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An interactive multimedia package for teaching experimental design skills in ecology

Barry Harper
University of Wollongong

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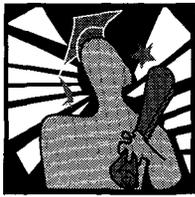
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An interactive multimedia package for teaching experimental design skills in ecology

Abstract

This project involves the production of a computer-based multimedia package for teaching Ecology at undergraduate level. The product will be designed to enhance the development of investigation skills in students of ecology and biology. It is a cross-faculty initiative involving collaboration between the Faculty of Education and the Department of Biological Sciences. The package will take full advantage of the most advanced interactive multimedia technology combined with the latest trends in science education and the most recent developments in learning theory and practice. It will exploit the combination of the conceptual power of a prediction model approach with involvement of the learner in actively constructing knowledge.



CAUT *project 3*

Learning Autonomy & Lecture Enhancement in Environmental Studies

Sharon Beder

This project aims to develop a flexible computer-based learning package which can be used to enhance lecture presentations and enable students to learn independently. The package will be designed to teach students about the social and political dimensions of environmental issues. It will contain resource materials that can be used by the lecturer in a large theatre, including video clips, sound recordings and overhead projection slides. This material will then be available to students who will be able to revise lecture material in their own time, explore aspects of it in more depth, and interactively access references, information and primary material to help them with assignments. The package will be designed to be used by students individually and in small groups.

Funding received: \$49,702.

Dr Sharon Beder is a lecturer in the Department of Science and Technology Studies at the University of Wollongong.



CAUT *project 4*

An Interactive Multimedia Package for Teaching Experimental Design Skills in Ecology

Barry Harper

This project involves the production of a computer-based multimedia package for teaching Ecology at undergraduate level. The product will be designed to enhance the development of investigation skills in students of ecology and biology. It is a cross-faculty initiative involving collaboration between the Faculty of Education and the Department of Biological Sciences. The package will take full advantage of the most advanced interactive multimedia technology combined with the latest trends in science education and the most recent developments in learning theory and practice. It will exploit the combination of the conceptual power of a prediction model approach with involvement of the learner in actively constructing knowledge.

There is currently little multimedia material focused on Australian conditions. One exception is a Hypercard-based package being produced by a group at Melbourne University (P. Ladiges and R. Gleadow; see National Teaching Workshop, Griffith University 1993), but this is aimed at introductory University biology.

The package, when developed, will be an extension of a recently produced interactive multimedia package for high schools, *Investigating Lake Illuka*, and will incorporate activities appropriate to the tertiary level.

Investigating Lake Illuka was developed and produced at the University of Wollongong and will be marketed to schools throughout the country from September 1993. It is CD-ROM-based and has been developed as a component of a broader partnership. Apple Computer Australia and the University of Wollongong have embarked on a project, called the *Christopher Columbus Program—Down Under*, to research effective applications of interactive multimedia in education and training, and to develop educational courseware employing alternative learning strategies for Australian and overseas markets.

Funding received: \$46 000

Dr Barry Harper is the Director of the Faculty of Education Interactive Multimedia Laboratory at the University of Wollongong. He currently develops multimedia packages for education at the secondary and tertiary level, lectures in the postgraduate program in Information Technology in Education with a specialisation in multimedia, and researches in the area.