Library Curriculum Pilot Project Report

Building Blocks: Embedding inquiry/research (information literacy) graduate capabilities into the curriculum

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Project purpose and overview

The University's *Design for Learning*[1] recommendations make clear that a systemic, coherent and sustainable University–wide approach to the design of undergraduate programs is needed to ensure all students are given opportunities to develop knowledge and skills in the six broad graduate capabilities (Writing, Speaking, Inquiry/Research, Critical Thinking, Creative Problem Solving, Team Work).

Information literacy is a key element of the inquiry/research graduate capability. While La Trobe University librarians have long collaborated with academic staff to provide student information literacy programs, many students miss out on developing these skills sufficiently. All students need the best possible chance to develop foundation information literacy skills for effective research in first year and throughout their undergraduate degree.

The 'Building Blocks: Embedding Inquiry/Research (information literacy) Graduate Capabilities into the Curriculum' project investigated these issues by testing and refining current Library processes and practices, and exploring potential new information literacy program design and resources. Experience from this project will inform the future direction of information literacy programs across the University. Lessons learnt from the project provide a strong imperative and rationale for implementing a model of research skills education that gives all La Trobe students the opportunity to graduate with the necessary information literacy skills for work, life and lifelong learning. The outcomes and recommendations of the project are the first step in a larger vision of all La Trobe students being information literate by the time they graduate.

Information literacy issues

Current information literacy programs at La Trobe University library employ a diverse range of approaches and delivery methods. The most widespread current approach is based on a traditional model which relies on individual academic staff inviting librarians to participate in skill development in specific units. This model involves a reliance on face-to-face delivery of skills sessions by librarians as a key aspect of the programs. Collaboration between librarians and academics using this model has been highly successful as reflected in feedback from academic staff and students, survey results and awards to staff. However the current programs are often not intentionally designed to be embedded as a cohesive part of the curricula structure and do not give all students equal opportunities to develop information literacy skills at the most appropriate points in their undergraduate education.

Considering that over half of La Trobe undergraduates are not exposed to basic library research skills, our approach to information literacy skill development needs to be institutional in scale, systematic and always transparent to students. New approaches are needed if our information literacy programs are to be relevant and sustainable in to the future, The 'Building Blocks' project explored the underlying issues that restrict the growth and development of our current programs. For example our current programs are limited because:

- information literacy is perceived as an optional add-on rather than a foundation skill
- some students have to attend more than one similar face-to-face session while other students receive no session
- students become disengaged by repeating similar skills instruction in different units or being asked to tackle advanced skills before foundation skills are mastered.
- ad hoc development occurs rather than coherent development over the course of an undergraduate program
- impact of the Library's contribution is not regularly measured to inform future program planning and resource allocation
- delivery of the face-to-face sessions is very time intensive and does not reach all students
- appropriate online resources are not available

[1] La Trobe University. *Design for Learning. Curriculum Review and Renewal at La Trobe University*. 2009.

Project parts

In order to achieve its aims and explore these issues the project focussed on four key areas of activity:

1. Development of an Information Literacy Strategy
2. Action research – evaluation of Health Sciences common first year information literacy program
3. Development of reusable learning objects
4. Investigation of possible first year information literacy program models for Science, Technology and Engineering

Each of these four parts of the project was interrelated. Four cross-campus working groups were set up to undertake the investigation in each part of the project. These were:

- Information Literacy Strategy working group
- Action research: Health Sciences evaluation working group
- Reusable learning objects working group
- Science, Technology and Engineering first year information literacy program working group

Investigations carried out in the project parts were a source of cross-fertilisation of ideas and dialogue between staff across the project. The working groups' deliberations resulted in distinct outcomes and recommendations for each part of the project. Together the outcomes of each part of the project form a holistic solution for delivering effective, systematic and sustainable information literacy programs that are part of the fabric of the curriculum across the University.

Project outcomes

The outcomes of the project include an information literacy strategy, reusable learning objects, research reports and recommendations for future practice and development.

The development of an Information Literacy Strategy was central to the project. The proposed Strategy is intended to be implemented as a whole of University activity, strongly based in discipline specific, embedded academic tasks and supported by comprehensive Library services and resources. Implementation of the strategy model should ensure information literacy programs are part of the curriculum across the University.

Development of the Information Literacy Strategy has involved consultation across the University and the proposed strategy is closely aligned with the key themes and recommendations in *Design for Learning*.

The Strategy builds upon the existing positive partnerships between academics and library staff, and the services and resources provided by the Library, but does so in a more scalable, sustainable and systematic way.

The Strategy completes the Library Information Literacy Policy and Framework developed in 2008. The Policy explains why information literacy skills are crucial to independent learning and outlines the Library's objectives and responsibilities in contributing to the development of information literate graduates. The accompanying Framework offers a guide to the sequential development of Information Literacy skills, matching desired attributes with specific competencies across three levels.

The Information Literacy Strategy acknowledges that student development takes place in a whole of University context through activities that are integrated into the curriculum and those that supplement the curriculum. It adds to the existing Policy and Framework by outlining an action plan for using the Information Literacy Framework as the basis for developing inquiry/research capabilities.

For undergraduates the Strategy proposes an innovative and new approach to design of information literacy programs to ensure students reach the proficient level of the Information Literacy Framework by the time they graduate. This means setting students on a learning continuum in first year so that they are able to develop foundation skills early in the course of study and progress to a proficient level of skills by their final year.

New perspectives

The challenges and lessons learned were many over the course of the project. The project working groups discovered promising approaches and new models for University-wide information literacy programs and developed the online resources and the scaffolding to support these new approaches. The emphasis on action research in the project resulted in development of useful indicators and measures for usability testing of online resources and diagnosis of student information literacy competency and skill levels. The testing conducted also revealed likely pitfalls in relation to questionnaire design and statistical analysis.

The project was complex and ambitious. In an ideal world it may have been more logical to complete its four interrelated parts in an ordered sequence rather than concurrently, starting with development of the Information Literacy Strategy. However, having worked on the various parts of the project concurrently instead of in stages means we are now well advanced in terms of field-testing new models for entry level undergraduate programs and have made significant progress in the development of online resources to support implementation of the proposed Strategy. The complexity and intensity of the project also served to create a positive momentum and enthusiasm, both in the Library and across the University, for information literacy and the intentional design of embedded information literacy programs. Implementation of the recommendations from the project will result in ongoing high quality, coherent and consistent information literacy education at all levels across the University.

Deliverables

Information Literacy Strategy working group

1. Information Literacy Discussion Paper
   http://www.lib.latrobe.edu.au/building-blocks/IL-Strategy-Discussion-paperSept19.pdf
2. Revised Information Literacy Policy and Framework
   http://www.lib.latrobe.edu.au/building-blocks/LTU_ILFramework_skillsmatrix.gif
3. Information Literacy Strategy
   http://www.lib.latrobe.edu.au/building-blocks/ILpolicyStrategy.pdf
4. Information literacy Strategy Summary
   http://www.lib.latrobe.edu.au/building-blocks/IL_Summary.pdf

See Appendices 5-7.

Action research: Health Sciences evaluation working group

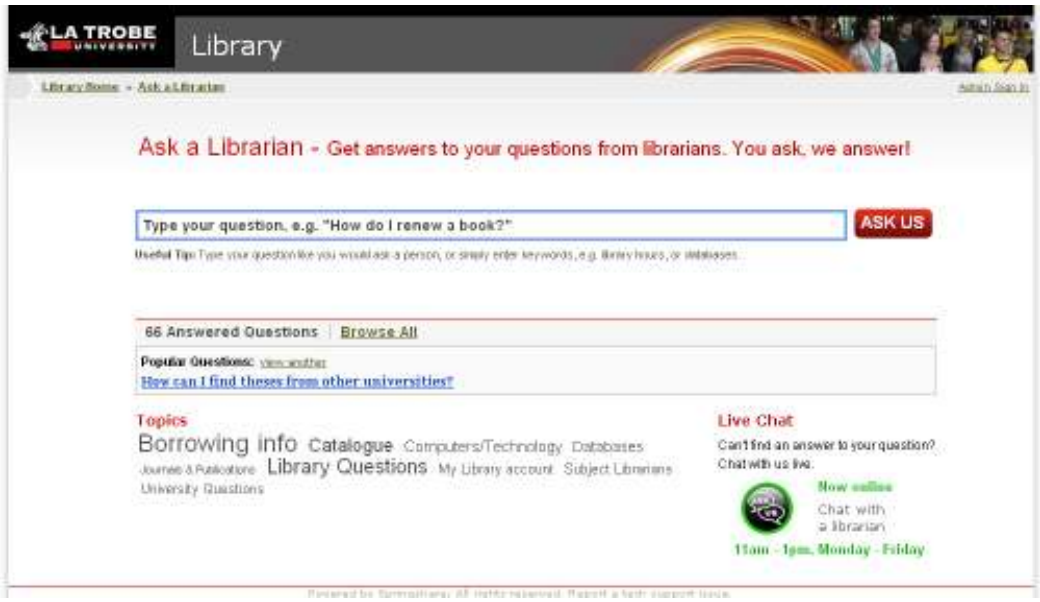
1. Pre-experience survey report
2. Pre/post experience survey: final report
3. LMS Quiz results report
4. Health Sciences information literacy modules usability testing report
5. Health Sciences Faculty staff experience of the Library involvement in the Common First Year: Online survey report

See Appendices 8-12.

Reusable learning objects working group

1. Foundation Information Literacy modules
   http://latrobe.libguides.com/lso

2. LibAnswers
   http://latrobe.libanswers.com/



Science, Technology and Engineering first year information literacy program working group

1. Proposal - Using Wikis to embed Information Literacy in Science, Technology and Engineering Cornerstone Units

See Appendix 15.

Communications and promotion

1. Project blog - **http://www.lib.latrobe.edu.au/building-blocks/**
2. Library Link articles
   a. Initial report
   http://staff.lib.latrobe.edu.au/wol/publications/link_01May2009.pdf
   b. Information Literacy Strategy workshop
   http://staff.lib.latrobe.edu.au/wol/publications/Link_17July2009.pdf
   c. Health Sciences information literacy program evaluation
   http://staff.lib.latrobe.edu.au/wol/publications/link_14Aug2009.pdf
   d. Colloquium presentation
   http://staff.lib.latrobe.edu.au/wol/publications/link04Dec2009.pdf
3. Library News article
4. Project brochure http://www.lib.latrobe.edu.au/building-blocks/overview.pdf
5. Project summary flyer
6. Project postcard

See Appendices 16-19.

Key Recommendations

The outcomes from the 'Building Blocks' project include recommendations for how the Library can continue to work in partnership with Faculties to enhance student learning and contribute to relevant recommendations of *Design for Learning*. The new approach proposed by the Information Literacy Strategy provides a mechanism for increasing the scale and ongoing evaluation of information literacy programs. Contributing to improving information literacy teaching practice within flexible learning environments to enhance graduate capabilities is a strategic priority for the Library in 2010.

Information Literacy Strategy

1. The proposed Strategy is enshrined in University policy and its principles adopted by the University.
2. The Strategy is implemented.
3. The Library develops an action plan for implementing components of the Strategy in 2010.

For full recommendations see page 13.

Action Research – Health Sciences evaluation

The recommendations from this part of the project focus on further improvements to the information literacy program for future cohorts of the common first year. In short the recommendations that have emerged are mainly related to the following six themes:

1. Reviewing online information literacy modules
2. Marketing online modules and library resources and support
3. Linking evaluation of information literacy programs to evidence about student entry-level information seeking skills and progress in first year
4. Reviewing the online quiz
5. Maintaining and reviewing where appropriate collections strategies for large cohorts in the light of evaluation data
6. Continuing to work with Faculty staff to further refine the embedding of information literacy skills in the common first year

For full recommendations see page 28.

Reusable learning objects

The Reusable Learning Objects part of the project made recommendations based around ten key themes. These themes are:

1. Evaluation and usability testing of generic modules
2. Naming and promotion of generic modules
3. Alignment of reusable object with the Information Literacy Strategy
4. Development of additional modules
5. Replacing Library Skills Online with the generic modules
6. Implementing LibAnswers
7. Additional student support materials
8. Professional development and training
9. Feedback/enhancements and administrative issues
10. Consistency in bibliographic styles for La Trobe University

For full recommendations see page 33.

Science, Technology and Engineering first year information literacy program

1. Continue to collaborate with Faculty staff to implement the Information Literacy Strategy in the Faculty of Science, Technology and Engineering first year curriculum
2. Implement proposal to use wikis to facilitate and enrich information literacy teaching in first year Science cornerstone units.

For full recommendations see page 36.

Concurrent initiatives

In addition to the key recommendations there is scope for investigating a range of concurrent initiatives that would supplement and reinforce the recommendations from the various project parts. Suggestions for concurrent initiatives fall in to the following categories and are based on specific educational design principles.

1. Investigate peer support programs focussed on research skills.
2. Improve Library/LMS involvement.
3. Continue to develop mini help aids.
4. Investigate reusable learning objects network amongst academic libraries
5. Develop video snapshots about the research process using real La Trobe student and academic voices.
6. Mainstream evaluation as part of future information literacy programs.

Suggestions related to these themes provide a starting point for developing additional future initiatives. For full details see Appendix 20.

Resources

Overall the project team included twenty library staff. At least 1609 staff hours were spent on the project. As staff did not record hours worked on the project before July the actual number of hours would be higher than the total indicated below.

Project part	**Hours**
Communications	83
IL Strategy	324
HS Action research	356
Reusable Learning objects	687
STE	159
Total	**1609**

A total of $21,447 was spent on the project. The major cost was staff backfill, although only a fraction of the hours (10%) spent on the project were able to be backfilled.

