ezylearn
education
system

VHIA
Management Services
A Division of VHIA

Interim Review

of

the trial

OF AN E-LEARNING SYSTEM FOR FIRE AND EMERGENCY PROCEDURE TRAINING IN THE VICTORIAN HEALTH SYSTEM

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E-LEARNING REVIEW

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E-LEARNING REVIEW

BACKGROUND

In the latter part of 2002, VHIA Management Services commenced the process of developing an internet-based system for the delivery of Fire Safety and Emergency Procedure Training for health facilities.

There were two main reasons for the initiative. Firstly, we had received an approach from a large rural hospital seeking alternate means of achieving mandatory training requirements under the EquiP accreditation requirements. The task was logistically complex since many staff work part-time and/or variable shifts. This means that ensuring all staff have completed the requirements is difficult and costly to achieve.

Secondly, the IT infrastructure of most health facilities is reasonably well developed, however there is as yet minimal applications development in the area of e-learning. The scope of the Fire Safety and Emergency Procedures Training provided a good opportunity to develop and test an alternate system for training delivery.

This document sets out the process undertaken to develop such a system, the technology used and the field testing performed. The project has been a collaborative effort between VHIA Management Services, Ezylearn Educational Systems and OH&S Consultants Matt Casey and Jo Millard. OH&S staff from Peninsula Health Service also assisted with reviewing an earlier version of the system and suggesting important modifications.

The results of the trial outlined in this report are extremely encouraging.   They suggest that this form of training delivery is well accepted by staff in health facilities and provides a useful tool to assist existing mechanisms for workplace learning. Naturally, there are problems/challenges with the introduction of any new system but these reflect both a lack of familiarity of the technology (which can be relatively easily addressed) and misplaced expectations about the extent to which technology can address a broader range of learning issues.

The outcome from this trial has two conclusions. Firstly, that an e-learning based system for the delivery of Fire Safety and Emergency Procedure Training has application and can address real needs in the health system. Secondly, that e-learning approaches should be further explored in other areas of knowledge development and information transfer in health facilities.

THE RATIONALE AND POTENTIAL BENEFITS

This project emerged from an approach we received from a large rural hospital seeking alternate means of achieving mandatory training requirements under the EquiP accreditation requirements. The task was logistically complex since many staff work part-time and/or variable shifts. This means that ensuring all staff have completed the requirements is difficult and costly to achieve.

This enquiry was the impetus for the investigation of alternate delivery mechanism for the compulsory training course in fire safety and emergency procedures. Potentially such as system offers:

The ability for organisations to delivery such training in a more efficient manner and make use of investments that have been made by health facilities in IT infrastructure.

The opportunity for all staff to undertake the training at a time and location of their choosing.

The ability to track and record staff completing the training and assess their understanding of the training material.

A system that verifies that staff have completed the course and reporting to ensure compliance with regulatory standards.

These potential benefits are significant and are this project seeks to understand how best they might be realised. Critical to the process is the development and field trial of such a system that will enable assessments to be made of the likely uptake and reaction of staff to undertaking their training in this manner. This is the purpose of this project.

DEVELOPMENT PHASE

The development of the training package commenced in the latter part of 2002. A project plan and methodology was developed to ensure that the course content met client needs and that the e-learning framework had functionality that addressed existing logistical and administrative difficulties. The project plan envisaged four discrete activities prior to the conduct of the field trial detailed in this report. These four stages were as follows.

Stage 1:
Course Review and Development

OH&S consultants Jo Millard and Matt Casey developed the course material. This involved a process of review in which existing resources used in many hospitals were considered. The consultants also relied upon the training framework guidelines articulated by the Victorian Department of Human Services and the EquiP accreditation guidelines as set out by the Australian Council for Health Standards.

The course content seeks remain consistent with these guidelines and to satisfy as much of the curriculum as is appropriate using an electronic medium for training delivery.

Stage 2:
Web Enable

Once developed the training package was provided to Ezylearn Education Systems (Ezylearn) a specialist provider of electronic learning management systems. Ezylearn have developed a sophisticated training delivery platform and host training delivery systems (www.ezylearn.net).

The software platform has complex functionality that provides many of the requirements being sought by health facilities. In addition to the administrative functions of training delivery, a key advantage of the Ezylearn learning management system is the tracking and reporting provided. This provides training administrators with a tool to monitor and verify staff usage of the system. The assessment items also provide the ability to verify competency of the training material.

