Inter-institutional Collaborative Teaching In The Virtual School of Biodiversity

W.J. Trewhella, P.M.C. Davies
Virtual School of Biodiversity
School of Life & Environmental Sciences
University of Nottingham, Nottingham,
NG7 2RD, United Kingdom
+44 (0)115 9513238
will.trewhella@nottingham.ac.uk
peter.davies@nottingham.ac.uk

Benny K.K. Chan, Gray A. Williams
Virtual School of Biodiversity
Department of Ecology & Biodiversity, The
University of Hong Kong, Hong Kong
+852 2299 0604
chankk@hkucc.hku.hk
hrsbwga@hkucc.hku.hk

ABSTRACT
The Virtual School of Biodiversity aims to distribute quality-assured, multimedia, teaching materials. This poster highlights one aspect of this initiative, the cross-institutional teaching of a technology-mediated undergraduate course in biodiversity.

Keywords
Biodiversity, distributed education, collaborative teaching.

1. INTRODUCTION
The Virtual School of Biodiversity (VSB) [1], [2] is a collaborative partnership between The University of Hong Kong (HKU), The University of Nottingham (UoN) and The Natural History Museum, London, under the auspices of *Universitas 21* (*U21*) [3].

The VSB is a response to two emerging global trends.

1) Higher education faces challenges related to increasing financial constraints, greater student numbers and competition from non-accredited organisations, and also opportunities resulting from the use of new technologies in teaching, and new global, multi-purpose strategic alliances, such as *Universitas 21* [1], [4].

2) Promoting education, public awareness and training in environmental issues can help redress the problem that biodiversity, a vital resource for all humankind, is being destroyed at unprecedented rates [5].

New technologies allow both trends to be addressed in a synergistic manner. As such, the VSB is a multi-disciplinary, research and development project, which involves:

- design of a pedagogically-sound, discipline-independent Web-based Integrated Learning Environment (ILE);
- delivery of biodiversity-related courseware and resources;
- evaluation of student learning styles;
- and promotion of good practice in these areas.

This poster describes one aspect of the VSB, notably the joint delivery between two tertiary level institutions of a technology-mediated module in the discipline of biodiversity.

2. COLLABORATIVE TEACHING
The School of Life and Environmental Sciences (SLES) in UoN has taught a biodiversity module since 1996, with interactive multimedia courseware as the primary teaching medium. This module is now being jointly offered in the SLES and The Department of Ecology & Biodiversity (DEB) in HKU.

The module has four primary components:

1) core teaching via technology-mediated courseware tutorials;
2) an extensive resource base including reading lists and Web-based resources;
3) guest seminars and discussions;
4) a group project.

The module is student-centred, based on independent learning, helping students to develop an effective and productive self-centred learning strategy, to develop transferable skills, and to enrich their knowledge of biodiversity.

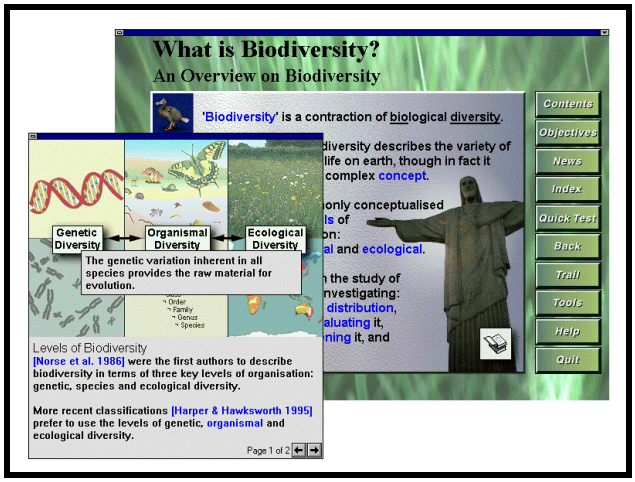

Figure 1 The Scholar's Desktop ILE

Courseware tutorials have been commissioned from international experts, independently reviewed and delivered via a hypertext ILE developed at UoN, called the Scholar's Desktop (Fig. 1). A 'reflective' learning style is emphasised, with questions and tasks being posed. The current ILE is Windows-based, but a new Web-based environment is being developed using eXtensible Markup Language (XML) [6].

Support is provided via Web-delivered Learning Support Centres (LSCs), which have two levels. The top level focuses on general aspects of learning by providing hyper-links to Web-sites offering guidance on study skills, career development and updates of breaking science news. The second level provides support for individual modules, such as Biodiversity (Fig. 2), and provides an overview of the module, a detailed listing of its aims and learning outcomes, and a resources page including

links to relevant Web-sites, on-line journals and major reference works. The Web offers a large resource of biodiversity-related material, with access to major environmental treatise and conventions, biosystematics databases and on-line scientific journals and news tickers.

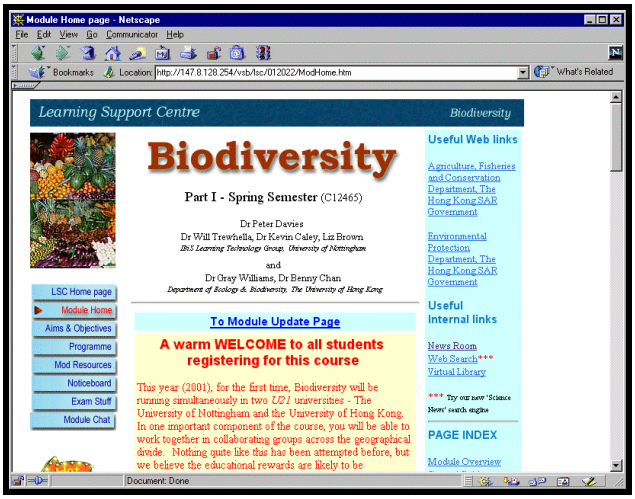

Figure 2 The Biodiversity Module LSC

Group project work on an aspect of biodiversity is an important element of this module and the inter-institutional collaboration adds an exciting dimension in that groups are composed of members from both institutions. On-line discussion forums provide the medium for student discussion, planning and production of project reports, therefore developing an effective on-line, cross-cultural, learning community. The risk of de-humanising teaching is removed by a series of seminars from guest lecturers and by the emphasis on an 'open-door' policy by the module's delivery team.

Figure 3 Students And Staff Using The Biodiversity Module

Assessment is via a mid term multiple choice questionnaire, and deliverables that include the group project report, two essay plans, and a written exam.

A programme of independent evaluation has been built into this initiative, in collaboration with experts from the School of Education (UoN) and the Hong Kong Institute of Education (HKU). The evaluation aims to analyse and assess the quality of this module as an educational experience for the students, with particular regard to the efficacy of student-centred learning and cross-institutional collaboration.

3. VSB VISION

This collaboratively taught module augurs well for the potential of this type of approach. This Biodiversity module and other similar modules produced by the VSB will be offered more widely, via the Web. An expression of interest to teach this module in 2002 has already come from the Department of Biology in the University of Oslo.

The model described here is of distributed learning via the Web, with students and teachers making use of distributed resources. The VSB project aims to build up its network of participating institutions and to further promote this model, offering new resources and teaching tools, particularly to developing countries. This model of distributed learning can also be applied to other academic disciplines. Access to these resources can be offered to a wider audience including secondary schools and lifelong learners, using a more distance learning orientated model.

4. ACKNOWLEDGMENTS

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Figure 4 VSB Partners

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