

NEWS FROM THE GEES SUBJECT CENTRE

Embedding entrepreneurial skills in the GEES curriculum

The Higher Education Academy is managing a programme of activity to encourage entrepreneurial skills amongst undergraduates, via curriculum development. A large amount of generic material has already been produced to support staff in embedding the development of such skills into the curriculum (all available on-line at www.heacademy.ac.uk/952.htm). In addition, ten Subject Centres have been awarded funding to develop discipline-specific resources.

The Higher Education Academy has a very holistic view of enterprise, entrepreneurship and 'intrapreneurship' which is encompassed in this definition by Alison Price:

"Enterprise is an inclusive concept which provides both the context in which subject disciplines can be explored, as well as an approach, through skill development, which can be taken to the exploration and discovery of a discipline. In these respects, it can provide a challenging environment within which to explore a variety of teaching areas (the small business context) as well as provide a dimension to learning, that of developing the skills of "being enterprising", which provide students with an attitude towards learning, which rewards and supports innovation, change and development.

Enterprise supports the recognition of new market opportunities as well as develops the opportunity to change and develop at the individual, business and industry/sector levels. This includes the exploration of new ideas and developments from a corporate perspective (as "intrapreneurship") as well as the creation of new ventures, social programmes and the exploration of new opportunities" (Price, 2004).

For GEES graduates, entrepreneurship often involves setting up consultancies (e.g. environmental, geophysics, GIS) or working in a freelance capacity. Many such businesses are often set up several years after graduation, when the individual has had an opportunity to gain more experience either through further study or work in industry. (Do you agree with this view of GEES graduate entrepreneurship? If not, or if you have any other examples, please let us know in order to help us build up a clearer picture.)

The GEES Subject Centre's Entrepreneurship Project aims to develop resources to support the embedding of entrepreneurial skills in the curriculum. The emphasis of this curriculum development is very much on skills (such as creativity, team building, risk awareness) and subject-relevance rather than a narrow focus on setting up businesses. The main outcomes of the project will be:

- A set of case studies from GEES graduate entrepreneurs;
- A resource pack of examples of curriculum exercises (available from April 05);
- A departmental workshop framework for the GEES Subject Centre workshop programme (to run from Sept 05); and
- A pioneering two-day residential workshop for staff and students (January 05).

How can you benefit? If you are considering including elements of entrepreneurial skills development in your curriculum, the resource pack will provide lots of ideas and advice to help you. If you would like an opportunity to try out some of the resources firsthand, then come along to our residential workshop on 13th & 14th January in Leeds when you will be able to sample the exercises hands-on and have the chance to discuss the issues further with staff and students.

How can you contribute? We are on the look-out for examples of exercises which develop entrepreneurial skills. These might be anything from 5 minute lecture breaks or 1 hour tutorials to week long field projects or entire modules. Please get in touch if you would like to offer any examples (all, of course, will be duly acknowledged).

For further information on the project or to book for the January event see our web-site at <http://www.gees.ac.uk/projects/entrep.htm> or contact the project manager: Helen King, GEES Subject Centre, Tel 01752 233 532 Email h.king@plymouth.ac.uk

The Higher Education Academy generic project on entrepreneurship skills

The 'Supporting Entrepreneurial Skills' project of the Higher Education Academy provides generic teaching materials, to embed enterprise within existing university modules. A matrix is presented as a framework to contextualise the business start up process and outline the range of support required for curriculum development.

The Supporting Entrepreneurial Skills Matrix (SESM) shows the personal capacity (knowledge, skills, aptitude, and motivation) required to start, develop and run a small business. SESM draws on two models – one that outlines the phases of business start up, developed at Leeds Metropolitan University, and one that draws out the personal elements required by the aspirant entrepreneur, the MAIR model. (See box.)

The Higher Education Academy has also developed further Materials for Enterprise Learning and Teaching (MELT), which include a range of teaching slides, lecturer support and student activities which can be built into any award, drawing out entrepreneurial skills and examples from the core discipline to create an appreciation of the business start up process.

Phases of business start up

- Idea
- Proven Idea
- Planning & Development
- Ready to Start-Up
- Business Growth
- Maturity

MAIR model of personal qualities for entrepreneurs

- Motivation and Confidence
- Abilities & Skills Development
- Ideas
- Resources
- Strategy
- Planning & Operations

1. Business Start Up @ Leeds Met Model of Business Start Up developed by Robertson, M (2000) from Churchill N.C. & Lewis V.L. (1983), The Five Stages of Small Business Growth, *Harvard Business Review*, **63**, 3, May-June and Stevenson Six dimensions of entrepreneurship, in Birley and Muzyka (1997) *Mastering Enterprise*, FT Pitman
2. An enhanced version of the 'MAIR model' adapted by Hartshorn, C from Gibb, A & Ritchie, J (1982). Understanding the processes of starting small businesses, *International Small Business Journal*, **6**, 70-80.

