from the

Geography home page at <http://www.geog.qmul.ac.uk/>.

### Team-Based Learning Staff Development Materials

Kenneth Lynch (School of Earth Sciences and Geography, Kingston University)

## Introduction

The success of a wide variety of learning contexts has promoted interest in strategies that encourage independent learning, in particular team-based learning to promote both learning of subject content and transferable skills. At Kingston University, collaborative research is ongoing that examines team selection, operation, training and assessment, the results of which have already been published (Livingstone and Lynch, in press; 2000; Lynch and Livingstone 1999; 1998).

This existing work proposes a typology of team-based learning exercises, involving progressive lessening of support and structuring (Livingstone and Lynch, 2000). We realised that in researching this issue, almost all of the research we had reviewed was focused on a single team-based exercise. We found no research that examined the way of embedding the team experience into the curriculum and explicitly ensuring progression in the development of team skills. Therefore, my LTSN-GEES project focused on integrating progressive team-based learning into undergraduate programmes. This project had 3 aims, namely to:

- 1) Review research on the issue of team-based skills in the undergraduate curricula across a range of disciplines and networks, including the Geography Discipline Network, Teaching and Learning Technology Project, Staff and Educational Development Association and other HE sector initiatives;
- 2) Raise issues for discussion among course teams, and School and University bodies charged with learning and teaching development, with a view to exploring strategies for ensuring progression;
- 3) Disseminate the results and experiences of Kingston University for the wider GEES community.

## The Demand for Team Skills in HE

The arguments in favour of team-based learning emphasise that it provides students with experience close to the type of work environments they are likely to find when entering the professional work-place e.g. CVCP (1998), DTI (1998), DfES (1999) and Hewitt (2001). This suggests that such skills are, and will be, increasingly important in the work-place. These strategic views are reinforced by the calls from employers, students (through feedback) and the Benchmarking Statements for Geography, and Earth Sciences, Environmental Sciences and Environmental Studies (QAA, 2000) for improving the quality of graduate skills.

This suggests that whatever academics' view of team-based learning, there is an expectation that graduates will have developed team skills. Anecdotal evidence among employers of graduates from the GEES disciplines suggest that employers perceive graduates of these disciplines to have reasonably good team skills because of their fieldwork and similar learning experiences, but there is room for improvement.

## Previous Work on Team Skills

Geographers have been in the forefront of developing approaches to the development of transferable skills for some time now (Gold *et al*, 1991; Healey and Jenkins, 2000). Geography and the 'field sciences' have strong traditions of students working in teams. However, the issue of formal progression in a degree programme is rarely discussed.

Some geography staff at Kingston University completed an audit of transferable and study skills taught in all elements of their undergraduate programmes in 1999. The evidence from this showed that we taught team skills widely in both field and classroom situations. This exercise also

raised the issue of how to ensure progression in such skills across the curriculum.

The starting point for this project was the belief that a well designed team-based learning project should ensure that teams are made up of students with a range of learning styles. In addition, it should ensure that there is appropriate training and support for team formation and management for the team's progress through the earlier and more difficult stages (Tuckman and Jensen's (1965) 'forming' and 'storming' stages). The intended result is that students have a positive experience of teams (Tuckman and Jensen's later 'norming' and 'performing' stages).

The aims of the outputs from this LTSN-GEES funded project were to provide a structure within which a teaching team could reflect on the way students experience team-based learning and how this could be more effectively structured. The recent launch of a School of Earth Sciences and Geography at Kingston University that includes geography, earth sciences, environmental sciences and related disciplines into one School, put this project in a strong position to contribute to the activities of LTSN-GEES across the represented disciplines.

## Outputs

The resulting outputs of this LTSN-GEES funded project were a set of materials which enable a facilitator to prepare a workshop on team-based learning for a course teaching team. The aim is to provide a context within which the issue of embedding progression in team skills in the curriculum can take place, while at the same time giving the course team experience of three contrasting methods of team selection. This workshop has been run successfully in the School of Earth Sciences and Geography at Kingston.

The materials include:-

- a short guide discussing the key issues on the theory and teaching of team-based learning;
- a workshop outline guide;
- MS Powerpoint presentation, including notes;
- guidelines on a workshop format;
- reading materials (including a copy of our award-winning paper\* in which many of these issues are discussed);
- list of additional reading materials, including research, reports and websites.

(These materials are continually being updated to incorporate feedback from those who use the materials elsewhere and are available from the author: [k.lynch@kingston.ac.uk](mailto:k.lynch@kingston.ac.uk)).

## Conclusion

Among the key arguments in the educational research literature, there is a strand that emphasises a strong need to develop high quality team-based learning experiences. The extensive use by GEES-related disciplines of teams in field and laboratory work, makes them well-placed to investigate and develop strategies of integrating progressive team-based learning into the curriculum in a way that is transferable to other disciplines. There is considerable scope for further research, including empirical analysis of progression of team-based learning in the curriculum. Most educational research is based on analysis of single team-based projects, with limited discussion of how they relate to other elements in the curriculum, or indeed other team-based elements. Also missing from previous work is the way different elements of team skills relate to each other and to the wider curriculum.

## Acknowledgements

Thanks to LTSN-GEES for supporting this work, in particular to Helen King for comments and patience. Thanks to Jackie Birnie (Gloucestershire) for her helpful comments on the materials. Thanks also to the staff and

students of Kingston University, especially to Dave Livingstone with whom I have collaborated, discussed, raked over, debated and agonised on team-based learning for the last 5 years.

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\*This paper won the 2002 *Journal of Geography in Higher Education Biennial Award for Promoting Excellence in Teaching and Learning for best academic paper*.

## LTSN-GEES Small Scale Learning and Teaching Projects 2002

In July 2001, LTSN-GEES announced the second round of funding under its small-scale projects programme. Twenty five excellent proposals were submitted and the following eleven projects were selected which will together benefit from a total of roughly £40,000. The programme aims are almost the same as for the first round (see previous article). However, as well as 'curriculum developments', 'pedagogic research' was also encouraged as a focus for activity.

The third round of funding will be announced in the Autumn semester 2002.

**Please note that, where appropriate, all of the final outcomes and deliverables from these projects will be made available to the GEES community through the LTSN-GEES resource database (see article on page 26). For further information on any of the projects listed here, please contact the Subject Centre (info@gees.ac.uk; 01752 233530)**

### Learning Styles and Concepts Held By Geography Undergraduates: An International Comparison

John Bradbeer (Geography, University of Portsmouth)

HEIs are attracting students with a greater range and variety of learning skills, preferences and styles. This project explores how ideas of learning styles and concepts of learning can be used to enhance the quality of learning of undergraduate students in geography. A key feature of the project is a comparison of the experience of students in the UK, Australia, New Zealand and the US. While the study is self-contained, it will also act as a pilot for comparable studies in the other disciplines in the LTSN-GEES Subject Centre. The implications of the findings for enhancing the quality of student learning will be identified and disseminated.

### The Vertical Project

Sarah Maguire (Biological and Environmental Sciences, University of Ulster) and Sheena Wurthmann (Built and Natural Environment, Glasgow Caledonian University)

With the current emphasis in Higher Education to provide not only academic education but also employability skills to a diverse group of students in times of financial constraints on students and institutions, innovative approaches to engage the students in the learning process are important. These innovations are often 'site specific' and there is little opportunity to test transferability. Innovations in one institution are discounted as impracticable in another and there are rarely resources available to test the assumptions. The present proposal is a recognition by the University of Ulster of the value of the principle of the Vertical Project at Glasgow Caledonian University in providing appropriate learning experience for their students. The Vertical Project is a group project offering students teamwork experience working on a task which is similar to a short-term consultancy. This LTSN-GEES funded project examines the feasibility of the University of Ulster developing a 'Vertical Project' for students in the School of Biological and Environmental Sciences.

### Field Guides and Associated Learning Support Materials for Selected Geological Sites of National Importance with Particular Emphasis on Support for Disabled Students

Rob Chapman (Continuing Education, University of Leeds) and Jim Best (Earth Sciences, University of Leeds)

This project seeks to utilise various sources of expertise within the University of Leeds to develop field guides to geological sites of national and international importance. The motivation to develop the guides is to include information which will enhance or facilitate the learning experience for disabled students engaged either in undergraduate study or continuing education.

### 'Real World' Experiences – An Evaluation of Practitioner / Employer Input from the 'Region' to Advanced Environmental Taught Programmes

Lindsey McEwen (GEMRU, University of Gloucestershire)

This project focuses specifically on: (a) methodologies to profile and evaluate the range of regional employer/practitioner inputs; (b) in-depth assessments of innovative teaching and learning strategies from different stakeholder perspectives; and (c) the dissemination of different models for effective regional practitioner/employer inputs that add significantly to the learning experience and employability of graduates and postgraduates.

**Developing Independent Learning Skills**

Peter Hughes (Geography and Tourism Team, University of Sunderland)

This research project aims to identify and evaluate how 'independent learning skills' are developed through a student's programme of study in the GEES disciplines, and identify and disseminate innovative and good practice in the development of independent learning skills across these subjects.

**Student Publishing of Fieldwork Geography (StuP)**

John McKendrick and Elizabeth Mooney (Human Geography Subject Group, Glasgow Caledonian University)

"StuP" is a self-contained project that supports undergraduate geography students to publish briefing papers and teachers' resource packs on the environment/geography of the Isle of Bute. It is conceived as a demonstration project for GEES in the UK and, as such, StuP will also produce transferable resources and guidance that can be used to implement student publishing projects in other departments of geography, earth and environmental sciences.

**The Transition Between 'AS', 'A' and IB Level and Honours Degrees in Geography, Environmental Science and Geology**

David Croot (Geographical Sciences, University of Plymouth) and Sarah Thompson (Truro College)

This project tackles a critical issue in the GEES community namely the problems encountered by learners as they transfer from a pre-HE learning environment to undergraduate status. The outcomes will comprise a number of analyses, detailing the various pathways by which students arrive at the threshold of HE, and the mismatches between pre-HE experiences and the reality of undergraduate learning contexts.

**Analytical Chemical Skills Development**

Mark Varney (Ocean and Earth Science, University of Southampton)

The project will construct software (using Visual Basic v6) for a web-based demonstration of acid-base theory and redox chemistry in seawater, sediments and soil. This project aims to provide teaching staff with a suite of programs that can be used to augment students' theoretical understanding and to enhance laboratory practicals. For example, the system will provide the equivalent of 'virtual' (graphic) titrations of acid species, spread-sheeted speciation equilibrium equations, display of redox equilibria in seawater and sediments (Pourbaix diagrams, for instance) and demonstrations of the metabolic utilisation of oxygen by organisms (AOU diagrams). A critical element is the incorporation of self-assessment, by the individual student, of their understanding and progress through two fundamental aspects of chemistry (as applied to marine and environmental sciences).

**An Illustrative Guide to Demonstrate the Concepts and Processes in Bringing Web Based Materials in line with SENDA Legislation**

Neil Witt (Institute of Marine Studies, University of Plymouth)

The Special Educational Needs and Disability Act (SENDA), introduced this year, requires that all HE module developers and information providers have access to tools and advice which will ensure that both current and future material is compliant with the Act's requirements concerning disability access. This project will illustrate the conversion of an existing generic skills module by drawing on current accessibility guidelines. All stages of the conversion process will be made available via an annotated website, reflective log and reports.