Expenses		**Cost $**
Staff backfill - all campuses	176 hours	6,262.79
External consultant - SPSS	125 hours	5,069.43
Software	Survey Monkey, Rapidity, LibAnswers	3,164.80
Workshop expenses	travel, lunch etc.	2,884.00
Communications	printing, creative services	4,012.70
Usability testing	vouchers	54.00
		21,447.72

Project Team members

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Acknowledgements

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Fiona Salisbury
Library Project Leader
Learning and Research Services Manager
22 December 2009

Project Part 1: Information Literacy Strategy

Aim and rationale

The aim of this part of the project was to develop a strategy to assist the University in fulfilling its aim to develop graduates with capability in inquiry/research, while outlining the library's role in that development.

The strength of the Library's current approach to information literacy development lies in its diverse range of approaches and is grounded in the willingness of librarians to undertake the teaching of information literacy skills at any time and in whichever format is requested. However the current program is often not intentionally designed as a cohesive part of the curricula structure and does not give all student equal opportunities to develop information literacy skills.

The Information Literacy strategy seeks to build on existing strengths, particularly the positive partnerships between academics and library staff, but to do so in a more scalable, sustainable and systematic way. The recommended strategy would be implemented as a whole of University activity, strongly based in discipline specific, embedded academic tasks and supported by informal and co-curricula activities.

Process

The Library's Information Literacy Coordinating Committee (ILCC) accepted the challenge of drafting the strategy in 2009. The ILCC includes a representative from the Learning and Research Services staff at each campus, as well as the Library's Educational Designer, providing a comprehensive cross-campus perspective and allowing a channel for feedback from all Learning and Research Services (LARS) staff. Members of this Committee have also been involved in the review of the Library's Information Literacy Policy and development of the Information Literacy Framework in 2008.

Environmental scan

The Committee began with a broad scan of recent literature available on the purpose and content of information literacy strategies, including any examples of existing strategies at other universities. An audit of current practices at each campus was also conducted, with each LARS team meeting to discuss what was successful and challenging about their current approaches and what future models of support may be desirable.

Workshop to explore issues

A summary of these discussions was distributed to 14 staff invited to a workshop on June 1st at the Bundoora Library. Members of the ILCC, selected LARS staff, representatives from the other working groups on the Building Blocks project and invited academic staff met on June 1st to discuss the following questions (see Workshop Program, Appendix 1)
Unfortunately only one academic staff member could attend the Workshop but another two provided feedback individually. Focus groups were held with small groups of academic staff at the Bundoora and Albury-Wodonga campuses to provide further feedback on the main issues identified.

Discussion paper

Members of the ILCC met in Shepparton on July 13th, 2009 to review the large amount of discussion and feedback available and to draft an Information Literacy Strategy (see Writing Workshop program, Appendix 2). Members also drafted a Discussion Paper to provide background information and a rationale for the development of an Information Literacy Strategy.

Two members of the Committee agreed to write a final version of both documents, with editing by all committee members. Both documents were then distributed to members of the June workshop, who had agreed to act as critical friends.

Feedback and editing of draft Strategy

The Committee met to review the feedback from the critical friends and then substantially amended documents were distributed to all LARS staff and all members of the Library Policy Advisory Committee for comment.

The Committee met once more to review the feedback from LARS staff. Further changes were made to the draft Strategy and an email sent to all LARS staff to provide feedback on some of the common issues raised (see Appendix 3: Feedback to LARS staff).

Distribution of draft Strategy

To encourage the wider University community to become familiar with the main tenets of the draft Strategy, a two page summary was created for distribution. Embedded in the summary were links to the full Information Literacy Policy, Strategy and Framework and to Discussion Paper.

Both these documents were loaded onto the project blog, created to keep the University community informed on the Library's Building Block project.
http://www.lib.latrobe.edu.au/building-blocks/

Consultation with academic staff

The summary of the draft Information Literacy Strategy was formally presented at all Faculty Committee meetings, Library Liaison meetings at Bundoora, Bendigo and Albury-Wodonga, Library Committee, the Cockatoo Club and the Albury-Wodonga Campus Academic Development Committee. Learning and Research Services staff have also been encouraged to discuss the draft Strategy with individual members of academic staff.

The draft Strategy was promoted in Library News, Library Link and the Library Blog. The draft Strategy was also be presented at the Learning and Teaching Colloquium in December.

Feedback from each of these presentations has been overwhelmingly positive of the concept (see summary of committee feedback, Appendix 4). Specific questions raised have informed the development of actions emanating from the Strategy.

Issues arising

Although the Strategy was completed on time, it took longer than expected to identify the key issues and provide opportunity for adequate discussion, prior to the drafting of a strategy. The drafting process also took longer than expected as members of the ILCC tried to reach consensus over the recommended approaches and explain these approaches clearly in writing. The cycle of creating, feedback and editing, however, helped members of the ILCC to confirm and clarify the principles of the Strategy. It is expected that this process of continuous evaluation will continue as the Strategy is implemented.

Many of the questions which have been raised are related to the implementation of the draft Strategy. While the preferred approach has been outlined, the details of implementation cannot be confirmed until the level of commitment by the wider University community is known.

Recommendations

1. The draft Strategy is enshrined in University policy and it principles adopted by the University.
2. The Strategy is implemented by the Library in partnership with each Faculty.
3. The Library develops an action plan for implementing components of the Strategy in 2010

   The action plan will include the following actions suggested in the draft Strategy:

   <u>For undergraduates:</u>
   - Develop a diagnostic tool for establishing baseline entry skills of commencing first year
   - Use Information Literacy Framework to identify threshold foundation skills common to all undergraduate studies (eg: locating items on a reading list)
   - Develop online modules to deliver foundation inquiry/research skills instruction, embedded in cornerstone units where they exist
   - Create a quiz which can be used to demonstrate mastery of the identified foundation skills.

   <u>For postgraduates:</u>
   - Work collaboratively with the Graduate and Research Office to develop and update the Postgraduate Essentials website, including the development of interactive links in this program as a platform for further support from Faculty Librarians.
   - Develop an online checklist for self-assessment of core skills for advanced research to assist students in identifying areas for further development

   <u>For staff:</u>
   - Develop a program of research skill seminars to be offered across the Library using a range of appropriate formats
   - Improved communication and promotion of existing resources and services
   - Develop a program for resource familiarisation and skills enhancement
   - Develop strategy for working more closely with academic staff in a systematic way

Linda Sheridan (Chair, Information Literacy Coordinating Committee).
Fiona Salisbury, Claire Brooks, Iris Perkins, Maureen Speed, Tracy Robertson.

Project Part 2: Action Research: Health Sciences evaluation

Aim and rationale

In 2009, the Health Sciences Faculty implemented a new common first year (CFY). In partnership with the Faculty, the Library redesigned the information literacy program for first year students so that was aligned with the enquiry-based learning design of the new curriculum and provided students with an appropriate level of information literacy skill development.

The first year health sciences program involved embedding library research tasks into a cornerstone unit (e.g. structured research tasks, facilitated reflection on the research process, online modules, online quiz etc). Collaboration between the Library and the Faculty ensured that a scholarly approach was applied to finding a range of types of materials. Instruction in the information literacy program was primarily[2] delivered via online modules[3] and assessed by a randomised online quiz[4].

The aim of this part of the project was to evaluate the CFY information literacy program in order to inform development of information literacy strategy by field testing a new model.

Process

In order to learn as much as possible about the CFY information literacy program the Library conducted an evaluation of the program and Library services which were developed in response to the needs of the new curriculum. This gathering of quantitative and qualitative data provided a substantial picture of the stakeholders' experiences in three key areas.

1. **Scholarly Literacy**
   Data was collected to initially determine the level of scholarly literacy of incoming first year students and then to assess the impact of online information literacy modules and other library support on student skills and graduate attributes development.
2. **Use of Library Services & Resources**
   Data was collected on the use of the Library services and resources during 2009 by this cohort.
3. **Stakeholder Feedback**
   Qualitative data was collected from key stakeholders on the organisational, institutional and learning processes.

1. Scholarly literacy of incoming students & impact of Library support on student skills

In order to examine students' knowledge and skills and map improvement in library research capabilities, students were tested at three points in the 2009 academic year;

- *March* - pre-experience survey (20 questions, 1000 usable responses, 60.6%)
- *May* - assessment quiz (15 questions, 90.7% of students completed)
- *September* – post-experience survey 20 questions, 1083 usable responses, 65.5%)

The pre/post-experience surveys included 11 identical questions that were designed to test respondents' knowledge and understanding of scholarly information seeking. The surveys

[2] Students were able to access a variety of library support, and perhaps peer support, in addition to the modules
[3] Health Sciences Information Literacy Modules: www.latrobe.libguides.com/health_sci
[4] Quiz was worth 5% of assessment of cornerstone unit

and quiz questions correspond with the foundation level of the La Trobe University Library Information Literacy Framework.[5]

While it is evident that the vast majority of students could not demonstrate these sorts of threshold skills when they commenced their studies in health sciences, the various components of the information literacy program (e.g. structured research tasks, facilitated reflection on the research process, online modules, online quiz etc) have contributed to an improvement in library research skills over the course of the year.

Overall there was improvement in responses between the pre- and post-experience surveys. A selection of results comparisons for particular questions is shown in table 1. The question types which show an opportunity for even further improvement can be the focus of further development for this cohort in second year and beyond[6]

Table 1. Pre and post experience survey - selected results comparison

Question type	Pre-experience result*# Mar 09	Post-experience result*# Sept 09
Journal article citation	23% correct	**59%** correct
Referencing	28% correct	**59%** correct
Boolean searching AND, OR	37% correct	**48%** correct
Evaluate an internet site	24% correct	**38%** correct
Peer reviewed journals	4% correct	**17%** correct

The quiz was a formative exercise which consisted of questions which were tailored to the content in the Information Literacy Modules. Results overall show an average score of 12.15 out of 15, the best of three attempts being taken as the score. A selection of quiz results for question categories similar to those in the surveys, show very positive outcomes for the students.

Table 2. Quiz - selected results for categories

Question category	Quiz result category*# May 09
Finding items on a resource list	**71%** correct
APA Referencing	**88%** correct
Planning a search	**80%** correct
Internet information	**90%** correct
Finding peer-reviewed journal articles	**79%** correct

* Figures have been rounded
# The pre/post-experience knowledge questions (not discipline tailored) were identical, however the Quiz questions were tailored to health sciences topics; students' results were the best of 3 attempts and the figures here reflect the % correct for the question category overall.

The contribution of the information literacy program to the foundation development of the inquiry/research graduate attribute is also reflected in student and staff comments and ratings

[5] La Trobe University Library Information Literacy policy and Framework: http://www.lib.latrobe.edu.au/about/infolit.php
[6] Question design flaws, evident during analysis of answers for some questions like 'evaluate an internet site', were also seen to have an impact on results

from the Library's post-experience survey and the Library survey of Faculty of Health Sciences staff.

> "***I am able to effectively use the Library catalogue to find electronic resources***" - 69% (737) of respondents in the student post-experience survey rated this statement either strongly agree or agree.
>
> " ***I am confident in using Library resources to find information for my university assignments***" – 60% (638) of respondents in the student post-experience survey rated this statement either strongly agree or agree.
>
> "***Embedding of information literacy skills in a subject (for assessment) was beneficial to students***". – 60% (9 of 15) of respondents in the Library survey of Faculty of Health Sciences staff's experiences of library support to CFY, rated this statement either strongly agree or agree. 14-26 October 2009.
>
> "***The information literacy information is excellent***" – a comment representing several comments in relation to 'What worked well' question in the Library survey of Faculty of Health Sciences staff's experiences of library support to CFY. 14-26 October 2009.

Refer to the full reports for further detail:

- Appendix 8 - Pre-experience survey report
- Appendix 9 - Pre/post experience survey: final report
- Appendix 10 - LMS Quiz results report

2. Use of the Library and resources

2.1 IL Modules

Use and usefulness of IL modules

Statistics on the use of the modules for 2009; 13,155 hits in total[7] (Jan – end Oct 2009) indicate substantial hits on particular modules (ranging from 857-1793). As shown in the modules usage data table below the usage peaked at March when the semester began and then May when the Information Literacy Quiz was conducted. Those modules with the highest statistics were: Referencing with APA style; Finding items on a resource list; Finding journal articles by topic, all of which had embedded links in unit materials within LMS of a first year subject. *Can't I just google?* was the next highest. It is evident that embedding specific links to modules positively affects usage.

[7] Modules are available from the Library website and the hits may not all have been CFY students

Modules usage data 1 January – 31 October 2009

Link	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Can't I just google?	41	87	317	162	449	49	43	56	46	15	-	-	1265
Finding credible internet information	35	36	160	57	420	31	33	34	33	17	1	-	857
Finding books, book chapters, reports or AV by TOPIC	33	21	214	61	592	20	7	30	35	10	1	-	1024
Finding health & social statistics	15	25	127	66	406	6	13	195	215	118	1	-	1187
Finding Items on a Resource List	55	70	433	124	720	32	18	49	39	18	-	-	1558
Finding journal articles by topic, including peer-reviewed	49	30	248	97	879	32	25	87	60	55	6	-	1568
Finding media reports/newspaper articles	22	34	71	41	321	9	35	291	158	38	1	-	1021
Introducing the library	34	55	201	100	390	29	22	34	38	9	-	-	912
Overview	20	39	292	135	369	16	6	52	38	9	-	-	976
Planning your search	40	38	171	99	543	11	17	31	26	18	-	-	994
Referencing with APA style	38	39	555	195	584	98	22	80	69	107	6	-	1793
Totals	382	474	2789	1137	5673	333	241	939	757	414	16	-	13155

Although there were specific embedded links in unit materials, some students may not have been able to find them as evidenced by this comment.

