

**Real Use Research Evaluation Report
For Module One – Essay Writing**

**eCDF 423 Information Literacy eLearning
Modules Project**

Leader researcher: Dr David Keen – Dunedin College of Education
Researchers: Wendy Ritson-Jones - Bill Robertson Library
Dawn Coburn - Dunedin College of Education
Bronwyn Hegarty- Otago Polytechnic
Jenny McDonald – University of Otago

30 June 2006

Prepared with the assistance of a Tertiary Education Commission contract
with the University of Otago, Dunedin, New Zealand

Acknowledgements

Special thanks to the following groups:

- Members of the Analysis and Evaluation Group (AEG) who assisted with advice and review: Sarah Stein, Philip van Zijl.
- Staff and students from the three participating institutions (Dunedin College of Education, Otago Polytechnic and University of Otago), who contributed to the research project.

TABLE OF CONTENTS

| | |
|--|-----------|
| EXECUTIVE SUMMARY | 5 |
| 1. INTRODUCTION | 7 |
| 1.1. BACKGROUND TO THE RESEARCH | 7 |
| 1.2 OVERVIEW OF THE RESEARCH EVALUATION PROJECT..... | 7 |
| 2. METHODOLOGY | 8 |
| 2.1 PARTICIPANT NUMBER AND TYPES OF RESPONSES..... | 9 |
| 2.2 ANALYSIS OF DATA | 10 |
| 3. RESULTS | 10 |
| 3.1 PROFILE OF PARTICIPANTS..... | 10 |
| 3.1.1 <i>Experience of computer use</i> | 12 |
| 3.2 SUMMARY OF COMMENTS AND RECOMMENDATIONS OFFERED BY PARTICIPANTS | 13 |
| 3.2.1. <i>Positive comments</i> | 13 |
| 3.2.2. <i>Broad recommendations from research participants</i> | 13 |
| 3.2.3. <i>Recommendations on specific items within the module</i> | 14 |
| 3.3 SELF-PERCEPTION OF E-LEARNING NEEDS FOR THE PREPARATION AND WRITING OF ESSAYS..... | 15 |
| 3.3.1 <i>Key points</i> | 15 |
| 3.3.2 <i>Discussion and analysis of the Table 2 data</i> | 15 |
| 3.4 OVERALL RATING OF THE MODULE | 17 |
| 3.4.1 <i>Key points</i> | 17 |
| 3.4.2 <i>Discussion and analysis of Table 3 and Figure 2 data</i> | 19 |
| 3.5 PERCEPTIONS OF THE SPECIFICS OF THE MODULE’S CONTENT | 22 |
| 3.5.1 <i>Key points from analysis of the Table 4 data</i> | 22 |
| 3.5.2 <i>Discussion of the Table 4 and Figure 3 data</i> | 23 |
| 3.5.3 <i>Participants’ comments re content</i> | 24 |
| 3.6. PARTICIPANTS’ PERCEPTIONS OF THE MODULE’S INSTRUCTIONAL DESIGN..... | 25 |
| 3.6.1 <i>Key points</i> | 26 |
| 3.6.2 <i>Discussion and analysis of the Table 5 data</i> | 27 |
| 3.7 PERCEPTIONS OF PARTICIPANTS’ ON THE SPECIFICS OF NAVIGATION | 30 |
| 3.7.1 <i>Key points</i> | 30 |
| 3.7. 2 <i>Discussion and analysis of the Table 6 data</i> | 31 |
| 3.8 EFFECTIVENESS OF THE MODULE AS A LEARNING TOOL..... | 32 |
| 3.8.1 <i>Key points</i> | 32 |
| 3.8.2 <i>Discussion and analysis of the Table 7 data</i> | 33 |
| 4. GENERAL DISCUSSION AND CONCLUSIONS..... | 33 |
| 5. REFERENCES | 35 |
| APPENDIX A – QUESTIONNAIRE | 36 |
| APPENDIX B – INTERVIEW QUESTIONS..... | 45 |

List of Tables

| | |
|---|----|
| Table 1: Profile of Questionnaire Responders (n = 22)..... | 11 |
| Table 2: Participants' perceptions of their own e-learning needs (n = 22)..... | 15 |
| Table 3: Participants' overall ratings of the module Essay Writing with Readings: response means/modes, based on a four-point Likert scale (n = 22). | 18 |
| Table 4: Participants' ratings of the content of the module Essay Writing with Readings: response means/modes, based on a four-point Likert scale (n = 22). | 23 |
| Table 5: Participants' ratings of the instructional design of the module Essay Writing with Readings: response means/modes, based on a four-point Likert scale (n = 22). | 27 |
| Table 6: Participants' ratings of navigation through the module Essay Writing with Readings: response means/modes, based on a four-point Likert scale (n = 22). | 30 |
| Table 7: Participants' ratings of the module Essay Writing with Readings as an aid to learning: response means/modes, based on a four-point Likert scale (n = 22). | 32 |

List of Figures

| | |
|--|----|
| Figure 1: Range of computer use and years experience..... | 12 |
| Figure 2: Participants' overall ratings of the module Essay Writing with Readings..... | 19 |
| Figure 3: Participants's ratings of module content (n = 22)..... | 24 |

Executive Summary

The following research report provides evaluative information on the on-line module *Essay Writing with Readings*, the first of a series of modules to be piloted and trialed within the *e-CDF 423 Information Literacy e-Learning Modules* project. This project responds to the diversity of experience and need, in relation to information literacy, among both tertiary students and staff. It seeks to develop a range of on-line modules, predicated on the ANZIIL¹ standards of information literacy (Bundy, 2004), and amenable to adaptation and use in a range of contexts.

Broad findings from the evaluation of *Essay Writings with Readings* showed the module, in essence, as meeting the project goals. The findings:

1. Strongly endorsed the module, which was welcomed by staff and student users in University, Polytechnic and College of Education settings.
2. Showed the module as having relevance for users with a diverse range of backgrounds and experiences. This diversity encompassed age, gender, specialist field of study and prior exposure to information technology.
3. Showed the module as rich in potential for adaptation, development and customisation.
4. Showed the module as being especially welcomed, by tertiary staff, for its potential as a teaching tool.

In the light of user feedback, aspects of the module broadly meriting attention include:

1. Streamlining, to offset module length and volume of material covered
2. Re-sequencing of material to create a more effective conceptual flow through the module.
3. Rethinking the way in which the module's linkage with the ANZIIL standards is introduced and explained to users.
4. Supplementing the module's structured approach with a choice of more open-ended learning experiences. These might relate both to the module's information literacy-related content and to its contextual exemplar, in this case *the Treaty of Waitangi*.

The research methodology which generated these findings was both quantitative and qualitative. It involved 23 research participants, both staff and students, from University, Polytechnic and College of Education backgrounds. It should be noted that the instruments used to gather quantified data were standardized, and there were some items not relevant to the module *Essay Writing with Readings* but, rather, were generic to the whole project. Using generically designed instruments afforded consistency of approach, for example in relation to prior evaluation of module usability, and will continue to afford consistency across the duration of the project.

¹ Australian and New Zealand Institute for Information Literacy

The methodology proved effective in generating relevant data, amenable to analysis and triangulation. Refinements which may be borne in mind for the evaluation of future modules include:

- Trialing modules initially with broadly selected participants and subsequently with specific user groups, for example students studying specific types of course, to see whether patterns suggested among the randomly selected sample are verified in specific contexts.
- Offering students who volunteer for observation, during their use of any module, the option of being observed while working in pairs rather than one-on-one. The advantage of observing paired student work lies in the insight into user reactions and thought processes, afforded by the flow of conversation between the students concerned.

1. Introduction

1.1. Background to the research

The eCDF 423 Information Literacy e-Learning Modules project is funded through the Tertiary Education Commission's e-Learning Collaborative Development Fund (eCDF). Launched as a collaborative venture between the University of Otago, Dunedin College of Education and Otago Polytechnic, it started out as a one year project and has developed into a two-year undertaking. The project was conceived to address four main areas in the tertiary sector associated with information literacy² learning:

- Barriers to tertiary study which can occur as a result of poor information literacy skills and the diverse needs of marginalised, mature and distance students.
- A shortage of high quality online information literacy modules which are reusable, portable and have pedagogical flexibility.
- A need for professional development opportunities for staff in the area of information literacy.
- A tertiary sector requirement for centrally maintained and managed, standards-conformant, online resources in this important foundation field.

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 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 LMS³ or via a SCORM⁴ compliant player.

1.2 Overview of the research evaluation project

The module *Essay Writing with Readings* is the first authentic task-based information literacy module to be piloted and trialed with students and staff in real use contexts as part of a class, and as a stand-alone resource. Evaluative research on the usability and effectiveness of the module was conducted between February and June 2006. The research participants were drawn from the three institutions involved in the project. This report, outlining the research process, has been prepared for the Tertiary Education Commission by the project's Analysis and Evaluation Group. It sets out the sequence of methodology and data analysis used in the research, and presents the derivative findings and recommendations.

The evaluation of *Essay Writing with Readings*, to date, has informed the development of four subsequent modules, sharing the same layout, navigation, graphic style, and modeling on authentic activities. On this basis we feel it is

² 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).

³ Learning Management System e.g. Blackboard, Moodle.

⁴ 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

reasonable to assume the approach used in the development of *Essay Writing with Readings* is likely to work in other contexts. Initial feedback from early trials of the additional modules supports this assumption. Evaluation of all modules will continue in the second year of this project.

A key target for the second year of the eCDF 423 Information Literacy e-Learning Modules project, as a whole, is the provision of an online system which will allow modules to be edited. We anticipate that in this way specific issues around context, treatment of subject material and so on can be addressed by teachers themselves who wish to repurpose the modules for their own students. A research study which will be undertaken in the second year of the project to see if this occurs.

This report for the evaluation research project covers the methodology used in the research, results presented and discussion about the findings, general discussion and conclusions, a reference section and appendices containing the data collection instruments.

2. Methodology

The researchers evaluating the module *Essay Writings with Readings* used both a quantitative and qualitative methodology to ascertain real use relevance and effectiveness of the module. A dual methodology allowed both descriptive and interpretive information to be gathered using a combination of observation, questionnaires and interviews which afforded opportunities for triangulation. Data gathered from the participants enabled the researchers to build a profile of the users in the study (age, gender, ethnicity, language, computer experience, institution and status, study area), and ascertain their eLearning needs and previous experience with essay writing. Researchers also investigated user expectations of the module, their overall impressions and asked for their critique of features they liked and did not like and suggestions for improvement. Specific features of the module relating to content, effectiveness for learning, instructional design and navigation were also investigated. The section of the questionnaire used to evaluate specific features of the module (content, effectiveness, instructional design and navigation) was tested previously during evaluation testing of the *Essay Writing with Readings* prototype (Analysis and Evaluation Group, 2006).

