

Evaluation of an Information Literacy Program for First Year Health Sciences

Jenny Corbin

Faculty Librarian, Health Sciences

La Trobe University Library

Presenting on behalf of
La Trobe University Library
Health Sciences Evaluation Working Group

Jenny Corbin (Faculty Librarian, Health Sciences & Coordinator)

Claire Brooks (Educational Design Coordinator)

Eva Fisch (Collection Development Manager)

Sharon Karasmanis (Health Sciences Librarian & Team Leader)

Fiona Salisbury (Learning & Research Services Manager)

Chris Wanklyn (Faculty Librarian, Health Sciences)

Overview

- Curriculum reform in Health Sciences
 - Common first year 2009 - nursing, physiotherapy, speech, occupational therapy, podiatry, prosthetics & orthotics etc...
 - large cohort of students ~1700 across 5 campuses
 - enquiry based learning
- What library model?
- Any impact?

Presentation outline

- The Library's response
 - Information Literacy program model
- How response evaluated
- Selection of results
- Challenges, limitations, next steps

Library response: new IL program model

- Library research skills embedded in the curriculum of one unit via structured research tasks & facilitated reflection on the research process,
- Delivered via online modules and quiz (assessed) with optional Q & A sessions & Library Discussion boards in the learning management system
- Quiz based on module content - 15 questions for each student randomised.
- Modules
 - aligned La Trobe University Library Information Literacy Policy & Framework [1]
 - aligned with learning outcome of a first year unit
 - to suit the enquiry based learning model
 - dip in and out
 - basic library survival skills to finding different types of material by topic
 - authoritative/credible thread
 - text with visuals of screens interspersed, practice exercises, multimedia videos created both inhouse & use of external multimedia where value-added

[1] La Trobe University Library (2008). Information literacy policy and framework. Available www.lib.latrobe.edu.au/about/infolit.php

Information Literacy modules

www.latrobe.libguides.com/health_sci

Example: [Finding items on a resource list](#)

- [Overview](#) ⓘ
- [Can't I just google?](#) ⓘ
- [Introducing the library](#) ⓘ
- [Finding Items on a Resource List](#) ⓘ
- [Referencing with APA style](#) ⓘ
- [Planning your search](#) ⓘ
- [Finding books, book chapters, reports or AV by TOPIC](#) ⓘ
- [Finding journal articles by topic, including peer-reviewed](#) ⓘ
- [Finding credible internet information](#) ⓘ
- [Finding media reports/newspaper articles](#) ⓘ
- [Finding health & social statistics](#) ⓘ

Evaluate the response:

1. **Data to determine the level of scholarly literacy of incoming first year students**
 - Student pre-experience survey – Mar 09
2. **Data to assess the impact of Library support on student skills and graduate attributes development**
 - Information literacy skills quiz in LMS – May 09
 - Post-experience survey – Sep 09
3. **Data on the use of the Library and resources**
 - Information literacy modules usability testing – May/Jun 09
 - Modules usage data
 - Collections usage data
 - Library help desks statistics
 - Library discussion boards in LMS
4. **Qualitative data from key stakeholders**
 - Faculty staff online survey – Oct 09
 - Library staff online survey – June 09
 - Student feedback from surveys & usability – as above

Students tested at three points

- Pre-experience survey - Mar 2009 - 1,000
- Quiz – May 2009 (90% completion rate)
- Post-experience survey – Sept 2009 - 1,083
 - Data collected to determine the level of scholarly literacy of incoming first year students
 - Assess the impact of online information literacy modules and other library support on student skill and graduate attribute development
 - Measure IL skill development

Pre and post experience surveys

- Based on the work of Dianne Mittermeyer [1]
- Carried out across all five campuses of LTU
- 20 questions overall
- 11 identical 'knowledge' questions designed to test respondents' knowledge and understanding of scholarly information seeking skills
- Corresponds with the foundation level of LTU Library's – Information Literacy Framework [2]

[1] Mittermeyer, D. (2005). Incoming first year undergraduate students: how information literate are they? *Education for information*, 23, 203-232.

