

# TDU REPORT 2006

Chair of Teaching Committee Copy

**TEACHING DEVELOPMENT UNIT  
SCHOOL of BIOLOGICAL SCIENCES  
UNIVERSITY of SYDNEY**

**Report to Teaching Committee for the period:  
Jan 2006 - Dec 2006**

## **1. INTRODUCTION**

During the year 2006 the Teaching Development Unit (TDU) continued to develop learning materials for students in the School of Biological Sciences (SOBS). These materials included both online and CD-ROM formats.

The TDU moved into its new office in room 519 Carslaw Building in February 2006.

## **2. PROJECTS**

### **New developments – Funded:**

The School of Biological Sciences Teaching Committee (Tcom) computer development grant – 8 applications were submitted in 2005 each is \$1500 for the developments in 2006.

- 1) Title: Providing quality education for generic skills by developing a proposal to extend and align the existing online laboratory report-writing program in SOBS.  
All drag and drop exercises in the “Biology Report Writing” web site were converted to Flash movies to make them compatible with the new generation browsers and to provide consistent user experience.
- 2) Title: Virtual dissection of the garden snail, *Helix aspersa*.  
A virtual interactive dissection of garden snail will be developed, using Authorware template, to allow students to study the techniques of the dissection and learn the basic anatomy of the garden snail, as preparation for the wet dissection, in BIOL2011 Intermediate Zoology. The TDU is waiting for content from Dr Elizabeth May to develop the module.
- 3) Title: To improve numeracy confidence of students enrolled in PLNT2001 Plant Biochemistry and molecular Biology.  
A series of questions will be designed for each of the practical classes and will be targeted to the kinds of calculations required:
  - during the practical class and
  - data handling post-practical

The program will provide numeracy assistance for all undergraduate units of study that require students to do similar calculations, and provide a model for future developments of this type. The TDU is waiting for content from Dr Rosanne Quinnell to develop the module.

- 4) Title: To improve, via web portal, the dissemination of curriculum information in the SOBS.

The aim of the project is to design the information that students require when selecting their study program:

- unit of study descriptions (link to UoS search)
- majors and areas of specialisation within majors
- timetable information
- teaching physiology
- UEO contacts
- how curriculum elements of each unit of study are constructively aligned
- articulating how second year is distinct from first
- articulating how third year is distinct from second
- academic responses to students evaluations.

This project needs to be reconsidered in the light of the university's policy on how the UOSs curriculum information will be presented. There are strategic questions to be answered before any development.

- 5) Title: Preparation of interactive program on microscope use.  
The program is completed, and VHS video is digitised. The TDU is waiting for feedback from Rosanne Quinnell to finalise it.
- 6) Title: To improve flexible delivery of ICT learning resources in Plant Form and Function (PLNT2003/2903).  
The navigational and graphical interface design have been constructed for the "Plant Form and Function - Carrel Computer Based Learning Resources" CD and each component of it. The available content for the CD is ready. The TDU is waiting for additional content from Dr Rosanne Quinnell and the latest software installers to be included before printing the CD. Production of the CD will be completed by semester 2 2007.
- 7) Title: Extension of learning activities within the First Year Biology (FYB) self-assessment modules (SAM).  
The template is complete. The TDU is waiting for feedback from Dr Charlotte Taylor and A/Prof Mary Peat for directions to place existing SAM modules within the template.
- 8) Title: Digital video camera to support interactive computer developments.  
The TDU explored the features of different digital video cameras within the budget and discussed options with members of the School. It is not possible to get all features in one camera. Digitising the old VHS videos are

considered to be the main priority, therefore Sony DCR-HC96E was purchased on October 12<sup>th</sup>, 2006.

**Intermediate Zoology CD – \$1500:**

The Intermediate Zoology CD ROM was developed and used by students during 2006. The master CD with inclusion of new software has been completed and it is under development for 2007.

**eFlora Interactive Glossary – \$1500**

The TDU had developed the database (MySQL) driven eFlora Interactive Glossary in PHP version 5, which was the latest version of PHP at the time of development. The glossary will be functional on the University's server when the University upgrades its PHP version from 4 to 5.

**Plants@Usyd Website – \$2450**

The Plants@Usyd website has been completed.