Stage 3:
Testing

This first version of the system was tested at Peninsula Health Service by members of their OH&S Committee. This test was conducted in December 2002 at a controlled session within a training room on site. The test provided an opportunity to verify access arrangements, consider course length and

structure and to obtain expert feedback on the content and performance of the system

Stage 4:
Modifications

The test provided important and positive feedback on the system. Generally, the system and its features were received very positively. A number of key modifications were nonetheless identified. The most important being the need to restructure the course content and assessment items into smaller groups of sequential learning. This required some significant re-programming but resulted in a product considered more suited to the needs of staff in these facilities.

At the conclusion of these activities we had a product ready and functioning for testing in the field.

THE TRIAL

The field test has been undertaken to:

- Enable health facilities to review the course material in the context of the exiting tools and systems used to train staff in these procedures.

- Provide access to the material for staff from varying backgrounds and disciplines

- Enable some assessment of the uptake and effectives of an e-learning system in a health service environment

Obtain further feedback on the details of the course and the performance of the system.

In the early part of 2003, personal visits were conducted to a large number of health facilities across rural Victoria explaining the design and purpose of the system and seeking expressions of interest in participation in the trial. Participating organisations were asked to nominate ten staff members to evaluate the system. The following health facilities registered staff members to participate in the trial.

- Western District Health Service
- Maryborough District Health Service
- Caulfield General Medical Centre
- Mt Alexander Hospital
- Djerriwarrh District Health Service
- Robinvale District Health Service
- Yarrawonga District Health Service
- Kyabram & District Health Service
- Cobram District Hospital
- Southwest Healthcare
- Rochester & Elmore District Health Service
- Echuca Regional Health
- Hepburn Health Service
- Terang & Mortlake Health Service
- Wodonga Regional Health Service
- Sunraysia Community Health Service
- Kooweerup Regional Health Service
- South Gippsland Hospital
- Mallacoota District Health & Support Service
- Inner South Community Health Service

The trial commenced in February 2003 and was conducted over a 6 week period. It should be noted that these 20 organisations joined the trial progressively over the period and not all staff were registered at the outset and indeed some did not commence until close to the conclusion of the period.

The following sets out how the 20 organisations progressed over the trial period.

Organisation	Completion
Caulfield General Medical Centre	0%
Cobram District Hospital	86%
Djerriwarrh District Health Service	65%
Echuca Regional Health	43%
Western District Health Service	10%
Hepburn Health Service	71%
Inner South Community Health Service	0%
Kooweerup Regional Health Service	3%
Kyabram & District Health Service	84%
Mallacoota District Health & Support Service	4%
Maryborough District Health Service	48%
Mt Alexander Hospital	57%
Robinvale District Health Service	75%
Rochester & Elmore District Health Service	20%
South Gippsland Hospital	1%
Southwest Healthcare	58%
Sunraysia Community Health Service	0%
Terang & Mortlake Health Service	27%
Wodonga Regional Health Service	26%
Yarrawonga District Health Service	71%

In terms of the specifics of the number of staff completing or commencing the trial this can be summarised as follows.

Organisation	Number of Staff	Number Completed	Started	Not Started
Caulfield General Medical Centre	5	0	0	5
Cobram District Hospital	10	7	3	0
Djerriwarrh District Health Service	10	6	2	2
Echuca Regional Health	10	4	2	4
Western District Health Service	10	1	0	9
Hepburn Health Service	10	7	1	2
Inner South Community Health Service	3	0	0	3
Kooweerup Regional Health Service	10	0	2	8
Kyabram & District Health Service	10	8	1	1
Mallacoota District Health & Support Service	10	0	3	7
Maryborough District Health Service	10	4	2	4
Mt Alexander Hospital	10	5	2	3
Robinvale District Health Service	10	6	2	2
Rochester & Elmore District Health Service	10	2	0	8
South Gippsland Hospital	10	0	0	10
Southwest Healthcare	10	4	4	2
Sunraysia Community Health Service	10	0	0	10
Terang & Mortlake Health Service	10	1	5	4
Wodonga Regional Health Service	10	2	3	5
Yarrawonga District Health Service	10	6	4	0

TOTAL	188	63	36	89

Completion Times

The average completion time for the course was 1 hour and 9 minutes

In terms of the specific modules and related assessment items the break down of completion times was as follows:

Introduction	6 minutes

Introduction   6 minutes

Type of Fires   36 minutes

Bomb Threat   9 minutes

Evacuation   13 minutes

Personal Threat   7 minutes

Internal Emergency   3 minutes

External Disaster   6 minutes

On completion of the course, staff were provided with an Evaluation Form (see Appendix) to provide feedback on course content, presentation and system navigation.