**A Web Based Interactive Learning Package to Assist in The Development of Fieldwork Skills**

John Stainfield (Geographical Sciences, University of Plymouth)

The aim of this project is to develop a generic web-based interactive learning package to assist in the development of fieldwork skills and the acquisition of specific knowledge sets relevant to the chosen fieldwork location. The package will provide the student with the opportunity to carry out simulated fieldwork in advance of, or, where appropriate in place of, a field visit.

**Module Websites as Tools for Active Learning in Undergraduate Geography**

Caedmon Staddon (Geography and Environmental Management, University of the West of England)

There are considerable barriers to creative and innovative adoption of ICT, and especially module websites, in undergraduate geography teaching. Some barriers are related to the learning curves demanded by webpage design programmes and testing software, while others seem to be a product of lack of knowledge about the possibilities attendant on integration of ICT into active teaching strategies. Starting with the careful redevelopment of a selection of existing module websites to incorporate more active, interactive and diagnostic type features, it is hoped that we can begin to build a database documenting lead/development time, student use patterns and student outcomes which can show that certain web applications can be both resource efficient and learning effective. It may then be possible to contribute to guidelines for good practice in this area.

*Please note that, where appropriate, all of the outcomes and deliverables from these projects will be made available to the GEES community through the LTSN-GEES resource database (see article on page 26).*

**UPDATE****The New QAA Systems for Quality Assurance and Enhancement**

The UK's Quality Assurance Agency (QAA) has been through some painful twists and turns during the last year or so. Many PLANET readers might therefore benefit from a brief summary of where the quality saga has reached, not least because the basic features of the new quality assurance system now, at last, appear to be settled. The outline below provides an introduction to the new arrangements for England, with some brief comments at the end on the variations expected to operate in other parts of the UK.

The new enhancement system rests on the principle that the prime responsibility for assessing teaching quality and standards should lie with the universities and colleges themselves. Each institution will therefore be expected to demonstrate that it has robust quality mechanisms in place, and these will then be reviewed by an institution-level QAA audit. The old procedures of systematic and comprehensive Subject Review are being replaced by an institution-level enquiry whose main aim will be to assess the effectiveness of the institution's internal processes and thereby to evaluate the quality and standards of its programmes and awards. The number of people in the audit team will depend on the size and complexity of the institution, but will typically range from four to eight.

Although the main thrust of the QAA's work will be at the institutional level, certain departments covering in total about 10 per cent of the student body, will be identified for more detailed "discipline audit trails".

These disciplines could be selected on a random basis or because they appear to indicate either areas of possible weakness or innovatory features of special interest. If the discipline audit concludes that there are reasons for concern, two subject specialist advisors will, as soon as possible, visit the department and check out any serious issues. Their views will be incorporated into the final overall audit report.

This new audit-based system will be introduced in the 2002/03 academic year, with the first institutional visits scheduled from February 2003. All HEIs in England will have an audit by the end of 2005.

These new arrangements do not, however, spell a complete end to the Subject Review process. Between 2002 and 2005 a small number of Subject Reviews (based on the handbook for Academic Review) will still be carried out in institutions which under the old 1995-2001 Subject Review programme received either two or more reviews with a profiling totalling 17 points or less, or two or more profiles containing two or more Grade 2's in their profile. Subject Reviews will still therefore have some relevance for a minority of institutions.

In addition, in those HEIs that will not be reviewed until 2004/2005, there will be, as an interim arrangement, between two and four "developmental engagements at programme level". Each will involve a two-day visit from a team comprising a QAA auditor, two subject specialists and an internal institutional nominee. This interim system of programme engagement is of particular relevance for the GEES disciplines because one of the subject groups "at risk" is disciplines rated as "satisfactory" (rather than "excellent") in the old Teaching Quality Assessment System (TQA). Under this pre-1995/96 TQA system, many GEES departments claimed to be "satisfactory" and having been awarded this grade on the basis of their self-assessment document, they were never visited. At least some such unvisited departments could find themselves becoming the focus for programme engagement.

However, these caveats aside, the main message is that the system of comprehensive Subject Review is being dismantled in favour of a system whose main focus will be on the examination of institutional quality assurance mechanisms. This will be true throughout the UK. However, there will be differences in emphasis and details between England, Scotland, Wales and Northern Ireland. The main difference to emerge so far is that in Scotland there will be a stronger emphasis on quality enhancement. This is likely to involve a series of additional activities whose purpose will be to identify, disseminate and embed good practice. These activities will focus on annual themes, such as perhaps employability, and will also highlight in turn particular curriculum areas such as the sciences, business and commerce and the arts. Final decisions on the details of the Scottish system are still awaited. Similarly, with respect to Wales and Northern Ireland, it remains unclear precisely how much they will adopt/adapt the English approach or some of the proposed Scottish variations.

Finally, it must be emphasised that the brief summary provided by this PLANET article, gives only a generalised view. Anyone wanting more detailed information is advised to consult the websites below.

For details of the new QAA procedures:  
<http://www.qaa.ac.uk/crntwork/newmethod/fod.htm>

For resources on QAA policies, and the quality enhancement debate:  
<http://www.ltsn.ac.uk/genericcentre/projects/qa/>

### Acknowledgements

My thanks to Norman Jackson (LTSN Generic Centre) for some of the material included in this article.

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## Launching the LTSN-GEES Resource Database and Enquiry Service

By way of introduction, can I ask you a few questions? When was the last time you searched for a new resource to use in your teaching? Did you actually find what you were looking for? How much time did you spend in your search? The availability of suitable resources for learning, teaching and assessment and the time needed by academic staff to hunt them out are concerns that LTSN-GEES intends to address directly through the **LTSN-GEES Resource Database and Enquiry Service**.

Many of us use internet search engines such as "Google" in an effort to find information and resources, but this often results in an overwhelming number of hits that are of variable relevance. In addition, some institutional and departmental libraries have seen a cut in funding, resulting in a reduction in the stock they carry.

Academic staff often do not have the time to devote to hunting out the information they need. In addition to these problems, looking for learning and teaching resources online or in a library often does not provide additional information such as tips on use or reviews. Such supplementary contextual information can assist a user in identifying the most appropriate resources. This is where LTSN-GEES will add value: we hope to provide a resource database that is more than just a catalogue.

### The LTSN-GEES Resource Database: It does what it says on the tin.

LTSN-GEES has been engaged in the development of two databases (PLANET Edition.3, p.35), namely "Tellus" and the "LTSN-GEES Resource Database". "Tellus" was initially envisaged as holding URLs related to learning and teaching in the GEES disciplines, whilst the Resource Database was developed to hold all other resources. The recent appointment of our Resource Co-ordinator (Yolande Knight, see page 4) resulted in a review of our strategy and it has been decided that in order to avoid ambiguity and duplication, the two will merge to form a single database known as the **LTSN-GEES Resource Database**.

This will provide a new service to the GEES HE community and ensure that both resources and information on resources, covering all aspects of learning, teaching and assessment, are easily accessible through a single webpage. Examples of the kind of resource we will hold information on can be found in Figure 1 overpage

### To develop the full potential of the LTSN-GEES Resource Database, we need your help.

Hunting out suitable learning and teaching resources can be time-consuming, and we hope that value will be added to the database by harvesting your comments and experience in developing and/or using such resources. This database will not come into service fully formed, but will grow according to the support and contributions from you, the GEES community. We would like to know about any learning and teaching initiatives or resources you have used, are using, or are currently working on, which you feel would be of interest to fellow practitioners. In addition, we will be actively asking for reviews of resources (Figure 1), which in turn will be fed back into the Database. The quality of material, context and fitness for purpose of the resources will all be considered and discussed. This additional information associated with the resource will assist the database user in identifying the most appropriate materials.

With your input, we can build a database that will act as a comprehensive and crucial resource for those involved in learning and teaching in the GEES disciplines.

The **LTSN-GEES Resource Database** will hold information on the following :

- All Geography Discipline Network learning and teaching "good practice" case studies;
- Books and software/multimedia on learning, teaching and assessment, relevant to the GEES disciplines!;
- Continuing Professional Development and learning and teaching issues in HE;
- Textbooks for use by students;
- Whole articles and links to articles on practical and pedagogical aspects of GEES teaching;
- Information on learning and teaching activities, such as practical/fieldwork schedules, question sets, images etc.;
- Teaching and assessment tips;
- Websites with value in the area of GEES learning and teaching;
- Reviews on these items by members of the GEES community;

Figure 1 So what do we mean by resources?

### The LTSN-GEES Enquiry Service

There is, of course, a possibility that you may not find what you are looking for on the Resource Database. So, if you have any query regarding learning and teaching or LTSN-GEES, please contact us. The **LTSN-GEES Enquiry Service** has been set up to provide help on any aspect of learning and teaching in the GEES disciplines. For example, if you need information on the implications for your teaching of the Special Educational Needs and Disabilities Act (SENDA) or the new academic review process, or if you cannot find a particular teaching resource matching your requirements, contact us at [info@gees.ac.uk](mailto:info@gees.ac.uk) or ring us on 01 752 233530.

Any resources that are found during an enquiry search will be fed back into the Resource Database, and it is hoped that in this way a positive feedback loop will be set up, highlighting gaps in resource provision and therefore enabling us to structure the future harvesting of materials and associated contextual information.

### Watch This Space!

The technical development of the LTSN-GEES Resource Database is now in its final stages, and will soon be ready for the input of records. Resources from the wealth of learning and teaching initiatives already out there will be gathered together by the LTSN-GEES team and entered as baseline content; and our first task will be to review these resources and find out how you use them at the chalk face. You will be able to access the Database directly from the LTSN-GEES website at <http://www.gees.ac.uk/>: we will publicise the launch of the Resource Database via a number of routes towards the end of this year, so Watch This Space!

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### Wanted!! Resource Reviewers

LTSN-GEES are looking for colleagues in the GEES HE community to review course software, texts and other learning, teaching and assessment resources that are made available to the Subject Centre. Reviews will be held in the LTSN-GEES Resource Database. If you are interested in becoming a reviewer for LTSN-GEES, then please contact the Subject Centre on 01 752 233560 ([info@gees.ac.uk](mailto:info@gees.ac.uk)) and we will send you review guidelines and talk to you about your areas of interest.

## Linking Teaching and Research in the GEES Disciplines

### Context

For the reasons outlined in Mike Bradford's editorial in this issue of PLANET GEES is strongly committed to promoting ways in which the involvement of staff in research can benefit teaching. Along with four other Subject Centres, LTSN-GEES has been chosen by the Learning and Teaching Support Network Executive to participate in a project investigating the ways in which different disciplines are developing the connections between research and teaching. Our prime concern is to identify case studies of the ways in which student learning in our disciplines is enhanced through providing closer linkages between research and teaching. Developing such linkages is an important way in which our students begin to think and act as geographers, earth and environmental scientists.

The GEES group of subjects provides an intriguing test ground in which to examine the linkages between research and teaching because of the position they hold on the intersection between the natural and physical sciences, the social sciences and the arts. They cover aspects of all four discipline types (soft, hard, pure and applied) recognised by Biglan (1973). Few other Subject Centres provide this degree of inter-disciplinarity.

### Types of Linkage

We recognise that students in our subject areas may benefit from research in a variety of ways including, where:

- 1) the content of courses is informed by staff research;
- 2) students learn about research methods;
- 3) teaching methods adopt a research-based approach, such as through problem-based learning;
- 4) they undertake their own research projects, whether individually or in teams;
- 5) they participate in staff research projects as subjects, as in, for example, perception studies;
- 6) they assist staff with their research projects;
- 7) staff undertake pedagogic research which benefits the quality of their teaching.