**Diversity Ecology and Evolution Research Group (DEERG) website – \$1000**

The construction of website for the DEERG has been completed.

**Research In Biology Education Training (RIBET) – \$2275**

The construction of a web site for RIBET has been discussed and an initial design completed. We are waiting for feedback and additional content to complete the site.

**Ongoing developments:**

**First Year:**

**CD ROM**

- The First Year Biology CD ROM was updated. New learning and self-assessment modules and latest versions of all software were included before the 2006 version was released. FYB CD ROM has received favourable acceptance by FYB students.

**Computer based learning modules upgrade**

The upgrade of First Year Biology computer based learning modules to Mac OS X compatible version was completed at the beginning of 2006, and some animations had to be redeveloped since they were not running as they are planned and the original programs were not available.

## **Self-Assessment Modules (SAMs)**

SAM templates used to develop the following new modules.

- Human Evolution and Human Impact on the environment for Semester 2, 2006 (Human Biology)
- Special Senses for Semester 2, 2006 (Human Biology)

## **Interactive practice exams**

- **The interactive practice exams, which use File Transfer Protocol (FTP) approaches had to be reprogrammed due to transfer of the Biology server.**

The Concepts and the Human Biology practice exams had been provided on the CD ROM (without questions) in 2005 and 2006. The questions and answers were accessed from the Biology server via the Internet at the appropriate time during the both semesters. During first semester of 2006 the Biology server was transferred to the university server, which required reprogramming on the original software to accommodate the changes.

The Living Systems practice exam was planned to be delivered same as the Concepts and Human Biology but the content was not received.

## **3. USE OF THE WEB**

### **Continuing use of “Computer Based Learning Resources”**

SOBS learning resources, which are hosted on the local servers, were transferred to USyd central server.

The TDU communicated and negotiated Usyd Content Management System (CMS) and network managers to find solutions to host SOBS learning resources. The existing CMS structure was not designed for such resources and it was not compatible to host them. As an outcome of these discussions USyd ICT group provided a free service for SOBS as a temporary solution until a compatible CMS system will be developed.

General maintenance has been done throughout the year, with the functionality slightly modified. The broken links caused by the transfer of biology resources to university server were fixed. The university server is a case sensitive one whereas the Biology server is not.

### **Plant Physical:**

Multiple-choice questions in the Plant Physical site were not functioning with the new versions of browsers as they were supposed to function. This incompatibility problem was fixed and missing animations were created.

**Reptiles:** Seven Quick Time movies, had been shot at the time of the development, had not been included in the module because of their large volume and limitations of data delivery via Internet. Those movies were recompressed and inserted into the module. At the present, it is available on the web site as well as in the Intermediate Zoology CD.

**VLE:**

The VLE continues to be used for all first year biology units of study, except EDUH1016.

**Databases:**

The database for data on the regional distribution of Fungi has been developed to minimise errors by students during data entry, to automate the process via the Internet and diminish the preparation time spent by technical officers.

The Practice Exam, a self-assessment module, had been programmed in 1998 to assist students to assess their knowledge and familiarise themselves with the exam format. Since then it has been used in Concepts and Human Biology Units of Studies in FYB. The director of FYB requested the TDU to create a database to enable students entering their marks so that academic staff could analyse the scores.

**Continuing use of WebCT**

The TDU assisted members of the School to develop and maintain their online student learning resources. Existing learning materials have also received essential on-going support and maintenance.

The BIOL1901 Human Biology (Advanced) WebCT site, HBOnline, has been used as template to create the BIOL1003 Human Biology and the EDUH1016 Human Biosciences sites. All three WebCT sites were modified because of changes in the 2006 curriculum.

There will be a major curriculum changes in BIOL1903 - Human Biology Online (HBOnline) in 2008, which will require reprogramming and redesigning of the learning resources. The existing resources will be edited and additional content and new interactive exercises will be created. The project is under development.

Six new WebCT sites have been developed during 2006.

Aida Yalcin from the TDU was assigned to be the WebCT Liaison Officer for the Biological Sciences.