Within the dual methodology, the research team observed tertiary students and staff in process of using the module on-line. The observed participants were randomly recruited volunteers from among the staff and Year 1 students at the University of Otago, Otago Polytechnic and Dunedin College of Education. The common denominator among the participants was that all were associated with courses or programmes to which the module *Essay Writings with Readings* had relevance. In each case, the observed students and staff, at the time of observation, were encountering the module for the first time. The observations lasted generally from one to one-and-a-half hours, and all were carried out on the Dunedin College of Education campus. In most cases, two members of the research team watched a single student or staff member using the module. In one instance, because of an equipment fault, two research team members watched two students working collaboratively at a single computer terminal. This proved to be a fortunate accident. Because the two observed students talked with each other while they were using the module, the observers

gained useful insights into user reactions and thought processes. The possible advantages of paired observations should be born in mind, and pairing might be offered as an option, when future modules are trialed.

After observation, the observed participants were invited to complete an evaluative questionnaire (Appendix A), providing both quantified and reflective information on their responses to the module. For better triangulation, copies of the questionnaire were offered, also, to students who had access to the module but who had not been observed using it. The questionnaire was designed to gather data relating to: responders' status as staff or students; ethnicity; English-language facility; gender; years of computer experience. It explored, also, responders' perceptions of their existing skills in essay writing and information use, and responders' overall impressions of the module. It provided opportunity for responders to critique and evaluate the module's specific features.

Responses to the questionnaire were made on a four-point Likert scale, this range being adopted to preclude the possibility of responders *sitting on the fence* in their answers by opting for a neutrally mid-point rating. Within the four-point range, a "4" response indicated a high degree of assent or support for the item in question, and a "1" response denoted strong dissent. The use of Likert scaling allowed responses, subsequently, to be analysed according to mode and mean. The questionnaire also provided opportunity for open-ended comment and responses.

Subsequent to observation and questionnaire completion, participants who had fulfilled both these steps were invited to take part in semi-structured, reflective interviews (Appendix B), the proceedings of which were recorded and transcribed. The interviews were used to obtain a greater depth and finer texture of information. Particularly, they created opportunities for participants to elaborate on aspects of their questionnaire responses. Usually, the interviews lasted half an hour and, in most cases, two research team members jointly interviewed one participant. The interviews took place on the Dunedin College of Education or University of Otago campuses. Student participants completing all three stages of the research sequence, i.e. observation, questionnaire and interview, were each given vouchers to the value of \$30 in consideration of their donation of time.

2.1 Participant number and types of responses

A minimum number of ten student and staff users was regarded by the research team as necessary to ensure representative validity and reliability of data. In relation to the module *Essay Writing with Readings*, as the numbers below show, and because of wide student and staff interest, this target was exceeded, enhancing the research by providing a widely representative user sample.

| | |
|--|---------------------------|
| Total number of research participants: | 23 (4 staff, 19 students) |
| Participants observed: | 20 |
| Questionnaires completed: | 22 |
| Participants interviewed: | 17 |

Most of the people returning completed questionnaires also volunteered for the observation/interview cycle; one staff participant and three students completed questionnaires only. Another staff participant was observed and completed a questionnaire but was not interviewed. One student participant was observed, but did not complete a questionnaire and did not present for an interview.

2.2 Analysis of Data

Demographic data from the questionnaire responses was used to create a profile of the participants who took part in the research evaluation. Questionnaire-derived, quantified data regarding participant perceptions of the module was tabulated in data pairs, to give a mean score and a mode. Research participants responded to the items listed in the questionnaire on a four-point Likert scale, with a “4” response indicating strong approval or agreement and a “1” response indicating strong dissent. In the tabulated data pairs, the first figure gives the mean score for the tabulated item, and the second figure gives the mode. Means of 3 or more and modes of 3 or 4 suggest broad approval or agreement, among responding participants, for the item concerned. Means of less than 3 suggest a degree of negativity, at least among some responders, regarding the item. Descriptive data gathered from the questionnaire and the interviews has been presented as quotes and as a summary of comments and recommendations.

3. Results

In this section, analysis of data and outcomes of the research are presented in eight sub-sections as listed.

1. Profile of participants
2. Summary of comments and recommendations offered by participants
3. Self-perceptions of e-learning needs for the preparation and writing of essays
4. Overall rating of the module
5. Perceptions of the specifics of the module’s content
6. Participants’ perceptions of the module’s instructional design
7. Perceptions of participants’ on the specifics of navigation
8. Effectiveness of the module as a learning tool

Sub-section 1, using table and graphical formats, provides data on relevant variables, including participant age, gender, ethnicity, institutional affiliation and level of computer experience. Sub-section 2 groups feedback, commonly received from participants, under the following headings: positive comments; broad recommendations; recommendations on specific items within the module. Within each of the designated sub-sections 3 to 8 inclusive, relevant data is presented in table and/or graph form. Key points evident in the tabled data then are listed, and developed further in discussion.

3.1 Profile of participants

A descriptive profile of the twenty-two participants, involved in the evaluation of the module *Essay Writing with Readings*, who completed and returned questionnaires, is presented in Table 1. Ethnic and other information regarding the single student who was observed but who did not complete a questionnaire or interview has not been included.

| Items | All responders | College students | Polytech. students | University students | Staff | Female | Male |
|---------------------------|--------------------|--------------------|--------------------|---------------------|-------|----------------|------|
| New Zealand European | 17 | 5 | 3 | 6 | 3 | 14 | 3 |
| Māori | 2 (dual ethnicity) | 2 (dual ethnicity) | 0 | 0 | 0 | 2 | 0 |
| Pacific Islander | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Asian | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other ethnicity | 5 | 1 | 2 | 1 | 1 | 4 | 1 |
| Mother tongue not English | 2 ⁵ | 0 | 2 ⁶ | 0 | 0 | 2 ⁷ | 0 |
| Age 15-20 | 9 | 2 | 2 | 5 | 0 | 5 | 4 |
| Age 21-30 | 4 | 1 | 1 | 1 | 1 | 4 | 0 |
| Age 31-45 | 5 | 2 | 1 | 1 | 1 | 5 | 0 |
| Age 46+ | 4 | 1 | 1 | 0 | 2 | 4 | 0 |
| Computer use <1yr | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| Computer use 1-2y | 3 | 1 | 0 | 2 | 0 | 3 | 0 |
| Computer use 3y+ | 18 | 5 | 4 | 5 | 4 | 14 | 4 |
| Total | 22 | 6 | 5 | 7 | 4 | 18 | 4 |

Table 1: Profile of Questionnaire Responders (n = 22).

The ethnic composition of the participants who responded to questionnaires broadly mirrors that of New Zealand's population as a whole and, in particular, that of the South Island's population.⁸ Of the participants, some three-quarters were New Zealand European and, among these, two students identified themselves as being of dual pākeha-Māori ethnicity. The remaining quarter of participants, identifying themselves as of *other ethnicity*, were of British, continental European or Australian birth. Among the participants of *other ethnicity*, lack of familiarity with New Zealand cultural concepts rather than language *per se* emerged as an issue in relation to tertiary essay work. No students identifying themselves as of Asian or Pacific Islands ethnicity completed questionnaires, an unfortunate lack in view of the proportionally rapid increase of these sectors in New Zealand's overall population mix.

As regards age distribution, forty-one per cent of the participants were 19-20 years of age. The other fifty-nine per cent of participants were distributed fairly evenly across

⁵ German, Spanish

⁶ German, Spanish

⁷ German, Spanish

⁸ Statistics New Zealand (2001). *Census of population and dwellings: Ethnic groups*. Retrieved, 27.5.06, from <http://www.stats.govt.nz/NR/rdonlyres/988C1E07-45FD-4A14-8164-393B5CFDF513/0/EthnicGroups01.pdf>.

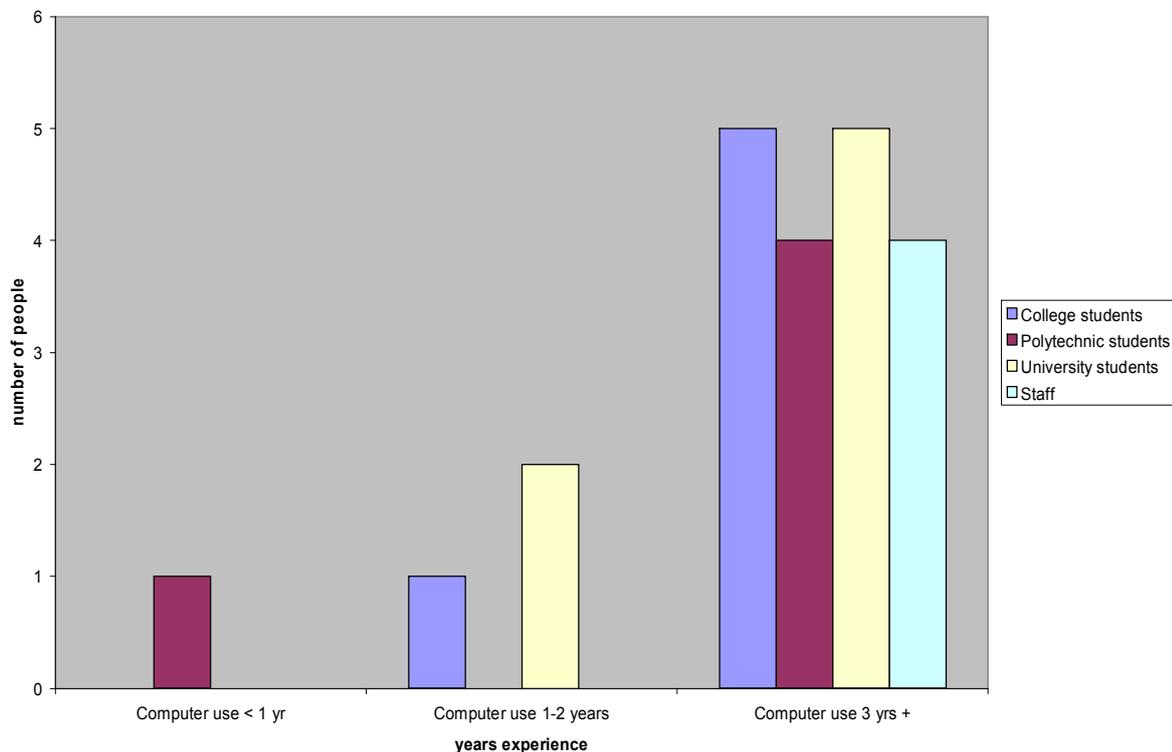
the spectrum of older age brackets. Older participants, mainly, were tertiary staff members or mature students returning to study at the Dunedin College of Education or Otago Polytechnic.

The gender imbalance among the participants makes it difficult to draw valid, gender-related conclusions about users of the module. Less than twenty per cent of the participants were male. However, it is not altogether surprising that a research study located within an educational/literary setting should attract female rather than male responders. Within New Zealand’s primary teaching service, for example, a female imbalance has been evident, and growing, for at least a hundred years.⁹

3.1.1 Experience of computer use

As can be seen in Figure 1, the great majority of participants claimed to have three years or more of experience of computer use. In every case, the participants who presented with limited computer experience were mature students, usually commencing tertiary study after time spent away from academia.

Figure 1: Range of computer use and years experience



⁹ Delwyn Elizabeth. ‘Not for man alone: toward a theory of the feminization of teaching in New Zealand primary schools, 1877-1925.’ MA Thesis, University of Otago, 1991.