> ***"Modules I did use were extremely helpful, easy to follow, and really helped my research techniques. Fantastic. It would be good if there was more info about them and they were easier to find so I could have utilized them earlier"*** comment from the student post-experience survey run September 7-14 2009

More explicit promotion of the modules to the students and a review of the links to the modules, including the placement and labelling of those links within the unit materials in LMS would clearly be of benefit.

In terms of usefulness, in the post-experience survey of students (Q8) the top three modules considered most useful were:

- Referencing with APA;
- Finding journal articles by topic and
- Finding credible internet information.

Usability testing conducted with 21 CFY students in May/June 2009 resulted in the following feedback:

- 78% of participants gave positive feedback about the modules in terms of usefulness, helpfulness, design, content, multimedia and language and practice exercises.
- 20%[8] gave feedback that navigation, design and promotion of the modules in workshops could be improved.
- When asked what worked well in terms of the 'Can't I just google?' video, a majority found the video "appropriate" and "easy to understand".

In addition, in the Library survey of Faculty of Health Sciences staff's experiences of library support to CFY, 66.7% (10 of 15) of respondents rated the statement ***"The online information literacy modules were useful for teaching necessary skills to students"*** either strongly agree or agree. 14-26 October 2009.

[8] 2% of feedback was neutral

Effectiveness of IL modules

Usability testing conducted with 21 CFY students in May/June 2009 revealed that the modules were moderately effective in assisting students to achieve success with a task. Labelling and design of modules led a majority of participants of the testing to an appropriate module (71%) and pathway (67%), however applying the module guidance successfully was evident in just over half the participants (57%) for one step actions, and less effective in more complex actions (27%), like choosing and accessing a journal database for a topic search.

Results show that pathways within the modules (including use of tabs and sub tabs) could be improved, however the successful use of internal links to the following page was a positive finding, perhaps a way to address an aspect of the pathway issue. Visuals and multimedia content were well received by the participants, indicating that enhanced and increased use of multimedia objects would be well received. Specific data on what aspects appeared to work or not, and the frequency and severity of issues which evidently affected achievement for participants, has been explained in the full usability report and will inform the review and improvement for 2010 to increase engagement and effectiveness for students.

Refer to the full report for further details:
Appendix 11 - Health Sciences Information Literacy Modules Usability Testing Report

2.2 Collections

The collection development aspects of the Health Sciences CFY was also evaluated in this part of the project. Of particular interest were four aspects of the Library's collection development activities:

1. multiple copies policies for recommended and prescribed readings
2. provision of materials for wider readings for essay and enquiry tasks
3. cross campus access
4. expanding the electronic books collection in the Health Sciences area.

Collection development and the common first year

Providing multiple copies for large student cohorts across all campuses can present a number of challenges. The 2008 Library client satisfaction survey revealed general dissatisfaction

among students with the number of multiple copies in the collection. To improve provision of multiple copies in the Health Sciences CFY, several measures were put in place:

1. Library staff worked closely with the academics developing new units to ensure recommended materials were in place at all campuses in time for Semester one 2009. Health Sciences CFY– *Resource lists* were prepared by Library staff cross campus and were systematically treated, to ensure all recommended and prescribed materials were added to the collection and catalogue:

    a. Ereserve (to be digitised)
    b. Book chapters (with one chapter only listed)
    c. Journal articles (only in print or not held)
    d. Ejournals available (no reserve action required, as these were not separately or specially linked)
    e. Internet sites/pdf reports to link to in the catalogue
    f. Books (either whole books listed or with more than one chapter)
    g. AV type material

2. The multiple copies formulas were reviewed at all campuses, and at Bundoora the following policy revisions (with Health Sciences examples) were made on a trial basis for review after 12 months:
    a. for high use and multiple copies titles, the formula for purchase was increased to one copy per 30 students with a maximum of 30 copies. In cases where an e-version was available and was single user access, 1 e-copy was treated as equivalent to four print copies and no more than four copies were purchased in e-format.
    b. 50 copies of set/prescribed texts if needed for more than one unit (e.g. Marieb's *Human anatomy & physiology*) were also purchased as a trial.
    c. 20 copies of additional/recommended readings e.g. for enquiries (e.g. *Effective writing in psychology: papers, posters, and presenta*tions) were purchased.
    d. five copies or less of books where a single chapter had been recommended and placed on e-reserve were purchased, or when the Library had an e-copy of the book (e.g. *Human frontiers, environments and disease: past patterns, uncertain futures*).

    The copies were distributed as follows:

    If 30 copies: 10 RESERVE, 15 on seven day loan; five 14 day loan (e.g. to allow some of the demand to show up via the purchase alerts function in Innopac)
    If 20 copies: 10 RESERVE, seven on seven day loan and three 14 day loan (ditto).

3. A policy and procedure for automatically providing an e-copy if available was instituted – estimated to be available for available for 10-15% of materials (the actual figure was closer to 5-10%). This policy assisted both cross-campus and 24/7 access for students and staff.

4. The impact of Innopac (Library Management System) requesting on demand and use was to be monitored and relevant committees looked the extension of holds to 3 and 7 day loans, but decided not to pursue this option.

5. The possibility of extending the hold quota was reviewed and a decision was made by Client Services Committee at the December 2008 meeting. The quota for staff was increased to unlimited, and all other patrons were increased to eight. While these decisions were not explicitly made to assist the Common First Year resourcing, they did have an impact on use and the perception of availability.

6. The Library purchased and promoted ebooks related to the enquiries:

- Doodys Core collection of 117 Health sciences electronic monographs,
- approximately 300 titles were purchased on the Myilibrary platform to assist students for their essay and research enquiries,
- Net library – a trial of patron driven acquisition of electronic book titles was another way in which the Library used Web 2.0 technologies for the quick addition of student and staff selected titles to the collection. Approximately 115 titles in the area of Health Sciences were selected in this way during the first half of 2009.

At some campuses extra copies of high demand materials were not always placed in the General collections for loan. In contrast the Albury-Wodonga practice is as follows; if there is only one copy, the copy goes to Reserve, but as most of the health sciences material was ordered in multiples there would be one copy on Reserve, one on three day loan and one in the General Collection. This is similar to the Bundoora practice which always provided a mix of loan periods across the multiple copies of health titles.

At Bendigo the practice is if there is only one copy which is in high demand it will automatically go on Reserve. Multiple copies for the Health Sciences were placed in Reserve for either three hour loan or 24 hour loan. At the end of semester one, due to low usage statistics, some copies were placed back on the shelves for general borrowing.

A broad assessment of these changes was planned, incorporating:

- feedback from the common first year participants : academic, student and general staff,
- loan, cost and use figures, e.g. electronic "turnaways" figures produced by the major e-book vendors and print Innopac purchase alerts, to assess student demand on the collection.

User feedback about Collections - Students

The Library sought feedback from students via open ended questions attached to questionnaire surveys. There was no specific feedback about multiple copies in the post experience questionnaire, nor any anecdotal evidence that this was an issue the Library needed to tackle.

Comments relating to the Library collections include:

Resources too old
Reserve is useful - I can always find what I want
The most difficult thing is finding books

Perhaps the most interesting data comes from a comparison of the pre and post experience surveys for questions about expected and actual Library use. While 94.8 % of new Health students expected to borrow books, only 63.5 % actually did so by the end of September when the post experience survey was run. In addition, of the 69.4% expecting to use electronic resources; only 52.8% actually used them in the first nine months of their University course.

User feedback about Collections - Academics

A cross campus survey of academic staff carried out in October 2009 asked two questions about resourcing the Common First Year course:

- *The Library holds useful and relevant electronic books for the Common First Year.*
- *The Library has sufficient multiple copies of materials for the Common First Year.*

Fifteen academics responded to these questions on a five point Likert scale, from s*trongly disagree to strongly agree.* While there was very good agreement, e.g. 80%, that the Library had a useful collection of electronic books (46.7 % strongly agreed and another 33.3% agreed), the results for the multiple copies question were more disappointing. Only 33.4% *strongly agreed or agreed* that there were enough multiple copies with 40% neutral.

In response to the question *"what worked well in the Library's support to the Common First Year"*, e-chapters, journal access and electronic resources were mentioned. One academic suggested that "*the Library promotes La Trobe Staff publications*", while three others commented on multiple copies:

- *Increase the number of texts available*
- *Increase resources in Library, also multiple copies of textbooks, putting some key texts on three hour loan, increasing the e-book collection*
- *students wanted more copies of the textbooks available for borrowing*

It would have been particularly useful to know the campus of the respondent as the multiple copies practices differ from campus to campus and relevant actions would depend on local conditions. Further work on teasing out this issue is needed – perhaps via a targeted phone survey to delve into this area.

Purchase alerts data

Innopac purchase alerts are a way of tracking when there is high demand on 14 day loan items. These data are collected by program and can be output at any time. In 2009 these reports were monitored monthly in Semester one. In addition the Library tracked data from the e-book vendors – NetLibrary and MyILibrary – to ensure that additional copies of e-book titles were ordered if warranted by the use data.

The data collected for Semester one 2009 indicate that the Faculty of Health Sciences accounted for few of the purchase alerts, since of the first 150 titles showing up in the purchase alerts, only 16 or 10% were from this Faculty. In addition, none of the Common First Year texts, as identified by the Library, were in this group.

The e books usage data for Semester one tell a similar story. Very few first year electronic texts were available – less than 1 % - and additional electronic copies of these were purchased as required.

Use of multiple copies of Common First Year texts at Bundoora

Based on both anecdotal and Library client satisfaction survey user feedback, textbooks were given a mix of four different loan periods, and at Bundoora these included:

- three hour
- three day
- seven day
- 14 day

Data from several titles treated in this way indicate that the three hour (Reserve) items had the greatest use. While these figures are affected by the total possible number of loans for each loan category (e.g. nearly 60 Reserve three hour loans are possible for each 14 day loan), the data also indicates that students were using Reserve copies when there were one and 2 week loan copies available. Indeed the maximum number of one and two week loans possible was never reached.

Since there were up to 20, 30 and even 50 copies of some titles listed in the catalogue, it may also be that students never scrolled down to locate the longer loan copies. Another hypothesis is that texts are often heavy and students wished to have a copy to consult while they were in the Library, using their personal copy at home. In 2010 with the introduction of a new discovery tool for users, tracking this pattern and assessing its impact on the use of various parts of the collection will be critical.

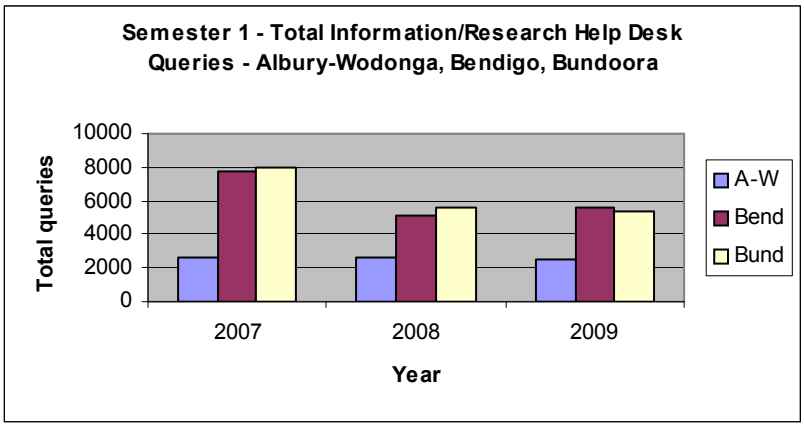
A snapshot of the cross campus loans and renewals to the end of October for one key text "*Vander's Human Physiology"* are as follows, showing the relative cross campus use, based on the number of students enrolled at each campus:

	Bundoora 1145 enrolled	**Bendigo 260 enrolled**	**Albury Wodonga 80 enrolled**
Reserve	10 copies	2 copies	only 1 copy
Average loans/copy	35.3	16.5	11
Range of loans/copy	18-55	13-20	11
14 day loans	20 copies	4 copies	NIL
Average loans/copy	14.2	12.5	Na
Range of loans/copy	9-20	6-21	Na
Total for all copies	30 copies	8 copies	3 copies (one 3 day, one 7 day)
Average loans/copy	21.6	13.8	8.3
Range loans/copy	9-55	5-23	7-11

*does not include in house use e.g. photocopying of chapters in Reserve/Short loan areas

2.3 Help desks statistics

There has been a downward trend pattern in the number of Information Desk/Research Help Desk queries[9] over the past few years, which continued in semester one, 2009, albeit at a slower rate. This is shown in the table below. Over this time period Library clients have been increasingly able to choose from a range assistance such as: service desk; Ask-a Librarian email; online chat; and LMS Library discussion boards in some subjects.



Desk statistics were monitored for semester one in order to investigate what impact the Health Sciences CFY (Common First Year) had if any on the face-to-face queries.
Of the total Information Desk/Research Help Desk queries for semester 1 2009, the percentage of desk queries relating to the Health Sciences Common First Year was:

Albury-Wodonga 7%,
Bendigo 1%
Bundoora 7%

A more detailed look at the months at the beginning of the semester (particularly March) for 2008 and 2009 for Albury-Wodonga, Bendigo and Bundoora show an increase overall,

[9] Albury-Wodonga, Bendigo and Bundoora Library Desk statistics are included in the discussion. Statistics not reported on here for Mildura and Shepparton.

however without detailed comparison figures from 2008 for health sciences queries, it cannot be known if this was attributable to the HS CFY or not.

2.4 Library discussion boards in the Learning Management System

To enhance the information literacy program which had primarily been delivered in semester one, a Library Discussion board was run in the learning management system (LMS)[10] in semester two. Between 19 August – 6 November 09, 114 library-related queries were posted (which is 67% of a total 169 postings).

Analysis of the Library discussion threads reveals that participation in these discussions is a key contributor to promoting a sense of community and cooperation amongst users relating to library matters.