It is important to emphasise that developing links between research and teaching is not restricted to staff undertaking research themselves. All academic staff may be involved in helping students with items 2, 3 and 4 above. Hence, enhancing student learning through developing their competencies to think about and practise research in the discipline should be on the agenda of both research-oriented and teaching-oriented departments.

Research may take a number of different forms, including RAE-level research, consultancy for clients, and action research aimed primarily at improving practice. We recognise that there are also potential negative impacts from staff involvement in research, such as staff absences and lower priority being given to teaching. We argue that for the benefits to be maximised and the disadvantages to be minimised, the relationship between research and teaching needs to be actively managed.

### Project Outputs

During the period of the project from April 2002 to September 2003 we will develop a series of outputs related to the project including:

- 1) Develop dedicated pages of the GEES Web site;
- 2) Prepare an annotated bibliography;
- 3) Collect, edit and publish at least 20 case studies;

- 4) Hold a National Conference (Spring 2003);
- 5) Prepare a review essay;
- 6) Publish a Special Edition of PLANET on linking teaching and research.

The second, third and fourth of these outputs will be put on the LTSN-GEES Web project pages.

### An Invitation

Several examples of the relationship between teaching and research in our disciplines have already been published (e.g. Dwyer, 2001; Gardiner, 1993; Jenkins, 2000 and Winchester, 2001). We would like to invite colleagues in the UK and overseas to contact us to tell us about other examples. A proforma is available at the GEES web site and there are prizes to be won for case studies (500+ words) put on the GEES web site (<http://www.gees.ac.uk/linktr/linktr.htm>).

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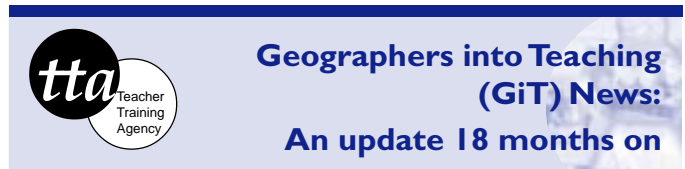
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## Got a Question or Query?:

## Ask LTSN-GEES

LTSN-GEES runs an enquiry and advisory service to answer your questions on any aspect of learning, teaching and assessment in the GEES disciplines. Contact the Subject Centre on 01752 233530 or email: [info@gees.ac.uk](mailto:info@gees.ac.uk). We guarantee an initial response time of no more than 48 hours.



### Background

A previous article on Geographers into Teaching (GiT) appeared in the June 2001 edition of PLANET, which introduced the work of the Geographers into Teaching (GiT) project. Since then, further support has been received from the Teacher Training Agency (TTA) as geography remains part of the TTA's Secondary Shortage Subject Scheme.

Amongst geographers, 87% of the ITT target for 2001-02 (1090) was met last year and although this was an increase on figures from 2000, there was still a deficit of prospective teachers accepting places on PGCE courses throughout England. 1094 teachers are needed to train in secondary geography teaching during 2002-03.

New objectives have been implemented by the RGS-IBG to complement the work established by the GiT project during 2000-01, and these are detailed below:

#### Some ways in which this goal is being achieved through the GiT scheme:

##### 1. General Awareness Raising

Information on school teaching and on developments within the project is forwarded to key contacts (see point 2 below) in geography and related HE departments. In turn, these departments are able to inform students about teaching as a possible career and play the initial role in the recruitment process.

Editorials have also been published in the THES (January 2002) and the Project Development Officer (PDO) has attended presentations and conferences around the UK to promote the need for taking action and encouraging students to think about teaching as a profession.

In addition, many posters and pamphlets have been designed and disseminated to HEI geography and related departments in an attempt to attract greater numbers of students into geography teaching.

##### 2. Teaching Liaison Officers (TLOs) - facilitating links

TLOs have been established in approximately 90% of universities in the UK in geography and related departments (the list is available on the RGS-IBG website: [www.rgs.org](http://www.rgs.org), then click on "education" followed by "teaching geography"). With the support of the PDO, they act as a point of contact in HEIs for geography teaching initiatives and liaise with initial teacher training geography tutors, careers advisors and current and former students.

Their role is to organise the promotion of teaching events within their department, publicise teaching on the geography pages of their university website and co-ordinate and inform the PDO what initiatives are being undertaken. This involves disseminating news about teaching geography amongst undergraduates, fostering links (i.e. facilitate Newly Qualified Teachers to link with their former department to enthuse current undergraduate students) and tracking undergraduates considering a PGCE in geography.

##### 3. Good practice / Adopting activities

The following projects are being funded through GiT during 2002 (further information on the RGS-IBG website):

- *Keele University* – Taster sessions are being held, aimed at second and third year undergraduates involving school placements and university-based workshops. These introduce participants to the role of a geography teacher and are publicised on the departmental website.

## P L A N E T

An additional focus is on the development of a 'Geographical Education' module.

- *University of Leeds* – Extension of the current voluntary student tutoring / mentoring programme to an accredited scheme as part of the School of Geography's established 20 credit Workplace Co-operative module. As part of this new accredited scheme, students should: i) gain experience in the classroom and work with school staff as appropriate; ii) develop an evaluative understanding of lesson planning through observation and reflection; iii) prepare a package of materials on a topical geographical subject that the teacher can use with the class.
- *London School of Economics, University of London* – Developing information on teaching on the geography department's website, which will provide a key summary of steps to follow to pursue a career in teaching by linking to relevant teaching or related sites. Working in close collaboration with the LSE careers centre, it will also promote activities where students can get hands-on experience in teaching at undergraduate level.
- *Manchester Metropolitan University* – This project aims to: set up a Schools Liaison Panel; develop school experience opportunities for students; promote teaching as a career; and strengthen ties with Initial Teacher Training (ITT). Students will be offered the opportunity to work in a school as part of their assessed placement experience or as a voluntary extra-curricular activity.
- *Newman College of Higher Education* – The running of a "taster" course, lasting one and a half days and entitled: 'Engaging with Geography Teaching'. This consists of four sessions: Career Mapping, The Nature of the PGCE, School Visit and Geography in Action at Leasowes Community College.
- *University of Newcastle and University of Northumbria at Newcastle* (joint initiative) Fieldwork project aimed at Key Stage 3/4 pupils involving PGCE students, 'Students into Schools' managers and undergraduate geography students. Participants will be engaged in preliminary work within schools before the fieldtrip as well as follow up work once the fieldtrip had been completed. Student dissertation work may be based on work associated with this project.
- *University of Plymouth* – Project consists of four strands; i) a website providing information on geography teaching, ii) the establishment of a mentoring system, iii) enhancement of an existing careers module and iv) development of the current work-based learning module.
- *University of Portsmouth* - Development of an undergraduate module 'Geography and Education' for second year students. Students will gain geography department experience of both 11-16 year old Comprehensive Schools and Sixth Form Colleges.
- *Queen Mary, University of London* – A 'Get into Teaching workshop' aimed at all geography undergraduates will run and will hopefully bring together former students who now teach geography in secondary schools as well as other educational advisors, with undergraduates. This will strengthen relationships between these groups and provide practical advice for prospective teachers.
- *University of Sheffield* – A three phase project aimed at second year undergraduates ranging from the widest possible audience down to those genuinely interested in the possibility of teaching. Comprises of a careers workshop, a limited number of one-day school placements, and a debrief / plenary session.
- *University of Sunderland* – A 'taster' course aimed at second and third year undergraduates, exposing them to the nature of a PGCE. Students spend time in a Partnership school, get involved in fieldwork, meet current trainees / teachers and obtain advice and support with Graduate Teacher Training Registry (GTTR) applications

#### 4. Strengthening Regional Networks

An audit of what departments were doing in 2000 is being updated for 2002. Extra support for the network has been given through a one day

conference (19 June at York University), where good practice was disseminated.

#### 5. Website

[www.rgs.org/education/teachinggeography](http://www.rgs.org/education/teachinggeography) continues to expand with over 40 pages of information for prospective teachers and Teaching Liaison Officers. An online registration form ([www.rgs.org/teachingregister](http://www.rgs.org/teachingregister)) is available for those interested in the profession to register their details and receive further information about teaching geography. An interactive map of HEI institutions offering geography at the degree and teacher training level ([www.rgs.org/heimap](http://www.rgs.org/heimap)) is the first map of its kind which allows browsers to search for institutions offering initial teacher training in geography or courses at the undergraduate and postgraduate level. It also enables external links to be made with over 80 universities and is a valuable resource for potential teachers of geography as well as those considering postgraduate courses.

#### 6. Partnership with the Year Out Group

Opportunities are being provided to improve gap year teaching experiences for those who have read, or plan to read, geography at university by working with a number of member organisations of the Year Out Group.

Pamphlets and posters have been distributed around the country via geography departments, careers services, Initial Teacher Trainer Providers and some schools. The poster offers advice to undergraduates and A level students considering taking a "year out" after their exams. The pamphlet targets returned volunteers and lists information on how experiences abroad can be used within the classroom; both provide contact details for teaching in England.

#### Wider initiatives

The RGS-IBG is pleased to announce a new initiative entitled "Innovative Geography Teaching 2002: Grants for Newly Qualified Teachers and PGCE students". This enables new or training geography school teachers to develop imaginative or innovative teaching materials and teaching methods. Applicants are invited to submit a proposal for any new teaching idea they would like to take forward by **30th August 2002**. Further details can be obtained from the grants coordinator ([h.hartog@rgs.org](mailto:h.hartog@rgs.org))

A successful RGS-IBG one-day conference took place on **Wednesday 12th June 2002** at the Society's headquarters in London, entitled: 'Changing A levels, recruitment and widening participation: the shifting agenda for geography in HE'.

The conference aimed to:

- inform the HE community about changing thinking and practice in the school curriculum and consider how it impacts on HE agendas
- provide an opportunity for the HE community to feed into proposals for changes in the 11-19 curriculum. A small group convened by the RGS-IBG has been drafting ideas for comment
- share good practice in recruitment in these increasingly challenging times (A write-up from this successful conference is currently being discussed).

TTA taster courses with a specific focus on teaching geography are being offered at the following institutions between now and March 2003:

- Institute of Education, University of London
- Bromley Schools Collegiate
- Manchester Metropolitan University
- University of Bath
- SW Recruitment Strategy team
- Canterbury Christ Church University College
- University of Sussex
- West Sussex County Council

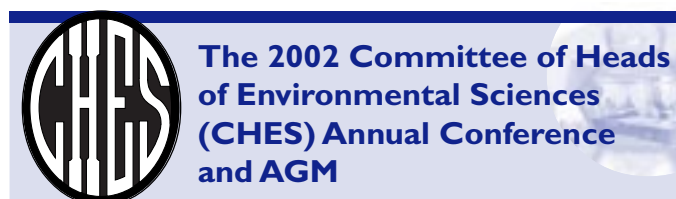
A more comprehensive list of taster courses offered in all subjects is available from the TTA website: ([www.canteach.gov.uk](http://www.canteach.gov.uk)). The courses are aimed at potential trainees who are close to making the decision to apply for ITT rather than at anyone who has a passing interest in teaching. As such, courses provide a more intensive 'taste' of teaching and teacher training.

