

**Overview Evaluation Report  
e-CDF Project 423 Information Literacy e-Learning  
Modules - Reusable and portable across a College of  
Education, a Polytechnic and a University**

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## **Acknowledgements**

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- Members of the Analysis and Evaluation Group (AEG)
- Staff and students from the three participating institutions (Dunedin College of Education, Otago Polytechnic and University of Otago), who participated in the evaluation processes

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# 1. Overview

The eCDF Project 423, Information Literacy e-Learning Modules - Reusable and portable across a College of Education, a Polytechnic and a University, started out as a one year project and has developed into a two-year undertaking. The key goals for the two years of the project are to:

- Design, implement and evaluate eleven authentic task-based information literacy modules underpinned by the ANZIIL<sup>1</sup> standards (Bundy, 2004).
- Design, implement and evaluate an online demonstrator system for selecting existing modules, as well as editing and publishing new modules.
- Develop modules which are reusable in a range of contexts and able to work offline, online or through a LMS<sup>2</sup> or via a SCORM<sup>3</sup> compliant player.

To date five authentic task-based, online information literacy<sup>4</sup> modules have been developed as part of the 2005/2006 phase of the project. The modules are currently available online for users to view and provide feedback as part of an ongoing evaluation process (<http://oil.otago.ac.nz>).

One module *Essay Writing with Readings* has been through a full scale evaluation process – usability testing of the prototype (AEG, 2006), and a research evaluation on the usability and effectiveness of the pilot module (Keen, Ritson-Jones, Coburn, Hegarty, McDonald, 2006). This research evaluation occurred between February and June 2006. As part of this process, the pilot module was trialled with students and staff from the three participating institutions. The module was tested in real use contexts as part of a class, and as a stand-alone resource.

An external interoperability review (Sheila MacNeill, Centre for Educational Technology Interoperability Standards [CETIS] in the UK) has been completed and appended to the report for TEC. The external ANZIIL review (Bryony Wakefield, Graduate Information Literacy Program, ANU, Australia.) is underway.

Findings from the first stage of the formative evaluations conducted on the four modules by members of the Analysis and Evaluation Group are presented in the following section. The modules which were formatively evaluated are:

- Annotated Bibliography
- Business Report
- Scientific Report
- NZ Information Sources.

Processes of expert review, informal observation of real use in class, group feedback and questionnaires investigating perceptions about navigation, instructional design, content, effectiveness for learning (Appendix B), were used to gather formative evaluative feedback. All participants were provided with an information sheet. (Appendix A).

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<sup>1</sup> Australian and New Zealand Institute for Information Literacy

<sup>2</sup> Learning Management System e.g. Blackboard, Moodle.

<sup>3</sup> Sharable Content Object Reference Model (SCORM) is a collection of specifications that enable interoperability, accessibility and reusability of web-based learning content.

[www.egov.hyperwave.com/solutions/standards.html](http://www.egov.hyperwave.com/solutions/standards.html)

<sup>4</sup> Information literacy is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively as needed (ALA, 2006).

## **2. Formative Evaluation Methods and Results**

Findings from the formative evaluation processes are presented in this section and grouped under each of the four modules.

### **2.1 Annotated Bibliography**

Expert review and also real use formative evaluation were conducted with two groups of students and their teachers during classroom sessions at the Dunedin College of Education.

Both groups of students were introduced to the module during a computer lab session. They were given time to explore the module after a brief introduction, then they were given a task to complete where they had to compare a hard copy example of an annotated bibliography with the example provided in the online module. The students were asked to make use of the module during the week following their computer lab session. Members of the Analysis and Evaluation Group distributed evaluation forms during the lab session, and collected verbal feedback and forms from the students and their teachers one week later.

There is still feedback to be collected from the teachers regarding annotated bibliography assignments the students had to prepare, to find out whether the teachers noticed any improvement in the quality of the assignments overall as a result of using the module as part of their classes.

Overall, responses to the module were very positive. Students welcomed use of the module during the initial computer lab sessions, and varying numbers of students used the module during the week following the lab session. The following is specific feedback gathered from each of the groups both verbally during class and using questionnaires.

#### **Class One - Observation Findings**

Informal observation during the computer lab session revealed that students tended to flick quickly through the module. Several liked the referencing activity, but found it a little hard to get right. The screen casts of how to search a data base were not working adequately therefore could not be tested in this class. Two students who had just started using computers since they were students in the course, liked using the Internet and liked the idea of using online modules in their study. A total of seven questionnaires (6 students and 1 staff) were returned both at the end of the computer lab and the following week. Only one of the students had used the module during the week, but the class was adamant they would use the module to help them prepare the annotated bibliography assignment.