3.2 Summary of comments and recommendations offered by participants

The summary which follows provides a ready guide to the main findings of the research. The analysis from which the findings are derived is developed in detail in the subsequent sections of this report. All the listed comments and recommendations have been offered by at least three of the research participants and, in most cases, by thirty per cent or more of participants. All the listed comments and suggestions have been checked for authenticity by comparing observational, questionnaire-sourced and interview-sourced data.

3.2.1. Positive comments

1. Participants, overall, strongly endorsed the module. All felt it addressed an area closely relevant to Year 1 student need.
2. Participants who felt their essay writing and/or digital technology skills fell short of tertiary-level requirements found that the module boosted their confidence, both by virtue of its content and through the opportunities afforded, by an on-line format, for the re-working and revision of material.
3. Nearly all participants said they would use the module again.
4. All participants said they would recommend the module to friends.
5. Participants who professed confidence and experience in information literacy still found the module useful. For these participants, the module affirmed existing knowledge and afforded useful revision. The flexibility inherent in the module's design allowed skimming and a selective approach.
6. A seventy percent majority of research responders rated the module positively, in its present form, for the way it highlights and clarifies key concepts.
7. Many participants noted the relevance of the module to secondary school developmental programmes, and suggested the module be made available for Year 13 secondary school use.
8. A further module on information search and retrieval techniques, if produced and published, would be likely to be well received.

3.2.2. Broad recommendations from research participants

1. The module is long, taking at least an hour-and-a-half for many users to work through, and might benefit from some streamlining. It should be noted, however, that length is offset by the module's flexibility. It is likely that users will use the module's material eclectically and selectively.
2. Granted the amount of information offered in the module, inexperienced students might use its content more effectively if the module prioritized the most important points, then offered links to related, supplementary material.
3. Provide links which allow users with interest and/or need to access information on styles of referencing other than APA; responders noted that the APA referencing style is not universal across the tertiary sector.
4. Provide links to suitably annotated, exemplar essays, pitched at a range of attainment levels, eg. C-, B and A+.
 - Consider links, also, to exemplar essays on topics other than the Treaty of Waitangi.

5. A link allowing interested users to follow up Treaty of Waitangi-related questions and issues in more depth might allay criticism that the material on Waitangi is conceptually thin.
6. Retain the audio material which, for many users, offers a welcome alternative to textual and visual communication.
 - Bear in mind, however, that not all users will have reliable access to the necessary technology.
 - Also, revise the text which underpins the audio segments and rework the delivery, to achieve a better register and tone.
7. Create links to optional, problem-solving activities, at various levels of challenge, to address the concerns of users who see the module as deficient in the area of thinking skills.
8. Provide more examples and practice exercises, both on referencing and on the rules of grammar and syntax.
 - This additional material could be accessed through links, giving an element of choice to people who wished to consolidate their knowledge in specific areas.
9. Provide, not merely examples of grammatical and syntactical usage, but also explanations of the underlying rationale of grammatical and syntactical usage and construction.
10. Give thought to some re-sequencing of material in the interests both of user convenience and of logical flow.
11. Consider ways of helping module users to distinguish between inert symbols/icons and active links.
12. Insert into the module a section advising students who suffer from writer's block.

3.2.3. Recommendations on specific items within the module

1. Rethink the use of the ANZIIL panel. Users suggest:
 - inserting material explaining the ANZIIL standards, either at the start or the end of the module.
 - convert the numbered buttons on the ANZIIL displays into active links, each numbered button allowing the user to access a description and explanation of the matching standard.
2. Revise the menu located at the left-hand side of each screen display.
 - This should make it easier for users, wishing to revisit material, to backtrack to specific pages, perhaps through provision of page numbering.
 - Provide, also, a facility for users to hide the menu when it is not in use.
3. Responders found the *print* option to be readily identifiable but had some problems using it. For some users, desired parts of a screen display failed to print. Research responders asked for the facility to:
 - print text only without pictures
 - identify pages by page number and print single, selected pages.
4. Revise the profiling activity designed to identify users' preferred learning styles, in light of user comments about personal privacy, the fallacy of false alternatives in the choices offered, and difficulty in interpreting the activity's results.
5. Adjust the practice activity following the *How do you cite* subsection. Currently, the cursor positioning required by the activity is too fine and precise for ease of use.
6. Remove the repeated sentence in the *Summarise and Paraphrase* section.

3.3 Self-perception of e-learning needs for the preparation and writing of essays

Participants' perceptions of their own e-learning needs reflected diversity of prior experience and future career aim among the participant sample. Participants' self – evaluation of e-learning need, as expressed in questionnaire responses, is tabulated in Table 2.

3.3.1 Key points

- Over half of all responders rated their skills in retrieving, analysing and applying information as elementary or traditional or, in two cases, both elementary and traditional.
- A majority of the group with self-rated elementary or traditional skills also felt challenged by the demands of today's e-Learning environment.

| Participants claiming to possess, or alluding to | All participants | College students | Polytech students | University students | Staff | Female | Male |
|--|------------------|------------------|-------------------|---------------------|-------|--------|------|
| Elementary skills retrieving, analysing, applying information | 4 | 1 | 1 | 2 | 0 | 4 | 0 |
| Traditional rather than digital skills | 10 | 3 | 3 | 3 | 1 | 9 | 1 |
| Digital rather than traditional skills | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| Both traditional and digital skills | 9 | 2 | 1 | 3 | 3 | 6 | 3 |
| Lack of familiarity with New Zealand cultural context | 2 | 0 | 2 | 0 | 0 | 1 | 1 |
| Need to master increasingly sophisticated information retrieval skills | 13 | 5 | 4 | 3 | 1 | 11 | 2 |
| Need to teach or role model skills for benefit of other people | 5 | 3 | 0 | 1 | 1 | 5 | 0 |
| Lack of confidence in digital technology | 4 | 2 | 1 | 0 | 1 | 4 | 0 |
| Total participants | 22 | 6 | 5 | 7 | 4 | 18 | 4 |

Table 2: Participants' perceptions of their own e-learning needs (n = 22)

3.3.2 Discussion and analysis of the Table 2 data

Among the responding participants, almost 60 per cent felt they were facing increasingly sophisticated demands in relation to their information retrieval skills. This perception was especially strong among Dunedin College of Education and Otago Polytechnic students. College of Education students were aware of the obligation, incumbent upon them, to model both information retrieval and processing skills for the pupils whom, in future, they would teach.

Facing the challenges of information literacy in a world of rapid technological development, 18 per cent of responding participants rated their current level of skill as *elementary* and also, in two cases, *traditional* as well as *elementary*. The rating was purely subjective on the part of the participant. People rating themselves at the humbly *elementary* level, tended to be Year 1 students, entering tertiary study straight from school, and feeling overawed at the level of performance required in tertiary, as compared with secondary, essay work. These people, during follow-up interviews, alluded specifically to the rigours of referencing at the tertiary level and, in some cases, noted deficiencies in extant writing guides.

*Referencing is the biggest thing...Like they don't seem to teach referencing. I mean, they give you a printout of how to do it, but we've never actually learnt it.*¹⁰

For these people, the module *Essay Writing with Readings* has emerged as an especially welcome supplementary resource.

The remaining 82 per cent of responding participants was split in a 3 to 4 proportion between those, on the one hand, who felt their skills in information retrieval and processing were reasonably developed but traditional and those, on the other hand, who saw their skills as digital or both traditional and digital. The participants falling into the *traditional* camp mainly were older students, predominantly from the Dunedin College of Education and Otago Polytechnic, who had laid the foundations of their educational experience in a pre-digital era. One tertiary staff member, also, was self-located in the *traditional* camp. Several of the *traditionalists* owned to a lack of confidence or at least, as interview clarification showed, to a lack of comfort in respect of using digital technology, with some owing to particular difficulties in relation to databases and tabulated presentations of information.

*I'm not completely sort of computer literate.*¹¹

*I'd probably prefer to see (the module content) in booklet form ... I get bored reading great tracts off the computer.*¹²

For some traditionalist responders, the sheer volume of information available on the Internet posed problems.

*I don't know where to start and often get bombarded with five hundred useless articles that have no connection to what I'm actually looking for.*¹³

For one young participant, on the other hand, weaned on digital technology, lack of experience in traditional ways of accessing and retrieving information was an issue.

The 41 per cent of participants who claimed to move with confidence between the traditional and the digital in information literacy tended to give credit their confidence to good secondary school training. One responder spoke especially favourably of the grounding in referencing and essay structure which she had received while on student exchange overseas.¹⁴ Student participants from diverse social backgrounds, but coming to tertiary study directly from school, made links between the module *Essay Writing with Readings* and their previous year's secondary school experience. Many expressed the wish that the module had been available to them for Year 13 of their schooling.

¹⁰ Two University of Otago students. Comments during joint interview.

¹¹ Otago Polytechnic student. Interview comment.

¹² Dunedin College of Education student. Interview comment.

¹³ University of Otago student. Questionnaire comment.

¹⁴ Otago Polytechnic student. Observation, questionnaire and interview comment.

3.4 Overall rating of the module

Questionnaire-derived, quantified data regarding evaluative perceptions of the module *Essay Writing with Readings*, among research participants, is presented in Table 3 and Figure 2. There is particular reference to the module's effectiveness, relevance, ease of use and level of user enjoyment.

3.4.1 Key points

- Most evaluative feedback on the module is favourable.
- Tertiary staff, evaluating the module, rated it highly (3.75), especially in respect of its potential as an aid to processing information, preparatory to writing an essay.
- College of Education and Polytechnic students rated the module more highly than did University students in relation to user need. Reasons for this disparity are noted in the *Discussion and analysis* section below.
- While most students warmly appreciated the module, its length, especially in the essentially artificial context of research observation, detracted from user enjoyment.
- Many student responders rated the module relatively lowest in respect of its utility as an aid to the location and retrieval of information, and would welcome further on-line guidance in this direction.
- University students rated the module lower than did other responding groups in relation to its coverage and analysis of the Treaty of Waitangi.

As adumbrated in the *Methodology* section of this report, research participants responded to the items listed in Table 3 on a four-point Likert scale, with a "4" response indicating strong approval or agreement and a "1" response indicating strong dissent. In the tabulated data pairs, the first figure gives the mean score for the tabulated item, and the second figure gives the mode. Means of 3 or more and modes of 3 or 4 suggest broad approval or agreement, among responding participants, for the item concerned. Means of less than 3 suggest a degree of negativity, at least among some responders, regarding the item.