The Project Development Officer at the RGS-IBG is continually monitoring and evaluating the success of the GiT project to report back to the TTA and to develop a plan for sustaining effective HEI activities and recruitment to Initial Teacher Training.

Comments on the work to date are welcomed. Do get in touch!

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The 2002 Committee of Heads of Environmental Sciences (CHES) Annual Conference and AGM was hosted by the University of York on the 18<sup>th</sup> and 19<sup>th</sup> March 2002, under the stewardship of Malcolm Cresser (Head of the Environment Department at the University of York). Forty one delegates attended the two-day conference, which focussed on three main themes: Recruitment to Environmental Sciences, The Research Assessment Exercise and supporting the LTSN-GEES Guides Project.

### Day One

David Eastwood (Ulster), chaired the recruitment session, which included a diversity of talks; the first being an update on the activities of the Recruitment Sub-Committee, where the colourful recruitment poster was commended for use in departmental open days and outreach programmes to schools.

Lawrie Phipps (TechDis Manager; LTSN Generic Centre) focused on the topical issue of widening participation with reference to disabled students. Hemda Garelick (Middlesex) followed this talk by considering the relationship between voluntary work and employment prospects. Hemda highlighted the fact that volunteering must involve training and reflection for it to be a useful and valuable learning experience. Ashley Kent (Institute of Education, University of London) then spoke about bridging the gap between schools and HE through a wide range of liaison initiatives.

Brian Black and his wife, both environmental film producers, gave an entertaining insight into the world of television production, with a message to get journalists in at the beginning of a story in order to have a good chance of productive relationship between science and screen. Roger Harrabin, Environment Reporter for the Radio 4 Today Programme, followed and surprised his audience with the enormous amount of time and effort it requires to produce sound-bites and shorts for radio. He emphasised the use of the media to advance education outreach and encouraged everybody to contribute to local or national radio. Both talks gave us food for thought for ES promotion.

After tea, the Research Assessment Exercise (RAE) was dissected, starting with a statistical analysis of the RAE results by Simon Watts (Brookes) and John McClatchey (University College Northampton). The guest speaker for this session was Peter Liss, Chair of the RAE Panel, who followed by eloquently explaining the workings of the panel.

After a well-deserved break, we were entertained in the evening with a Medieval Banquet in the House of Layman and Bishop's Chamber; St William's College, York Minster. So, from current concerns we were transported back through the centuries and were entertained by jugglers, minstrels and a knight in shining armour. Someone was heard to comment that they were thin on the ground in ES circles these days!

### Day Two

The second day of the conference started with a CHES Executive Committee Breakfast Meeting, with Harold Silver present (LTSN-GEES External Evaluator), enabling him to get a feel for the impact of LTSN-GEES on the Environmental Sciences (ES) community. The CHES AGM followed where the new Chair, Donald Davidson (Stirling) was confirmed, and David Eastwood (Ulster), the outgoing Chair, was warmly thanked for his stalwart support and leadership of the ES Community. Jennifer Blumhof then reported on two new initiatives - the fast track Institute of Environmental Sciences/CHES Accreditation Scheme, and the John Connell Memorial Award. Details of both these can be found on the CHES website <http://www.herts.ac.uk/natsci/Env/ches/newches/home.htm>. The ES Team in Hatfield, Jennifer Blumhof, Marianne Hall and Chrissie James, were thanked for organising the Conference, in collaboration with Malcolm Cresser.

The final session, chaired by Jennifer Blumhof, Senior Advisor for Environmental Sciences at LTSN-GEES, focused on the GEES Guides Project which is developing five guides to support learning and teaching in Earth and Environmental Science, an extension of the Geography Discipline Network Guides. Ian Williams (Central Lancashire), a member of the CHES Learning and Teaching Sub Committee introduced Andrew Turner (Coventry) and Claire Guyer (Ulster), two of the GEES guides authors, who in turn updated the community on progress. Ian asked that the community contribute case studies to the guides. The plan is for these guides to be available online in Spring 2003. For further information on the GEES guides project, please see PLANET Edition 3, January 2002, p29, or visit: [www.gees.ac.uk](http://www.gees.ac.uk).

The Conference culminated with a visit to the University of York Environment Department and a farewell lunch. This Conference attracted an ES Colleague, Gyala Lakatos all the way from Hungary. The comments from the conference evaluations were very positive; people welcomed the opportunity to discuss critical topics with colleagues dealing with the same issues:

*"It was an excellent opportunity to work together to develop a strategic view of the future and rise to the challenge of integrating learning and teaching across the sector."*

*"A useful and very productive Conference"*

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CHES website:

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### Wanted!! Resource Reviewers

LTSN-GEES are looking for colleagues in the GEES HE community to review course software, texts and other learning, teaching and assessment resources that are made available to the Subject Centre. Reviews will be held in the LTSN-GEES Resource Database. If you are interested in becoming a reviewer for LTSN-GEES, then please contact the Subject Centre on 01752 233560 ([info@gees.ac.uk](mailto:info@gees.ac.uk)) and we will send you review guidelines and talk to you about your areas of interest.

## Time to reflect? Promoting reflection among students and staff: a national conference on reflective learning

Hugh Rollinson, University of Gloucestershire

### Abstract

A one-day conference in February 2002 at the University of Gloucestershire addressed the role of reflective learning within the Geography, Earth and Environmental Science (GEES) disciplines. Keynote speakers dealt with the issues of the place of reflective learning within the UK HE policy framework, and how reflective learning might be promoted amongst colleagues and students, some of whom are sceptical. The results of a national questionnaire survey showed that reflective learning is at present only partially embedded within the GEES disciplines. The conference raised important issues about disseminating good practice in reflective learning in the GEES subjects, about the precision of language and definitions of reflective learning and about how students might be encouraged into and through the process of reflection.

### Introduction

A one-day conference, entitled 'Time to reflect? Promoting reflection among students and staff' was organised by Margaret Harrison, Chris Short and Carolyn Roberts of the School of Environment at the University of Gloucestershire on February 5, 2002. The meeting was supported by the LTSN (Learning and Teaching Support Network), Geography, Earth and Environmental Science (GEES) Subject Centre and was attended by about 70 delegates from 25 UK Universities. The participants were drawn principally from Departments of Geography, Earth and Environmental Sciences, but also from the Medical and Veterinary Sciences, the Built Environment, the Performing Arts as well as from University Professional Development Units. The programme included keynote talks from Norman Jackson of the LTSN Generic Centre and John Cowan of Heriot-Watt University together with a case study presentation on a GEES Subject Centre research project on reflective learning, and six workshops themed around reflective learning.

### Key Notes

Norman Jackson in his talk 'Expanding opportunities for reflective learning in HE' showed how reflective learning has grown out of the Kolb learning cycle (Kolb, 1984), a systematisation of the learning process in which students are encouraged to review their learning as part of the learning process. More recently, work through the University for Industry's 'Learning through work scheme' has shown how students can be involved in managing their own learning, leading to the concept of 'Personal Development Planning' (PDP). This is a structured and supported process in which students reflect on their learning with a view to planning for their own specific and personal educational and career development needs. PDP is seen to be the way ahead for many HEIs, although interestingly, whilst a significant number of subject benchmark statements make reference to reflection in learning and to the skills implicit in Personal Development Planning, only about 20% of HEIs actually have policies in place which encourage these processes. This proportion is set to increase in the next 3-4 years through an increasing number of LTSN initiatives set up to support reflective learning in response to HEFCs recommendations that PDP is in place by 2005/6.

John Cowan offered the provocative title 'My students don't want to bother with reflection. Neither do I. (Anon 2002). A positive response.' His response was thoughtful and robust. In essence, he argued for the subversive approach – 'Don't tell them what you are doing, just do it! Then, after the students have been doing it for a while to good effect, and have seen the difference that reflective learning can make, then explain what they have been doing'. Central to his argument was the concept that the best teachers

are constantly asking questions like: 'How do I do particular things in my teaching?' and 'How well do I do these things?'. These questions lead to explanations as to 'Why do we do certain things?' In other words, the best teachers are reflecting on the process of teaching and learning, even if they do not articulate it as such in the language of reflection. John Cowan illustrated his argument with an impressive number of case studies showing the benefits of reflection on the process of teaching and learning. Most impressive was an example from a first-year Technology course at the University of Aalborg in Denmark. Traditionally, this course had a major project element, which commenced with a week-long orientation programme. Under John Cowan's guidance this orientation programme became replaced, initially via a pilot study, through an iterative 'process analysis' approach in which expectations of staff and students were gradually brought together, through a 'problem-based learning' exercise. Central to the 'process analysis' was a marrying together of what the staff were expecting of the students and what the students thought the staff were expecting of them. The outcome of the pilot of this new approach was the advice from the students who attended that 'you must never do that again, because it gave us such an unfair advantage over the other students on the course'!

Developing the process analysis model of student learning, John Cowan discussed the importance of students keeping a 'learning journal'. This included writing advice to themselves for the coming semester on the basis of their learning experiences of the previous semester; then subsequently, at the end of that semester, evaluating the advice they had given themselves. Most impressive here was evidence that some students continued to keep a learning journal even when it was not required, in order to facilitate their learning.

Margaret Harrison reported on 'The Geography, Earth and Environmental Science (GEES) project on reflective learning', an analysis of the views of University teachers in the GEES disciplines on reflective learning<sup>1</sup>. The study was based upon the results of a questionnaire survey sent to the heads of all GEES departments. The questionnaire produced a response rate of 29% (56 responses), with replies ranging from those who were thoroughly convinced by the merits of reflective learning to those who were downright hostile. The survey suggested that reflective learning is embedded in the GEES disciplines, although how widely it penetrates into student learning cannot easily be judged from the questionnaire response rate. However, perhaps the most important outcomes of this work are the questions which the study has raised. These include: Can reflective learning be taught?, Should reflection be implicit or explicit in student learning? and, Should reflection be assessed?

### Conference Workshops

Many of the themes highlighted in the three keynote sessions of the morning were returned to in workshops and a plenary during the afternoon. Workshops were given by Will Diver (Plymouth) on *Personal and professional skills in Geology and Earth Sciences*, Carolyn Harrison (UCL) on *Reflections on skills for a dissertation in Geography*, Chris Short (Gloucestershire) on *Introducing reflection to students*, Peter Hughes (Sunderland) on *Reflective diaries in a multilevel project*, Carolyn Roberts (Gloucestershire) on *Team building and reflection in Environmental Sciences*, and Elizabeth Skinner (Gloucestershire) on *Reflective learning and distance learners*. The central theme of the final plenary session, chaired by Brian Chalkley, Director of the LTSN-GEES Subject Centre, was the plea for the dissemination of examples of good practice in reflective learning and ideas on how to start this in individual departments.

### Discussion and Personal Reflection

Readers might be interested to know that the author of this article is 'the archetypal geologist', predictably resistant if not downright hostile to many things to do with reflective learning. So, you might ask, how was it for me? Clearly John Cowan was imported especially for the likes of me. However, I have to admit that his lecture was impressive.

'You've become a convert', my wife said, when I told her of the events of the day, although I would like to think that is probably an over-statement. You the reader must judge. Nevertheless, the conference raised some questions in my mind on which I have been made to ponder and which I outline below.