#### **Class One - Questionnaire Findings**

Overall, all seven respondents provided positive feedback (agreed or strongly agreed) for most aspects of navigation, instructional design, content and effectiveness for learning in the module. The staff respondent provided much more positive responses (strongly agreed) overall than the students. A few items were not agreed with and are listed with percentage responses and comments in Appendix C.

### **Class Two - Observation Findings**

A total of seven questionnaires were returned by students at the end of a computer lab and the following week. Eleven students used it two or more times during the week and 14 used it once.

### **Class Two - Questionnaire Findings**

Overall, the seven respondents provided positive feedback (agreed or strongly agreed) for most aspects of navigation, instructional design, content and effectiveness for learning in the module. A few items were not agreed with and are listed with percentage responses and comments in Appendix C.

## **2.2. Business Report**

At present this module is undergoing expert review, and the prototype will be tested in real use conditions with staff and students from the three participating institutions later in the year.

## **2.3 Scientific Report**

This module has undergone expert review, and the prototype will be tested in real use conditions with staff and students from the three participating institutions later in the year.

## **2.4 New Zealand Information Sources**

Part of the module has been formatively evaluated. Seven people comprised of four international students and three staff reviewed one of the scenarios in the module as a group. The Joseph scenario contains information relevant for a student who is a newcomer to New Zealand. Overall the module was regarded as very useful and be a huge benefit for people coming to live here, as well as for use in schools, and as a vehicle for asking the right questions and providing skills to assist international students.

## **3. Discussion and Conclusions**

Initial formative evaluation findings for Annotated Bibliography and NZ Information Sources have been very positive, and students and staff have provided some very useful feedback which will be acted upon in the second part of the project 2006/2007. Two of the modules, Business Report and Scientific Report have yet to be evaluated with students and staff and this will also occur in the next phase, along with a more in-depth evaluation of all scenarios in the NZ Information Sources module.

Considering the same template is in use for all the modules, and expert review has been undertaken and also that most aspects of navigation, instructional design, content and effectiveness for learning have been positively received overall for the modules on essay writing and annotated bibliography, the project team do not anticipate there will be significant modifications to be made.

#### 4. References

American Library Association (ALA). (2006). Information Literacy Competency Standards for Higher Education.. <http://www.ala.org/acrl/ilcomstan.html> (Accessed 09 July, 2006)

Analysis and Evaluation Group (AEG). (2006). Evaluation report - Essay writing usability of prototype results for information literacy eLearning modules: Reusable and portable across a College of Education, a Polytechnic and a University project. Available at: <http://oil.otago.ac.nz>

Bundy, A. (2004). (ed.) Australian and New Zealand Information Literacy Framework, *principles, standards and practice*. 2<sup>nd</sup> edition. Adelaide: Australian and New Zealand Institute for Information Literacy (ANZIIL).

Keen, D., Ritson-Jones, W., Coburn, Hegarty, B. and McDonald, J. (2006). Real Use Research Evaluation Report for Module One – Essay Writing: eCDF 423 Information Literacy eLearning Modules Project. Dunedin, New Zealand: University of Otago. Available at: <http://oil.otago.ac.nz>

## Appendix A – Responses to Questionnaire

### Annotated Bibliography Module

#### Class One and Two Responses to Questionnaire

Item	Class One	Class Two
<b>Navigation</b>	<ul style="list-style-type: none"> <li>▪ Entry into the module is easy and obvious (57%)</li> <li>▪ Instructions for using the module are clear (14%)</li> <li>▪ Printing facility is made obvious (43%)</li> <li>▪ Video, audio or animation sequences can be replayed (28%)</li> <li>▪ Return to start is clearly and regularly displayed (28%)</li> <li>▪ Work can be saved and returned to at any time (43%)</li> </ul>	<ul style="list-style-type: none"> <li>▪ User is given choices about pathways (14%)</li> <li>▪ Position in module is easily determined (14%)</li> <li>▪ Printing facility is made obvious (28%)</li> <li>▪ Return to start is clearly and regularly displayed (14%)</li> </ul>
<b>Instructional Design</b>	<ul style="list-style-type: none"> <li>▪ Self-analysis opportunities are provided (28%)</li> <li>▪ Peer interaction is enabled (14%)</li> <li>▪ Interaction with instructor encouraged (28%)</li> <li>▪ Some instantaneous feedback is provided (14%)</li> <li>▪ Sound enhances module (14%)</li> <li>▪ Narration is easy to hear and understand (14%)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Some instantaneous feedback is provided (28%)</li> <li>▪ Sound enhances module (28%)</li> <li>▪ Narration is easy to hear and understand (14%)</li> <li>▪ Video segments are of appropriate length (14%)</li> </ul>
<b>Content</b>	<ul style="list-style-type: none"> <li>▪ Learning objectives/goals are stated clearly (14%)</li> <li>▪ Terminology is supported by a glossary (14%) – couldn't find one</li> </ul>	<ul style="list-style-type: none"> <li>▪ Learning objectives/goals are stated clearly (14%)</li> <li>▪ Terminology is supported by a glossary (14%) – couldn't find one</li> </ul>
<b>Effectiveness for Learning</b>	<ul style="list-style-type: none"> <li>▪ Feedback is given promptly (14%)</li> <li>▪ Feedback is clear and helpful for learning (14%)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Activities encourage exploration of the topic (14%)</li> </ul>