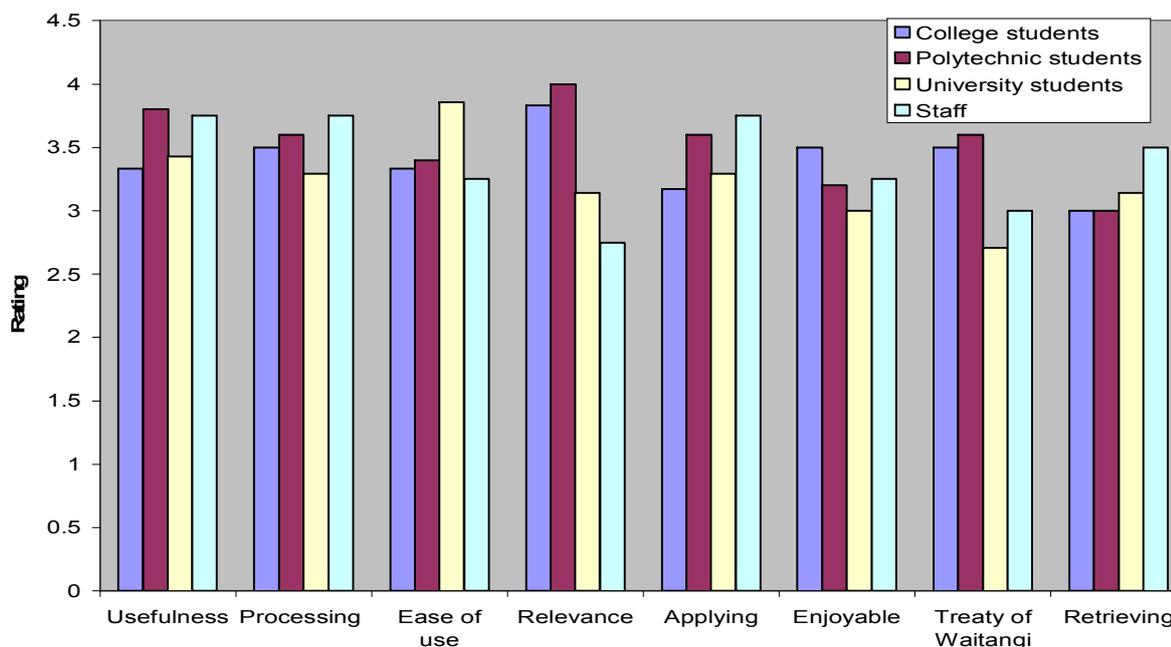
The listing sequence in Table 3 on the following page, ranks the items in order of overall mean affirmation or approval among responding participants.

| Items | All responses | College student | Polytech student | Univ student | Staff | Female | Male | Students aged 31+ |
|---|---------------|-----------------|------------------|--------------|----------|--------|----------|-------------------|
| Overall usefulness and effectiveness of module | 3.55/4 | 3.33/3 | 3.80/4 | 3.43/3 | 3.75/4 | 3.56/4 | 3.50/4-3 | 3.50/4 |
| Effectiveness as an aid to processing information, preparatory to writing an essay | 3.50/4-3 | 3.50/4-3 | 3.60/4 | 3.29/3 | 3.75/4 | 3.56/4 | 3.25/3 | 3.50/4-3 |
| Ease of use | 3.50/4-3 | 3.33/3 | 3.40/3 | 3.86/4 | 3.25/3 | 3.44/3 | 3.75/4 | 3.33/3 |
| Relevance to user need | 3.45/4 | 3.83/4 | 4.00/4 | 3.14/3 | 2.75/3 | 3.44/4 | 3.50/4-3 | 3.83/4 |
| Effectiveness as an aid to applying information, preparatory to writing an essay | 3.45/3 | 3.17/3 | 3.60/4 | 3.29/3 | 3.75/4 | 3.39/3 | 3.75/4 | 3.33/3 |
| Enjoyable | 3.23/3 | 3.50/4 | 3.20/3 | 3.00/3 | 3.25/3 | 3.28/3 | 3.00/3 | 3.33/4 |
| Effectiveness as an e-learning aid specific to preparing an essay on the Treaty of Waitangi | 3.23/3 | 3.50/4-3 | 3.60/4 | 2.71/3 | 3.00/3 | 3.39/3 | 2.25/3 | 3.67/4 |
| Effectiveness as an aid to locating and retrieving information, preparatory to writing an essay | 3.18/3 | 3.00/3 | 3.00/3 | 3.14/3 | 3.50/4-3 | 3.11/3 | 3.50/4-3 | 3.17/3 |

Table 3: Participants' overall ratings of the module Essay Writing with Readings: response means/modes, based on a four-point Likert scale (n = 22).

As illustrated in Figure 2 below, Otago Polytechnic students and tertiary staff gave the module relatively the highest ratings for overall utility and effectiveness. Dunedin College of Education and Otago Polytechnic students rated the module highly, also, for personal relevance, whereas University of Otago students rated it relatively lower.

Figure 2: Participants' overall ratings of the module Essay Writing with Readings



3.4.2 Discussion and analysis of Table 3 and Figure 2 data

The prevalence of means of 3 or higher, and of modal scores at level 3 or 4, indicates overall approval, among responding participants, for all aspects of the module *Essay Writing with Readings*. The great majority of participants, whether or not they were experienced essay writers, found the module to be useful and effective, or even *awesome*.¹⁵ Observation confirmed this questionnaire-based finding. It showed participants who had considerable prior experience of essay work as using the module selectively. In follow-up interviews these participants, both students and staff, commonly stated that they found the module content affirming, and as affording useful revision of concepts and procedures. Almost all gained some new learning from the module, for example citing items of terminology with which previously they had been unfamiliar. Most students said that, definitely, they would revisit the module in connection with specific aspects of essay preparation. All stated, unequivocally, that they would recommend the module to friends. Many called to mind individuals for whom the module, they believed, would have immediate relevance and utility.

Differences in findings between the institutions are probably a function, not of institutional affiliation, but of the age profile of the student population. The Dunedin College of Education and Otago Polytechnic attract relatively high numbers of mature students returning to study after periods of absence from academia. Responding participants from this student group, aged 31+ and commonly identifying themselves as unpractised in essay procedures and, in some cases, in digital technology, rated the module highly in relation to personal need.¹⁶

*This (IT stuff) is just mysterious to me ... But I think one thing (the module) does is give you confidence.*¹⁷

¹⁵ Dunedin College of Education student. Questionnaire comment.

¹⁶ Questionnaire comments from students aged 31 years and over, responding to the question *What were your expectations of the module?*

¹⁷ Otago Polytechnic student. Interview comment.

Another responder, younger but similarly returning to study after some four years of absence, spoke of the positive reinforcement which the module provided. This responder, computer literate but diffident as regards essay writing, noted appreciatively the opportunities afforded, by an on-line format, for the re-working and revision of material without fear of public embarrassment.¹⁸ Tertiary staff on the other hand, professionally honed in essay skills and mainly practised in digital technology, gave the module a modest Likert rating in relation to personal need but, in follow-up interviews, accorded it a high rating for its potential utility as a teaching tool. Staff found it to be accessible while offering comprehensive coverage.

*It was very accessible to students..... a simple, logical, step-by-step process, easily understood.*¹⁹

*I thought it would guide the user through basic construction and use, e.g. referencing. The module, however, went beyond this.*²⁰

For many questionnaire responders, enjoyment of the module, although rated positively, figured rather lower than relevance and utility. This was true especially of University of Otago students and of males. Participants' main criticism of the module, evident in observation and confirmed in interviews, was its length. For one student, who trialled the module independently, the problem of module length was compounded by slow downloading time. The student noted that the fault might have lain with her home dial-up connection rather than the programme *per se*. Whatever the case, frustration led her to skip some parts of the module, and she was by no means alone in doing this.²¹ For many participants, even using reliable hardware, working through the module took an hour-and-a-half or more. Even people whose prior experience of computer use and of essay work allowed them to skim the module found themselves enmeshed for up to an hour. Participants in observation sessions noted that observation created an unreal situation, in that they, the observed, felt obliged to keep working through the material sequentially. Working informally and unobserved, they would have used the material eclectically, and within an idiosyncratic and unstructured time frame. As a student participant observed,

*You can dip in [to the module] wherever it's relevant to you.*²²

However, one staff responder doubted whether, even on this basis, inexperienced students would have coped with the volume of information offered.

*I found the content of the module brilliant... However, if I was really using this to plan an essay, I would find the amount of information overwhelming... I would prefer, as a student, to know which were the really important points to get to grips with first.*²³

At least two staff participants, while rating the module highly for its potential as a teaching tool, felt the length factor would be a deterrent to autonomous student use.

The perceived problem of length notwithstanding, no participant found the module, overall, to be difficult to use and many found length to be offset by variety. Most participants found the module to be couched in accessible language and most found

¹⁸ University of Otago student. Comments offered during observation.

¹⁹ Otago Polytechnic staff member. Questionnaire comment.

²⁰ Otago Polytechnic staff member. Questionnaire comment.

²¹ Dunedin College of Education student. Questionnaire comment.

²² University of Otago student. Comment offered after the observation session.

²³ Dunedin College of Education staff member. Questionnaire comment.

that its structure afforded convenience and flexibility of navigation. University of Otago students and males rated the module as particularly user-friendly.

*Overall, it is a really useful and easy e-module, with easy-to-follow steps ... Easy to look at with big pictures, and in a language that everyone can understand.*²⁴

The module's visuals were enjoyed by most students for the variety which they afforded.

*They [the visuals] keep you interested.*²⁵

They were warmly welcomed by self-styled *visual learners*, and were rated as especially congenial by one Otago Polytechnic participant, for whom English was a second language.

In the context of an overall favourable response, the people who, relatively, were more critical of the module's user friendliness were older participants, including tertiary staff. This is not to say that, in any absolute sense, older students or tertiary staff found the module harder to use than did young students. In the case of tertiary staff, suggestions regarding the module's usability were prompted largely by anticipation of, and awareness of the diverse nature of, student need. Staff comment reminded the researchers of, for example, the discrete needs of students in art and design courses. For some of these students, accustomed to the visual expression of concept and meaning, the sustained textual communication demanded by an essay can be a challenge.²⁶

Assessing the module in relation to the specifics of essay preparation, questionnaire responders of almost all groups, whether College of Education students, Polytechnic students, University students or staff, rated the module relatively highly as an aid to processing information. They rated it rather lower, but still uniformly positively, as an aid to applying information. Module features which student responders rated as especially useful were the sections on referencing and the guidance provided on essay structuring. Several students spoke appreciatively, during observation and interview, of the range of methods, outlined in the module, for organising information, noting particularly how these methods would facilitate better focused planning. In the words of a responding student,

It (the module) helped me through the steps of essay writing.

*The way it broke down the actual essay question was extremely helpful.*²⁷

Some students, including those for whom English is a second language, found the section on plagiarism to be illuminating, and also the module's stylistic and grammatical tips to be beneficial. The diverse range of benefits cited, in questionnaire and interview responses, by individual students is a tribute to the module's comprehensiveness and flexibility.

Most responders rated the module lowest, albeit mainly still positively, as an aid to locating and retrieving information. For some student responders, information gathering represented the most daunting part of essay production.

*I think probably the hardest part of (essay writing), or the most strenuous part, is finding all the resources you want.*²⁸

²⁴ University of Otago student. Questionnaire comment.

²⁵ University of Otago student. Comment offered during observation.

²⁶ Otago Polytechnic staff member. Interview comment.

²⁷ University of Otago student. Questionnaire comment.

²⁸ Otago Polytechnic student. Interview comment.

At least one student from each participating institution stated explicitly, in discussion subsequent to observation, that the module was deficient in its treatment of information retrieval.