#### **4. EXTERNAL CONTRACT WORK**

##### **Centre for Developmental Disability Studies (CDDS) – \$6665**

**WebCT:** During 2006, the TDU developed seven new WebCT units for the CDDS by using the template the TDU created earlier. The CDDS asks for assistance and guidance of the TDU on any WebCT or technical related issue. Every year the TDU assists staff of the CDDS at WebCT workshops, and receives wonderful comments of appreciation from the staff. The CDDS contracts the TDU based on hourly rate and the required development time is increasing in line with student numbers, and resulting new UOSs. The TDU received \$2,470 in 2004, \$3,315 in 2005 and \$6,665 in 2006 for its service.

##### **University of Sydney Learning Centre (LC) – \$39,900**

**Writing a Short Report in Biochemistry:** The second year Biochemistry report-writing e-learning resource has been reprogrammed to maintain compatibility with new technology. The project was completed successfully within budget (\$10,000).

**Clearer Writing Website:** The project consists of four modules and three modules have been completed successfully. The TDU was contracted an hourly rate and received \$29,900 for the development. The content of fourth module is being produced.

#### **5. GENERAL ACTIVITIES**

##### **Raising Funds:**

Members of the School were informed of potential sources of funding to assist development of e resources as they become available. Assistance and support was then provided for the preparation of funding applications.

Eight appropriate grants were applied, and five of them, totalling to \$226,760, were successful.

##### **The Collaboration and Structural Reform (CASR) Fund – \$450,000**

**Project leader** – Dr Peter McGee

**Project title** – National Program in Medical Mycology.

The expression of interest was submitted in conjunction with the Faculty of Medicine, Westmead Hospital, USyd and Adelaide Women's and Children's Hospital, University of Adelaide. The application was unsuccessful, and further applications will be explored.

**The Major Teaching Improvement Fund (TIF) – \$80,000**

**Project leader** – Dr Rosanne Quinnell

**Project title** – Providing quality education for generic skills by extending and aligning existing online laboratory report writing programs in science and engineering.

An expression of interest in consultation with Usyd LC centre academic Helen Drury was submitted. The grant submission was not successful but further developments were explored and the project restructured for more suitable grants.

**Carrick Competitive Grant – \$147,000**

**Project leader** – Dr Peter McGee

**Project title** – Creating an integrated student-centred online learning environment for report writing in the sciences and engineering.

In 2006 an expression of interest and then the final application was submitted for the grant in conjunction with the USyd LC and the University of New South Wales Learning Centre. The grant application was successful.

The TDU will receive \$85,135 and the project will commence in 2007.

**Environmental Education Grants Programme – \$4500**

**Project leader** – Dr Tina Tentori

**Project title** – Moon Jellyfish in Darling Harbour Web Site.

The grant application was submitted in 2005 but was not supported.

**Faculty of Science Teaching Development Fund (TDF) – \$10,450**

**Project leader** – Dr Osu Lilje

**Project title** – Re-structuring the Human Biology Online component, HBOnline to accommodate major changes to the First Year Biology Curriculum in 2008.

The application was successful. The TDU will be receiving \$3,500 of the fund amount.

**Faculty of Science Teaching Development Fund (TDF) – \$12,000**

**Project leader** – Dr Charlotte Taylor

**Project title** – Extending/redesigning innovative resources for improving oral and poster presentations in the sciences to increase their accessibility and use.

The application was successful. The TDU will receive \$3,500.

**Teaching Improvement and Equipment Scheme (TIES) Small – \$10,000**

**Project leader** – Dr Meloni Muir

**Project title** – Development of a flexible online introductory statistics tutorial for science students

The application was successful. The TDU will receive \$5,000 for the module.

**Teaching Improvement and Equipment Scheme (TIES) Large – \$47,310**

**Project leader** – Dr Osu Lilje

**Project title** – Biology online and hands-on – maintaining diverse learning experiences for the large first year cohorts.

The project has three electronic developments

- 1) Report writing
- 2) Card games
- 3) Core biology

The application was successful. The TDU will receive \$19,755 for online developments of three modules.

**Maintenance:**

Maintenance of OS X and BugsDB server and other hardware and software updates.

**Consultation:**

- Assisted staff with use of WebCT, Photoshop, Dreamweaver, pdf, html, video, streaming etc.
- Assisting in grant applications, including the Apple scholarship.

**Brochures / Business cards:**

The TDU produced 30 coloured brochures detailing information about the TDU service, and distributed at courses and seminars / showcases attended, emailed to academics information about the TDU's service with additional information to further promote the service.