See: www.heacademy.ac.uk/952.htm

Creativity in Earth & Environmental Sciences / Studies: call for interest

The GEES Subject Centre is looking at setting up an interest group to stimulate a discussion around the role of creativity in disciplinary learning and practice with particular reference to the 'Earth Science, Environmental Science & Environmental Studies' QAA Benchmarking statement. This discussion will be part of a pilot process initiated by the Higher Education Academy's 'Imaginative Curriculum' project. The purposes of this part of the project are to:

- 1) gain a deeper understanding of our own practice;
- 2) think of ways of inspiring students to come to university to study our disciplines;
- 3) influence the next generation of benchmarking statement.

The current Benchmarking statement (<http://www.qaa.ac.uk/crntwork/benchmark/earth%20science.html>) suggests that Earth & Environmental Scientists need to be creative thinkers for various reasons:

- working with incomplete data
- using different ways to visualise or represent the data (e.g. maps, diagrams, models)
- thinking about the Earth as a complex set of systems
- working in a variety of scales (nanometres to thousands of kilometres; seconds to millions of years)

If you would be interested in joining the interest group and / or would like to offer examples of teaching creativity from your practice, please contact Helen King, Tel 01752 233 532
Email h.king@plymouth.ac.uk

New GEES Teaching and Learning Guides

Three new guides on teaching and learning in Earth and Environmental Science / Studies will be shortly available from GEES on:

- Fieldwork
- Practical and Lab Work
- Assessment

These are an extension and adaptation of the excellent Geography Discipline Network (GDN) Guides for Geography. The authors of the new guides are discipline specialists working in close collaboration with the original GDN authors.

These will be available for download from the GEES website at: <http://www.gees.ac.uk/pubs/guides/eesguides.htm>

Printed copies will be sent to all Departmental Contacts. If you would like further copies sent to you, please email: wmmiller@plymouth.ac.uk

GEES Senior Adviser among the first Chartered Environmentalists in the UK

Congratulations to Jennifer Blumhof, GEES Subject Centre Adviser for Environmental Science on the award of the title of Chartered Environmentalist (CEnv). She is one of the first group of around 50 individuals to receive this new designation, recently granted the Royal Charter. Congratulations also to James Longhurst, Carolyn Roberts and Steve Martin who were amongst this group

Limited offer! FREE workshop and advisory service for GEES departments

The Inclusive Curriculum Project is now offering either a department-based workshop, or up to two days' advice and guidance on a wide range of topics on the theme 'Developing an Inclusive Curriculum'. Making reasonable adjustments for disabled students is now a legal requirement and one which will be monitored should the Disability Discrimination Bill come into force in 2006

This offer is open to all GEES staff who come into contact with students, including Heads of Departments, course leaders, lecturers, administrative staff, laboratory technicians, librarians and IT personnel. See our website at [HYPERLINK "www.glos.ac.uk/gdn/icp/index.htm"](http://www.glos.ac.uk/gdn/icp/index.htm) www.glos.ac.uk/gdn/icp/index.htm for further details.

GEES events for 2004/05

GEES has planned a series of events over the academic year. Starting with the conference held jointly with HEEPI on 14 September, meetings for small project grant holders have been held in London and Birmingham. A CPD workshop for facilitators of GEES Departmental Workshops will also be held. Alongside the programme of Departmental Workshops held on request throughout the UK, other events planned for 2005 include:

- Entrepreneurship workshop in Leeds in January.
- Meeting in Edinburgh in April on the Quality Enhancement Initiative themes of Flexible Delivery and Employability.
- Meeting in Wales on Employability and Entrepreneurship on 7th February.
- Conference on GIS to be held in Leicester in spring.
- Residential Workshop on 23/24 May for newly-appointed and aspiring lecturers in GEES subjects.
- Annual Conference in June.

(See also Diary on pp.44/45 this issue.) Further details will be sent to all Departmental and other GEES Contacts by email, and advertised through JISCMail lists. Please contact GEES if you would like to receive details of any of these directly by emailing: wmmiller@plymouth.ac.uk

GEES Departmental Workshop programme

As in previous years, the GEES Subject Centre has been offering a programme of free workshops to all GEES departments in the UK for the 2004/5 academic year, on a first-come, first-served basis. To date, nearly 100 workshops have been coordinated and funded on subjects such as fieldwork, assessment, key skills, work-based learning, linking teaching and research, and e-learning. These are designed to be subject-specific and to complement any generic events offered within institutions. Comments from previous years have included:

'So interesting, we could do with more!'

'Provided a small, overstretched team with the luxury of sitting down and dealing with crucial issues'

'Practical and applicable ideas - inspiring!'

Although the deadline for requesting these has now passed for this year, the GEES Subject Centre can still offer to coordinate and deliver additional learning and teaching workshops for a £350 fee, plus travel and accommodation for the facilitator, if necessary. It is expected that the free programme will be offered again next year, and the call for requests will be sent to Departmental Contacts at the beginning of the 2005/6 academic year. To find out more about this year's programme, see:

www.gees.ac.uk/events/workshops/workshops.htm