*The area which still mystifies me a little ...is gathering the relevant information for an essay.*²⁹

A future module on information search techniques is planned and, on release, is likely to be well received.

Some students cautioned also that the module, despite its huge benefits, was not a universal panacea for those challenged by the techniques of essay writing. As one student participant explained,

I can begin essays and I can end them. Introductions and conclusions are not a problem. The hard bit for me is the middle bit... organising it and keeping going.

This student argued strongly that a section on writer's block should be included in the module.³⁰

3.5 Perceptions of the specifics of the module's content

Overall, the content of the module *Essay Writing with Readings* was regarded favourably by research responders. Table 4 and Figure 3 which follow, provide questionnaire-derived, quantified data regarding perceptions of the content of the module, among research participants. In Table 4, the ranking of items and the analysis of data by means and modes conforms to the same pattern as was used in Table 3, previously.

3.5.1 Key points from analysis of the Table 4 data

- A large majority of responders had confidence in the validity and accuracy of the module's content, and found the presentation to be accessible and clear. One student participant, on the other hand, in relation to the accuracy of the module's information, queried - *How would I know?*
- Most of the tabled items attracted strongly positive modal scores of 4. Exceptions were the items relating to: the module's ability to maintain interest; the cultural appropriateness of the module's material; the module's coverage of the Treaty of Waitangi. Generally, these items drew the positive, but relatively more muted, modal score of 3.
- Students who gave the module relatively a lower rating in respect of *attention and interest* mainly were reacting to the module's length. Student comments offered, in this connection, in relation to the data in Tables 3 and 4 were mutually corroborative.
- Most responders rated the module relatively lowest in respect of its treatment of the Treaty of Waitangi. Male student responders returned a modal score of 2 for this item.
- Staff responders rated the module relatively lower than did students with regard to the level at which the content was pitched. College of Education students tended to rate the module lower than did other responders with regard to clarity of language and terminology.

These points and more can be viewed in Table 4 which follows.

²⁹ Otago Polytechnic student. Questionnaire comment.

³⁰ University of Otago student. Comments offered during and after observation.

| Items | All responders | College student | Polytech student | Uni student | Staff | Female | Male |
|--|----------------|-----------------|------------------|-------------|--------|----------|----------|
| Information is accurate | 3.89/4 | 4.00/4 | 3.75/4 | 3.86/4 | 4.00/4 | 3.87/4 | 4.00/4 |
| Concepts are presented clearly | 3.77/4 | 3.67/4 | 4.00/4 | 3.86/4 | 3.50/4 | 3.78/4 | 3.75/4 |
| Content relates to objectives | 3.77/4 | 3.83/4 | 3.60/4 | 3.71/4 | 4.00/4 | 3.78/4 | 3.75/4 |
| Content is presented logically | 3.73/4 | 3.67/4 | 3.40/4 | 3.86/4 | 4.00/4 | 3.72/4 | 3.75/4 |
| Objectives are stated clearly | 3.68/4 | 3.67/4 | 3.60/4 | 3.57/4 | 4.00/4 | 3.67/4 | 3.75/4 |
| Language is concise and clearly written | 3.64/4 | 3.17/3 | 3.75/4 | 3.71/4 | 4.00/4 | 3.56/4 | 4.00/4 |
| Content is pitched at an appropriate level | 3.55/4 | 3.33/4 | 3.60/4 | 3.86/4 | 3.25/3 | 3.50/4 | 3.75/4 |
| Terminology is supported by a glossary | 3.48/4 | 3.17/3 | 3.75/4 | 3.43/4 | 3.75/4 | 3.35/4 | 4.00/4 |
| Content maintains attention and interest | 3.41/3 | 3.50/4 | 3.60/4 | 3.29/3 | 3.25/3 | 3.39/3 | 3.50/4-3 |
| Material is culturally appropriate | 3.28/3 | 3.20/3 | 3.67/4 | 3.00/3 | 3.67/4 | 3.40/4-3 | 2.67/3 |
| Provides in depth content on the selected topic (Treaty of Waitangi) | 3.10/3 | 2.83/3 | 3.50/4-3 | 3.00/3 | 3.34/3 | 3.24/3 | 2.34/2 |

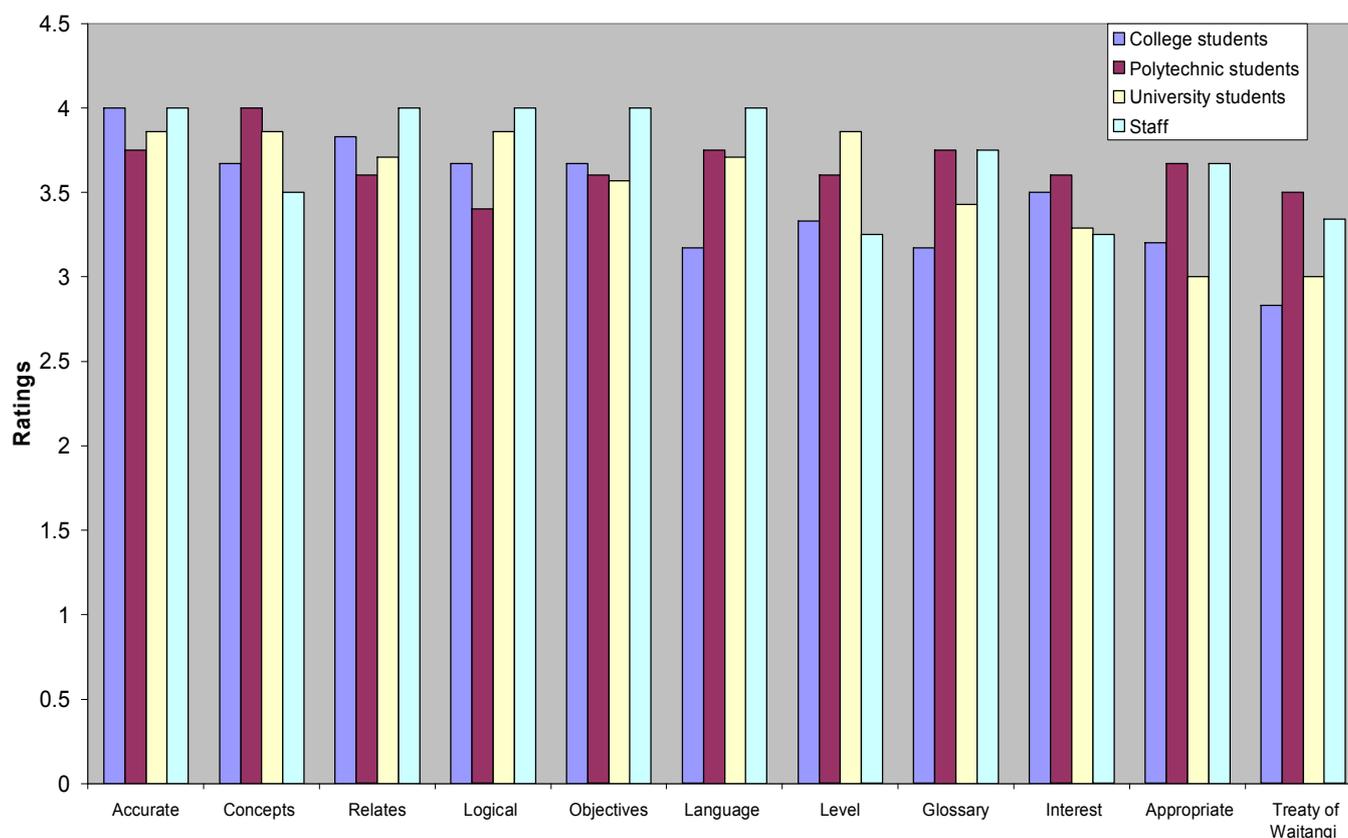
Table 4: Participants' ratings of the content of the module Essay Writing with Readings: response means/modes, based on a four-point Likert scale (n = 22).

3.5.2 Discussion of the Table 4 and Figure 3 data

Feedback from research participants regarding the content of the module was, in most respects, strongly positive. Participants' mean rating of the module's overall effectiveness, as shown in Table 3 previously, was 3.55 whereas, in relation to the specifics of content, shown in Table 4, almost two thirds of the response means were at the 3.55 level or higher. As can be seen in Table 4, the lowest ratings were given by college students and male responders regarding in-depth content on the Treaty of Waitangi (2.83 and 2.34), and male responders regarding culturally appropriate material (2.67). Only six per cent of participant feedback regarding module content was specifically negative, and the detail of this will be outlined further on in this section.

Differences in ratings between the responders can be seen more clearly in Figure 3 which follows. Overall, staff provided the highest ratings for some aspects of the module's content, for example, objectives which related to the content, logical presentation, concise and clear language and clearly stated objectives. College students, however, rated the presence of concise and clear language much lower (3.17), the same score they gave for terminology supported by a glossary, and lower in comparison to the perceptions of staff for both items (4 and 3.75 respectively). Staff also perceived another aspect of content to be better than did students with a score of 4 for the logical presentation of content compared to 3.4 given by polytechnic students (Figure 3). However, the researchers were unable to ascertain the reasons for different perceptions amongst the groups of responders.

Figure 3: Participants's ratings of module content (n = 22)



3.5.3 Participants' comments re content

As well as information gleaned from the rating of the module content, participants also offered suggestions for further improving an already good product. A fifth or more of responders, in questionnaire comment or during interviews, suggested:

- Widening the treatment of referencing to include formats other than APA.
 - Students and staff, while welcoming the module's valuable coverage of referencing and appreciating the coherence of its APA focus, pointed out that university departments use a range of referencing styles.
 - Aware of the length of the module, participants suggested that links could be provided, allowing access to information on alternative referencing styles, for those who wished to explore referencing in more diversity and depth.
- Providing access, in the module, to exemplar essays.
 - Some responders, both student and staff, suggested these exemplars might be graded and suitably annotated to illustrate, for example, work at the C-, B and A+ grade levels.
 - Several students indicated that they would like to be able to track the steps involved in transforming mediocrity into excellence, as regards essay work.
 - There were student requests, also, for exemplar essays on topics other than the Treaty of Waitangi, in disciplines, for example such as health science.
 - Students liked the continuity and coherence which the module's focus on the Treaty of Waitangi afforded. They suggested that links to exemplar alternatives would afford variety without sacrificing coherence.

- Providing more examples and practice exercises, both on referencing and on the rules of grammar and syntax.
 - In these contexts too, student responders suggested that this additional material could be accessed through links, giving an element of choice to people who wished to consolidate their knowledge in specific areas.
- Providing not merely examples of grammatical and syntactical usage and construction, but providing explanations, also, of the underlying rationale.
 - In this context, several student responders noted that they learn best when recall is linked to understanding.