It is interesting to note (see Table 5) that the discussion threads initiated by the library did not result in further discussion or response from students. Almost all the discussion threads initiated by students, however elicited a response or started a discussion between more than two people. The success of these conversations requires active and enthusiastic participation from the librarians involved because while students may not respond to library threads library staff must be active in participating in student threads.

Table 5

Where discussion thread initiated	Number of threads	Threads with discussion
Library staff	30	0
Academic staff	1	0
Students	50	57

Out of the 81 threads on the discussion board (see Table 6) the most frequent category type were notices posted by library staff. There were several library staff posted notices which prompted direct emails to individual faculty librarians for assistance. This activity within the Library discussion board extended and prompted students to seek help in other ways. The other six categories of threads were student initiated discussions. These discussions included a range of topics with traditional-style reference queries being the most frequent such as Finding information on a topic, Finding journal articles and Referencing.

Table 6

	Number of threads by category	Number of Posts per category
Categories:		
Library notices	22	22
Reference/research queries	16	37
Turnitin	14	38
Citation style	12	32
Locating journals	11	23
Essay format	4	11
Using/navigating LMS	2	6
	81	**169**

[10] In four LMS sections of HLT1IPB

The postings and threads, a number of which were answered by students helping each other (as seen in table 7) and which can be seen by all enrolled within a subject section, indicate a well used service that would be of benefit in semester 1 in the future.

Table 7

Students helping each other		
Thread category	**Number of Threads**	**Number of Posts**
Turnitin	6	30
Reference/research queries	3	12
Citation style	2	6
Essay format	2	6
Locating journals	1	4
Using/navigating LMS	1	3
	15	**61**

A student comment sums up the benefit of including library discussion support in LMS:

"***Great information and now I have a much clearer understanding of how I can access information through the database***" - Student comment after being assisted on a Library Discussion board within the LMS of a first year unit, for assistance with finding journal articles. 26 August 2009 11:11 AM, Library Discussions Board, Section A, HLT1IPB.

3. Stakeholder Feedback

Opportunities were provided for Faculty of Health Sciences' staff and students and library staff to give feedback about the impact of the Library's contribution to the common first year. A common thread amongst all feedback was the suggestion to promote the Library's modules and other support (including Library Q & A sessions) to a greater extent so that students can maximize the use of the resources and assistance which is available to them.

3.1 Student feedback

Feedback from students was elicited from: usability testing; pre and post experience survey responses and comments and the LMS library discussion board in semester two. Some of the student feedback quotes have been already mentioned in this report. In summary, there were a mixture of positive and negative comments, and suggestions relating to library modules and library support.

Comments about the information literacy modules ranged from: 'difficult to access'; 'didn't know they were available' and 'I don't have time to invest'; to 'very useful for doing health sciences research'; 'were easy to use' and 'really helped my research techniques'.

There were several comments about lack of computers or printer problems and lack of group study spaces in the Library.

An number of students commented that finding journal articles was 'too complex and difficult' and there were suggestions that 'the library has good material but further knowledge to find the material needs to be shown to everyone' and 'it would be handy to make workshops available for first years to teach us and so we can ask questions then'. It is evident from these comments that some students were not aware of the library Q & A sessions offered in semester one and this is also reflected in the low attendance at these sessions. Student feedback will be reviewed for the planning of library support to the 2010 first year cohort.

Refer to the full reports for further details of student responses and comments:

Appendix 8 - Pre-experience survey report
Appendix 9 - Pre/post experience survey: final report
Appendix 11 - Health Sciences Information Literacy Modules Usability Testing Report

3.2 Faculty staff feedback

In order to gain a picture of Faculty staff experience of the Library's involvement in the Common First Year, the Library ran an online, cross campus Health Sciences Faculty staff survey between the 14 and 26 October 2009. Fifteen staff members completed the online survey which consisted of Likert scale statements and open-ended questions. Overall the Faculty feedback was very strongly positive.

Selected responses from Faculty staff are provided throughout this summary, the majority of responses (13 of 15) being very positive overall. Staff were overwhelming positive about the library/faculty interaction citing in particular Information Literacy online assistance, electronic resources, communication initiated by the Library in relation to the CFY, and library staff and responsiveness to student needs.

"The Library staff responded well to the needs of CFY students" - 78.6% (11 of 15) of respondents in the Library survey of Faculty of Health Sciences staff's experiences of library support to CFY, rated this statement either **strongly agree** or **agree**. 14-26 October 2009.

What worked…
Responses to 'In your experience…What worked well…' can be summarised as follows:

- *Information literacy* (4) e.g. 'The information literacy information is excellent' & 'Information literacy was very good – more emphasis maybe required on this area because students continued to make errors…'
- *Electronic resources* (2) e.g. 'e-chapters and journal access are excellent'; 'Access to journals is very appropriate'
- *Library Discussion board* (2) e.g. 'Discussion board on LMS seemed to be well appreciated by students'
- *Approachability of staff* (2) 'Approachability of the staff, students reported how staff were very willing to help'
- *Faculty librarians & other library staff* (4)
- *Communication…initiated by library* e.g. 'Good communication between library and CFY campus coordinator, initiated by the library was invaluable'

What could be improved…
Responses to 'In your experience….What could be improved…' can be summarised as follows:

- *Librarians present at a lecture* (2)
- *Increase texts* (3)
- *List of available resources*
- *Library workshops for facilitators and students*
- *Space for group work*
- *Consistency in LMS sites to promote Library help*

Since the collections usage data for selected prescribed texts does not reflect a lack of multiple copies it is possible that improvements may be needed in the instruction for students (and staff) regarding recognising additional copies.

Overall the feedback from Faculty staff about the Library's support to CFY was very positive. It also helps the Library reflect on internal processes and communication as well as emphasising the importance of clear and timely communication with Faculty staff.
It is clear by this statement "Make them take advantage of what you offer!" that further explicit promotion of Library support would be of benefit (whether it be through lectures or facilitator/student workshops or other methods). Although there was much positive feedback about library staff, information literacy and library resources, there is room for further refinement of library support to CFY, which will be the focus for the 2010 cohort of first^{t} year

and also second year Health Sciences students, in consultation and collaboration with Faculty staff.

Refer to the full report for further details:
Appendix 12 - Health Sciences Faculty staff experience of the Library involvement in the Common First Year: Online survey report

3.3 Library staff feedback

A number of data collection strategies were implemented to elicit feedback from Library staff, including a whole of library staff survey (25 responses), implementation log (informal collection of issues and problem solving, 42 individual posts by 10 people, representing a much larger group of Health Sciences faculty librarians), interview with senior member of Library management, additional phenomenological data such as personal notes made as part of the action research process.

Overall the Library staff responded very positively about the impact of the Health Sciences CFY curriculum reform project. The project impacted on many areas of library work - collection development, space and information literacy instruction in particular.

Library staff commented favourably about their involvement in the common first year as a whole. Key Factors included:

- Commitment of most of the academic staff to work with Library in embedding IL skills into curriculum.
- Coordination of Library CFY initiatives, and faculty communication (by key personnel/faculty librarian) was critical to successful implementation.
- Creation of libguides, and embedding of these in LMS.
- Checking and ordering of multiple copies of books, and digitisation of resources.
- Collection building around the enquiry topics.
- Library access to LMS.
- Use of Sharepoint as a central resource.

What worked…
In response to ‘what worked well’ these issues were amongst common responses:

- Collections
- Communication
- Cross campus issues
- Sharepoint
- Library service desk support
- Library Discussion

Comment about what worked:
"The health sciences librarians cross campus working together and supporting each other with the support of other expert staff"

The CFY had a significant impact on the Library affecting not only the collection development, physical space and information literacy needs of students, but also the working relationships, communication, cross campus working relationships and service provision, project management and other factors internal to the Library.

What could be improved…
In response to ‘what could be improved’ these issues were amongst common responses:

- Physical space for group work
- Promotion of modules
- Lack of attendance at Q & A
- Library/Faculty LMS Communication

The major issue which concerned a large number of library staff was determining how to best meet the information literacy needs of students. Issues included concern that the online information literacy modules were not easy to find on the LMS, that there was no additional support in the LMS for students using the modules and that they were not promoted sufficiently. Steps to remedy these issues were undertaken. For example a Library discussion board was established in one second semester unit, face to face Q & A sessions were offered on all campuses, and usability testing invited students give feedback about the information literacy modules.

Issues that were regarded as being of high priority to focus on in future included:

- Adequate resourcing of further curriculum reform projects,
- Maintaining close working relationships with faculties, individual academics and key processes of curriculum reform.
- Communication, flexibility and team work amongst library staff.

These issues are or will be addressed in the recommendations and by the actions taken as part of the action research approach.

Overall library involvement in the common first year was perceived very positively by the library staff who completed the surveys or provided feedback in other ways. A considerable number of suggestions for improvements in the future were offered.

Recommendations

An evaluation of the Library services and programs designed for the CFY indicate that the Library has made a significant contribution to the foundation development of first year students' scholarly information seeking skills. It is evident that a multi-faceted approach in which a variety of support is provided is beneficial for students to access when and where it is required. Stronger marketing of a number of aspects of the library support to CFY has emerged from across the data.

In short the outcomes that emerged are mainly related to these topics:

- Reviewing modules in light of findings
- Marketing modules and library resources and support
- Planning and tracking information literacy programs in relation to what is known about information seeking entry skills and progress in first year
- Reviewing the quiz
- Maintaining and reviewing where appropriate collections strategies for large cohorts in the light of evaluation data
- Continuing to work with faculty staff to further refine the embedding of information literacy skills in CFY

To further improve the information literacy program and library support for future cohorts of the CFY the following recommendations should be considered. (Further details are in the full reports, Appendices 8-12)

Recommendations: Library pre and post experience survey: final report

1. Review the Information Literacy modules to enhance and improve instruction.
2. Market the Information Literacy modules more effectively to the first year Health Sciences cohort in 2010.
3. Investigate enhancing pathways from the Library web page to ensure there is efficient and effective access to the scholarly databases.
4. Review all pre and post-test results by discipline in consultation with relevant faculty librarians and academic staff to target areas of need and tailor information literacy instruction to fill these gaps.
5. Plan information literacy programs for this cohort in second year to fill the skill gaps identified in the survey.
6. Track the progression of information literacy skill development in this cohort by conducting another survey in October 2010 and beyond:

    a. to ensure areas of need are identified and addressed.
    b. to track the deep learning of these skills.
    c. to track students in targeted groups e.g. disciplines or age.
7. Investigate a method of measuring improvements in Library support for the first year cohort in 2010 (i.e. improvements in the modules, marketing Library support at lectures and Library Discussion Boards).

Recommendations: LMS Quiz results report

1. Investigate the quiz becoming a hurdle requirement.
2. Check and review practice exercises in the modules to ensure there is sufficient modelling of similar quiz questions.
3. Investigate an increased use of 'doing' questions in which students need to perform an activity to get an answer.
4. Review quiz questions in view to providing clear explanation as to what particular module provides the guidance for that question type (as quiz if formative and to explicitly direct students to the learning resources provided for them).
5. Review quiz questions where students performed least well to identify issues with question design.
6. Review instruction in modules to include more multimedia learning objects that illustrate different types of scenarios, so skills can be demonstrated in a range of contexts to make transfer of new skills easier.
7. Retain use of question types which were well answered.
8. Consult with faculty staff regarding:
    a. the timing of the quiz and promotion of the modules as the guidance tool;
    b. how questions are randomised;
    c. the number of questions in the bank in relation to the cohort number;
    d. and if there was any faculty feedback from students or staff regarding the information literacy quiz.

Recommendations: Health Sciences Information Literacy Modules usability testing report

There were a large number of recommendations stemming from the usability testing findings. This is a select list with the full list being available in the usability report.

Modules

1. Reduce module density and text and improve layout.
2. Review the use of sub tabs and tabs – perhaps removing or linking to tab/sub tab content in an alternative/more explicit way.
3. Investigate module pathways and review all titles and headings to improve understanding of the pathways.
4. Investigate guidance in modules relating to selecting and searching databases to find journal articles by topic.
5. Investigate ways to promote the modules further via workshops, lectures, an LMS library discussion board in semester one, facilitator training, handouts, business cards or bookmarks etc. Retain links to specific modules in unit materials and consult with faculty staff to ensure optimum labelling and placement.
6. Consider the newly created generic modules from the Reusable Learning Objects part of the Project and incorporate any ideas or aspects which may enhance or replace the health sciences modules.

Multimedia items

1. Retain the use of video in the modules and the [can't I just google?] concept overall.
2. Look for more opportunities to add instructional videos where appropriate.
3. Review all instructional videos for quality.

Library website

1. Retain the library website entry 'Journal Titles'.
2. Consider changing 'Articles via Databases' to 'Journal Articles via Databases'.
3. Databases by subject area: investigate removing the check boxes and LibXplore search box.

Recommendations: Collections

The 2010 introduction of a new search tool, Summon, and the BONUS+ program for undergraduates may have an impact on all of these recommendations.

1. Learning and Research Services, Health Sciences Team, Collections and Reserve staff at all campuses collaborate to further develop their liaison with the Faculty and individual academics in determining and ordering high use titles. This recommendation acknowledges that this liaison is easier to accomplish with large first year classes, using established teaching staff and more difficult when there is a plethora of medium sized units, and a changing mix of lecturing staff.
2. Each campus to review their policy in this area taking into account the data presented above and the academic feedback that *students wanted more copies of the textbooks available for borrowing.*
3. At Bundoora, review the number of copies allocated to each loan period, with a view to allocating additional copies to Reserve and seven day loans and fewer copies to the other categories. The data suggest that 50 copies of a text are not warranted and a maximum of 30 copies should normally be sufficient.
4. The use of multiple copies shows interesting patterns which would benefit from ongoing investigation in 2010. Consider a targeted phone survey of patrons, including questions on this topic, possibly coordinated with the 2010 Library client satisfaction (Insync) survey.