#### Navigation: Synopsis of Comments

- Hard to get into the site at first; not having www is confusing.
- Liked the signposts on the road
- Green arrows are useful
- + useful in menu if want to see more
- Pop up windows confusing if you can't get back to where you were
- Would like to click on road signs and go to place they are naming
- Link to go back to all modules would be useful
- Please click here on introduction page does not work
- Links in overview map don't appear to work
- Activity on APA doesn't work easily – had trouble dragging components of the reference to place them in the right order
- Easy to navigate, well set out and given lots of choices
- Clear and appropriate, to the point.

- Arrows at bottom of home page could be more clear i.e. need to scroll down to find.
- Instruction at top at eye level would be clearer.
- I still haven't spent the time on navigation but will be looking at this in more depth over the next few weeks.
- A general search key would be useful.
- Needs a search option available to users.

### **Instructional Design: Synopsis of Comments**

- Great design – eyecatching
- Layout is easy, liked the “eye” for “Look”
- Didn't hear sound at all (n = 4) or see video (n = 4)
- Helpful to have reading list highlighted
- Include punctuation with referencing activity as that is the challenging part
- Need more activities as good for self-analysis
- Good to have glossary
- Good activity on citation but hard to understand instructions (e.g. point arrow where you want to go)
- APA reference style was difficult to position e.g title, date author .....
- Haven't tried the self analysis.

### **Content: Synopsis of Comments**

- Content very appropriate
- Like the section summary
- Really like the activity as good practice and interactive
- A lot of useful information
- Great example of annotations
- A link to glossary down side would be useful
- Synonyms activity is quite hard – maybe have a clue function where some of the letters are displayed
- Didn't find glossary
- Other subjects not just social studies

### **Effectiveness for Learning: Synopsis of Comments**

- Great to interactive website rather than just a textbook
- More variety in activities and more of them would be great
- More feedback from activities would be good – rather than just “you got it right”
- Would like to be able to do my annotated assignments on it but couldn't
- Didn't see feedback
- Activities helpful – good practice and citation activity wont move if it is not correct, so you know if you are wrong
- Will definitely use in the future. Very helpful to narrow searches and in appropriate areas e.g. NZ.
- This site only become available a week before the first part of the assignment was due.
- More in depth look would have been beneficial.
- A link to a trial search would have been helpful.
- I found this extremely helpful when writing my annotated bibliography.
- Great idea and well thought out.
- Easy to follow layout.
- Being able to critique an article online and receive feedback or examples of how your critique went would be good.

### **General Comments**

- Very relevant, great activity, clear layout, easy to follow and move around
- I will use this module a lot for this assignment
- Good practice and information

### **Notes from Feedback session with College of Education on New Zealand Information Sources module – 28th June 2006**

Seven people comprised of four international students and three staff reviewed the Joseph Scenario – newcomer to New Zealand - as a group

### **Responses from people to the value of the Joseph scenario**

- 1) “thankyou, some activites (things that need sorting when you arrive in a new country) really pressurize us – how do you get the information – info about school, church was really a problem for us. When i think back, yeah I would pat myself on the back, without so much information (as in this module) I’ve done it!” xx
- 2) “yes this definitely would have helped in the first instance”. International. Student
- 3) “another way to find information....away from scholarship/study” International. Student
- 4) “just a splendid resource and thinking about different ways it could be used” xx
- 5) Whole process useful, huge benefits for people who live here, use in schools, vehicle for asking the right questions, provide skills to assist international students – overall feedback

### **To add/change**

- Huhana – a little more Maori? (need a free picture of a Maori girl)
- all external links must open in new window
- Need to add information about NZ national holidays, surcharges in cafes/restaurants, electricity/power/phone/rates.
- Accommodation/rent – replace pictures of houses with more appropriate photos of the sorts of houses xx was looking at. Change St Kilda bus to Normanby bus.
- email links of all modules to xx.