*The hardest thing for me is learning without a rationale.*³¹

Negative comments

The small amount of negative comment about the module's content, received from responding participants, related to interest levels, terminology, cultural appropriateness and coverage of the Treaty of Waitangi. While many participants found the module to be long, only two, an older student accustomed to traditional rather than digital approaches to information gathering and processing and a student working cross-culturally, stated overtly that the module was not interesting. Numerous other responders described the content as interesting, but too much to digest at one sitting. A small number of responders, struggling with unfamiliar terminology, voiced the need for a glossary. However, far more appreciated the links provided to explanatory lists, such as that on *abbreviations*, and appreciated, also, the link to an on-line dictionary. A small number of responders, whether because of the module's length or for personal reasons, questioned whether the items on *Inclusive Language* and *Stereotyping*, in the module's *Language Use* section, were appropriate or necessary. At least one participant, on the other hand, wished that the issues of gender and inclusiveness had been explored in more depth.³²

Most of the negative comment regarding module content related to the module's coverage of The Treaty of Waitangi. All responding participants understood that the module, while generic in its intent, had to function within the context of a concrete example, with the Treaty of Waitangi having been selected for exemplar purposes. A quarter of student responders, however, believed that the module was conceptually thin in its treatment of Waitangi, failing to highlight and address significant questions and issues. Provision of a link, to allow interested students to follow such questions and issues in more depth, would address this concern.

3.6. Participants' perceptions of the module's instructional design

Most aspects of instructional design present in the *Essay Writing with Readings* module were perceived favourably. One exception was male responders who gave the lowest rating for how sound enhanced the module. The reasons for other ratings below 3, will be outlined in the discussion of the results portrayed in Table 5. The ranking of items in the table, and the analysis of data by means and modes, conforms to the same pattern as was used previously in Tables 3 and 4. "N/A" indicates that half or more of the responders in the designated category did not make a response. The listing sequence ranks the items in order of overall mean affirmation or approval among responding participants. For example, agreement that "important concepts are highlighted" and "Visual layout is appealing" scored highest as depicted in Table 5.

³¹ University of Otago student. Comment offered during observation.

³² University of Otago student. Questionnaire comment.

3.6.1 Key points

- It should be noted that the questionnaire, used to gather the data displayed in Table 5, was standardised to evaluate the full range of on-line modules, to be offered in the context of the *e-CDF 423 Information Literacy e-Learning Modules* project.
 - It was not specific to the module *Essay Writing with Readings* and, hence, a small number of questionnaire items were linked only peripherally to this module. For this reason as expected, between a quarter and a third of all research participants offered no rating in respect of the items on *Pre-testing*, *Post-testing* and *Peer interaction*. For the same reason, data on *video sequencing* has not been shown in Table 5, the feedback not being relevant.
- Twenty-seven percent of responders made no evaluation of sound and narration in the module. Because of technical difficulties, these participants had not been able to access the module's audio material at the time of evaluation.
- Responders who did offer evaluation of the module's audio elements differed widely in their perceptions and evaluations of the audio facility.
- The visual elements of the module, on the other hand, were appreciated warmly by most responders.
- Staff responders rated the specifically pedagogical features of the module's design more highly than did student responders. Comments supplementary to the questionnaire phase of data gathering showed staff as viewing the module, generally, as a teaching rather than learning tool.
- University students, compared with other responders, gave the module a low rating as a stimulus to critical thinking.

More detail about the key points and other aspects of participants' perceptions of the module's instructional design can be seen in Table 5, below.

| Items | All responders | College student | Polytech student | Uni student | Staff | Female | Male |
|---|----------------|-----------------|------------------|-------------|------------|----------|----------|
| Important concepts are highlighted | 3.68/4 | 3.50/4-3 | 3.80/4 | 3.71/4 | 3.75/4 | 3.67/4 | 3.75/4 |
| Visual layout is appealing | 3.67/4 | 3.17/3 | 4.00/4 | 3.80 | 3.75/4 | 3.65/4 | 3.75/4 |
| Animation is relevant | 3.60/4 | 3.60/4 | 3.75/4 | 3.57/4 | 3.50/4-3 | 3.63/4 | 3.50/4-3 |
| Techniques to encourage interaction with the material are present | 3.59/4 | 3.17/3 | 4.00/4 | 3.57/4 | 3.75/4 | 3.61/4 | 3.50/4-3 |
| Design is creative and interesting | 3.59/4 | 3.33/4 | 3.80/4 | 3.57/4 | 3.75/4 | 3.61/4 | 3.50/4 |
| Graphics are clear | 3.57/4 | 3.67/4 | 3.75/4 | 3.57/4 | 3.25/4 | 3.59/4 | 3.50/4-3 |
| Narration is easy to hear and understand | 3.50/4 | N/A | 4.00/4 | 3.29/4 | N/A | 3.75/4 | 2.75/4 |
| Colour is used effectively | 3.45/4 | 3.33/4 | 3.80/4 | 3.43/3 | 3.25/4 | 3.44/4 | 3.50/4-3 |
| Sound enhances module | 3.43/4 | N/A | 3.75/4 | 3.29/4 | N/A | 3.75/4 | 2.50/3 |
| Some instantaneous feedback is provided | 3.43/4 | 3.17/3 | 3.75/4 | 3.14/3 | 4.00/4 | 3.47/3 | 3.25/3 |
| Layout of content is uncluttered | 3.41/3 | 3.50/4-3 | 3.40/4 | 3.43/3 | 3.25/3 | 3.33/3 | 3.75/4 |
| Starting instructions are explicit | 3.36/3 | 3.33/3 | 3.20/4-3 | 3.29/3 | 3.75/4 | 3.33/3 | 3.50/4-3 |
| Range of skill levels is catered for | 3.29/3 | 3.60/4 | 3.00/4-3 | 3.29/3 | 3.25/4 | 3.18/3 | 3.75/4 |
| Facilities to encourage critical thinking are present | 3.26/3-4 | 3.40/4 | 3.50/4-3 | 2.86/3 | 3.67/4 | 3.27/3 | 3.25/4 |
| Interaction with an instructor is encouraged | 3.16/3 | 3.20/4-3 | 3.50/4-3 | 2.86/3 | 3.33/4 | 3.13/4 | 3.25/3 |
| Post-testing is used | 3.06/3 | 3.00/3 | 3.00/4 | 3.00/3 | 3.33/3 | 3.17/4-3 | 2.75/3 |
| Pre-tests are provided | 2.86/3 | N/A | 3.00/4 | 2.67/2 | 3.00/2-3-4 | 2.82/2-4 | 3.00/3 |
| Peer interaction is enabled | 2.56/2 | 2.75/3 | 2.75/3 | 2.43/2 | N/A | 2.58/2 | 2.50/2-3 |

Table 5: Participants' ratings of the instructional design of the module Essay Writing with Readings: response means/modes, based on a four-point Likert scale (n = 22).

3.6.2 Discussion and analysis of the Table 5 data

Generally, the response means in Table 5, regarding the specifics of the module's instructional design, tally well with those in Table 3, regarding the module's overall usefulness and effectiveness as a teaching/learning vehicle. Means in excess of 3.30 figure prominently in both tables.

In Table 5, the item relating to the highlighting of important concepts drew the highest number of level 4 responses, indicating unequivocal agreement on the part of responders. Seventy per cent of all responders accorded the module a maximum level 4 rating for the way it communicated and highlighted its most important concepts, and the remaining thirty per cent gave the module a still positive level 3 rating. No

responder felt that the module failed in communicating its key concepts. The apparent success of the module in flagging and communicating key information might allay the expressed concerns of some staff responders that students would not cope with the amount of information presented.

Other items, which attracted level 4 responses from at least 65 per cent of research participants, were those regarding the module's visual layout, interactive pedagogy and creativity and interest of design. Many responders enjoyed the snippets of information, slipped into the module through the *light bulb* icons as quasi-light relief. Numerous student and staff comments suggested these learner-friendly features might help to offset the ennui which, otherwise, the sheer length and volume of the module might engender.

Aspects of the module's instructional design where participant responders suggested improvements concerned the sequence of material, distinction between inert icons and active links and, also, perceived ambiguity in the learning styles test. Participants suggested that, among the module's wealth of information, some re-ordering of content might be helpful. A staff responder asked for a guiding caution about the length of the module to be at the beginning of the programme. The same staff responder suggested that the requirement to download *Macromedia Flash Player 8* and *Adobe Acrobat Reader* should be introduced earlier. Student suggestion included rationalising the sections on referencing, quotation and plagiarism, to lessen repetition and achieve better logical flow. Specific suggestions in this regard included:

- linking the module's sections on summarising, paraphrasing and highlighting
- linking the sections on referencing and plagiarism.

Within the *Why plagiarise* sub-section, one student participant requested that the listed reasons for plagiarism be re-sequenced, recommending that *lack of confidence* be cited first in the list. This student felt that citing *ignorance* first in the list was overly negative and therefore educationally counter-productive.³³

At least a quarter of student responders found the ANZIIL inserts to be puzzling and/or intrusive.

*It's only when you were sort of half way, two-thirds of the way through (the module), it was beginning to make sense.*³⁴

At least one participant thought the numbered ANZIIL standards referred to sequential steps in an educational chronology.³⁵ Numerous students asked for the inserts to be removed or re-sited or to be supported, at whatever point might be most appropriate, by a suitable explanation of their context and meaning.

In exploring where and how such *suitable explanation* might best be provided, student participants touched on an issue relevant to the module as a whole. Student suggestions for clarifying the ANZIIL inserts included the idea of converting the numbered buttons on the insert image into active links, each numbered button giving access to a description and contextualised explanation of the matching ANZIIL standard. Several student participants, in fact, had thought the buttons were active links. Not only in relation to the ANZIIL inserts but also elsewhere in the module, some students had difficulty in distinguishing between inert symbols and icons and active links. The pencil icon commonly used to introduce referencing activities was

³³ Otago Polytechnic student. Comment made during observation.

³⁴ University of Otago student. Interview comment.

³⁵ University of Otago student. Comment offered after observation.

often mistaken for a link, and even more confusion was caused by the signposts decorating the road maps on the module's introductory pages.

Ambiguity was found, as well, in the module's *learning styles* diagnostic test. Problems in this respect were evident in observation sessions. Users tended either to love this test or hate it. Several who were averse to it simply omitted it. One participant who wished to try the test was deterred, at first, by the activity's initial requirement to log in with her name, a requirement which she saw as a needless intrusion into privacy. Some participants, having begun the test, became frustrated when they found many question pairs falling into the fallacy of false alternatives.

*I often found both (options) were true.*³⁶

This led the participants concerned to doubt the test's validity. Finally, some participants who completed the test then found it hard to interpret the array of results.

Overtly negative responses to questionnaire items regarding the module's instructional design related to *critical thinking* as an aspect of module activity, pre and post testing within the module's design and, above all, to the module's audio facility. Student participants from the University of Otago tended to see the module as failing to stimulate critical thinking. More than thirty per cent of all responders felt unable to comment on pre or post-testing as an aspect of module design, and another eighteen per cent saw the module as deficient in these areas.

The audio facility, however, emerged as a more overtly controversial feature of the module. It should be born in mind that a significant minority of participants, because of faulty equipment, were denied the chance to evaluate the audio inserts. Those who could access the audio facility tended either to love or loathe it. Those who liked the audio element welcomed it as a break from textual and visual communication, and at least one responder asked that the audio component be proportionally increased. A student for whom English was a second language appreciated being able to listen to material and follow it simultaneously in text format.³⁷ On the other hand, several participants for whom the audio approach had no appeal simply ignored it and did not try it or, having sampled one audio item, ignored the rest. Those who overtly resented the audio elements disliked both the content and the style of delivery, describing these as patronising and *belittling*.³⁸ Male responders tended to rate the voices used in the audio items as uncongenial, claiming that the speakers sounded

*too much like schoolgirls to have appeal to a university audience.*³⁹

Nevertheless, responders who personally disliked the audio inserts mostly believed that an audio dimension should be retained in the module for the sake of users who preferred an auditory learning style.