Central for me is the definition of reflective learning. What exactly do we mean by reflective learning? Norman Jackson in his talk pointed out that at one level 'we all do it'. It is an instinct that is part of the educational process. If this is really true, I ask, then why make such a fuss about it? More disturbing were the implicit statements in John Cowan's talk that we most definitely do not do it, or at least do it very well. This apparent disagreement between speakers leads me to the conclusion that there are levels at which we engage in reflection. It would seem that we all engage to a degree in reflection in our teaching or learning, but for many this may be very superficial, and probably therefore, not that beneficial. There is clearly a scale of reflection, within the reflective process. Thus it would seem that we, as University teachers, need to be engaging in a deep reflection on the teaching process, and our students on the learning process, and this needs to be clear in the language that we use. My plea is that the advocates of reflective learning are more explicit about what exactly they mean by reflection and how this might vary in different contexts. Clearly John Cowan's advice is helpful here – we are almost better to avoid the term reflection and focus on a few simple questions such as How? and How well? This at least focuses the mind on the process.

A related question stems from the observation made a number of times during the day, that reflection seems to come more easily to mature students. Clearly, the ability to reflect is closely related to one's breadth of experience of life. I would suggest that mature students find reflection easier than the '18-year-old' student, because they have more of life's experiences to draw on. Are we therefore expecting too much of our '18-year-old' student population? In asking them to reflect deeply, are we overlaying on them as learners, a burden which we as teachers should be carrying? I am very uncomfortable with the suggestion that students need to engage in reflective learning, because it's good for them, like cod-liver oil. Forcing students to do things, against their will, seems to me to be not the name of the game. Persuasion – yes. Compulsory activities of this nature – no. Maybe we need to give more thought to the guidance we give students in directing them into and through the reflective process. Further, maybe we should be looking for a maturing or evolution in the way in which students reflect during their degree course. Clearly here, answers are best addressed by institutional guidelines and/ or policies on reflective learning.

It is apparent that the level of openness towards reflective learning varies greatly between the disciplines. Teachers of subjects such as social work and counselling tend to be very open to reflective learning and use this style a great deal in the teaching and learning process. Teachers of the natural sciences, on the other hand, are reputedly more sceptical. So, what is it about these disciplinary differences towards reflective learning, and can we learn anything here? In part, the differences relate to the perceived importance of the knowledge component of learning relative to the importance of the individual's own viewpoint, self-awareness and feelings – a topic touched upon by Norman Jackson. This is clearly an important issue, for we are in an era of dwindling student enrolment in the sciences, and yet have a student body often more self-aware and more able to articulate their feelings than some of their teachers. However, my suspicion is that the scepticism towards reflective learning reported in the LTSN-GEES

funded project (see page 21 for a summary account in this edition of PLANET), may have more to do with old geography-geology, social-/ natural-science subject rivalries, than about reflective learning *per se*. Again I return to the matter of language and definitions. It would be interesting to know how the sceptical respondents would have replied if the survey questions had been phrased differently, explicitly avoiding what some might regard as 'educational jargon'.

## Conclusion

So, by what criteria can we judge reflective learning? Firstly, does it work? By that I mean, does it improve student learning? I heard of some impressive examples of where student learning has improved and therefore must concur that it works. Secondly, is it important? The case was made, and it also makes good sense, that reflection on the part of a teacher in Higher Education leads to better and more cost-effective teaching. For the student, it can lead to improved performance. I am however, left with two as yet unanswered questions. Firstly, do employers want reflection in the portfolio of student skills? Has anyone asked them? Finally, *do we have 'time to reflect'*? What am I going to leave out of the teaching programme if I introduce reflective learning into my modules?

For further information on reflective learning, please contact: [info@gees.ac.uk](mailto:info@gees.ac.uk)

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## Endnote

- 1) A joint project organised by Margaret Harrison, Chris Short and Carolyn Roberts all at the University of Gloucestershire (see page 21 of this edition of PLANET)

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## GEES Goes to Hollywood: The Association of American Geographers (AAG), 98<sup>th</sup> Annual Conference, 19-23 March 2002, Los Angeles



### Abstract

In this article, Geoff Robinson, C&IT senior advisor to the LTSN-GEES Subject Centre, provides us with a review of the AAG 2002 annual conference in LA. Particular attention is given to the specific sessions on the use of C&IT in the GEES disciplines.

### Introduction

This transatlantic bean-feast is the largest annual conference of geographers in the English-speaking, if not the whole world. It attracts about 6,000 delegates, many from outside North America and always including a large contingent from the UK. The commensurately large number of presentations (805 this year) are necessarily delivered in many parallel sessions, catering for the AAG's great variety of speciality. Over the four days of paper presentations there were 25 sets of 41 parallel sessions. Add to these the various lunchtime sessions, pre- and post-conference field trips, a few 'plenaries' (in one sense a misnomer, in that nowhere could accommodate all the delegates), speciality group business meetings, and other AAG events held in conjunction with the conference, and we have some indication of the magnitude of the task that annually faces the local organisers. This year it was the turn of geographers in the various universities of southern California to organise the conference; they are to be congratulated that there appeared to be only minor hiccups in the smooth running of the event.

Most presentations were short, formal papers. There were also a few large poster sessions and a fair number of seminars and discussion panels. Given the large number of parallel sessions, it was inevitable that most papers were delivered to small audiences and, given the papers' brevity, there was little opportunity for discussion of work in progress rather than passive reception of reports of completed work. However, delegates interested in pursuing a topic further with presenters could meet outside the sessions and also use the excellent CD-ROM of abstracts as a basis for further follow-ups. This annual production of substantial abstracts is an extremely useful adjunct to the conference: it is searchable and enables delegates to gain a wider view of the conference papers and at least partially resolve the dilemmas of choosing between papers in several simultaneous sessions.

### Geography Education

The work of this speciality group, included a session on "Distance learning, online instruction and technology". This included a paper on **Information Technology in Geographic Education**. In their presentation, William J. Lloyd (blloyd@fullerton.edu), Jonathan S. Taylor (jstaylor@fullerton.edu) and John C. Carroll (jcarroll@fullerton.edu), all of California State University, Fullerton, critically evaluated recent articles dealing with information technology in the geographic education literature. Applications of information technology fall into five main groups: multimedia, geographic information systems, remote sensing, Internet collaboration, and the World Wide Web. Much of the recent literature consists of case studies demonstrating how these technologies are being used in geography classes. The studies provide valuable insights into the practical issues surrounding the use of technology, including strategies for overcoming the barriers that discourage its wider use. However, they rarely include much in the way of formal assessment of the efficacy of using technology. Although many authors argue persuasively about technology's rich promise, they are unlikely to sway sceptics until the benefits of using technology can be demonstrated through formal evaluation studies. This is an area that will continue to exercise LTSN-GEES.

In a related paper, *Internet Instruction in Introductory Economic Geography*, Bob Bednarz (Texas A&M University, r-bednarz@tamu.edu) observed that while more and more geography instructors have begun to use the Internet to deliver course material to more and more students, very little research has been conducted about how this new instructional strategy influences student learning. Even less has been written about the impact different strategies or implementations of Internet-assisted learning have on student performance. This paper presented the outcomes of several experiments to determine the effect of Internet-based instruction on the learning of introductory economic geography students. Several methods of instruction were employed, different assessments were used to measure learning, and students were prepared for the Internet lesson to differing degrees. Evidence was presented that supports the hypothesis that, for the average student, Internet-assisted learning is often less effective than traditional methods. And, contrary to some claims about gender bias, these results hold true for both men and women.

### International Collaboration

Bob Bednarz is a founder member of the International Network for Learning and Teaching Geography in Higher Education (INLT) (Rich et al, 2000) and the conference provided a good opportunity to meet up with other fellow members of this network (the dedicated website is at [www.colorado.edu/geography/inlt/index.html](http://www.colorado.edu/geography/inlt/index.html)). One of them, Michael N. Solem (Southwest Texas State University, michael.solem@swt.edu), considered geographers' use of the Internet to support international teaching and research collaborations. In his paper **Building On-line International Learning Partnerships in Geography**, Solem reviewed the goals of global education and how they are addressed by two disciplinary bodies: the International Geographical Union's Commission on Geographical Education and the INLT. The aim of collaboration is to build knowledge and negotiate learning together; and Solem described a Web-based structure to facilitate computer-supported collaborative learning (CSCL). He reported the start of a project, the Global Geographic Inquiry Challenge (GGIC), which is producing digital instructional materials that emphasise CSCL in an international context. The project's website, [www.swt.edu/~ms32/ggic](http://www.swt.edu/~ms32/ggic), has student and instructor materials available for a module on migration and nine further modules are in development.

Solem's paper concluded by identifying key problems that require attention from researchers if Internet technology is ever to deliver equitable educational opportunities to geographically and culturally diverse groups of learners. Joos Droogleever Fortuijn, (Universiteit van Amsterdam, j.c.droogleever@frw.uva.nl), addressed a related topic at length in delivering the 'Journal of Geography in Higher Education/Carfax lecture' **Internationalising Teaching and Learning: a European Experience**. The lecture focused on experiences with international teaching and learning in the ERASMUS programme on geography and gender. This had brought together geographic educators, students and academic staff from six universities and five countries between 1990-1998. It was an example of collaborative work that experimented with a variety of models to address the differences that arise in international teaching and learning: in language and culture, in mastery of English, and in approaches to geography. The balanced academic exchange programme intended by ERASMUS has not yet been achieved; there is a hierarchy of ERASMUS movements – from South to North, and from non-English speaking to English-speaking countries.

English remains the dominant language in international geography; it dominates journals and other publications and the methods of teaching and learning. Issues over what this means for international collaboration had previously been raised in the first collaborative exercise of the INLT (Shepherd et al. 1999; 2000). Something to note, especially by those with ERASMUS students in our classes, is the observation by students in the geography and gender programme that heavy regional accents among English speaking staff can greatly disadvantage non-English speaking exchange students in the UK, particularly in lectures. International

collaborative work can also encounter the political implications of some languages – the example given was Catalan. Droogleever Fortuijn discussed the strategies used to bridge cultural and linguistic differences and to break down hierarchies, making clear whether they were successful or not. In illustrating how the project 'used' the differences as teaching and learning contexts, she concluded that direct contact and encounter with persons of different backgrounds can offer an efficient and effective teaching method to accrue the 'profits of diversity' in learning about geographical phenomena, approaches and definitions, research and teaching methods. A point that hit home to many in the audience was that European students carrying out fieldwork in other cultures interpret what they see from their own viewpoint and therefore achieve only a partial (in both senses of the word) appreciation of what they are studying.

INLT members were among the participants in a panel session **Mentoring New Faculty in Geography: Issues and Strategies** organised by Susan W. Hardwick (University of Oregon, [susanh@uoregon.edu](mailto:susanh@uoregon.edu)), Kenneth E. Foote (University of Colorado, Boulder, [k.foote@colorado.edu](mailto:k.foote@colorado.edu)) and Stanley D. Brunn (University of Kentucky, [brunn@pop.uky.edu](mailto:brunn@pop.uky.edu)). The panel also included other experienced senior geographers, who have served as mentors for many years, and younger faculty. A long-term National Science Foundation (NSF) -funded project centres on providing support for new faculty and advanced graduate students in geography. Comments and conversations in this session featured ideas, issues, and strategies for finding a mentor or mentors who can provide support for new faculty. New lecturers and senior staff in the UK might usefully contact one of the organisers for details about the project.

