

Appendix 7B: Report on the usage of resources by first year biology students at the University of Melbourne – major trends

Data from Questionnaire

10. Are you female **70%** male **29%** NR **1%**
11. Are you full-time **97%** part-time **2%** NR **1%**
12. Your age range is 17-20 **95%** 21-24 **3%** >24 **1%** NR **1%**
13. Are you an international student? Yes **10%** No **89%** NR **1%**
14. Is English your first language at home? Yes **80%** No **18%** NR **2%**
15. In which Degree/Combined Degree are you enrolled at The University of Melbourne?
 BSc **70%**, BA/BSc **9%**, BEng/BSc **6%**, BOptom **3%**, BCom/BSc **2%**, MUPHAS **2%**, BVetSc **2%**, Other **3%**, NR **3%**
7. Have you completed Units 3 or 4 in VCE Biology or 1B or equivalent?
 Yes **62%** No **36%** NR **2%**
8. For what specific learning purposes in Biology of Cells and Organisms have you used the following resources? (*Please tick all relevant boxes*)

<i>Resource</i>	Did not use	Quiz/Exam revision	Learning new knowledge	Learning by consolidating knowledge	Background information	Personal interest
Lectures	1	30	80	40	30	17
<i>Lecture notes /summaries</i>						
<i>On-line (web)</i>	13	43	48	41	24	9
Paper Based	6	42	51	40	25	10
Practicals	2	19	60	54	24	17
Tutorials	7	40	43	64	21	8
Laboratory Manual	6	22	40	34	40	7
Text book	4	44	63	49	47	27

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Library	70	12	10	8	7	7
Peer group/study group	69	16	6	14	3	5
Tutor on Duty	76	8	8	11	4	2
Computer based learning	18	30	52	43	26	11
Internet	37	27	24	19	20	15
Email	69	7	6	5	9	8
Web-based chat group	92	1	2	1	0	1

9. Using the list above in question 8, think about the *multimedia resources* that have most helped your learning in Biology of Cells and Organisms. Choose the two multimedia resources (all in bold) from the list above that have been *most helpful* to your learning in Biology of Cells and Organisms and explain why, as in the example below:

THE TWO MULTIMEDIA RESOURCES THAT HAVE MOST HELPED YOUR LEARNING:

CAL	42%	CAL	11%
Lecture Notes	16%	Lecture Notes	8%
Web Site	4%	Web Site	2%
Internet	8%	Internet	12%
E-mail	2%	E-mail	6%
Sample Exam	1%	Sample Exam	2%
Tutorials	2%	Tutorials	3%
Lectures	1%	Lectures	0%
Other	3%	Other	5%
NR	21%	NR	51%

10. Are there other sorts of learning opportunities that could have been provided in Biology of Cells and Organisms this semester that would have been helpful?

Past exam Q's and A's	3%
CHEMCAL for Biology	3%
Extra tutorials/Duty Tutors/esp. for non-VCE Biol students	3%
Lecture note more complete and available prior to lecture	2%
More CALS/Improved CALS	2%
Q/A bank like CHEMCAL	1%
CAL accessible from home on web	1%
Field Trips	1%
Tutorial answers provided	1%
Other	5%
No changes	10%
NR	60%

1.0 Major Trends for Total Respondents

Demographics

The biggest difference in the demographics of all the respondents is that 70% of respondents are female. Other demographics include: 97% respondents are full time versus 2% part-time which then follows on to the age demographics indicating that the majority of respondents are first time University students aged 17-20 y.o. (95%) with a few mature age students: 21-24 y.o. (3%) and >24 y.o. (1%).

10% of the respondents are international students with 80% of total respondents stating English is the first language spoken at home.

In terms of degree types, BSc dominates Biology with 70% of respondents enrolled on a BSc (BA/BSc 9%, BEng/BSc 6%).

Over a third of the respondents have not completed VCE Biology, 36% versus 62% who have.

Resource Usage

80% of respondents used lectures to learn new information with lecture notes also playing a role: Lecture notes (paper) 51%, Lecture Notes (web) 48%. A similar proportion of respondents used the lecture notes on the web and on paper for revision and to consolidate learning. Slightly more respondents stated they did not use lecture notes from the web (13%) than on paper (6%).

Overall, lectures appear to be a critical resource as only 1% responded that they didn't use them and 17% responded that they found lectures personally interesting.

The resources not being used in high numbers are the library, peer study groups and duty tutors with 70%, 69% and 76% of respondents respectively stating they did not use these resources.