EVALUATION

The Evaluation Form was distributed to the staff electronically shortly after they had completed the training course. This sought feedback on course content, navigation and presentation. For each question, staff were asked to rate the system on a scale of 1 to 5 where: 1 was very poor; 2 was poor; 3 was average; 4 was good; and 5 was very good. A summary of the results is shown below.
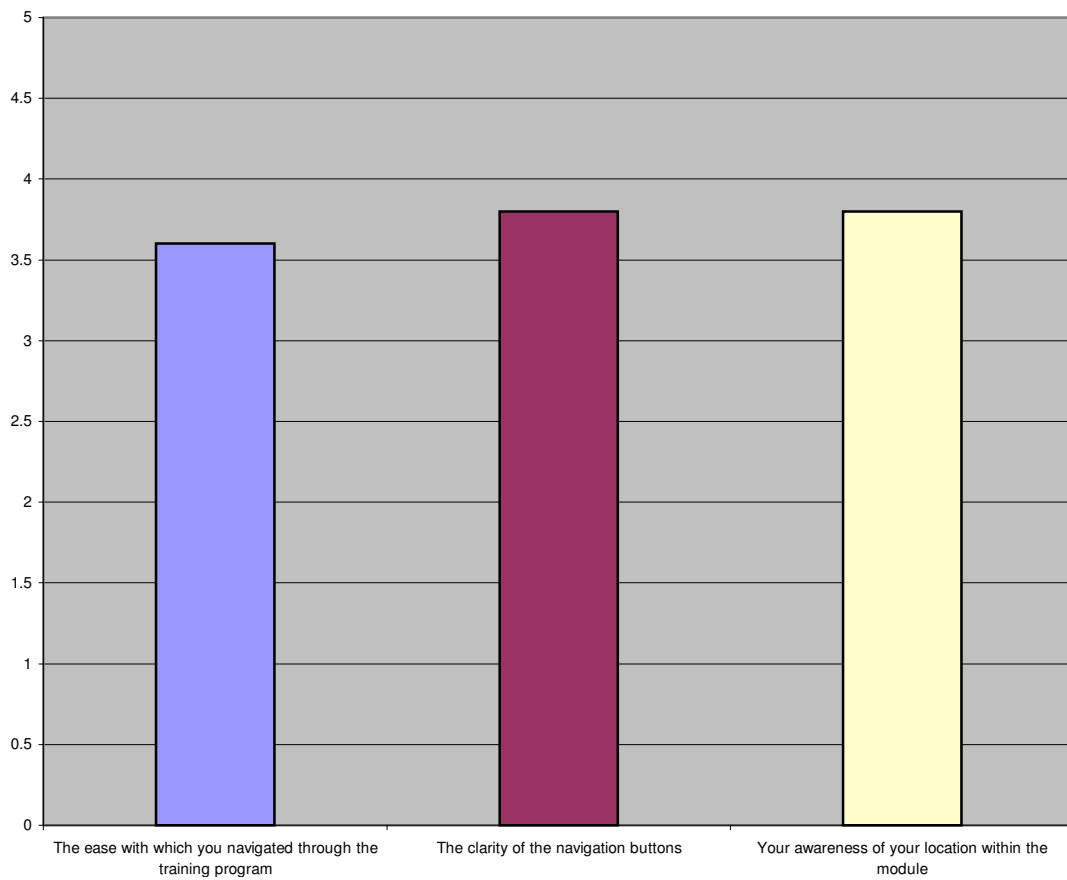
In terms of course content, the course was seen to provide a good overview of the subject matter.