Recommendations: Health Sciences Faculty staff experience of the Library involvement in the common first year: Online survey report

1. Consult and collaborate with faculty staff to identify mechanisms which will increase awareness amongst both students and staff, of the information literacy program and library resources and support for 2010
2. Review library Q & A sessions with regard to labelling and marketing so that 'at risk' students will maximise use of available support
3. Review and improve guidance in Information Literacy modules to maximise effectiveness
4. Continue to work with Faculty staff to further refine the embedding of information literacy skills in CFY
5. Continue to seek feedback from Faculty staff through surveys and particularly focus groups or structured interviews with key personnel to assist in the improvement of the Library response to CFY

Action research: Health Sciences evaluation working group

Jenny Corbin (Coordinator).

Claire Brooks, Eva Fisch, Sharon Karasmanis, Fiona Salisbury, Chris Wanklyn.

Project Part 3: Reusable learning objects

Aim and Rationale

The Reusable Learning Objects part of the project developed and implemented a number of learning objects. The learning objects chosen were a range of complete generic information literacy tutorials and a librarian driven online assistance service.

The objective was to explore a range of existing learning objects which could be adapted and changed to support information literacy skills. The exercise was to gain an insight into the process, working in cross-campus collaborative teams, time involved, training requirements, technical support and software required. This subgroup's brief was based on the assumption that the re-usable objects developed were to be a sample of possible re-usable objects that could be further developed and built upon to implement the Information Literacy Strategy.

The group initially struggled with the concept of what a 'reusable learning object' was and how these objects could be used and disseminated. The preliminary project brief had many possibilities, resulting in the group changing tasks and perspectives numerous times early on in the development stages. The concept of meeting the needs of an evolving Information Literacy Strategy also affected the subgroup's focus.

To meet the timeframe of the project, it was important to stay focused on a concise set of goals and not to extend the scope of the project. Constraints overall of limited time to develop a variety of re-usable objects and the timely feedback from parts of the Project, has meant that further work needs to be done on the developed reusable learning objects. (This is reflected in the recommendations section).

Out of scope of the project was resolving possible broader issues around the management of University wide learning objects e.g. maintenance and updates, as well as University wide technical solution of storing learning objects e.g. repository.

Process

Initially a literature review (see Appendix 13) and an environmental scan of practical real world examples (see Appendix 14) was performed. Given this background investigation the team held a brainstorming workshop discussing these ideas and information. Early on in the discussion two clear tasks for development emerged from the range of ideas.

1. Generic Information Literacy modules targeting specific areas of skill or theme.
2. A Question and Answer system to help assist when students have a problem.

To manage and focus on these two tasks, the group divided into smaller teams to tease out ideas and develop these objects.

Generic modules

The group investigated an existing proven model of information literacy based tutorials. These comprehensively evaluated modules designed to teach information literacy skills were developed by a New Zealand consortium. These modules were bundled as a tutorial style learning object.

Preliminary work began in converting the modules for delivery at La Trobe as a 'generic' information literacy instruction. The modules have been delivered via existing library software 'LibGuides' by Springshare. This means that it was relatively easy for librarians to edit and customise in the initial development stage. The completed generic information literacy modules can be accessed via the LibGuides page:
http://latrobe.libguides.com/content.php?pid=74742

The modules can be used in various ways: as self paced, self directed, non-assessed, generic learning support; embedded as part of the teaching program of a faculty, including possible assessment or hurdle requirements; as part of a blended (online and face to face) program of information literacy; and in various other ways either by the library or in collaboration with academic staff at a subject, course or school level.

The group focused on and produced the following modules:

- Searching for Information:
  - Using the Catalogue
  - Using Websites
  - Finding Journal Articles
- Finding items on a reading list
- Evaluating Information Sources
- Ethical use of information
- Digital information literacy
-

These modules will form the basis of delivering foundation skills within the Information Literacy Strategy Framework.

LibAnswers

The group investigated various commercial products for Q&A type help services. The group finally settled on purchasing a new product called 'LibAnswers' by the same company that produces 'LibGuides'. The advantage of this was the tight integration between both systems and the staff familiarity of operating these products. This method of a range of tips, suggestions and explanations follow a student directed approach and ties in closely with the online librarian assisted model of the Information Literacy strategy. The initial questions were distilled from questions asked via the existing 'Ask a Librarian' service and online chat as well as staff recommendations. The question and answer bank will continue to grow once it is launched and students begin asking live questions. Currently most answers are text based. However, over time more video and image based responses will be created. The video and image based answers have been re-used in the generic modules as well.
The product can be accessed via: **http://latrobe.libanswers.com**

What we learned

This part of the Project highlighted the enormous effort undertaken to conduct and manage a small group in a cross-campus environment. The time taken to produce the outputs should not be underestimated for future activities. External organisational factors also hampered progress in regard to sourcing part time casual hours and staff commitment.

Innovation and the development of software expertise issues suggest that in order to support and sustain reusable learning object development, a small team of focused individuals should be responsible for the creation, development and re-purposing of reusable learning objects. Overall though, the content of reusable learning objects should form part of mainstream activities of Faculty Librarians as part of their role in delivering effective and inclusive information literacy skills.

Further exploration on how students will actually interact with and use the generic modules needs to be investigated. Student feedback will ultimately determine acceptance, use and effectiveness of these resources. Questions such as: Are these modules what the students require or need? Are these tutorials better to be broken up into short or long stepped tutorials? Should these modules sit inside the LMS? Do these materials need to be promoted in lectures by lecturers? Is there a need to make these part of the core curriculum and be accessed? How will library staff make best use these modules? Will they be stand alone, self paced? Will customised version be available for each faculty?, will need to be considered and

form part of ongoing discussions to fully address information literacy issues overall. Hopefully these questions will be answered as the Library moves forward and learns from the experiences of this part of the project.

Recommendations

1. Evaluation and usability testing of generic modules should be undertaken
   Evaluation and usability testing of the modules has not been formerly undertaken as part of the Building Blocks project. Proofreading has been carried out on the generic modules but broader evaluation strategies and feedback needs to be followed up. Although the modules were extensively tested and evaluated by the original New Zealand developers moving them into LibGuides may have impacted on their usability. The usability testing of the Health Sciences modules, also delivered using LibGuides has been undertaken concurrently, and so has not been available to fully inform the development of the generic modules.

2. Naming and promotion of generic modules
   A clear name and branding scheme be used to identify and promote these modules is recommended. This action should be carried out before full implementation of the modules. This should be a collaborative decision in consultation with the Faculty Librarians and Learning and Research Services staff. Naming suggestions such as; Library Skills Online; Research 101; Teach yourself research skills; Research Essentials etc. will need to be further explored.

3. Further align generic modules with the Information Literacy Strategy
   Because the generic modules and the Information Literacy Strategy were developed concurrently the modules need further evaluation to check alignment with the Information Literacy Strategy and Framework. It is anticipated that the modules will form the set of online foundations skills tutorials embedded in the first year curricula structure as outlined in the Information Literacy Strategy.

4. Development of additional modules
   Further development and prioritisation of modules is recommended in order to further align module content with the Information Literacy Framework. In addition implementing the Information Literacy Strategy as it relates to other specific groups (e.g. international and post graduate students) may require further module development. Development of additional modules, for example in the areas of writing business reports and writing scientific reports, could be targeted. Also any remaining topics not covered in the current Library Skills Online modules should be identified and developed.

   The subgroup strongly recommends allowing appropriate lead time for development and production of these further modules.

5. Replace Library Skills Online with the generic modules
   Once the modules have been fully evaluated along with any remaining additional modules to be developed, it is recommended that they will replace the current Library Skills Online modules.

   Factors that influence this recommendation are; easier maintenance and update methods via LibGuides; reduced associated costs; staff familiarity; improved site integration with the current Library Guides and LibAnswers; improved statistics and Web 2.0 versatility.

6. Implementation of LibAnswers

   LibAnswers is an evolving product and can be built upon to align with changing student needs. It also supports implementation of the Information Literacy Strategy by reinforcing skills and library support in an online environment. It is recommended that LibAnswers replace the current “Ask a Librarian” service.

   Maintenance of the supplied answers, creation of new and additional video screen casts and other forms of information delivery to better enable clear and appropriate library support will be required. Appropriate policies/procedures and documentation will need to be developed. Outstanding issues of staff rostering, cross campus integration and product administration will need to be addressed. Consideration of rebranding and promotion will also need to be considered along with a changeover/cut-over implementation plan.

7. Development of additional student support materials as required

   Create appropriate just in time, point of need student support products such as job aids, help prompts or video screen casts. These can also be reused and embedded into LibAnswers, the online modules and the library website.

8. Professional development and training issues

   It is recommended that library staff have access to and are trained in a range of software including LibGuides, LibAnswers, Camtasia Studio and Raptivity eLearning program. Production of modules relied heavily on the technical skills of staff member which resulted a workflow bottleneck. Adequate training via professional development and diversifying staff skills would alleviate this problem. In turn this would foster and encourage new ideas and extend the barriers of technical achievements.

9. Feedback/enhancements and administrative issues

   It is recommended that future administration and maintenance tasks such as version control and editing rights are addressed. Ownership and general maintenance will have to be delegated. A suggested model could be to operate in the same way Library Skills Online is managed.

   At the upcoming cross campus Learning & Research Services Conference, Faculty Librarians will view the generic modules and give feedback. It is also recommended that more detailed feedback is organised via team leaders of the Learning and Research Services Section, as well as student feedback and useability testing.

10. Support for consistency in bibliographic styles for La Trobe University

    The variety of bibliographic styles used within the University is problematic for students. Different Faculties adopt different citation styles. This leads to difficulty in providing consistent instruction and presentation within the modules. This raises many questions related to consistency in bibliographic styles for La Trobe University. Where possible it is recommended that the Library contribute to future discussions on the efficacy of consistency of bibliographic styles.

Reusable learning objects working group

Anthony Flack (Coordinator), Heather Hulett (Coordinator).
Ann Copeland, Nicole Sackers, Claire Brooks, Sharon Karasmanis, Annette O’Brien.

Project Part 4: Science, Technology and Engineering first year information literacy program

Aim and Rationale

The aim of this part of the project was to develop a prototype and proposal to implement the information literacy strategy in the Science, Technology and Engineering first year curriculum. The proposed plan will result in embedding information literacy into the proposed 2010 Faculty of Science, Technology and Engineering (FSTE) cornerstone units, in order to develop FSTE graduates with capabilities in inquiry/research.

This proposal seeks to build on existing partnerships between academics and library staff in a sustainable and systematic way. The recommended proposal would be strongly based in unit specific, embedded assessment tasks and supported by online and face to face teaching.

Process

This part of the project also worked closely with the FSTE Firm Foundations in Science Project Group. Outcomes of the FSTE Firm Foundations in Science project include:

- Defining elements (academic and organisational) which will be common to all FSTE foundation units to provide a smooth transition to University study and equip students with the core academic skills needed for productive learning.
- Investigating staffing models for these units, and in particular looking at the requirements to provide intensive academic skills training for students who need extra support.
- Identifying effective support and training for staff to ensure alignment between unit objectives, teaching activities and assessment and also to achieve excellent management of the units.
- Implementing these guidelines in test units in Semester 2, 2010.
- The FSTE Firm Foundations in Science Project group included the following members:

Tony Gendall	Botany
Tania Blanksby	Genetics + Faculty scholar
David Wilson	Chemistry
David Hoxley	Physics
Narelle Brack	Physics
Marcel Jackson	Mathematics
Mary Witten	Computer Science
Richard Tresider	Computer Science
Melanie Murphy	Psychology
Elizabeth Johnson	Associate Dean
Robyn Yucel	FSTE LAS
Meg Rosse	FSTE LAS
Tony Gleeson	FSTE Educational Developer
Claire Brooks	Library
Graeme Oke	Library
Kris Valenta	Library
Michael Angove	Pharmacy
Marcus de Rijk	CTLC

Environmental scan

Recent literature on science-related information literacy programs, particularly those that are embedded in the curriculum, was reviewed in order to further develop the Science, Technology and Engineering information literacy program proposal.

Consultation

The Science, Technology and Engineering group met with the Health Sciences evaluation group to discuss and learn about issues associated with implementing the Health Sciences common first year information component, and possible implications for the proposed FSTE information literacy program.

Discussion paper

The Science, Technology and Engineering information literacy group prepared a discussion paper outlining a proposed plan for implementing the Information Literacy Strategy. The paper included a definition of information literacy skills and strategies to develop information literacy skills. The paper was presented to the following groups for feedback:

- Firm Foundations in Science Project
- First Year Biology Learning and Teaching Group

Feedback

Feedback from the FSTE Firm Foundations in Science project members and the First Year Biology Learning and Teaching Group on the discussion paper was incorporated into a draft proposal which was uploaded to the FSTE Firm Foundations in Science project Sharepoint site at: http://projectsvr2007/PWA/FSTE%20Firm%20Foundations%20in%20Science/default.aspx

Feedback about the FSTE information literacy proposal from the Firm Foundations in Science Project and the First Year Biology Learning and Teaching Group has been positive. The FSTE information literacy proposal will be incorporated into the Firm Foundations in Science project final report for 2009.

Issues arising

Some of the issues indentified include:

- Possible issues with implementing seven cornerstone units in the FSTE (see unit list below) rather than one common first year unit as was the case in the Health Sciences:
  - BIO1OF
  - CHE1GEN/CHE1BAS
  - MAT1DM
  - CSE1OOF
  - PHY1SCA
  - PSY1PYA
- FSTE is still negotiating the direction and content for each cornerstone unit.
- Details of the implementation of the Science, Technology and Engineering information literacy proposal cannot be confirmed until the level of commitment from the wider FSTE community is known.
- Evaluating/ Assessing IL skills.