Presented a poster: College of Sciences and Technology  
"TIF Grant to Integrate Teaching: Has TIF money enhanced our teaching?" at the Teaching and Learning Showcase

**TDU Staff**

Permanent, full time: Aida Yalcin

Casual: Kathy Kuzmanovic

**TDU Management Committee**

Dr Peter McGee (Chair)

Dr Rosanne Quinnell

Dr Liz May

Mr Michael Joseph

## APPENDIX 1

Financial Statement: 1 January 2006 – 31 December 2006

<u>Class</u>	<u>Class Description</u>	<u>Actuals</u>	<u>Commitments</u>	<u>Total</u>
<b>Jan - December 2006</b>				
1810	Operating Accum Funds C/Fwd	\$56,764.43	\$0.00	\$56,764.43
	Sales Miscellaneous-			
2713	Glencoe_McGrawHill	\$65.04	\$0.00	\$65.04
2719	Sales Course Notes	\$39.50	\$0.00	\$39.50
3618	CDDS WebCT development	\$6,665.00	\$0.00	\$6,665.00
3314	BCHM2 Website	\$10,000.00	\$0.00	\$10,000.00
3314	Clearer Writing Website Mod2	\$8,930.00	\$0.00	\$8,930.00
6751	Clearer Writing Website Mod 3	\$10,505.00	\$0.00	\$10,505.00
3319	Plant Sciences Website	\$2,450.00	\$0.00	\$2,450.00
3319	HBOonline	\$3,500.00	\$0.00	\$3,500.00
	<b>Total income</b>	<b>\$98,918.97</b>	<b>\$0.00</b>	<b>\$98,918.97</b>
	<b>less</b>			
4103	General Salary Casuals	\$39,250.31	\$0.00	\$39,250.31
4420	General Payroll Tax Casuals	\$2,607.39	\$0.00	\$2,607.39
4421	General Workers Comp Casuals	\$471.00	\$0.00	\$471.00
4422	General Super Oncost Casuals	\$3,494.16	\$0.00	\$3,494.16
	Salary Expenses total	\$45,822.86	\$0.00	\$45,822.86
5043	Stationery and Office Supplies	\$138.12	\$0.00	\$138.12
5100	Computer Rep & Mtce	\$423.44	\$0.00	\$423.44
5102	Internal Chg Computer Maint	\$50.89	\$0.00	\$50.89
5290	Equipment Under \$1,000	\$234.55	\$0.00	\$234.55
5302	Comp Equip \$1,000 to \$4,999	\$1,080.00	\$0.00	\$1,080.00
5344	Computer Software & Licences	\$897.27	\$0.00	\$897.27
5708	Accommodation Domestic	\$177.27	\$0.00	\$177.27
5712	Conference Chges Travel Dom	\$431.82	\$0.00	\$431.82
6302	Postage	\$10.00	\$0.00	\$10.00
6303	Telephone	\$267.70	\$0.00	\$267.70
6304	Internal Chrges Communications	\$0.43	\$0.00	\$0.43
7003	CD-Rom Materials	\$15.44	\$0.00	\$15.44
7103	Internal Charges-Motor Vehicle	\$2.10	\$0.00	\$2.10
	<b>Total expenses</b>	<b>\$49,551.89</b>	<b>\$0.00</b>	<b>\$49,551.89</b>
<b>Balance at 31/12/2006</b>		<b>\$49,367.08</b>	<b>\$0.00</b>	<b>\$49,367.08</b>

### Additional budget notes: \$7000

During the financial year 2006, Tcom computer development grants (amount \$7000) were required to be transferred into the TDU account for the following completed projects.

Digital video camera and tapes	\$1500
SAM paragraph answer question template	\$1500
Biology report writing upgrade	\$1500
Interactive microscope use program	\$1500
Plant form and function ICT learning resources CD	\$1000
<b>Total</b>	<b>\$7000</b>

**APPENDIX 2**  
**EXTERNAL REQUESTS for use of RESOURCES**

Request	Contact	Resource	Use	Income
Extension of the usage of Dung Beetle Image	Stephanie Scales, Glencoe / McGraw-Hill 8787 Orion Place Columbus OH United States	Dung Beetle Larvae image	Presentations / publications	US\$50