### Scholarship of Teaching

A session devoted to the "Scholarship of Teaching in Geography" provided an opportunity for Mick Healey (University of Gloucestershire, [m.healey@glos.ac.uk](mailto:m.healey@glos.ac.uk)) to introduce and promote the LTSN-GEES Subject Centre. Another presentation in the same session, **A Place for Geography in the Private, Liberal Arts College** by Mark D. Bjelland (Gustavus Adolphus College, [mjbjelland@gac.edu](mailto:mjbjelland@gac.edu)), considered the mission statements of private, liberal arts colleges that often describe a commitment to interdisciplinary learning, global understanding, environmental responsibility, and social justice, for which geography would seem to be the ideal liberal arts discipline. However, although liberal arts colleges are noted for innovative education methods and produce a disproportionately high number of PhD students and university professors in many disciplines, only 20% offer geography BAs. Even more noteworthy, only 7% of the United States' premier private liberal arts colleges have geography. Among the contributory factors for this low representation of the subject in these colleges, and its potential hindering of the so-called renaissance of academic geography, is the great ignorance of the subject in schools. This is something that we are concerned should not happen in the UK.

Cary Komoto (University of Wisconsin-Barron County, [ckomoto@uwec.edu](mailto:ckomoto@uwec.edu)), in **Putting Teaching on the Map: The Scholarship of Teaching and Learning in Geography**, considered the place of teaching in the trinity of teaching, research, and service for college and university geography staff. The process of research, its documentation, and how it is evaluated in academia involve well-understood and generally accepted practices. In contrast, teaching does not have a widely accepted form of documentation or evaluation. ("A problem in research is an invitation, in teaching it's an accusation!"). Applying lessons learned from research into teaching and learning is another way of thinking about the scholarship of teaching and learning: a shift from 'fixing' a problem to ongoing investigation. The scholarship of teaching and learning is an approach to elevate the process of teaching and learning as scholarly, intellectual work. Moving along the path of the scholarship of teaching and learning requires an academic culture that encourages, among other things, systematic inquiry into teaching and learning issues, building upon the work of others, and public dissemination of results with peer reviews. The Wisconsin college system has a workshop programme for developing the scholarship of teaching, a possible opportunity for international collaboration with the GEES pedagogical research programme on fieldwork ([www.gees.ac.uk/pedresfw/pedresfw.htm#aims](http://www.gees.ac.uk/pedresfw/pedresfw.htm#aims)).

### Miscellany

Some salient points from a small sample of presentations are worth reporting. Amongst a large number of poster presentations on geographical applications were several that extended into unfamiliar but interesting territory. For example, Keith D. Harries (University of Maryland Baltimore County, [harries@umbc.edu](mailto:harries@umbc.edu)) presented **GIS Applications in Parole and Probation**. Observing that the corrections field has lagged in the adoption of GIS technology, this project introduced GIS to the Maryland Division of Parole and Probation, demonstrating how GIS could support the Division's operational model, known as Proactive Community Supervision (PCS). As an alternative to incarceration, in the context of burgeoning prison populations, the PCS model places a premium on information and communication. Apart from obvious applications, such as mapping general caseload and querying databases in order to assess the distributions of subsets of the caseload, GIS offers the opportunity to optimise routing for parole and probation agents, the emphasis being on agents going to their clients in the community, rather than clients reporting to agents located in offices. Facility locations could also be optimised with respect to the caseload. In a scenario all too familiar in this country, although the project was able to demonstrate applications, it was found that actual adoption of innovations was hindered by lack of resources and other intra-agency issues.

One disappointing characteristic of some formal presentations was the poor quality of visual aids. Overhead projection featured at least as often as data projectors: not in itself a bad thing, but in this day and age it is unforgivable to have so much detail on overhead transparencies that they simply cannot be read by even a small audience! By contrast, however, Douglas E. Alsdorf (UCLA, [alsdorf@geog.ucla.edu](mailto:alsdorf@geog.ucla.edu)), as a self-confessed first-time 'powerpoint' user, demonstrated the effectiveness of this presentation technology in clearly illustrating his paper **Water Storage of the Central Amazon Floodplain Measured with GIS and Remote Sensing Imagery**. He successfully conveyed the logical and technical intricacies of extrapolating a Space Shuttle-based swath of radar data beyond their 15% coverage of the central Amazon floodplain. This was used to estimate water storages that differ substantially from those derived from previous basin-wide mass-balance modelling approaches.

That paper was for me a high point of the conference and my largely positive view of the conference as a whole was not sullied by the benign weather that made it a pleasure to be in Los Angeles that week. (The weather immediately before and after was apparently less clement, prompting one TV presenter to ask, when faced with a forecast high of 68°F, "Will winter never end?"). In 2003, the conference will be held between March 5<sup>th</sup> and March 8<sup>th</sup> in New Orleans during Mardi Gras, the first day coinciding with "Fat Tuesday". Consider: 6000 delegates trying to get to, and find a place to stay in, an already full city! If you want to go, I advise you to have made your hotel and travel arrangements some time ago! (To register, visit [www.aag.org](http://www.aag.org))

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## The LTSN-GEES Senior Advisors



One of LTSN-GEES' Strategic Aims is to "foster a positive approach to the three disciplines working constructively together, whilst recognising and catering for their distinctive attributes and requirements." This has been successfully achieved from the start through GEES-collaborative events and activities run by the team based at Plymouth, and through the activities of the subject-based Senior Advisors based in their own institutions. In addition, LTSN-GEES has considerably benefited from the work of Geoff Robinson, at Leicester University, who has acted as Senior Advisor for C&IT. Geoff is retiring at the end of this academic year, and we would like to take this opportunity to thank him for his valuable input both during the development stage and in the recent activities of LTSN-GEES.

The purpose of the subject Senior Advisors is to provide specialist and high quality expertise to LTSN-GEES and to ensure the needs of the individual discipline communities are identified and met. An outline of the types of activities each subject Senior Advisors undertakes is given below:

### Geography: Mick Healey, University of Gloucestershire (mhealey@glos.ac.uk)

With support from Phil Gravestock (University of Gloucestershire)

- Keeping in contact with the geography community through:
  - Involvement in activities of the Subject Centre, Geography Discipline Network, International Network of Learning and Teaching Geography in HE, and membership of the *JGHE* Editorial Board and the RGS-IBG Council, Education Committee, and Higher Education Study Group;
  - Answering telephone and email enquiries about geography in HE;
- Keeping in contact with the broader education community through membership of the Institute of Learning and Teaching Accreditation Team, the Teaching and Research Group, the Pedagogic Research Group and activities associated with the National Teaching Fellowship and the LTSN Generic Centre;
- Promoting collation of good practice examples from UK and overseas to contribute to the LTSN-GEES Resource Database;
- Helping to raise the profile of the LTSN-GEES through participation and presentations at geography and wider GEES and educational events.

### Earth Science: Neil Thomas, Kingston University (n.thomas@kingston.ac.uk)

- Conducting departmental visits in 'outreach campaign';
- Development of 'survival skills for new lecturers' package;
- Funding small learning and teaching development projects in the Earth Sciences;
- Disseminating the outcomes / products of previous projects;
- Providing advice to Earth Scientists on specific curriculum development issues;
- Raising the profile of LTSN-GEES within the industrial sector;
- Maintaining and developing links with the Geological Society, Royal Astronomical Society, Earth Sciences Teachers Association (ESTA) and cognate LTSN Subject Centres;
- Seeking examples of good practice (national and international) and including these in the Resource Database (see article on page 26) and an update of the Key Skills portfolio;
- Helping to raise the profile of the LTSN-GEES through participation and presentation at Earth science and wider GEES and educational events.
- Co-directing the LTSN-GEES guides project with Jennifer Blumhof (see <http://www.gees.ac.uk/projects/EESguides.htm>)

### Environmental Science: Jennifer Blumhof, University of Hertfordshire (j.r.blumhof@herts.ac.uk)

With support from Marianne Hall (University of Hertfordshire) and Christine James (RGS/IBG)

- Keeping in contact with the environmental science community through the activities of the Committee of Heads of Environmental Sciences (CHES), CHES Learning and Teaching Committee and the Institution of Environmental Sciences- Education Committee
  - Keeping in contact with the European environmental science community through work with the Association of University Departments of Environmental Sciences in Europe (auDes) and Environmental Sciences Strengthened in Europe by Networking, Conferences and Education (ESSENCE);
- Keeping in contact with the broader education community through work with Hertfordshire Integrated Learning Project, Association of Eastern \Region Universities- regional profiling group, membership of the Institute of Learning and Teaching and through work as Learning and Teaching Development Tutor for the University of Hertfordshire;
- Answering telephone and email enquiries about ES in HE;
- Organising the CHES annual conference and AGM;
- Promoting the dissemination of good practice through Swap Shops;
- Continuing with the development of Esac-ltsn jiscmail discussion list and CHES web site;
- Promoting collation of good practice examples from UK and overseas (through ESSENCE contacts) to contribute to the new Resource Database;
- Contributing to the organisation of the Annual Hertfordshire Integrated Learning Project (HILP) Skills conference;
- Raise the profile of LTSN-GEES through participation and presentation at environmental science and educational events.
- Co-directing the LTSN-GEES guides project with Neil Thomas (see <http://www.gees.ac.uk/projects/EESguides.htm>)

In addition, all the Senior Advisors work closely with the cross-disciplinary activities of LTSN-GEES, including contributing extensively to the:

- National conferences;
- Departmental workshops;
- New Lecturers' residential workshop;
- PLANET editorial board;
- Selection panel for the small-scale project funding;
- Learning and teaching research project;
- Development of learning and teaching guides in Earth & Environmental sciences project;
- Linking Teaching and Research project;
- Representing LTSN-GEES at national events; and
- General planning of LTSN-GEES activities.

**Please remember that each of the LTSN-GEES senior advisors represent a particular discipline. They are your Subject Centre representatives and would welcome hearing from you if you have any subject-specific queries or suggestions on learning and teaching in higher education. Contact details for each senior advisor are provided above.**



Further copies of PLANET are available in a variety of different formats - if you would like any further information please contact the Subject Centre:  
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## A Vintage Year for GEES!



### Background

The National Teaching Fellowship Scheme (NTFS) is part of an overall programme to raise the status of learning and teaching in Higher Education. It was set up by the Higher Education Funding Council for England (HEFCE) and the Department for Employment and Learning (DEL) in Northern Ireland and is managed by the Institute for Learning and Teaching in Higher Education (ILT) (<http://www.ilt.ac.uk>). The high profile scheme celebrates excellence in teaching by recognising individuals who are outstanding as teachers and promoters of learning. The NTFS is the individual strand of the HEFCE's Teaching Quality Enhancement Fund (TQEF), and comprises 20 Fellowships every year, each worth £50,000, to be used to the benefit of learning and teaching in Higher Education.

### The Gees 2002 NTFS winners

Geography and Environmental Sciences have scored highly in this year's National Teaching Fellowships, with three out of the twenty winners teaching in these disciplines. These winners were chosen from 82 nominations from HE institutions throughout England and Northern Ireland. The nominations were judged by a National Advisory Panel chaired by Sir Martin Harris, Vice-Chancellor of the University of Manchester.

The Geography and Environmental Science winners are:

**Pauline Kneale** (Department of Geography, University of Leeds, [pauline@geog.leeds.ac.uk](mailto:pauline@geog.leeds.ac.uk))

Pauline Kneale is a Senior Lecturer in the Department of Geography at the University of Leeds and has worked there for 17 years. Her work is mostly concerned with hydrological forecasting, water quality and wetlands, as well as research into learning and teaching in Geography. She is also a member of the editorial board for the JGHE and a member of the LTSN-GEES Steering Group.