Training Course Content
**(Rate the following on a scale of 1 to 5)**
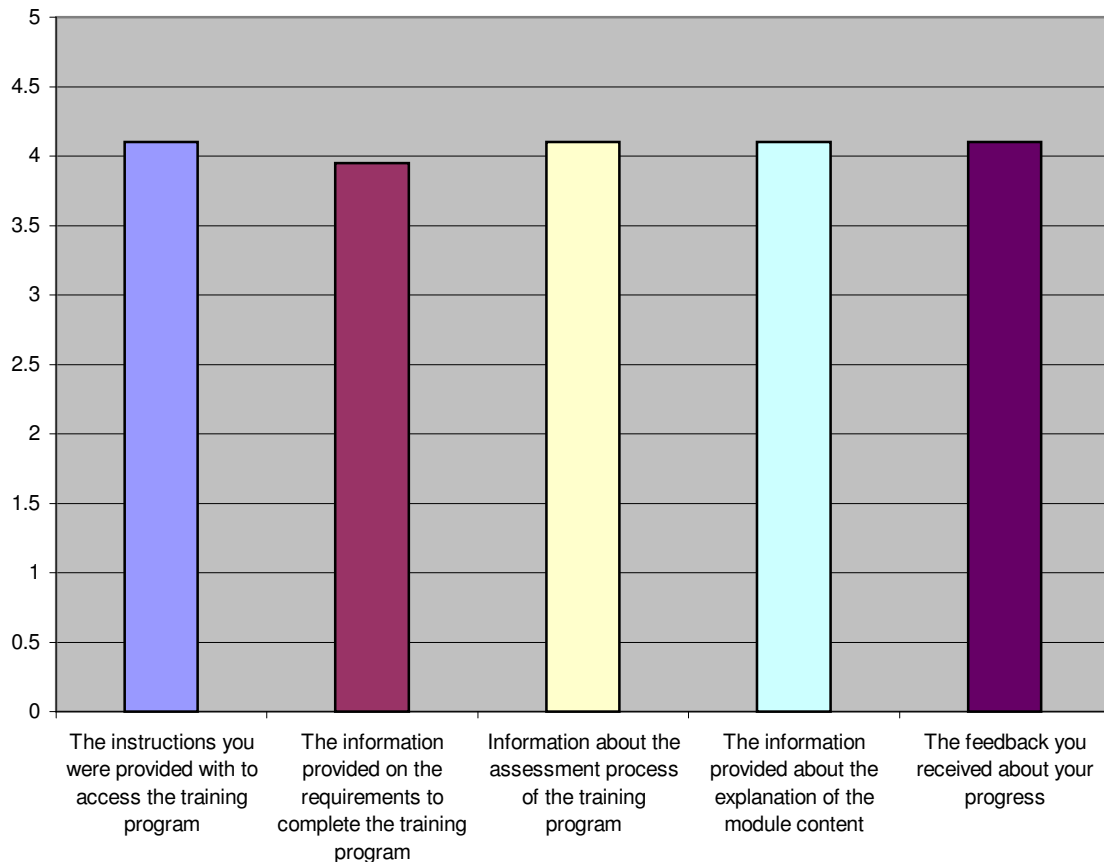
In terms of navigation, the system rated slightly lower. In the main this reflected the variable IT skill levels of the participants and in many cases the staff themselves acknowledged that the problems they encountered were the result of their limited use of computers. Programming changes have since been made to assist these users with the navigation of the system.

Navigation of the E Learning System
(Rate the following on a scale of 1 to 5)

| | The ease with which you navigated through the training program | The clarity of the navigation buttons | Your awareness of your location within the module |

The presentation of the course material was very well received by staff and there was very little negative comment about how the course material was structured and presented to them.

Presentation of the Course Material
(Rate the following on a scale of 1 to 5)
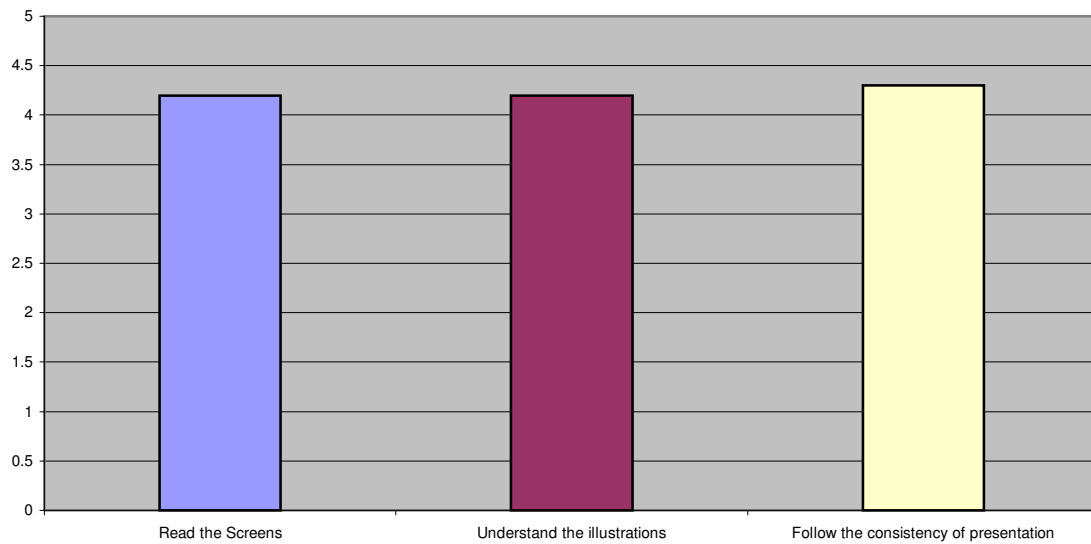
COMMENTS

In addition, to the structured feedback, the Evaluation Form also sought general staff feedback on the training course and the performance of an e–learning system. The following is a brief summary of some of the comments received.