[2] La Trobe University Library Information Literacy Policy and Framework
www.lib.latrobe.edu.au/about/infolit.php

Analysis of 'knowledge' questions

- Respondents were given a 'score' out of 11 based on correct answers to the questions
- Results (from 1000 responses in pre-test & 1083 in the post test):
 - a moderate increase in the mean score of 11% from pre to post-test
 - Respondents scoring more than 50% correct increased from 7% (pre) to 25% (post)

Selection pre/post-experience survey results

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

Analysis of results:

- Overall improvement in correct responses between pre and post-experience surveys
- Opportunity for further improvement the focus for this cohort in 2nd year – 2010 and beyond
- Opportunity for further improvements in Library support for 1st year students in 2010

Limitations: pre/post-experience surveys

- Wording issues with some questions:
 - Pre-tested survey instrument used, however not an exact fit for our purposes
- Timing of the post-experience survey was not optimal:
 - Crux time for individual tasks later than survey distribution

Library online quiz in LMS – assessable!

- Questions: Health examples, tailored and based on content in modules
- Best of 3 attempts being taken as the score
- 90% of students completed the quiz
- Average score of 12.15 out of 15



Quiz results

- Very positive outcome as below:

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

Student feedback

– based on 1083 responses

- 60% felt confident in using the Library
- 69% felt confident in using the Library catalogue to find electronic resources
- ***“Library skills need to be stressed more because I didn’t listen at the start of the year!”***

Results & comments from Library post-experience survey conducted 7-10 Sept 2009

Faculty staff feedback

- *“Embedding of information literacy skills in a subject (for assessment) was beneficial to students”*

60% of respondents in Library Faculty staff survey rated this statement either strongly agree or agree

Results from Library Survey of Faculty of Health Sciences staff, run 14-26 Oct 09

Modules Usability

- Aim of testing

To gain student feedback on the structure, design and navigation of the LibGuides, and the usefulness of the content. The activities were created with all aspects in mind.

If a student has to do task X, can they:

- Find the instructions on how to do task X?
- Follow the instructions to actually do task X?

Ideas from the literature

- Role of the wording of the questions
- Cover parts of the interface related to common tasks
- Complete within given time frame
- Include morale boosting task
- Ask participants to comment whilst testing
- Number of participants more than six
- Poor test results can be due to participants lack of fundamental library and/or research skills

Letnikova, Galina (2008). Developing a standardized list of questions for the usability testing of an academic library web site, *Journal of Web Librarianship*, 2 (2-3): 381-415.



Vaughn, D. and B. Callicot (2004). "Broccoli librarianship and Google-bred patrons, or what's wrong with usability testing?" *College and undergraduate libraries* 10(2): 1-18.

Usability testing of the IL modules

- May - June 2009
- 21 participants across three campus libraries
- Divided into 4 groups, each participant given:
 - Warm up exercise
 - Usability task (4 separate tasks to test 4 modules)
 - Brief feedback survey
- Modules tested:
 - finding items on a resource list
 - referencing with APA
 - finding articles on a topic including peer-reviewed
 - finding credible internet information
- Tasks split at random across 3 campuses
- Voice and actions recorded using Camtasia

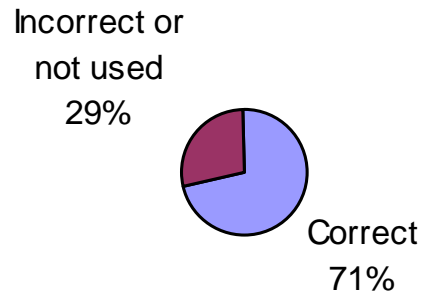
Analysis of Findings

- 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

- Simple tasks  more effective
- More complex tasks  less effective

Module choice

71% chose the correct module (although in some cases not immediately)



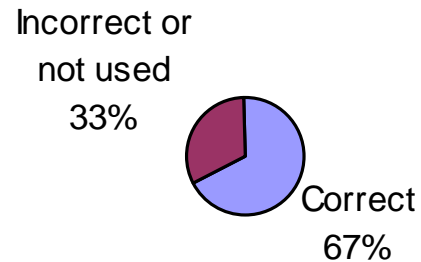
Example of findings:

“Finding credible internet information is a recognisable label...”