*Some people learn visually; some people learn better aurally.*⁴⁰

Its critics asked that the audio facility should be, not removed, but reworked.

³⁶ University of Otago student. Interview comment.

³⁷ Otago Polytechnic student. Comment offered during observation.

³⁸ University of Otago student. Questionnaire comment.

³⁹ University of Otago student. Comment offered during observation.

⁴⁰ University of Otago student. Interview comment.

3.7 Perceptions of participants' on the specifics of navigation

Response data shows that, overall, users felt able to move freely through the module. Table 6, below, provides questionnaire-derived, quantified information regarding participants' perceptions of module usability and ease of navigation. The ranking of items and the analysis of data by means and modes conforms to the same pattern as was used in previous tables.

3.7.1 Key points

- Most participants found little difficulty in navigating their way through the module, and gave it high ratings in this regard.
- Where difficulties occurred, commonly these arose early in the module, at the entry point or soon after. The difficulties encompassed misunderstanding of initial instructions and confusion between inert and active icons.
- Many responders would have appreciated the provision of links in the module, allowing them to follow pathways of discrete interest. Clearly, the concept of customising the module, which was intrinsic to the intention of the design team, has much to offer.
- Several users encountered difficulty with the *print* facility.
- Between 20 and 35 per cent of responders offered no evaluation of the items regarding *exiting from the module* and *saving of work*.

| Items | All responses | College student | Polytech student | Uni student | Staff | Female | Male |
|---|---------------|-----------------|------------------|-------------|----------|----------|----------|
| User is able to move freely throughout the module | 3.68/4 | 3.50/4-3 | 3.80/4 | 3.71/4 | 3.75/4 | 3.61/4 | 4.00/4 |
| Navigation icons are consistent and readily available | 3.67/4 | 3.67/4 | 3.75/4 | 3.60/4 | 3.75/4 | 3.65/4 | 3.75/4 |
| Position in module is easily determined | 3.62/4 | 3.50/4 | 3.80/4 | 3.50/4-3 | 3.75/4 | 3.56/4 | 4.00/4 |
| Printing facility is made obvious | 3.60/4 | 3.33/3 | 4.00/4 | 3.60/4 | 3.67/4 | 3.50/4-3 | 4.00/4 |
| Instructions for using the module are clear | 3.59/4 | 3.50/4-3 | 3.80/4 | 3.60/4 | 3.50/4-3 | 3.56/4 | 3.75/4 |
| User can enter and exit from the module at any time | 3.39/4 | 3.67/4 | 3.67/4 | 3.14/4 | 3.67/4 | 3.29/4 | 3.75/4 |
| User is given choices about pathways | 3.36/3-4 | 3.17/3 | 3.40/4 | 3.43/3 | 3.50/4-3 | 3.28/3 | 3.75/4 |
| Entry into the module is easy and obvious | 3.33/3 | 3.60/4 | 3.20/3 | 3.29/3 | 3.25/3 | 3.35/3 | 3.25/3 |
| Return to start is clearly and regularly displayed | 3.31/4 | 3.00/2-3-4 | 3.75/4 | 3.29/4 | N/A | 3.27/4 | 3.50/4 |
| Work can be saved and returned to at any time | 2.87/3 | 3.00/3 | N/A | 2.71/3 | N/A | 2.64/3 | 3.50/4-3 |

Table 6: Participants' ratings of navigation through the module Essay Writing with Readings: response means/modes, based on a four-point Likert scale (n = 22).

3.7. 2 Discussion and analysis of the Table 6 data

Most research participants rated the module highly for its usability and ease of navigation. Participants saw the module as a flexible learning tool, allowing either rapid scanning or revisiting of material, and amenable to eclectic and selective use. Of all responders, 70 per cent gave a maximum “4” rating to the questionnaire item *User is able to move freely through the module*. The items *Position in the module is easily determined* and *Navigation icons are consistent and readily available* gained maximum ratings from 65 per cent of users. Sixty per cent gave a maximum rating to *Instructions for using the module are clear*.

In spite of these high ratings, some research participants requested improvements to the content menu, shown at the left-hand side of each screen display. Many participants commented overtly on the utility of this feature. Some users, on the other hand, found that, when they wished to backtrack to a specific page, they had trouble locating the page concerned. These people asked whether the menu could incorporate a page numbering system. Two users, while appreciating the utility of the menu, found its permanent presence to be intrusive, and would have liked the option of being able to hide it when it was not in use.

Queries about page numbering applied, also, to participants’ use of the *Print* facility. Some users requested a page numbering system so that they could, conveniently, select specific pages for printing. One student user wondered whether an option to print text alone, without graphics, could be incorporated. Also, occasions did arise when the print output emerged incorrectly formatted and with desired information omitted.

Another item, which created technical problems for many participants, was the practice activity following the *How do you cite* sub-section. Participants understood the intent of the activity easily enough, i.e. the correct sequencing of information in a sample citation. However, when they attempted the activity, many participants found it was difficult to use the cursor to move and re-locate the citation’s information blocks. The positioning of the cursor had to be too precise for the exercise to be user friendly.⁴¹

However, the navigation-related items which drew, relatively, the lowest levels of approval from research participants were those relating to module entry, choice of pathways, the *return to start* facility and facilities for saving work. A minority of participants found the icons and instructions at the start of the module to be a little puzzling or confusing. Regarding subsequent stages of navigation, the items *User is given choice of pathways* and *Return to start is clearly and regularly displayed* gained maximum ratings from less than half of all users. A wider use of link options could remedy any perceived deficiency in choice of pathways, and the module’s potential for customisation should be explored. The item drawing the lowest level of approval from questionnaire responders was *Work can be saved and returned to at any time*. Thirty-five per cent of responders felt unable to evaluate this aspect of the module, and twenty per cent rated the aspect as poor.

⁴¹ Commonly noted during observation sessions.

3.8 Effectiveness of the module as a learning tool

Participants indicated, overall, that the module was effective as a tool for learning. They found primarily, that the design enhanced understanding of concepts, and that learning activities were interesting. In this respect, Table 7, provides questionnaire-derived and quantified, relevant data. The ranking of items in the table, and the analysis of data by means and modes, conforms to the same pattern as was used in previous tables.

3.8.1 Key points

- Users rate the module positively as effective for learning, with polytechnic users providing particularly strong affirmation in three areas (ratings = 4).
- The design was found to enhance understanding of concepts.
- Learning activities were regarded positively by a majority of users.
- Users accord the module a more muted approval in relation to items conceptually linked to autonomous learning. The relatively low rating of the module in the context of *problem solving*, especially by university users, correlates with similar data on *critical thinking* displayed in Table 5.
- Mixed reaction to the module in respect of its exemplar topic, *the Treaty of Waitangi*, correlates with data displayed in Tables 3 and 4, and strengthens the argument for customization to be a feature of the module.

| Items | All responses | College student | Polytech Student | Uni student | Staff | Female | Male |
|--|---------------|-----------------|------------------|-------------|----------|----------|----------|
| Design enhances understanding of concepts | 3.57/4 | 3.67/4 | 4.00/4 | 3.29/3 | 3.33/3 | 3.59/4 | 3.50/4-3 |
| Learning activities are interesting | 3.52/4 | 3.50/4-3 | 3.75/4 | 3.29/4-3 | 3.75/4 | 3.53/4 | 3.50/4 |
| Feedback is clear and helpful for learning | 3.50/4 | 3.60/4 | 3.80/4 | 3.14/3 | 3.67/4 | 3.50/4 | 3.50/4-3 |
| Activities aid learning effectively | 3.50/3-4 | 3.50/4-3 | 4.00/4 | 3.29/3 | 3.33/3 | 3.50/4-3 | 3.50/4-3 |
| Design motivates learning | 3.43/3-4 | 3.17/3 | 4.00/4 | 3.29/3 | 3.50/4-3 | 3.47/4 | 3.25/3 |
| Activities encourage critical thinking | 3.38/3 | 3.67/4 | 3.50/4-3 | 3.00/3 | 3.50/4-3 | 3.35/3 | 3.50/4-3 |
| Activities help memorisation | 3.29/4 | 3.33/4 | 3.75/4 | 3.00/3 | 3.25/4 | 3.18/4 | 3.75/4 |
| Activities encourage inquiry | 3.30/3 | 3.33/4 | 3.50/4-3 | 3.14/3 | 3.33/3 | 3.19/3 | 3.75/4 |
| Problem-solving is encouraged | 3.18/3 | 3.17/3 | 3.60/4 | 2.71/2-3 | 3.50/4-3 | 3.17/4-3 | 3.25/3 |
| Design encourages exploration of the module topic, viz. The Treaty of Waitangi | 2.95/3 | 2.83/3 | 3.00/2-3-4 | 2.71/3 | 3.67/4 | 3.06/3 | 2.33/3 |

Table 7: Participants' ratings of the module Essay Writing with Readings as an aid to learning: response means/modes, based on a four-point Likert scale (n = 22).

3.8.2 Discussion and analysis of the Table 7 data

The data set out in Tables 3-7 inclusive suggests that research participants, overall, rated the module highly with regard to its content, usability and ease of navigation. In respect of the module's instructional design and effectiveness as a tool for learning, participants' ratings, while still largely positive, were a little more equivocal. In Table 7, fifty-five per cent of participants gave the maximum "4" ratings to the questionnaire items *Design enhances understanding of concepts* and *Learning activities are interesting*. Fifty per cent gave a maximum rating to *Activities help memorization*, but twenty per cent rated the module poorly in this respect. Participants were more equivocal, however, regarding the module as a stimulus to problem-solving, inquiry and critical thinking, and most equivocal regarding the module as a gateway to the study of the Treaty of Waitangi. Data in Table 7 in respect of these areas accords with related data in Tables 3 and 5.

Seemingly, as a structured aid to learning, the module works well. It has limitations for users who are seeking the open-ended and lateral in their learning experiences. In questionnaire responses, less than forty per cent of all participants rated the module highly in relation to thinking skills, with University of Otago responders, particularly, tending towards low ratings. For example, two student participants noted that the *matching activity* attached to the *Knowing about Information* section presented no real challenge because the correct answers fell in sequential order. Another student responder urged that

.. *there should be more scope for open-ended activity and response.*
*Go beyond the tick box.*⁴²

Perceptions of instructional design linked to student perceptions of the module in relation to its exemplar topic, *the Treaty of Waitangi*. Judging from the patterning of level 4 questionnaire responses, triangulated against interview comment, only twenty per cent of responders, because of perceived conceptual limitations in the material, rated the module highly as a gateway to the study of the Treaty. Links to optional extension activities, predicated on the module's content and inviting participants to attempt problem-solving at various levels of challenge, might address these concerns. Modifications of this nature might be considered in the context of module customization.