Content

"Fire Extinguishers were still hard to learn. I think the uses of each extinguisher question should be asked with the type of extinguisher to use."

"The content was very accurate concise and well sequenced. The pictures of the Fire Extinguishers was excellent"

" At the beginning I felt we needed to have some idea of how long the program was to take."

Navigation

"Once the first topic was completed it never stated there were more topics to complete"

"At conclusion of training program there was no specific notification just that each module was marked completed."

" I though I had completed but found out I was only half way through. It is not very clear on when finished."

"I am not familiar with computers so this may impact on my assessment."

"Not all information fits easily on the screen"

"Navigation was made more difficult by having to scroll right and down all of the time"

"I became better the more I progressed."

"It was hard at first to know exactly where you were at the start of each section."

"When module completed unsure of whereto go next."

Presentation

"A useful tool to reinforce my learning

"Would be an adequate initial education with a view to the thorough orientation to follow."

"Found the session direct and appreciate the simplicity of the format."

"The presentation was excellent. I thoroughly enjoyed this form of learning."

"Very clear and I felt individual subjects made it able to stop and return to next criteria."

"It would have been helpful to know when we had actually finished the whole program."

The two main issues to emerge from these comments relate to the presentation of the fire extinguisher material and the navigation of the training course.

Programming changes to address the main navigational issue have already been undertaken and the structure and presentation of the fire extinguisher material is under review.

CONCLUSION

An e-learning training course for staff in health facilities has been developed and trialed in 20 organisations.

The results of the trial outlined in this report are extremely encouraging. They suggest that this form of training delivery is well accepted by staff in health facilities and provides a useful tool to assist existing mechanisms for workplace learning.

For these organisations such a system offers:

- A flexible system to deliver learning to a workforce characterised by high numbers of casual shift workers.

- The opportunity for staff to attend and complete training at a time and location of their own choosing.

- A technology to allows for the tracking of staff through the training course, an assessment of their competency and verification that the training course has been completed.

Naturally, there are problems/challenges with the introduction of any new system but these reflect both a lack of familiarity of the technology (which can be relatively easily addressed) and missed placed expectations about the extent to which technology can address a broader range of learning issues.

The system that has been developed is a good start. If the initial interest now translates to ongoing use of this technology then there will be ongoing improvements to both the contents of the training course and the functionality of the system. In this way, user needs will be better met into the future.

APPENDIX

Fire Safety and Emergency Procedures

Training Evaluation Form

Now that you have completed the online Fire Safety and Emergency Procedures course we require your feedback on the materials. The evaluation is to determine your reactions to aspects of the online training materials. In particular it will be important for you to identify any areas in the online training materials; that are difficult to understand, where there are not enough instructions or simply do not work.

The online delivery is structured so that the database records your interactions within the training materials. Such things as the number of accesses, the amount of time logged on for the session, progress through the training program are recorded.

This online delivery of Fire Safety training is unique and innovative. It will assist in the development of the project that you take 10 minutes to fill in the questionnaire. You can assist us by giving us this feedback so that we can ensure that this project is of the highest quality and meets the needs of healthcare facilities and staff.

Instructions:
Please select 1 to 5 as a measure of your response with 1 being poor and 5 being good. When completed please return your form to VHIA by email (krintel@vhia.com.au) or by facsimile (9520 1888).

Thank you.

CONTENT

How would you rate the following?

1.   **The instructions you were provided with to access the training program**

                                        1   2   3   4   5

2.   **The information provided on the requirements to complete the training program**

                                        1   2   3   4   5

3. Information about the assessment process of the training program

                                                                  1   2   3   4   5

4. The information provided about the explanation of the module content

1   2   3   4   5

5. The feedback you received about your progress

1   2   3   4   5

Any other comments on the content of the training program

_____

_____

_____

_____

_____

NAVIGATION

How would you rate the following?

6. The ease with which you navigated through the training program

1   2   3   4   5

7. The clarity of the navigation buttons

1   2   3   4   5

8. Your awareness of your location within the module

1   2   3   4   5

Any other comments on navigation of the training program

_____

_____

_____

_____

PRESENTATION

Please rate the ease with which you were able to perform the following

9.   Read the Screens

                             1   2   3   4   5

10.   Understand the illustrations

                             1   2   3   4   5

11.   Follow the consistency of presentation

                             1   2   3   4   5

Any other comments on the presentation of the training program

_____

_____

_____

_____

Thank you for taking the time to complete this feedback form. When completed please return your form to VHIA.