“Finding items on a resource list is not always recognised as a tool which will help students find a known journal article citation”

Appropriate pathway

67% took an appropriate pathway

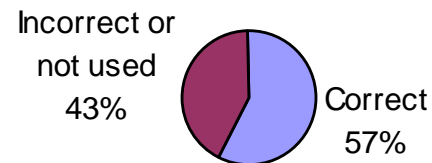


Example of finding:

“Sub tabs information was not utilised on the whole”

Follow the guidance – Part 1 simple task

57% appeared to follow the guidance in simple task

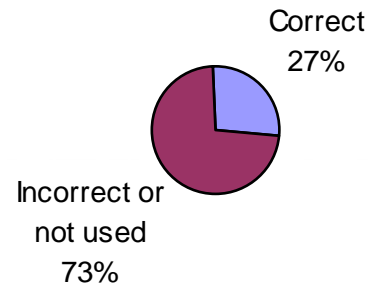


Example of finding:

“Most students found an appropriate example to model...APA style”

Follow the guidance – Part 2 complex task

27% appeared to follow the guidance in the more complex task



Example of finding:

“Instructions in the modules on choosing and accessing a database did not effectively guide the participants to the selection and use of an appropriate database”

Frequency and severity of issues

- *Frequency* = number of users
- *Severity* = level of difficulty encountered

Issue	Frequency rating	Severity rating
Lack of use or confusion when using tabs or sub tabs. Problematic in all sets for many participants.	H	H
'Journal titles' link in Library homepage used when searching for journal articles by topic. Problematic in one set but for most participants of that set.	M	H
LibXplore search box use. Problematic in 2 sets	M	H
Selecting an appropriate database to search. Problematic in 1 set but for most participants of that set.	M	H
Electronic resource vs print copy issues in Library website. Problematic in 1 set but for most participants of that set.	M	H

Recommendations - selections

- Review or remove use of sub tabs
- Consider wherever possible to put as much information in a single box so that students can scroll rather than linking off to another box
- Investigate use of multimedia objects to enhance clarity of the stepped process
- Reduce module density and text and improve layout

Student feedback - Modules

- Positive comments (78% overall)
 - usefulness
 - helpfulness
 - design
 - content
 - multimedia
 - language
 - practice exercises

- Issues & suggestions (20 % overall)
 - design
 - navigation
 - more promotion of the modules

Note: 2% = neutral

Student feedback - Modules

- *“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”*

Quote from the student post-experience survey run Sep 7-14 2009

Student Feedback - Modules

- *“the modules were very informative and clear which helped me facilitate the process of searching out certain information. However I feel that approaching the research help desk was more direct and easier”*

Quote from student:
post-experience survey,
run Sep 7-14 2009



Faculty staff feedback - Modules

- ***“The online information literacy modules were useful for teaching necessary skills to students”*** – 66.7% (10 of 15) of Faculty staff rated this statement either **strongly agree or agree**
- ***“The information literacy information is excellent”*** – a comment representing several comments in relation to ‘**What worked well**’ question in the Library Faculty staff survey
- ***“Make them take advantage of what you offer!”***
 - comment from Faculty staff survey
- Library Survey of Faculty of Health Sciences staff was run 14-26 Oct 09

Challenges, Limitations, Lessons & next steps

- Plan had to change
- Question design crucial
- Need for expertise in statistical analysis
- Timing important in terms of students and faculty staff
- Piloting of usability testing beneficial
- Equality of testing sets in usability an issue

Next steps

- Investigate and implement recommendations and opportunities for further tracking

Summary

- Evaluation of Library services & programs designed for the HS CFY indicate Library has made a contribution to the foundation development of first year students' scholarly information seeking skills
- But – further improvement and promotion of all aspects of Library support recommended for future.

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When completed – full report will be available:

www.lib.latrobe.edu.au/building-blocks/static.php?page=group2

Questions

[Can't I just Google?](#)