## Appendix B Information Sheets

### **INFORMATION SHEET FOR STUDENT PARTICIPANTS – Usability Evaluation of Information Literacy<sup>5</sup> e-Learning Modules – Reusable and Portable across a College of Education, a Polytechnic and a University**

Please read this information sheet carefully before deciding whether or not to participate in the usability evaluation. If you decide not to take part there will be no disadvantage to you of any kind. The module prototype<sup>6</sup>(s) you are being asked to test is/are being developed as part of an ECDF<sup>7</sup> project for the Ministry of Education with the intention of providing online, high quality resources for information literacy in the tertiary sector. The project is being conducted by staff from the University of Otago, Otago Polytechnic and Dunedin College of Education. The module(s) will be for stand-alone use, as well as to support accredited courses, and will be designed for delivery via Blackboard or any other standards conformant LMS (Learning Management System). Your input is very valuable to ensure the design (layout and content) of the modules is appropriate for users.

#### **1. What is the purpose of the usability evaluation?**

The usability evaluation (testing of module prototype(s)) will establish contact with users and find out your opinions about the design and usability of the information literacy module prototype(s). In other words ascertain how easy the module(s) are to use and whether the design (layout and content) is relevant and appropriate for the intended purpose.

#### **2. Who is invited to participate?**

Students from the University of Otago, Otago Polytechnic and the Dunedin College of Education who can spend one hour testing prototypes of the modules.

#### **3. What will be required?**

Some general observations may be made during the first time you explore the module. You will also be asked to fill in a questionnaire and return it to XX within the first week of use. A \$10 book voucher will be given to people who take the time to use the module and complete the feedback sheets.

#### **4. What use will be made of the data?**

Data will be collated and reported to the project team. The confidentiality of all people providing information is guaranteed absolutely. The data gathered will inform modification of the prototype and a report, which the project team will provide for the Ministry of Education. However, in no way will this report identify individuals.

If you have any questions about the evaluation, either now or in the future, please feel free to contact:

Bronwyn Hegarty, Analysis and Evaluation Group Chairperson  
Phone: 479 3600 or email: [bronwynh@tekotago.ac.nz](mailto:bronwynh@tekotago.ac.nz)

Or Dawn Coburn, phone 4772289 ext 805, or email: [dawn.coburn@dce.ac.nz](mailto:dawn.coburn@dce.ac.nz)

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<sup>5</sup> Information literacy is the lifelong ability to recognise the need for, to locate, evaluate and effectively use information (ALA, 1989).

<sup>6</sup> A prototype in this case is an original, full-scale, and usually working model of a new product.

<sup>7</sup> eLearning Collaborative Development Fund.

**INFORMATION SHEET FOR STAFF PARTICIPANTS –  
Usability Evaluation of Information Literacy<sup>8</sup> e-Learning Modules – Reusable and  
Portable across a College of Education, a Polytechnic and a University**

Please read this information sheet carefully before deciding whether or not to participate in the usability evaluation. If you decide not to take part there will be no disadvantage to you of any kind. The module prototype<sup>9</sup>(s) you are being asked to test is/are being developed as part of an ECDF<sup>10</sup> project for the Ministry of Education with the intention of providing online, high quality resources for information literacy in the tertiary sector. The project is being conducted by staff from the University of Otago, Otago Polytechnic and Dunedin College of Education. The module(s) will be for stand-alone use, as well as to support accredited courses, and will be designed for delivery via Blackboard or any other standards conformant LMS (Learning Management System). Your input is very valuable to ensure the design (layout and content) of the modules is appropriate for users.

**1. What is the purpose of the usability evaluation?**

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**2. Who is invited to participate?**

Staff at the University of Otago, Otago Polytechnic and the Dunedin College of Education who can spend time testing a prototype of the modules, and have an interest in good quality resources for teaching and learning.

**3. What will be required?**

The testing will involve surveying the module as a whole, using selected aspects and filling out a questionnaire. If you also wish to discuss the module with Bronwyn or Dawn this would be very much appreciated.

**4. What use will be made of the data?**

Data will be collated and reported to the project team. The confidentiality of all people providing information is guaranteed absolutely. The data gathered will inform modification of the prototype and a report, which the project team will provide for the Ministry of Education. However, in no way will this report identify individuals.