4. General Discussion and Conclusions

Overall, the module was well received by the twenty-two participants, students and staff from University, Polytechnic and College of Education settings, who took part in the research evaluation project. The results indicate that the module has relevance for users with a diverse range of backgrounds and experiences. Users varied in age and gender as well as in their field of study and prior exposure to information technology. Participants saw the potential of the module for modification and development in real use contexts. The module was especially welcomed, by tertiary staff, for its potential as a teaching tool.

The methodology proved effective in generating relevant data which was amenable to analysis and triangulation. Project goals such as reusability in relation to SCORM compliance and adherence to ANZIIL standards were not addressed as part of this

⁴² University of Otago student. Comment offered after observation.

research, and have been reported elsewhere. Refinements of research design which will be borne in mind for the evaluation of future modules include:

- Trialing modules with both broadly selected participants and specific user groups, for example students studying specific types of course, to see whether patterns suggested among the randomly selected sample are verified in specific contexts.
- Offering students who volunteer for observation, during their use of any module, the option of being observed while working in pairs rather than one-on-one. The advantage of observing paired student work lies in the insight into user reactions and thought processes, afforded by the flow of conversation between the students concerned.

The findings of the research indicate there are some aspects of the module requiring attention. For example, module length and volume of material covered could be addressed by streamlining the content, and re-sequencing of material to create a more effective conceptual flow through the module. Some users were unable to link the module with the ANZIIL standards which were displayed and this could be explained better. Additionally, participant responses suggested that supplementing the module's structured approach with a choice of more open-ended learning experiences would be beneficial. These might relate both to the module's information literacy-related content and to its contextual exemplar, in this case *the Treaty of Waitangi*.

However, it should be noted, that any participant concerns about the module sprang, not from a substratum of disapproval, but from a strongly positive sense of the module's potential. Precisely because research participants enjoyed and valued the module, they were, without exception, fluent and free with constructively critical comment. They saw the module as something to be welcomed, as a venture worthy of development with a view to wide implementation. Most participants inquired, with positive interest, about the module's future path, and expressed an explicit wish to be kept informed. The flow of participant suggestion testifies to the module's fundamental health.

5. 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*. 2nd edition. Adelaide: Australian and New Zealand Institute for Information Literacy (ANZIIL).

Appendix A – Questionnaire

Evaluation of an e-Learning Module: *Essay Writing with Readings*

Introductory information

Welcome to this e-learning modules research project. The module on which currently you are working is one of five e-learning modules which are to be piloted at the University of Otago, Otago Polytechnic and the Dunedin College of Education. The results of the research will be used to guide modifications prior to releasing the modules to the New Zealand tertiary sector.

You are invited warmly to take part in this project by completing the following questionnaire. The purpose of the questionnaire is to assess the initial impact and usability of the pilot e-learning module with which you are currently working, i.e. Essay writing with readings.

If you agree to take part in the project, by completing the questionnaire, your responses will be collated and sent to the project team responsible for module development. However, your confidentiality is guaranteed absolutely. No individual responding to the questionnaire will be identified in any way in any derivative report. The source documents containing the data which you provide will be destroyed when data processing has been completed.

The questionnaire will take 30-40 minutes to complete. Your participation is entirely voluntary. If you do choose to take part, the information which you provide will be invaluable to, and most gratefully received by, the project team.

Please return your completed responses to David Keen (Office S3-3, Tower Block, or Dave Keen's pigeonhole, Floor 3, Tower Block) or to Wendy Ritson-Jones (at the Bill Robertson Library) – by Monday 10 April.

Contact details for David and Wendy are:

Dr David Keen, Dunedin College of Education, Private Bag 1912, Dunedin

Wendy Ritson-Jones, Dunedin College of Education, Private Bag 1912, Dunedin

david.keen@dce.ac.nz

Wendy.Ritson-Jones@billrobertson.library.ac.nz

If you have any questions about the project in general, or the questionnaire in particular, please e-mail David or Wendy, or phone 4772289 ext 886.

Survey Material

A) Status

Please mark X on the grid below alongside whichever items apply to you

| | |
|--|--|
| Female | |
| Male | |
| New Zealand European | |
| Māori | |
| Pacific Islander | |
| Asian | |
| Other ethnicity | |
| First language/mother tongue is not English (please state the language) | |
| Age 15 - 20 | |
| Age 21 -30 | |
| Age 31- 45 | |
| Age 46 or over | |
| Less than one year's experience of computer use | |
| 1 – 2 years' experience of computer use | |
| 3 years or more of experience with computers | |
| University of Otago staff member | |
| University of Otago student | |
| Otago Polytechnic staff member | |
| Otago Polytechnic student | |
| Dunedin College of Education staff member | |
| Dunedin College of Education student | |

B) FOR STUDENTS ONLY

If you are a student, please mark X on the grid below alongside whichever items apply to you

| | |
|--|--|
| Full time student | |
| Part time student | |
| Foundation course student | |
| Certificate course student | |
| Undergraduate student | |
| Post-graduate student | |
| Newly returned to study after a break of one year or more | |
| Please state, in the right hand column, what is your main field of study | |

C) Your assessment of your own e-learning needs, with specific reference to the preparation and writing of essays or similar pieces of extended academic writing.

| | Please mark X alongside any listed item or items which you feel fit your situation |
|--|---|
| I have elementary skills in locating, retrieving, analysing and applying information relevant to the task of essay writing | |
| I have traditional skills in locating, retrieving, analysing and applying information relevant to the task of essay writing, but am less skilful when accessing and manipulating information using digital/electronic technology | |
| With regard to essay preparation, I have experience and skill in accessing and manipulating information using digital/ electronic technology, but am less skilful when working from traditional sources (e.g. texts, libraries) | |
| With regard to essay preparation, I have experience and skill in the use both of traditional and digital/electronic methods of sourcing and manipulating information | |
| With regard to essay preparation, I am unfamiliar with New Zealand context of assigned topics, but need to gain familiarity in order to function effectively in New Zealand society | |
| With regard to essay preparation, I am moving into situations which require me to apply increasingly sophisticated, information-gathering skills in increasingly demanding academic contexts | |
| With regard to essay preparation, I need to develop my own skills in relation to the location, retrieval, analysis and application of information in order to support and teach other people | |
| With regard to essay writing, I lack confidence in using digital/electronic aids to preparation because I am unfamiliar with the technology. | |

Comment

What were your expectations of the module Essay Writing with Readings. For Example, what knowledge or skills did you think you might gain from the module? In what ways did you think the module might be of use or relevance to you?

D) Overall impressions of the module Essay Writing with Readings

| | Please rate each listed item on a 1 – 4 scale. 1 = poor 2 = fair 3 = good 4 = excellent |
|---|--|
| How enjoyable did you find the module overall? | |
| How relevant was the module in relation to your situation or needs in the area of essay preparation and writing? | |
| Overall, how useful and effective did you find the module to be as an aid to essay preparation and writing? | |
| How easy did you find the module to use? | |
| How do you rate the module's effectiveness as a generic aid to locating and retrieving information, preparatory to the writing of an essay? | |
| How do you rate the module's effectiveness as a generic aid to processing information, preparatory to the writing of an essay? | |
| How do you rate the module's effectiveness as a generic aid to applying information, preparatory to the writing of an essay? | |
| How do you rate the module's effectiveness as an e-learning aid specific to the preparation of an essay on the Treaty of Waitangi? | |

E) Critique of the module

| | Please comment in the spaces below |
|--|---|
| Which features of the module did you particularly like, or find particularly helpful, and why? | |
| Which features of the module did you particularly dislike, and why? | |
| How can the module be improved? | |

F) Evaluation of specific features of the module

| Item | Please rate each listed item on a 1 – 5 scale 1 = strongly disagree 2 = disagree 3 = agree 4 = strongly agree 5 = N/A (not applicable) | | | | |
|--|--|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 |
| A. Module Content | | | | | |
| 1. Objectives/goals are stated clearly | | | | | |
| 2. Content relates to objectives | | | | | |
| 3. Information is accurate | | | | | |
| 4. Language is concise and clearly written | | | | | |
| 5. Terminology is supported by a glossary | | | | | |
| 6. Concepts are presented clearly | | | | | |
| 7. Content is presented logically | | | | | |
| 8. Content is pitched at an appropriate level | | | | | |
| 9. Content maintains attention and interest | | | | | |
| 10. Provides in-depth content on the selected topic, viz. <i>The Treaty of Waitangi</i> | | | | | |
| 11. Material is culturally appropriate (i.e. considers differences of ethnicity, gender etc) | | | | | |
| B. Effectiveness for Learning | 1 | 2 | 3 | 4 | 5 |
| 1. Design motivates learning | | | | | |
| 2. Design encourages exploration of topic, viz. The Treaty of Waitangi | | | | | |
| 3. Feedback is clear and helpful for learning | | | | | |
| 4. Problem-solving is encouraged | | | | | |
| 5. Design enhances understanding of concepts | | | | | |
| 6. Learning activities are interesting | | | | | |
| 7. Activities help memorisation | | | | | |
| 8. Activities encourage critical thinking | | | | | |
| 9. Activities encourage inquiry | | | | | |
| 10. Activities aid learning effectively | | | | | |
| C. Instructional Design | 1 | 2 | 3 | 4 | 5 |
| 1. Starting instructions are explicit | | | | | |
| 2. Range of skill levels is catered for | | | | | |
| 3. Pre-tests are provided | | | | | |
| 4. Post-testing is used | | | | | |
| 5. Layout of content is uncluttered | | | | | |
| 6. Important concepts are highlighted | | | | | |
| 7. Techniques to encourage interaction with the material are present | | | | | |
| 8. Peer interaction is enabled | | | | | |
| 9. Interaction with an instructor is encouraged | | | | | |
| 10. Facilities to encourage critical thinking are present | | | | | |
| 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 | | | | | |
| D. Navigation | 1 | 2 | 3 | 4 | 5 |
| 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 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 | | | | | |

Any further comments:

Thank you for your time and trouble in completing this questionnaire

Appendix B – Interview Questions

Evaluation of e-Learning Module: *Essay Writing with Readings*

Focusing Questions for Semi-Structured Interviews

1 What experience do you have in preparing and writing essays or similar pieces of extended academic writing?

2 How do you find the processes of essay preparation and writing?

The unpacked items below may emerge during discussion of Question 2.

When preparing and writing an essay, what sequence of steps do you follow?

Where, and how, do you access information?

How do you process the information that you have accessed?

What do you find to be the main difficulties in essay preparation and writing?

3 Has doing the module shifted your view of essay writing?

4 Which aspects of the module were helpful for you and which aspects were not helpful?

The unpacked items below may emerge during discussion of Questions 3 and 4.

Overall, how relevant and useful have you found the module *Essay Writing with Readings* to be?

How do you rate the module as an aid to locating and retrieving information?

How do you rate the module as an aid to processing information?

How do you rate the module as an aid to applying information?

How easy did you find the module to use?

5 How likely is it that you will re-visit the module site or use it again?

6 Would you, or would you not, recommend the module to a friend – and why?

7 What suggestions do you have for improving the module?

8 (question specifically for staff users) How would you use the module in your teaching?