Section 7: Comparison of the use and perceptions of usefulness of the various resources, including ICT, in supporting the learning of biology

Evaluations of the use and perceptions of usefulness of a range of resources were done both in first year biology at the Universities of Melbourne and Sydney. A similar survey instrument was used at each location (in Appendices 7A and 7B). The results are presented, as far as possible, as simple comparative graphs.

Demographics

- **Gender**
  - Melbourne: Male = 30%, Female = 70%
  - Sydney: Male = 60%, Female = 40%

There is approximately the same percentage of male and female students at the two universities, with a smaller percentage of males in the Melbourne cohort.

- **Incoming age ranges**
  - Melbourne: 17-20 = 80%, 21-24 = 20%
  - Sydney: 17-20 = 10%, 21-24 = 90%
  - >24: Melbourne = 0%, Sydney = 10%
Most of the students at both universities are in full-time enrolment. In addition most of the students are school leavers, with few in the other groups (Category B and mature-age at Sydney).

There were data collected at the University of Melbourne that indicates 10% of the students are international students. No such data are available for Sydney.

In terms of degree types, at the University of Melbourne the BSc dominates Biology with 70% of respondents enrolled on a BSc (BA/BSc 9%, BEng/BSc 6%). At the University of Sydney there is a greater variety of degrees represented in the biology cohort indicating that biology at Sydney is servicing a greater spread of degree programs. At Melbourne there is a B.Biomedical Sciences degree program that caters for many of the students who take biology in first year.
At school, Biology can be taken as a component of the Victorian Certificate of Education (VCE) and the NSW High School Certificate (HSC). The resulting ENTER and UAI scores of students are equivalent.

In both groups about half of the students have not taken senior biology before leaving school.

**Resource Usage**
Students were asked by qualitative and quantitative survey questions about their use of various resources available for the first year units of study.

- **Non-use**
  It is of interest to those of us involved in curriculum design to find out what resources are not used (and why). In these surveys students were asked if they attended classes and/or used various “resources”. The interesting findings are:

These findings suggest that in Sydney there is more use of a number of the resources compared with use in Melbourne.
• **Use**

Students were asked to indicate how they used the resources to help them in their learning.

**Use of textbook**

![Use of textbook chart]

**Practical Classes**

![Practical Classes chart]
The different patterns seen between the two groups may reflect the content of the lab notes and the stated objectives of such resources.

There are great similarities between the reporting by both groups of students, possibly with a stronger comment on the use of lectures by the Melbourne students.

With respect to ICT resources students reported the following uses for:
It is of interest to note that at the University of Melbourne email is used to send out a weekly newsletter to the students that includes in semester 2 a “problem of the week” and the solution to the previous week’s problem.

Again there is a great similarity between the two student groups with perhaps the University of Sydney group being more comfortable with the use of email. In addition those students who used the resources reported them useful for a variety of purposes.

**Summary**

- The demographics are very similar with respect to gender, age and enrolment status. Biology backgrounds very similar VCE/HSC.
- The types of degree programs in which the biology cohorts are enrolled are quite different.
- Enrolments across the diverse degrees at the University of Sydney reflect the service teaching where service teaching is defined as biology being compulsory within a degree program.
- Students attend lectures on campus.
- The use of the Internet is comparable between the two groups but with a higher use of email at the University of Sydney.
- There is a difference in the use of the University Library across the two campuses.