Deliverables

- Science, Technology and Engineering information literacy Discussion Paper
- Draft FSTE information literacy program proposal

Program principles

Definition of skills required (what we want students to achieve)

Through a cornerstone subject, students should be able to:

- Know how information is organised
- Understand how to use and evaluate different information resources
- How to find information
- How to use information
- Understand the importance of investigating problems and making judgments on the basis of sound evidence, and understanding what they are doing and why – both at university and in their professional lives [11].
- Develop critical evaluation skills;
- Develop foundation research skills;

Program Proposal for implementing the Information Literacy Strategy in the FSTE first year curriculum

- Students would complete a diagnostic tool to assess entry level information literacy skills. This would make explicit the skills that are expected of students in terms of University graduate capabilities and give them feedback on their strengths and weaknesses.
- Students would work in small teams to create and edit wikis based on lecture topics in their unit.
    - Students would be encouraged to use a wide range of information resources to create their wikis. This process would also encourage the development of information literacy skills through peer learning and would also encourage teamwork (see Appendix 15).
    - The wiki has the added advantage in that it can be used as a revision tool for the entire class.
- An online library skills tutorial (http://latrobe.libguides.com/lso) would provide scaffolding/ support for the development of information literacy skills. The diagnostic tool would direct students to specific modules in the online library skills tutorial e.g. if the student failed the diagnostic tool section on finding journal articles, they would be directed to this module in the online library skills tutorial.
- Workshops/ tutorials and online support will be available for students who fail the early diagnostic to help develop their information literacy skills.

Recommendations

1. Continue to collaborate with Faculty staff on the information literacy program proposal in order to implement the Information Literacy Strategy in the Faculty of Science, Technology and Engineering first year curriculum
2. Implement proposal to use wikis to facilitate and enrich information literacy teaching in first year Science cornerstone units.

STE first year information literacy program working group
Kristine Valenta (Coordinator), Graeme Oke (Coordinator).
Claire Brooks, Clayton Bolitho, Beverley Forsyth, Heather Hulett.

[11] Brew, A (2006) Research and teaching: beyond the divide. London: Palgrave Macmillan
Carnegie Foundation for the Advancement of Teaching (2006) Opportunities for Scholarship, Presentation to Hong Kong University Grants Committee, Hong Kong 23-24 January 2006 http://www.ugc.edu.hk/eng/ugc/publication/prog/rae/rae.htm/

Appendices – Information Literacy Strategy

Appendix 1: Workshop program

Familiar Paths or New Roads -
Information Literacy Strategy Workshop

When: Monday June 1st, 2009
10am – 1pm (lunch provided) 1pm – 3pm

Where: Seminar Room, Bundoora Library

What: Discuss what issues should be considered in developing an information literacy strategy for the Library's contribution to the graduate capability of research/inquiry

Time	Task	Detail	
9:45	Arrive	Tea and coffee	
10.00	Introduction General discussion	**Deciding the destination** Background and purpose of the workshop Define IL in the context of our current Policy and Framework - The Information Literacy policy defines where we are going and the Strategy outlines 'how we are going to get there' What skills should a graduate who is capable in Research /Inquiry possess? How does/can the Library contribute to Research/Inquiry?	**Fiona** **Tracy**
10.30	Where are we now? General discussion	**You are here** Overview of current approaches Strengths and challenges	**Linda** **Iris**
11.15	Morning tea		
11.30	Influences on our directions General discussion	**What do we pack?** Current drivers What at the external and internal drivers that impact on an IL strategy	**Tracy** **Fiona** **Maureen**
12 .00	Issues Small group discussion	**Which roads do we take?** - Embedded /add on / stand alone - Online v face2face - Hurdle / Credit bearing / optional - Different approaches for different levels	**Iris** **Maureen** **Claire** **Fiona**
1.00	Lunch		
1.30	Mapping	**Mapping the journey** Small group discussion on; Broad Objectives Possible Models of delivery Possible approaches to an IL Strategy	**Linda** **Iris** **Claire**
2.30	Planning	**Creating an itinerary** Discussion of where to next Timeline and Action Plan	**Fiona** **Linda**

**** note takers in blue**

Appendix 2: Writing workshop program

Information Literacy Strategy Workshop

Monday July 13th, 2009:

10am – 3.30pm (lunch provided)

Seminar Room, GoTAFE Library, Shepparton

Objective:
To develop a discussion paper and draft IL strategy for distribution to the University community for comment.

Outcome of day:

- Agreed format for discussion paper, including headings and main points
- Agreed outline of IL strategy, including headings and main points

Agenda:

Time	Task	Detail	
9:45	Arrive	Tea and coffee	
10.00	Where we are up to	Summary of progress to date Reminder of drivers and timeline	
10.15	Ideas	Discussion of your vision	
11.15	Morning tea		
11.30	Draft of IL Strategy	Agree on main headings Work in pairs on dot points under each heading	
12.30	Lunch		
1.00	Draft of IL Strategy	Review dot points – what is missing? Agreed outline of IL strategy, including headings and main points	
2.00	Discussion paper	Agreed format for discussion paper, including headings and main points	
3.00	Where to next	Timeline and Action Plan Consultation plan – including working with critical friends	

Appendix 3: Email to all Learning & Research Services staff

Email sent 22/09/2009

Dear Faculty Librarians,

Thank you for your recent feedback on the new Information Literacy Strategy. A revised version is now available for viewing on Sharepoint (IL Policy & Strategy Sept 19).
http://sharepoint.lib.latrobe.edu.au/curriculum-review/IL%20Strategy/Forms/AllItems.aspx
This version will be distributed to the wider university community for information and comment, via Faculty meetings and the various Library Committees between now and the end of October. There will also be promotion on the Library blog and newsletters, inviting feedback. Faculty Librarians are also encouraged to discuss the Strategy with their academic colleagues and provide any feedback to their Faculty and campus team leaders.

Some feedback on your feedback

The ILCC met to review the feedback and changes were made to try and address the following issues;

1. The suggested approach for undergraduates needs to be made clearer. What are the foundation skills which will be covered, when will that occur, what will be covered after first year?
   The Strategy now refers directly to the Framework (attributes 1 – 4) and that we are aiming to develop skills to a proficient level by the completion of the undergraduate year. This does not preclude students developing advanced skills, but the capstone module(s) will aim to measure capability at a proficient level, as defined in the Framework.
   The Committee felt it was too prescriptive to determine exact content and timing in the Strategy, but this may be something the Faculty teams wish to pursue within the broad structure suggested.

2. More detail wanted on the pre-experience/pre-test/diagnostic tool. Will it be tied to a post-test or Quiz? If so, who will those results go to?
   The Strategy now refers to a diagnostic tool, rather than a pre-experience or pre-test. A working group of Faculty Librarians will need to develop this but the desire would be to have a short, online quiz that students log in to and complete. The results are returned to them (for self-awareness) and broad results to the Library to inform program design. They do not complete a broad post-test but will complete a quiz either at the end of each online module completed or set by the Faculty in a cornerstone unit (such as Health Sciences have done).

3. Varying views on whether the modules should be generic or faculty specific. How do we balance relevance to a discipline and sustainability?
   The Strategy allows for both but the initial intention is to develop a small set of generic online tutorials in 2010 -which can be later customised if desired. The Reusable Objects Working Group is currently developing 4 tutorials based on the OILS tutorials. Faculty teams will meet to discuss what skills are common to all undergraduates.

4. Some concern about Postgraduate Essentials (as it currently stands) as the Library's preferred tool.
   The wording in the Strategy has been amended to ‘an online postgraduate support program’.
   The ILCC felt that it was still important to work with the wider university on a postgraduate program, rather than a stand-alone library product. This is particularly important as we often do not know of/have contact with commencing post-graduate students.

5. Co-curricula - term seems to cause confusion.
   The Strategy was amended to refer to ‘optional training and assistance’.

6. Voice of the document - are we offering a Library strategy or a University strategy?
   This was hotly debated. At this point in time, the Strategy advocates for a university-wide approach, but we must also accept that it is the Library contribution that we will have the most control over. The document is evolving and may be able to be more strongly worded if/when the University endorses this Strategy in its recommendations for Curriculum review.

Linda Sheridan and Fiona Salisbury
(on behalf of the Information Literacy Coordinating Committee)

Appendix 4: Feedback from committees

Library Committees

Bundoora Library Liaison Committee **8 October**

Members were very supportive of the proposed Strategy and were interested in the detail of stratagems that would be used for undergraduates.

Library Liaison Committee (Bendigo) – Tracy **9 October**

Committee were supportive and impressed with this initiative and keen to know when they could expect to see implementation across the board. They congratulated the Library on the involvement in the project.

A-W Library Advisory Committee **13 October**

Members were very supportive of the proposed Strategy. The comment was made that it aligned closely with the Design for Learning approach. One member suggested promoting more widely the successes of the Health Sciences Common first year approach. This would help to convince academic staff of the value of allocating time for completion of IL modules within the first year curricula. Another member liked the idea of faculty librarians working more closely with academic staff to identify relevant resources for new courses.

Library Committee **21 October**

The Strategy generated a lot of discussion with members generally positive about the approach. Questions were raised on;

- If the foundation modules are compulsory, how do we check that the students actually complete them? Will it be a compulsory hurdle requirement or assessed as part of their unit's marks?
- If there are modules in the capstone units, how will achievement be certified? (completion and level of competence?)
- How will the strategy deal with advanced entry students?
- What part may e-portfolios play in the Strategy?

The point was made that there are 4 levels of postgraduates; research level, coursework level, technical graduate certificate (eg: VET teaching) and postgraduate courses which is distinctly different from the undergraduate training (eg: Dip Ed.). The members suggested considering the diversity of postgraduate students when fleshing out the postgraduate strategy.

Other committees or forums:

AW Campus Academic Development Committee **22 October**

Members were very supportive of the proposed Strategy. Health Sciences staff confirmed that the approach to building IL skills in first year students was very successful and that a similar strategy is now being developed for 2nd years to build on these skills. Identifying a corner stone subject will be more challenging in the other faculties.
members were very interested in the approach for postgraduate students. None had heard of Postgraduate Essentials but were interested to view it. They agreed that postgraduates enter with a vast range of skills and therefore supported the idea of a checklist. One member explained that she already uses a skills audit with postgraduate students, which may inform the Library's checklist. Members liked that there was a visible link between undergraduates and postgraduates and that a student studying at a higher degree level will still be able to access the training in fundamental skills.

The meeting ended with a great deal of affirmation for the work that the Library does.

Cockatoo Club 28 October

Collection of comments / questions raised by the audience re embedding IL presentation

- Where getting skills at University? How better is it to embed at start (possible research area)?
- Alternative to embedding in a unit – 5 credit point subject, mandatory and online
- Lecturers/tutors are not teaching these skills
- It's a timing issue; need to learn it before being assessed in another unit
- Gap – What the students need to know and don't know
- Computer literacy is a gap
- IT and IL often go together (
- Difficulty with technology is that it changes and younger people are ahead of us
- Skills will focus on understanding the concepts; standardised catalogues are not a reality
- Online skilling opportunities may be developed for PGs – evidence needed
- There are significant language issues, such as dealing with synonyms and more precise concepts
- An important skill in 1st year is how to construct a bibliography, students are not aware that there are other styles available.

Education Faculty Meeting (Bendigo)

Members were happy with proposal, and asked the following:

- Date of implementation
- How do we allow for pre-test differences?
- What if the students don't pass the post-test?
- How will this affect the PhD students?

So while agreement in principle was given, and they were supportive, they were interested in the mechanics of how it would work.

Education School Meeting (Bendigo)

Again, general support for the project. One staff member with a PhD asked "What is Information Literacy?". Marg felt that this comment highlighted the significance of this project, and the need for some structured embedding.

Appendix 5: Information Literacy Strategy summary

Appendix 6: Information Literacy Discussion Paper

Appendix 7: Information Literacy Policy, Framework and Strategy

Appendices – Action Research: Health Sciences evaluation

Appendix 8 – Pre experience survey report

Appendix 9 – Pre/post test survey report

Appendix 10 – Quiz results report

Appendix 11 – Usability testing report

Appendix 12 – Stakeholder feedback report: Faculty staff

Appendices – Reusable learning objects

Appendix 13 - Literature review and environmental scan

This literature review / environmental scan is a selective list of resources from 2000 to date.

These resources informed the working group about the use, practical applications of, and reasons for the use of reusable learning objects and issues related their management.

1 Re-usable learning objects – General
2 reusable learning objects and Information Literacy
3 Practical examples
4 Student experiences/use
5 Management of reusable learning objects

1. Re-usable learning objects – General
Chrysostomou, C. and G. Papadopoulos (2008). "Towards an Object-Oriented Model for the Design and Development of Learning Objects." *International Journal on ELearning* 7: 219.

Abstract:
This work introduces the concept of an Object-Oriented Learning Object (OOLO). The study goes on to examine existing learning object design and development models as well as relevant tools and assesses the ability of these models and tools to implement the OOLO concept. The study concludes by summing up the benefits that can be realised by the development of OOLOs and by outlining the work that needs to be done for achieving the application of Object-Oriented techniques to learning objects.

Barritt, Chuck and F. Lee Alderman (2004). *Creating a reusable learning objects strategy [ebook}: leveraging information and learning in a knowledge economy*. San Francisco, Pfeiffer.
Abstract:
Shows how to create and implement a reusable learning objects (RLO) strategy that is flexible enough to accommodate individual needs or use across a global organisation. The book also helps evaluate the level of changes you will need to account for during the transition to RLO.

Clyde, L. A. (2004). "digital learning objects." *Teacher Librarian* 31(4): 55.
Abstract:
Clyde discusses the significance of digital learning objects in relation to the universities and to continuing professional education or workplace learning - areas where funding seems to be available for development, on the basis of assumed gains or efficiencies. The concept of learning objects is based in both instructional technology and computer science, and while they may be "chunks" of content, they may also be simulations, communication tools, assessments activities and learning management tools.