If you have any questions about the evaluation, either now or in the future, please feel free to contact: Bronwyn Hegarty, Analysis and Evaluation Group Chairperson  
Phone: 479 3600 or email: [bronwynh@tekotago.ac.nz](mailto:bronwynh@tekotago.ac.nz) or Dawn Coburn, phone 4772289 ext 805, or email: [dawn.coburn@dce.ac.nz](mailto:dawn.coburn@dce.ac.nz)

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<sup>9</sup> A prototype in this case is an original, full-scale, and usually working model of a new product.

<sup>10</sup> eLearning Collaborative Development Fund.

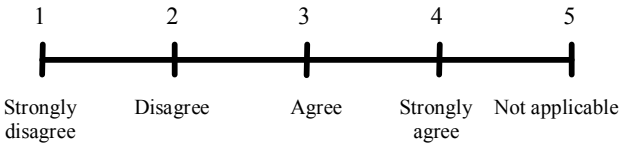
## Appendix C – Questionnaire - Usability of prototype

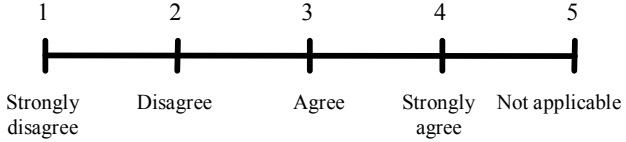
### Information Literacy e-Learning Modules – Reusable and Portable across a College of Education, a Polytechnic and a University Project

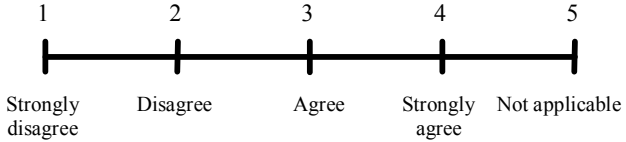
Are you a staff member or a student? \_\_\_\_\_

Please tick the following items as relevant using the five point Likert scale.

Items					
	1 Strongly disagree	2 Disagree	3 Agree	4 Strongly agree	5 Not applicable
<b>A. Navigation</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Entry into the module is easy and obvious					
2. Instructions for using the module are clear					
3. User is given choices about pathways					
4. Position in module is easily determined					
5. User is able to move freely throughout module					
6. Navigation icons are consistent and readily available					
7. User can enter and exit from the module at any time					
8. Printing facility is made obvious					
9. Video, audio or animation sequences can be replayed					
10. Return to start is clearly and regularly displayed					
11. Work can be saved and returned to at any time					
<b>Comments on Navigation:</b>					

Items					
<b>B. Instructional Design</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Starting instructions are explicit					
2. Range of skill levels is catered for					
3. Self-analysis opportunities are provided					
5. Layout of content is uncluttered					
6. Important concepts are highlighted					
7. Interaction with the material is possible					
8. Peer interaction is enabled					
9. Interaction with an instructor encouraged					
10. Critical thinking encouraged					
11. Graphics are clear					
12. Colour is used effectively					
13. Animation is relevant					
14. Some instantaneous feedback is provided					
15. Visual layout is appealing					
16. Design is creative and interesting					
17. Sound enhances module					
18. Narration is easy to hear and understand					
19. Video segments are of appropriate length					
<b>Comments on Instructional Design:</b>					

Items					
	1	2	3	4	5
<b>C. Content</b>					
1. Learning objectives/goals are stated clearly					
2. Content relates to objectives					
3. Information is accurate					
4. Content is relevant					
5. Language is concise and clearly written					
6. Terminology is supported by a glossary					
7. Concepts are presented clearly					
8. Content is presented logically					
9. Content is pitched at an appropriate level					
10. Content maintains attention and interest					
11. In-depth content is provided on a specific topic					
12. Material is culturally appropriate (i.e. considers differences of ethnicity, gender etc)					
<b>Comments on Content:</b>					

Items					
<b>D. Effectiveness for Learning</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Design motivates learning					
2. Overall design encourages exploration of topic					
3. Feedback is given promptly					
4. Feedback is clear and helpful for learning					
5. Problem-solving is encouraged					
6. Activities and examples enhance understanding of ideas and concepts					
7. Learning activities are interesting					
9. Activities encourage thinking about the topic					
10. Activities encourage exploration of the topic					
11. Activities aid effective learning					
<b>Comments on Effectiveness for Learning:</b>					

**Additional comments:**

Thank you for your time in completing this questionnaire