Pauline's NTFS project will link three strands - skills, intrapreneurship, and business examples of personal development planning (PDP) to create a suite of experiential, problem-based case materials that embed employability themes in academic curricula. The more challenging (to teach) skills they will highlight include: networking, handling difficult colleagues, getting ideas across to colleagues, managing unfair criticism, changing goalposts, stress management and broader experience of teamwork and team writing. The cases will be trialed with undergraduates and postgraduates in geography, but their environmental and business basis will ensure that they have a broader, generic appeal.

**Peter Hughes** (School of Humanities and Environmental Studies, University of Sunderland, [peter.hughes@sunderland.ac.uk](mailto:peter.hughes@sunderland.ac.uk)).

Peter Hughes is a Senior Lecturer in Environmental Studies at the University of Sunderland. Peter has been at the University for eight years and his work is mostly concerned with environmental studies and geography, with a particular interest in values and the environment, international environmental politics, sustainable development and ecotourism.

Peter will spend his Fellowship money on examining the opportunities for, and constraints upon, the development of "autonomous learning zones" within HE. He will investigate whether traditional academic disciplines act as a barrier to the establishment of autonomous learning opportunities through explicit expectations as to how a student should perform, and through imposing boundaries on the sorts of knowledge they should engage with.

**Brian Chalkley** (LTSN-GEES and the Department of Geographical Sciences, University of Plymouth)

Brian has been at the University of Plymouth for 31 years and is involved in undergraduate teaching in human geography and directing the LTSN-GEES Subject Centre in its work of promoting good practice in learning, teaching and assessment.

Brian's project will look at how to enhance graduate employability, in particular in the discipline of geography, although the principles and practice developed will have implications for other areas of higher education. The main purpose of the project will be to identify, document, develop and disseminate ways of strengthening students' capacity to make an effective contribution in the workplace.

### Previous GEES-NTFS winners

These three NTFS 2002 winners makes a total of four Geography and Environmental Sciences NTF successes in three years, with Mick Healey having obtained the first of these fellowships in 2000 (GEMRU, University of Gloucestershire and senior advisor for Geography to LTSN-GEES). LTSN-GEES approached Mick to ask whether he could offer any advice to the winning teaching fellows of 2002. He replied: "*Many congratulations! Do take advantage of the time and status provided by the fellowship to reflect and network widely*".

Mick's project is concerned with investigating the way in which the scholarship of learning and teaching is embedded in HE and disciplines throughout the world. This is broad enough to let him reflect broadly and to network extensively both in the UK, and in Australasia and North America!

Further details of the NTFS and this year's winners, can be found at: <http://www.ntfs.ac.uk/>, or by emailing: [ntfsenquiries@ilt.ac.uk](mailto:ntfsenquiries@ilt.ac.uk)

LTSN-GEES hope that there will be more National Teaching Fellowships awarded to colleagues in the GEES disciplines over the next few years.

## Got a Question or Query?

## Ask LTSN-GEES

LTSN-GEES runs an enquiry and advisory service to answer your questions on any aspect of learning, teaching and assessment in the GEES disciplines. Contact the Subject Centre on 01752 233530 or email: [info@gees.ac.uk](mailto:info@gees.ac.uk). We guarantee an initial response time of no more than 48 hours.

## Diary Dates - June 2002 to August 2003

This section lists some specific learning and teaching conferences and workshops, and other conferences with learning and teaching sessions. For further information and registration, visit the website addresses provided. A continually updated list can also be downloaded at <http://www.gees.ac.uk>

Please note that at the time of going to press, some of these events will have already taken place.

### JUNE

#### Wednesday 12 June

Changing A-levels, Recruitment & Widening Participation: The Shifting Agenda for Geography  
RGS-IBG, London  
<http://www.rgs.org>

#### Tuesday 18 June

Maths support for non-specialist students in science and engineering departments  
Hamilton, near Glasgow  
<http://itsn.mathstore.ac.uk/workshops/maths-support/index.shtml>

#### Thursday 20 June to Friday 21 June

European Workshop On Mobile and Contextual Learning  
Birmingham  
<http://www.eee.bham.ac.uk/mlearn/>

#### Tuesday 25 June to Wednesday 26 June

Learning Lab 2nd Annual Conference and Exhibition  
Telford  
<http://www.learninglab.org.uk/>

#### Wednesday 26 June to Thursday 27 June

The 4th International JISC/CNI Conference  
Edinburgh  
<http://www.ukoln.ac.uk/events/jisc-cni-2002/>

#### Friday 28 June to Saturday 29 June

A symposium on Environmental Education for Sustainable Development  
Moscow State University  
Contact: [bchalkley@plymouth.ac.uk](mailto:bchalkley@plymouth.ac.uk)

### JULY

#### Sunday 7 July to Wednesday 10 July

Higher Education Research and Development Society of Australasia (HERDSA) Annual Conference  
Perth, Australia  
<http://www.ecu.edu.au/conferences/herdsa/>

#### Monday 8 July

Accessible curricula = good practice for all  
London  
<http://www.itsn.ac.uk/genericcentre/for-scs/AccessibleCurricula.asp>

#### Tuesday 9 July

Keeping up with our Neighbours: e-learning in Australian higher education Manchester  
<http://www.itsn.ac.uk/genericcentre/projects/elearning/event20020709.asp>

#### Tuesday 9 July to Wednesday 10 July 2002

6th International Computer Assisted Assessment (CAA) Conference  
Loughborough  
<http://caa2002.lboro.ac.uk/caaconference/>

#### Wednesday 10 July to Thursday 11 July

Hertfordshire Integrated Learning Project (HILP) Third Annual Skills Conference  
University of Hertfordshire  
<http://www.herts.ac.uk/envstrat/HILP/>

#### Monday 15 July to Wednesday 17 July

Beyond Text: Enriching the E-learning Experience  
University of Derby  
<http://cedm.derby.ac.uk/BeyondText/parent.htm>

### AUGUST

#### Monday 26 August to Friday 30 August

The ISAGA/SAGSET Conference  
Edinburgh  
[http://www.eds.napier.ac.uk/isaga\\_sagset/](http://www.eds.napier.ac.uk/isaga_sagset/)

### SEPTEMBER

#### Wednesday 4 September - Friday 6 September

The 10th Improving Student Learning Symposium (Improving Student Learning: Theory and Practice - 10 years on)  
Belgium  
<http://www.brookes.ac.uk/services/ocsd/>

#### Monday 9 September to Wednesday 11 September

ALT-C  
Sunderland  
<http://www.alt-c2002.org.uk/>

### OCTOBER

#### Wednesday 16 October - Saturday 19 October

National Council for Geographic Education Annual Conference  
Philadelphia, USA  
<http://www.ncge.org/activities/meetings/philadelphia/>

### NOVEMBER

#### Tuesday 19 November - Wednesday 20 November

Staff and Educational Development Association (SEDA) Annual Conference (Forging the Links in Post Compulsory Education)  
Birmingham  
<http://www.seda.demon.co.uk/confmenu.html>

### DECEMBER

#### Tuesday 10 December - Thursday 12 December

Society for Research into Higher Education (SRHE) Annual Conference (Students and Learning: What is Changing?)  
Glasgow  
<http://www.srhe.ac.uk/annualconf2002/glasgow1.htm>

## Diary Dates continued

### JANUARY 2003

Thursday 9 January



End of LTSN-GEES Pedagogic Research and Fieldwork Programme Conference

Coventry

<http://www.gees.ac.uk> (details to be posted here in due course). Deadlines for submitting a paper will be October 31<sup>st</sup>. Deadlines for booking will be December 1<sup>st</sup>. NOTE: This conference is only for the project team.

### MARCH 2003

Tuesday 4 March - Saturday 8 March



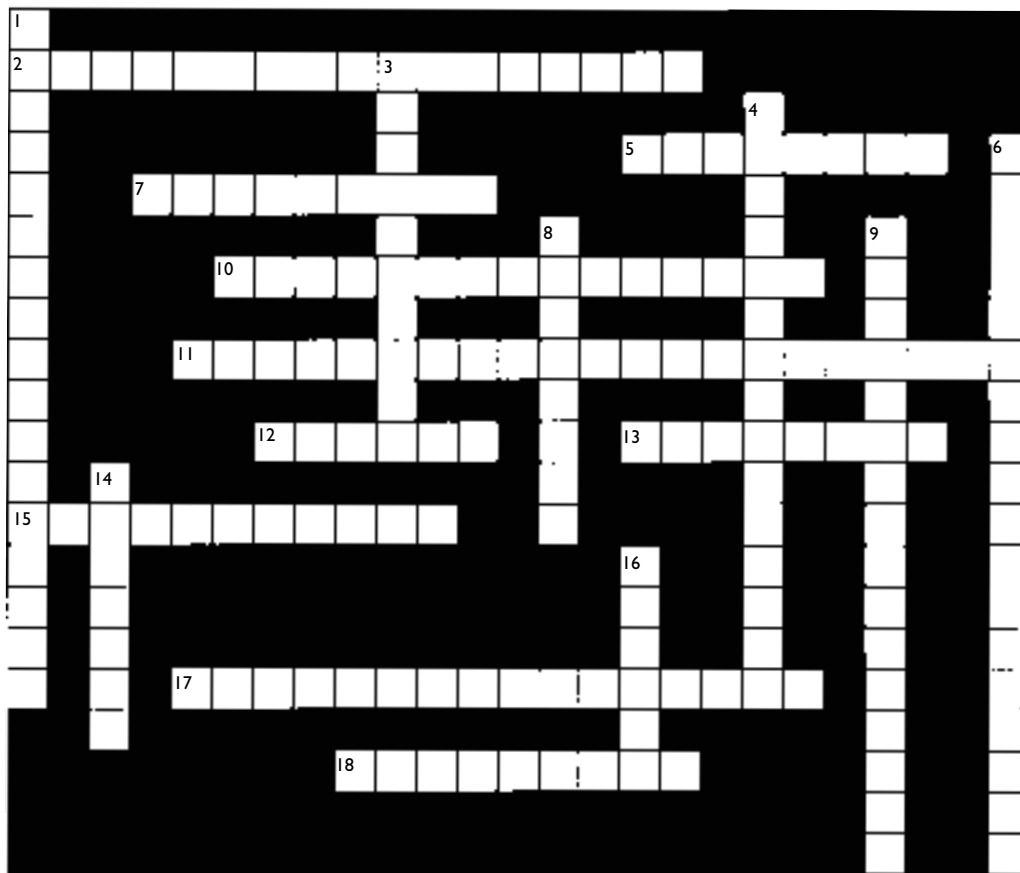
Association of American Geographers Annual Conference 2002  
New Orleans, USA  
<http://www.aag.org>

### AUGUST 2003

Saturday 10 August - Wednesday 14 August



GeoSciEd IV  
Calgary, Canada  
<http://www.science.uwaterloo.ca/earth/geosciEd/>



# planet

## CROSSWORD

### ACROSS

- 2 A device for marking objective tests (7/4/6)
- 5 Small group teaching (8)
- 7 Essential skills in order to be effective in the workplace (3/6)
- 10 Emotive aspect of a person's learning (8/6)
- 11 Government initiative to increase the number of people under 30 into HE by 50% by 2010 (8/13)
- 12 LTSN-GEES publication (5)
- 13 Learning process whereby the participants take on part of other individuals (4/4)
- 15 Enlisting of new students to degree programme (11)
- 17 Procedure whereby the markers of exam scripts are unaware of the identity of the students taking the exams (9/7)
- 18 The study of how learning occurs (9)

### DOWN

- 1 Learning acquired through the workplace (4-5/8)
- 3 Process whereby a learner takes time to consider an experience (10)
- 4 The major area of learning disciplines. Has to do with knowledge, understanding and thinking (9/6)
- 6 Small groups in which learners co-operate especially to relate to real-world problems where action needs to be taken (6/8/4)
- 8 Theory or process of teaching (8)
- 9 Type of simulated fieldtrip undertaken through the internet (7/9)
- 14 Learned person (7)
- 16 Short written instructions on exam scripts (6)



## Geography Discipline Network

### *Learning Support for Disabled Students Undertaking Fieldwork and Related Activities*

#### Web-based Guides for Tutors in Higher Education

The following Web-based guides are the result of the ‘*Learning Support for Disabled Students Undertaking Fieldwork and Related Activities*’ project, funded by HEFCE’s *Improving Provision for Disabled Students Funding Programme*.