Dolphin, I. and P. Miller (2002). "Learning objects and the information environment." *Ariadne* 32 (June/July).
Abstract:
Discusses the Iconex project at the University of Hull and how it was funded to demonstrate the value of small, portable, pieces of digital content in assisting student learning. The project aimed to create a repository of interactive Learning Objects, many of which are already available for use and reuse. This repository is intended to stimulate cross-fertilisation between disciplines to develop generic views of types of interaction, and to encourage the reuse of learning objects. In this paper, the authors explored some of the more wide-ranging issues which have arisen during the project, and attempt to demonstrate why consideration of Learning Objects and their role is relevant to all librarians.

Mardis, L. A. and C. J. Ury (2008). "Innovation - an LO library: reuse of learning objects." *Reference Services Review* 36(4): 389-413.
Abstract:
The purpose of the paper is to share the types, uses, and students' recommendations about reusable digital learning objects at Northwest Missouri State University, which can be used or adapted by other libraries in both online and on-ground information literacy instruction environments.
The paper provides suggestions for developing and evaluating learning objects. This includes successful applications of digital learning objects in traditional and online information literacy classes. It shares easy to incorporate learning objects that can be used in tutorials or on-ground bibliographic sessions and includes a student survey about reuse of learning objects, analysis of survey results, and suggestions for survey improvement.

2. Re-usable learning objects and information literacy
Hunsaker, Marci et al 2009 Digital learning objects: a local response to the California State University system initiative, *New Library World,* 110 (3/4), p 151-160.
Abstract:
This article describes and presents various high quality interactive information literacy digital learning objects. It details suggestions from the literature to guide development of Web 2.0 tools in order to produce to supplemental learning modules for information literacy programs. The article recommends best practice examples.

Kurubacak, Gulsun 2007 Building knowledge networks through project-based online learning: a study of developing critical thinking skills via reusable learning objects, *Computers in Human Behavior*, 23 (6), p 2668-2695.
Abstract:
This article discusses the promotion of critical learning skills through the use of reusable learning objects from global online resources.

Multimedia Educational Resource for Learning and Online Teaching, *Library and Information Services* (2009). from http://www.merlot.org/merlot/materials.htm?category=2269&&

Chaudhry, A.S.and C.S G.Khoo (2008). "Enhancing the quality of LIS education in Asia: Organizing teaching materials for sharing and reuse " *New Library World* 109(7/8): 354.
Abstract:
This paper aims to describe the continuing effort to develop a repository of teaching materials for sharing and reuse in library and information science (LIS) schools in Asia. It also aims to propose a framework for carrying out a user study to validate the taxonomy and metadata, and evaluate how they support the reuse of teaching materials in four Asian countries. This paper makes contributions in several ways. It suggests guidelines for developing taxonomies in different domains; describes steps in building repositories of learning materials; and suggests a methodology for studying reusability of learning material.

Graham, Nancy & James, Anne-Marie. (2007*), Institutional case study to explore academics' perceptions and use of electronic reusable learning objects for information literacy:* A report for the Eduserv Foundation Information Literacy programme, University of Birmingham, from **http://www.is2.bham.ac.uk/blasst/Report_Version_Eduserv_pdf.pdf**
Abstract:
This is a very important report for the RILO group. It describes a project of the library working with academics to create IL learning objects. It gives a warts and all account of the project. The eventual decision was that Birmingham would re-use others LO's but not create their own (there are a large number of UK wide IL LO projects on which they can draw).

Meng, M. (2005). A Learning Object Approach for Designing Information Literacy Instructional Materials. *International Association of School Librarianship. Selected Papers from the ... Annual Conference***:** 1.
Abstract:
The author talks about the use of a Learning Objects in designing online instructional content and compares them to small lego-like instructional components (objects) that can be readily

assembled, delivered and reused in multiple instructional and learning contexts. He investigates how tagging objects makes it possible to match objects with individual competency levels, hence provides greater flexibility and relevancy for end users. Other advantages of developing material to be reused as learning objects such as ease of update and search, customization, interoperability and increased value of content are discussed in relation to information literacy instruction.

Timbs, J. (2002). New Opportunities: Teacher Librarians Managing Digital Learning Objects. *International Association of School Librarianship. Selected Papers from the ... Annual Conference*: 239.
Abstract:
In Australia there are currently large-scale national and state initiatives underway to develop a critical mass of learning objects. The development of a Learning System Architecture has also become a vital step to make it possible to manage these learning objects. Packages that will enable students and teachers to communicate, collaborate, locate and access resources within intellectual property arrangements, assemble digital resources into learning sequences, assess and report are all necessary requirements. The Learning System Architecture emerging in Australia enables these disparate systems to function together as seamless and interoperable packages. A new profile of teacher librarian competency is also being developed in Tasmania to assist with planning the professional learning needs of this group

3. Reusable learning objects - Practical examples

Blaabjerg, Nils Jorgen. (n.d.) *User Centred Information Literacy Education- application of multimedia in e-learning and blended learning*, Aalborg University Library, Aalborg University, from **http://www.aub.aau.dk/swim2/1024/start.html**
Abstract:
This case study presents the application of multimedia in an E-learning and blended learning product which aims at developing students' information literacy. The paper will elaborate on our development concept. Especially, on how we have applied our main principle; to create user focused e-learning. This means that we have aimed at taking the user's perspective and taken into account that we are going to facilitate virtual rooms for reflection, where the learner can create new knowledge. We have applied a problem oriented approach to learning because we wanted the learner to become motivated and personally engaged.

Quick list of information literacy site examples

- **http://www.lib.latrobe.edu.au/help/il/**

http://www.ithaca.edu/library/research/widgets.php
https://dspace.ucalgary.ca/handle/1880/43471

- **http://ants.wetpaint.com/?t=anon**
- **http://oil.otago.ac.nz/oil/**
- **http://pilot.library.qut.edu.au/**
- **http://www.its.qut.edu.au/training/onlinetrain/**
- **https://olt.qut.edu.au/udf/loli/**
- **http://www.vts.rdn.ac.uk/**
- **http://www.arts.uwa.edu.au/studentnet/enrolment/iris**
- **http://www.griffith.edu.au/ins/training/library/home_lrt.html**
- **http://info.library.unsw.edu.au/skills/elise.html**
- **http://www.informationliteracy.org.uk/Resources_By_Theme/Tutorials_australia.aspx**
- **http://www.caledonianacademy.net/spaces/....BestPracticeExamples**
- **http://www.open.ac.uk/safari/index.php**
- **http://spfldcol.libguides.com/content.php?pid=3558&sid=28695**
- **http://library.acadiau.ca/tutorials/research/**
- **http://ctcp.uow.edu.au/resources/index.html**
- **http://www.newcastle.edu.au/service/library/tutorials/endnote/**

Kuhlthau's Model of the Stages of the Information Process, Humbolt State University.
Possible activities- the research process – following on Kulthau's model. We should talk about this model and whether we support the use of it, but this is an interesting example of a very different sort of LO. They have published on this extensively, including the theory on which the LO is based.

4. Student experiences/use

Chen, H.L. and J. P. Williams (2009). "Use of multi-modal media and tools in an online information literacy course: College students' attitudes and perceptions." The Journal of Academic Librarianship 35(1): 14-24.
Abstract:
This project studies the use of multi-modal media objects in an online information literacy class. Significant relationships were found among computer skills, teaching materials, communication tools and learning experience.

Dorner, D. G., & Gorman, G. E. (2006). Information Literacy Education in Asian Developing Countries: cultural factors affecting curriculum development and programme delivery. *IFLA Journal, 32*(4), 281-293.

5. Management of re-usable learning objects

Jamsa, K. (2008). *Implementing a distributed learning object registry and repository to measure learning-object metadata (LOM) practices and use*. PhD Capella University.
Abstract:
This study includes the design, implementation, and deployment of a learning-object portal which simplifies and promotes standardized description of learning objects, registration and storage of such objects, and provides a foundation from which developers can build and deploy learning-object-metadata (LOM) tags which describe a learning object. Using the portal, this study measured to what extent instructional designer use of a learning-object registry portal to define a learning object's metadata improved the metadata's correctness and completeness and efficiency compared to metadata created by hand.

Plodzien, J., E. Stemposz, et al. (2006). "An approach to the quality and reusability of metadata specifications for e-learning objects." *Online Information Review* 30(3): 238-51.
Abstract:
This paper discusses research that lead to the identification of new metadata for learning objects. The main finding was the identification of the metadata, including those that are not defined in current e-learning standards. Some of the new metadata could be introduced to the existing standard metadata categories; the others could be used to form completely new categories.

RLO-CETL - The CETL for Reusable Learning Objects. **http://www.rlo-cetl.ac.uk/joomla/index.php**.
The RLO-CETL develops, shares and evaluates learning objects and leads on innovation in pedagogical design. RLO-CETL is funded by the Higher Education Council for England (HEFCE) to be a Centre for Excellence in the design, development and use of learning objects.

Sheffield, C. (2006). "e-Learning Object Portals: A New Resource That Offers New Opportunities for Librarians." *Medical Reference Services Quarterly* 25(4): 65-74.
Abstract:
Four elearing portals most effective in providing health care information are identified: The Medical Library Association's Center of Research and Education (CORE), the Health Education Assets Library (HEAL), the American Academy of Medical College's MedEDPortal, and the Multimedia Education Resource for Learning and Online Teaching (MERLOT). Various user groups such as librarians, educators, and students are discussed, as well as their reasons for using e-learning object portals. New roles for librarians in promoting and developing these portals are also reviewed.

The University of Sydney. (2009). "Creating and Managing Digital Resources", from **http://www.library.usyd.edu.au/subjects/digital/learningobjects.html**
Includes links to Australian and International resources on learning objects.

Ternier, S., D. Massart, et al. (2008). "Interoperability for Searching Learning Object Repositories: The ProLearn Query Language." *D Lib Magazine* 14.
Abstract:
This article describes the "ProLearn Query Language", a query language that was developed for repositories of learning objects. PLQL is primarily a query interchange format, used by source applications (or PLQL clients) for querying repositories (or PLQL servers). The authors give a precise description of the semantics of PLQL, concerning both kinds of clauses and their mutual relationship and describe two experimentation efforts around PLQL: one involving the ARIADNE repository and the other the EUN Learning Resource Exchange initiative.

Appendix 14 – Key reusable objects

Sample list of examples and ideas we investigated as well as demonstrated in the workshops:

ANTS
http://ants.wetpaint.com/?t=anon

OILS
http://oil.otago.ac.nz/oil/

Follow up examples in use look at Business information skills, especially module 6
http://www.flexiblelearning.auckland.ac.nz/business_information_skills/18.html

PILOT
http://pilot.library.qut.edu.au/

LOLI - Learning On-Line Interactively

RDN Virtual Training Suite

UWA – IRIS
http://www.arts.uwa.edu.au/studentnet/enrolment/iris

Griffith
http://www.griffith.edu.au/ins/training/library/home_lrt.html

ELIS
http://info.library.unsw.edu.au/skills/elise.html

Collection from UK featuring Australian sites and others
http://www.informationliteracy.org.uk/Resources_By_Theme/Tutorials_australia.aspx
from the UK
http://www.informationliteracy.org.uk/Resources_By_Theme/Tutorials_uk.aspx

UK again:
http://www.caledonianacademy.net/spaces/LLiDA/index.php?n=Main.BestPracticeExamples

SAFARI – from the Open University- good "Unpacking Information" module
http://www.open.ac.uk/safari/index.php

USA
http://spfldcol.libguides.com/content.php?pid=3558&sid=28695
http://library.acadiau.ca/tutorials/research/ cartoon style

University of Newcastle Endnote tutorial
http://ctcp.uow.edu.au/resources/index.html

This EndNote Tutorial was developed by Library staff at the University of Newcastle, and is designed to provide an introduction to using EndNote.
http://www.newcastle.edu.au/service/library/tutorials/endnote/

Demonstrated at the workshops:
http://www.bbk.ac.uk/lib/life/InformationLiteracy/_LOs/Schgoogle_ver.2.0/SchgoogleIntroduction.htm

New York University Tutorial
http://archive.library.nyu.edu:8000/research/tutorials/boolean/tutorial.html

Texas Information Literacy Tutorial

http://tilt.lib.utsystem.edu/

Wisconsin Online
http://critcore.wisc-online.com/asp/critcore.asp?PrCo=guest

University of Huddersfield Information Literacy Toolkit
http://www.hud.ac.uk/cls/infolit/topics.htm

Synonym search
http://www.nwmissouri.edu/library/courses/research/head.htm

http://www.flexiblelearning.auckland.ac.nz/business_information_skills/18.html

Tic tac toe citation identifier game
http://www.lib.jmu.edu/tictactoe/

Check citations – by selecting from 3 boxes – medium / referencing style / output
http://www.lib.jmu.edu/help/checkcite/

The Citation Machine (MLA, APA etc)
http://citationmachine.net/index2.php

You Quote it, you note it –Plagiarism tutorial
http://library.acadiau.ca/tutorials/plagiarism/

Cornell University - How to find scholarly articles
http://www.youtube.com/watch?v=uDGJ2CYfY9A
The Scarborough Library Tour (student video - pretty bad but there are a few good ideas)
http://www.youtube.com/watch?v=uPl-L-sD0E4

Pima Community College (range of online tutorials)
http://www.pima.edu/library/help/how-to

http://www.merlot.org/merlot/materials.htm?category=2269&&

Appendices – STE information literacy program

Appendix 15 - Using Wikis to embed information literacy in Science, Technology and Engineering cornerstone units

Proposal

- Use Wikis[12] to facilitate and enrich information literacy teaching in first year cornerstone science units.
- Start with 1-2 cornerstone biological sciences units in 2010.
- Extend to all first year cornerstone science subjects in 2011.