When the library was being used it was for revision purposes (12%). Peer study groups for learning consolidation (14%) and revision (16%) and duty tutors for learning consolidation (11%).

Practicals were mostly used for new learning (60%), learning consolidation (54%), background (24%) and also they came equal second to lectures in personal interest overall (17%).

Lab manuals were mainly used for new and background learning (40% each) and to consolidate learning (34%).

The text book received high usage numbers for new learning, 63%, consolidate learning, 49%, background, 47% and revision, 44%. This is what would be expected. Also, the textbook came in highest overall for use out of personal interest at 27%.

Web chat was rarely used as a resource with 92% of respondents admitting to not using it. 69% of total respondents did not use e-mail and when they did use it it was for background learning (9%) or personal interest (8%).

Of all the electronic media, CAL was the most subscribed to overall. 52% of respondents used it for new learning, 43% consolidation, 30% for revision and 26% for background.

The internet was not used by 40% of respondents and when it was used it was mainly for revision purposes (27%) possibly as during revision time the students are at home and need to access whatever resource they can quickly. However, some of the respondents also used the internet for new learning (24%), consolidation (19%) and background (20%).

Most Useful Resources

CAL was found to be most useful with 42% of respondents mentioning it followed by lecture notes with 16% responding and 8% responding the internet. A fifth did not respond to this question, 21%.

The next most useful resource mentioned still focused on the internet 12%, CAL 11%, lecture notes 8% and e-mail is mentioned by 6% of total respondents. Over half did not respond to this question, 51%.

Suggested improvements met with 60% no response and 10% responding there were no improvements they could think of. Some suggested improvements included 3% for availability of past exams, 3% for CHEMCAL type set up for Biology and 3% for extra duty tutors and tutorials especially for non-VCE Biology students. With such a limited response to this question I have not broken it down by male/female etc., as there would be too few significant responses.

2.0 MALE/FEMALE SPLIT

Demographics

The main difference in demographics between the male and female respondents was that a higher proportion of female respondents have completed VCE Biology, 69% compared to males 47%.

Resource Usage

Resource usage patterns appear very similar between males and females. There was a slight difference in lecture notes (paper) usage with 14% of male respondents admitting they did not use them and only 4% of females and CALS with 26% of males not using these compared to 14% of females.

Males also showed a higher personal interest in tutorials (12% compared to 6% of females) and higher usage of lecture notes for new learning, 55% compared to 43%.

Most Useful Resources

CAL was the most useful resource for males (46%) and females (34%). The next most useful resource were CAL for females (13%), lecture notes (10%) and the internet (13%) with the males opting for the internet with a 9% response.

3.0 ENGLISH FIRST LANGUAGE AT HOME OR NOT

Demographics

The main demographic difference between students whose first language at home is or isn't English is the international versus domestic student. 73% of international students cited English as the first language at home compared to 94% of domestic students.

In addition, 65% of students with English as a first language at home have completed VCE Biology with 51% completing VCE Biology that do not have English as a first language at home.

Resource Usage

Students with English not the first language at home use duty tutors more than those with English as a first language at home, 18% learn new, 14% consolidate learning versus 6% learn new, 11% consolidate learning respectively. This is evident in the non-usage figures as 79% of English first language respondents said they did not use the duty tutor whereas 67% of English not first language at home responded in this way.

Students with English not a first language at home also used the text book less than the English first language at home respondents. 29% for revision (English 1st No) versus, 49% (English 1st Yes), 55% learning new versus 66%, 32% learning consolidating versus 53%. This may be due to language difficulties and would indicate the students whose first language at home is not English are using duty tutors more for their learning and consolidating.

In addition, Students whose first language at home is not English responded to using the internet for personal interest more so than students whose first language at home is English (25% versus 12% respectively) and for learning new, (32% versus 22% respectively).

Most Useful Resources

CAL was the most useful resource, again, with 44% of respondents whose first language at home is English citing it as the most useful and 36% of English not first language at home. Lecture notes and internet also feature; 17% and 8% respectively for English first language at home and 12% and 7% respectively for English not first language at home.

Next most useful resources for English first language at home respondents were: CAL 12%, Internet 10%, e-mail 8% and tutorials 5%. For English not first language at home respondents CAL 10%, internet 12% and lecture notes 9% were most useful.

4.0 DEGREE TYPE

Demographics

There are more part-time students in the 'other' degree categories such as MUPHAS, BVet, BOpt etc.

There are also fewer international students in the BA/BSc degree, 0% compared to BSc 11%, BEng/BSc 8% and Other degree types 14%. This affects the English as a first

language at home or not when broken down by degree types; English as a first language at home BSc 84% and BA/BSc 89% compared to BEng/BSc 76% and Other 62%.