- Issues in Providing Learning Support for Disabled Students Undertaking Fieldwork and Related Activities
- Providing Learning Support for Students with Mobility Impairments Undertaking Fieldwork and Related Activities
- Providing Learning Support for Blind or Visually-impaired Students Undertaking Fieldwork and Related Activities
- Providing Learning Support for Deaf or Hearing-impaired Students Undertaking Fieldwork and Related Activities
- Providing Learning Support for Students with Mental Health Difficulties Undertaking Fieldwork and Related Activities
- Providing Learning Support for Students with Hidden Disabilities and Dyslexia Undertaking Fieldwork and Related Activities

<http://www.glos.ac.uk/gdn/disabil/index.htm>

## The PLANET Archive

All back issues of PLANET can be downloaded as pdf files from the LTSN- GEES website at <http://www.gees.ac.uk/planet/>. The following list categorises by main theme and provides titles, authors and PLANET issues of all feature articles contributed by the GEES Higher Education community over the last two years. Thank you again to the authors for their time and effort.

### Use of C&IT in Learning and Teaching:

- Developing Field-Sim; Software to Support Fieldwork- Mike Sanders and Malcolm Nimmo, PLANET Ed. 1 (see also Fieldwork)
- Urban Planning: A New Collaborative Learning Environment- Chris Webster *et al.*, PLANET Ed. 1
- UKESCC Earth Science Courseware goes on the WWW- Bill Sowerbutts, PLANET Ed. 2
- One Year's Experience of duo (Durham University Online)- Barbara Watson and Daniel Donoghue, PLANET Ed. 3
- Using Geographic Information Systems and the Internet to Support Problem based Learning - Michael Solem, PLANET Special Edition 2 (see also Curriculum Development)

### Employability:

- Linking the worlds of academia and work: work based learning in the geosciences- Jennifer Jones, PLANET Ed. 3
- Sustainable development and the professions- Steve Martin and Annie Hall, PLANET Ed. 3
- QAA Code of Practice on Careers Education Information and Guidance (CEIG), PLANET Ed. 3
- PLANET Special Edition 1- Embedding Careers Education in the Curricula of Geography, Earth and Environmental Sciences
  - What does the employer want? A British Geological Survey perspective on graduate employability - Ian Penn
  - The use of an employers' forum for student career development - Sarah Maguire and Claire Guyer
  - Stressful experiences are useful experiences: creating skill-based materials for GEES students - Pauline Kneale
  - A 'Career Planning Agreement' devised for Geography programmes - Alice Goddard
  - Embedding and assessing career management skills in Earth Sciences degree courses: a subject-specific group and individual assignment - Neil Thomas
  - Developing and embedding reflective portfolios in the Faculty of Earth and Environmental Sciences - Pauline Kneale
  - Developing undergraduate entrepreneurial abilities using Problem Based Learning - Barbara Page
  - Putting Careers into a single honours Geography programme - Chris Ribchester and Judith Done
  - Why include careers? The data - Pauline Kneale
  - Geographers into Teaching News - Felicity Thorne
  - Geographers and the workplace: an embedded module - Sue Hawkworth and Pauline Kneale
  - The Personal Development Portfolio (PDP) for Geographers and Earth Scientists - Andrea Duncan and Dawn Weatherston
  - What career skills do our graduates take to the marketplace? - Sue Hawkworth and Pauline Kneale
  - A graduates' perspective - from Geography to recruiting Geographers - Martin Bradbury and Pauline Kneale

- A careers module for final year Geographers - Brian Chalkley and Mandy Burns
- Developing personal and professional skills in Geology at the University of Plymouth - Will Diver *et al.*
- It's not what you study, it's how you benefit from your study that interests us' - Andrew Bottomley
- Externalising geo-assessment - Ann Worsley

### Widening Participation:

- Examining Home Learning Environments- Greg Spellman *et al.*, PLANET Ed. 3 (see also Curriculum Development)

### Fieldwork:

- A Field-Based 'Oil Business Game' for Honours Geology Students- Gordon Walkden, PLANET Ed. 1
- Developing Field-Sim; Software to Support Fieldwork- Mike Sanders and Malcolm Nimmo, PLANET Ed. 1 (see also C&IT)
- Fieldwork and Problem based Learning - Chris Perkins *et al.* PLANET Special Ed. 2 (see also Curriculum Development)
- Disabled Students and Fieldwork: Towards Inclusivity? - Mick Healey *et al.*, PLANET Special Ed. 3 (See also Accessibility)

### Scholarship of Teaching:

- Teaching and the RAE- Mick Healey, PLANET Ed. 1
- 'I hear and I forget, I see and I remember, I do and I understand'- putting learning models into practice- Benjamin Horton, PLANET Ed. 2
- Theory into practice: making the most of team working- Martin Pill, PLANET Ed. 2
- Pedagogic Research: The new frontier- Seraphim Alvanides *et al.*, PLANET Ed. 3
- Helping academics to write: experiences and insights from a writers' retreat- Sarah Moore and Maura Murphy, PLANET Ed. 2

### Curriculum Development:

- Local Sustainability and LA21: a vertically integrated, research, learning & teaching activity- Peter Hughes *et al.*, PLANET Ed. 2
- Synergy: The Greenwich Experience- Mike McGibbon, PLANET Ed. 1
- Mapping the Territory at Cheltenham and Gloucester- Carolyn Roberts, PLANET Ed. 2
- The 'statistical': driving data collection and analysis- Mark Langan *et al.*, PLANET Ed. 2
- But isn't this what you're paid for? The pros and cons of peer and self assessment- Ian Hughes, PLANET Ed. 2
- Breaking the feedback loop: problems with anonymous assessment- Drew Whitelegg, PLANET Ed. 3
- Workshop-based teaching of research design- David Simm and Carol David, PLANET Ed. 3
- Using Class Quizzes for Weekly Review- Martin Haigh, PLANET Ed. 3
- Examining Home Learning Environments- Greg Spellman *et al.*, PLANET Ed. 3 (see also Widening Participation)
- **PLANET Special Edition 2- Case Studies in Problem Based Learning (PBL) from Geography, Earth and Environmental Sciences**
  - The Problem Based Learning Landscape - Maggi Savin Baden
  - Using Problem Based Learning to Develop Graduate Skills - Jennifer Blumhof *et al.*
  - Problem Based Learning: a Personal View - Chris Lee
  - Name and Locate That 'Town' (La Muskah): A Problem Based

**P L A N E T**

- Learning (PBL) Exercise in Environmental Geology - Chris Lee
- Problem Based Learning (PBL):A Case Study from Environmental Sciences - Simon Belt
- Challenging the Teaching Convention in Geography Using Problem-Based Learning: The Role of Reflective Practice in Supporting Change - Adrian Chappell
- Using Geographic Information Systems and the Internet to Support Problem based Learning - Michael Solem (see also C&IT)
- The World Bank Scenario:A Problem Based Learning Activity in Human Geography and Environmental Science - Randy Gabrys Alexson and Christopher Kemnitz
- Fieldwork and Problem based Learning - Chris Perkins *et al.* (see also Fieldwork)

**Accessibility:**

- Disabled Students and Fieldwork towards Inclusivity? Mick Healey *et al.*, PLANET Ed. 3
- **PLANET Special Edition 3- Special Educational Needs and Disabilities: Learning and Teaching Guidance for Geography, Earth and Environmental Sciences**
  - The Special Educational Needs and Disability Act (SENDA) 2001 - An introduction to the new legislation - Skill: National Bureau for Students with Disabilities
  - Introducing the QAA Code of Practice for the assurance of academic quality and standards in higher education - students with disabilities - Karen Czapiewski, Quality Assurance Agency (QAA)
  - Learning, Teaching and Disability: The Need for a New Approach - Mike Adams, National Disability Team
  - Using Online Learning to Disseminate Disability-related Staff Development Materials - Mike Wray
  - The Teachability Project: Creating an Accessible Curriculum for Students with Disabilities - Anne Simpson
  - Of Mountains and Molehills: An Overview of Accessibility and Technology for Learning and Teaching - Juliet Laxton
  - Mobility impaired students could face access and location problems on entering Higher Education - Ann Norman
  - Dyslexia: Implications for Learning, Teaching and Support - Judith Waterfield
  - Disabled Students and Fieldwork: Towards Inclusivity? - Mick Healey *et al.* (see also Fieldwork)
  - Able Student, Disabled Person: practical activities and disabled students - Alan Jones
  - Academic Assessment and Students with Disabilities - Lawrie Phipps, TechDis
  - Disability: The Students' View - (Various)
  - QAA Code of Practice on students with disabilities

**Editorial Correction**  
 The editorial board of PLANET acknowledge the type-setting error made in the January 2002 edition, where the same line of text was repeated at the top of both columns on page 6. We would like to apologise to Jenny Jones for this editorial lapse.

**P L A N E T**  
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The Editorial committee of PLANET welcomes all material of interest to academics and support staff in the fields of learning and teaching across the three disciplines of Geography, Earth and Environmental Sciences. Generic submissions from other disciplines and submissions with an international dimension are also invited. PLANET also welcomes learning and teaching 'work in progress'.

The audience for PLANET is academics, support staff and educational developers. Articles accepted for publication may be subject to editing.

### Types of Contributions

Short research papers, notes or short communications, case studies of learning and teaching practice, annotated web-links, software and book reviews and letters to the editor commenting on an article previously published in PLANET, or on current higher education issues.

### Main Paper Submissions:

Manuscripts must be typewritten. The author(s) should provide contact details, including email addresses. All submissions should be in electronic format. Main papers should normally be in the order of 1000-2000 words, although longer articles may be considered. An abstract of no more than 200 words should also be provided. Notes, or short communications, annotated web-links, book and software reviews and letters to the editor, should be no longer than 400 words.

### Referencing:

All publications cited should be presented in accordance with the Harvard Referencing System, both within the text and in the reference list.

### Illustrations:

All illustrations should be provided in a reproducible form (this may include reduction).

All articles with any accompanying figures, tables, diagrams and photographs, should be submitted in electronic format to:

### Steve Gaskin

Editor

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## Contact Us!

If you have any questions or queries about this publication, or on any learning and/or teaching issue, then contact the Subject Centre team at:

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Website: <http://www.gees.ac.uk>



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