Key features

- Students would use a diagnostic tool (modified Mittermeyer survey) to assess entry level skills and make explicit the skills that are expected of them in terms if University graduate capabilities.
- Set of online library skills tutorials (**http://latrobe.libguides.com/lso**) provide scaffolding for the development of inquiry/ research skills.
- Students work in small teams to create and edit wikis based on lecture topics in their unit.
- Skill development is reinforced and supported by librarian assistance in person and online.
- Reviewed and evaluated at the end of each unit.

Issues to consider

- Identifying read and edit control of the wikis, including how the content will be monitored so as so to avoid the posting of inaccurate/ misleading information.
- Whether to make the wikis public – available to all students enrolled in the unit, all La Trobe University students, Public etc
- Which wiki software to use – should be able to be incorporated into the existing LMS (**http://www.wikimatrix.org/**)
- Security and privacy issues.
- Is this form of assessment sustainable?
- Are the results/ outcomes measurable? Can we demonstrate that this has improved information literacy skills?

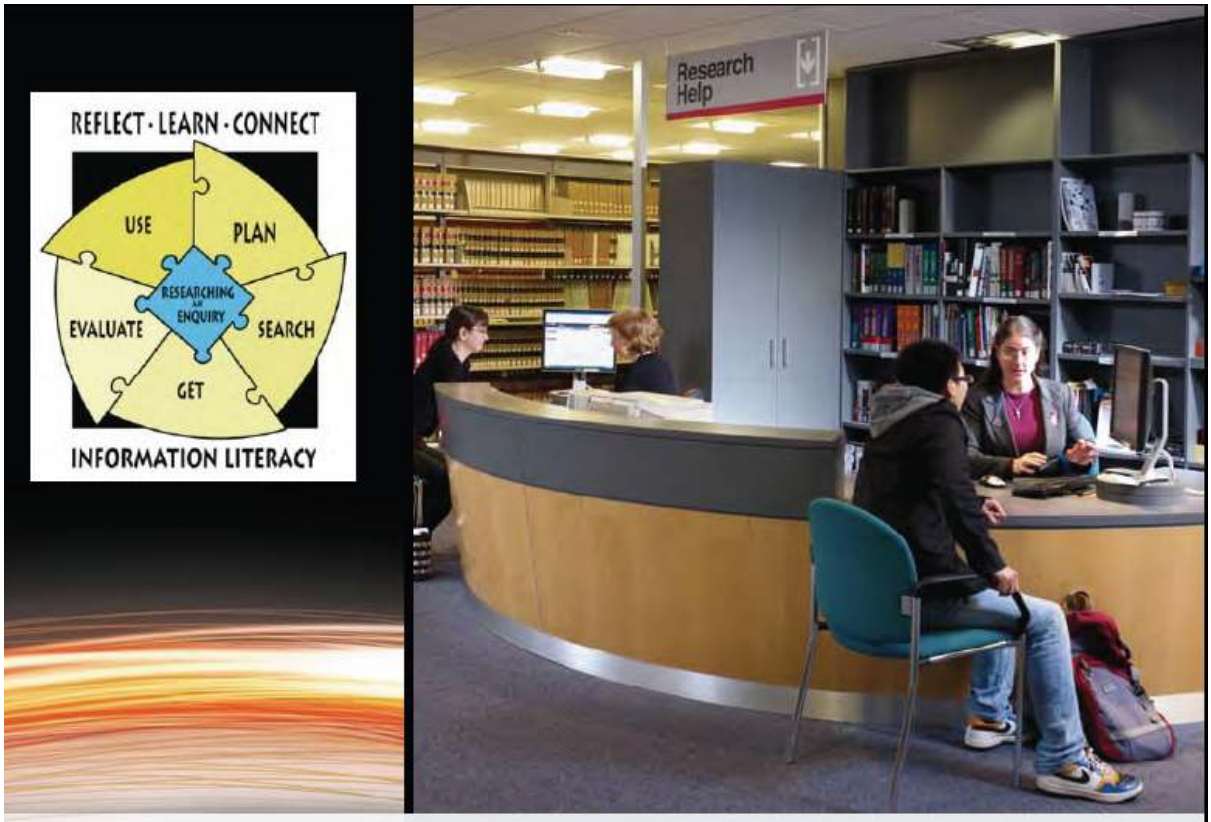
Benefits/ Outcomes

- Students develop inquiry/ research capabilities.
- Uses an inquiry based learning approach.
- Authentic task which is embedded in the unit curriculum.
- Students develop group work skills.
- Encourages the development of information literacy skills through peer instruction.
- Library staff work in partnership with academics to develop programs which facilitate the development inquiry/ research skills.
- Students engage more with tasks/ try harder those that are viewed by peers rather than those assessed my lecturer/ tutor etc (need citation) so are more likely to engage with the wiki activity/ assessment.
- The wiki can then be used as a revision tool for the entire class.
- Students get an opportunity to evaluate different information resources.
- Demonstrates the wide range of resources available to students.

[12] Wikis are collaborative websites with open editing. Examples includes Wikipedia.

Appendices – Communications

Appendix 16 – Library news article



Building information literacy

La Trobe University librarians have a long and successful history of collaborating with academic staff on student information literacy programs. However, many students still do not have an opportunity to develop these skills sufficiently.

Finding ways to ensure that all students graduate with strong inquiry/research capabilities and information literacy skills for work, life and lifelong learning is the aim of the Building Blocks project currently being undertaken in the Library.

The 'Building Blocks: embedding inquiry research (information literacy) graduate capabilities into the curriculum' project is one of ten curriculum pilot projects that were initiated in 2009 by the Curriculum, Teaching and Learning Centre to test and refine potential processes for implementation in 2011 through to 2013 as part of the University's Curriculum Review and Renewal program.

The Building Blocks project is investigating the issues and exploring ways to deliver effective, systematic and sustainable information literacy programs that are part of the fabric of the curriculum across the University.

The project is focussing on four key areas, each with a team of staff working on different aspects of the task.

The Information Literacy strategy group is extending the work of the Information Literacy (IL) Coordinating Committee which developed the Library's Information Literacy Policy and Framework in 2008. The group is exploring what currently works, the role of online learning, curriculum models and future directions with a view to drafting a University-wide information literacy strategy.

The Action research/evaluation group is evaluating the information literacy component of the Health Sciences first year curriculum with a view to considering how aspects of the Health Sciences program may be used as a model for embedding inquiry/research skills into the curriculum in other disciplines.

Initial results from the evaluation data demonstrate clearly that the information literacy program implemented this year has had a very strong positive effect on student's information literacy skills, including in areas such as their understanding of citations and peer reviewed journals, finding appropriate journal articles and evaluating internet sites.

The Reusable learning objects group is developing a number of learning objects ranging from redesigned interfaces for accessing existing web pages and library guides to redevelopment of complete generic information literacy tutorials.

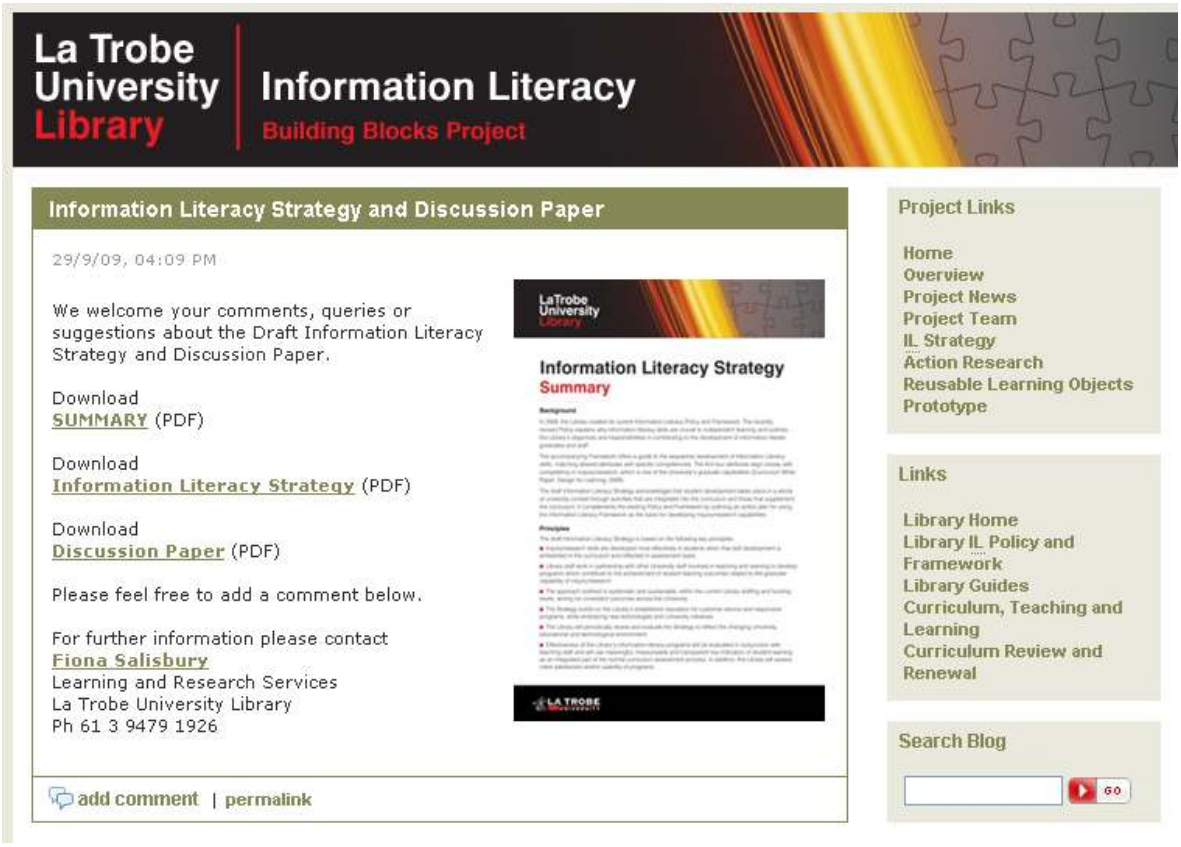
The Faculty prototype group is working in collaboration with the Faculty of Science, Technology and Engineering to develop prototypes for future development, in particular looking at information literacy skills for first year commencing students in the cross-campus Foundations of Science unit.

The project raises many issues and questions which will be explored in forums and workshop within the Library and the University.

The project website at www.lib.latrobe.edu.au/building-blocks/ will provide progress reports and seek to extend the dialogue beyond the immediate project activities and timelines to the wider university and professional library community. Your comments are welcome.

Fiona Salisbury, Learning and Research Services Manager

Appendix 17 – Project blog



Appendix 18 – Project summary flyer

Appendix 19 – Project brochure

Appendix 20 – Concurrent initiatives

These recommendations are based on the literature and the practical experience of the Building Blocks Project. These recommendations supplement the existing recommendations from the various Project groups and are based on specific educational design principles.

1. Peer support programs focussed on research skills
    a. This is the single most effective educational design intervention the library could make.
    b. This could be a stand alone program run by the library and support through the La Trobe awards program, or could be embedded in any peer support programs conducted by the faculties, or some combination of both
    c. We know that students learn best in a socially supportive environment from and with their peers. Investing in training a small group of students will grow a community of scholars around research/inquiry skills more effectively than running multiple library sessions.
2. Improve Library/LMS involvement
    a. Lobby to ensure the new LMS is able to support whole of university sites
    b. Develop a library LMS site with branches to separate faculty information
    c. Embed librarians in the conrnerstone units in a library /academic skills discussion board
    d. Ensure there is a link to the library on the LMS opening portal page
    e. Lobby to have the library linked on the front page of the University.
3. Customised, tailored responses for each faculty
    a. Ensure as much as possible that faculty librarians are involved in curriculum reform projects at a very early stage. It is essential to have library involvement in the development of the cornerstone units.
    b. Generic library programs are less effective than tailored programs where students can grasp the discipline specific nature of the library role, and where they can immediately practice and apply the skills they are learning. Generic programs should be freely available to all students form the library website. Their use should be monitored.
    c. Develop engaging, active learning programs for later years of study eg active, interactive support for cap stone years. This needs to be developed while
    d. Develop support program for postgraduate students (refine Post Grad essentials.
4. Develop mini help, job aids to be used in a timely way rather than relying on long generic IL modules. These can be available through “Ask a Librarian” and also linked at crucial points eg- Need to find a journal article? Need to find a book? Finding items on a reading list?
5. Re-usable learning objects network amongst academic libraries
    a. There is likely to be considerable interest in support sharing of learning objects amongst academic libraries. This could be confined to IRUA libraries or more widely. La Trobe could develop a policy of creative commons release of materials.
    b. Develop high production value reusable learning objects that do not need to be constantly updated for specific things eg getting started in

research/enquiry; personal information management strategies; personal research styles, etc.

c. Liaise with LAS to develop a seamless experience of academic skills support for students. Use LAS advisors as peer/critical friends on development projects.

6. Develop La Trobe perspectives on ‘how we do research’, ‘what research means’, ‘where do I start’ ‘who can help’ etc using video snapshots (mini talking heads) of real La Trobe students and lecturers. This could form part of a larger orientation and transition support material. It is likely there would be small, semi structured video vignettes based on real La Trobe students and staff. This will support the transition aim of making explicit the expectations and culture of the La Trobe University, at the same time as giving student support information. These vignettes should reflect the diversity of students and staff at La Trobe. They can be used on the website, and in various other ways.
7. Research what La Trobe students are really doing for research- focus on using technologies and tools and grounded research.
8. Build evaluation into these interventions from the start. Plan to actively research the research and library use activities of students and use this material to inform the impact research.
    a. Establish some baseline data of incoming student skills.

Claire Brooks

Educational Design Coordinator