BEng degree respondents have a high level on non-VCE Biology at 80%, with BA/BSc degree respondents at 47% and BSc at 31% non VCE Biology.

Resource Usage

BSc respondents use lectures predominantly for their new learning (81%). Their usage of duty tutors and the library is low with 78% not using duty tutors and 65% not using the library. Also, 19% of BSc respondents admit to not using the lectures. The main resources BSc respondents used are lectures (above) and CALS, 51% new learning and 41% consolidation. There is also some internet usage, between 23-29% for learning new, consolidating and revision.

BA/BSc respondents use lectures more for their learning at 92% than BSc, but this would make sense as more of them have not done VCE Biology than BSc respondents. They tend to use the duty tutor and library less than BSc respondents (do not use - 87% and 87% respectively) and similarly to BSc rely on lectures and CAL for a lot of their learning; 58% learning consolidating, 55% learning new, 29% revision.

Web chat is used minimally with 97% of BA/BSc not using this resource, 96% BEng/BSc and 92% of BSc.

BEng/BSc respondents use lectures for learning new at 80% and also place a good importance on lecture notes both paper and web. It is interesting to note that the BEng/BSc and BA/BSc respondents find lectures personally interesting 20% and 24% respectively compared to BSc 10%. Possibly because fewer have done VCE Biology than the BSc respondents and they are hearing the information for the first time.

BEng/BSc respondents use the duty tutor slightly more than BSc and BA/BSc respondents; 20% consolidation and 12% revision versus BA/BSc 8% and 8% and BSc 11% and 8%. There is also a higher usage of the CAL and a slightly higher reliance on tutorials than BSc and BA/BSc, again this could be to do with the lower rates of VCE Biology completion in this group. CAL usage BEng/BSc 68% consolidation, 48% learning new and 40% background. Tutorials: BEng/BSc 53% learning new, 79% consolidating learning versus BSc 46% and 64% respectively and BA/BSc 44% and 76% respectively.

Most Useful Resources

CAL and lecture notes dominate the most useful resources for all degree respondents with internet being mentioned by BSc and BA/BSc degree respondents slightly more often.

	CAL	Lecture notes	Internet
BSc	41%	14%	9%
BA/BSc	58%	24%	5%
BEng/BSc	48%	20%	
Other	38%	22%	

The next most useful resource responses follow on for the most useful with CAL, lecture notes and internet being responded most often, although in low numbers. One item that stands out however is the BEng response to e-mail is 16% on this question.

5.0 VCE BIOLOGY/NON-VCE BIOLOGY

Demographics

A larger proportion of females have completed VCE Biology than males (78% versus 59%).

Resource Usage

Non-VCE Biology respondents rely on lectures more for new learning (83%) rather than consolidating what they know (27%). This is understandable as they have not done Biology before, whereas VCE Biology respondents are using lectures to consolidate what they have learnt in the past relatively more at 48%.

Duty tutor usage is lower in VCE Biology respondents as 83% do not use them compared to non-VCE Biology respondents at 68%. This is not surprising as non-VCE Biology respondents are using duty tutors relatively more for consolidating 19%, learning new 14% and revision 10% compared to VCE Biology respondents using duty tutors for these purposes, 6%, 5% and 7% respectively.

Other resources the non-VCE Biology respondents are making greater use of the following resources for new learning purposes: text book 71% versus 61% in VCE Biology, tutorials 51% versus 41% and lab manuals 47% versus 37%.

It is interesting to note a similar level of personal interest in the text book from both groups, 28% VCE Biology and 26% non-VCE Biology.

CAL is important to both groups for learning new and consolidating, revision and background information.

	VCE Biology	Non-VCE Biology
Learning new	53%	51%
Learning consolidating	42%	46%
Revision	29%	30%
Background info	26%	25%

There is very limited e-mail and web chat usage on the part of either group. VCE Biology use the internet slightly more for learning, revision and background than non-VCE Biology.

Most Useful Resource

For VCE Biology respondents this is CAL 45%, lecture notes 16% and internet 8%. For non-VCE Biology respondents the most useful resources are the same at VCE, but in different quantities: CAL 38%, lecture notes 17% and internet 8%. CAL, internet and lecture notes remain on the next most useful list for both groups with e-mail also being mentioned by 4% VCE Biology and 8% non-VCE Biology respondents. It is interesting to note that non-VCE biology respondents find the tutorials less useful than VCE Biology respondents (2% versus 3% respectively), but the percentages are low and marginal!

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