

An Online Course in Information Literacy

A Case Study by

David Murphy
Open University of Hong Kong
dmurphy@ouhk.edu.hk

Abstract

In order to make best use of available information through the Internet, students need to develop their skills in information literacy. Specifically, they need to have a strategy that enables them to find and evaluate information, and then use it effectively. The Open University of Hong Kong (OUHK) has developed an online course *Mining Information in the Internet Age* to accomplish this purpose. The course also trains students in the use of the OUHK's Electronic Library, which makes available to OUHK students a vast array of educational resources (journals, e-texts, etc.). The course presents students with a 5-step strategy that is designed to suit most information-seeking situations. The strategy is then applied in detail to Internet resources. Each of the three units presents content that is linked to interactive activities and an online discussion group. Links are also provided to online resources relevant to each topic (such as information literacy, search strategies and plagiarism). Assessment is through a series of online tests.

The course was offered for the first time in October 2001. The case study reports on the design and development of the course, its outcome, and includes the results of course evaluation.

Introduction

This paper presents the case study of an online course in information literacy. The value of case studies is that they provide concrete examples of exactly how theories and ideas are brought to fruition by practitioners. They can provide resources for training and development (Murphy et al., 2001), allow points of comparison or simply be a stimulus for the generation of ideas, applications and development by others. Case studies methods are popular in education and training, including research (Stake, 1995), and are also known as 'case accounts' or 'case methods' (Schulman, 1992).

In October 2001 the Open University of Hong Kong (OUHK) offered the online course *Mining Information in the Internet Age* for the first time. Although the OUHK has been offering courses with online components since 1998, this was the first fully online course. Being of general interest and of short duration (up to about 30 hours of study), this non-credit bearing course was offered through the OUHK's Institute of Professional and Continuing Education.

Mining Information in the Internet Age was developed by a Course Team of OUHK staff, with members from the Library, academic units and the Educational Technology and Publishing Unit (ETPU). Instructional design and the drafting of the study units was done by the author of this paper, who is a Senior Course Designer in the ETPU. The project took approximately six months to complete.

Overall, the aim of the course is to improve participants' skills in searching for, evaluating and using information from the Internet. At the same time, access is provided to the OUHK's extensive Electronic Library (<http://www.lib.ouhk.edu.hk/>), and a significant part of the course is devoted to elaborating how best use can be made of this resource. Background resources were gathered and ideas gleaned and refined from a large array of materials from university libraries around the world. Attention was particularly paid to existing online library guides, some of which are included as links in the course.

The basic platform on which the course is built is WebCT (<http://www.webct.com/>). However, due to dissatisfaction with the standard interface of the software, a purpose-designed interface was developed by the team with the assistance of graphic and programming staff of the ETPU. The online discussion group facility of WebCT was left unchanged.

As it turned out, initial enrolments for the course were disappointing, with only 11 students opting to take the course. However, it was believed that the course would be of benefit to staff of the University, and when soon after a slightly modified version was offered to full-time staff, 40 persons enrolled. Encouragingly, these enrolments included both academic and administrative staff. Given this positive outcome, *Mining Information in the Internet Age* will be made available to the large pool of part-time tutors of the OUHK.

Course Features

The online course is divided into three units:

Unit 1: A Strategy for Searching for Information

Unit 2: Finding Information

Unit 3: Evaluating and Citing Information

This simple structure is revealed in the course Home page, shown in Figure 1.



Figure 1: Course home page

Unit 1 presents a 5-step strategy for searching for information, which seeks to answer the following questions:

1. What am I looking for?
2. Where can I look for the information?
3. How can I find the information?
4. How do I evaluate the information?
5. How can I use my information source/s?

These steps form the basis for the course content. Participants are presented with a number of scenarios of persons seeking information from a variety of perspectives, and stages of the scenarios are integrated with the study units, culminating in final outcomes at the end of Unit 3. In addition, participants are led through a series of activities that allow them to apply the steps to their own information-searching needs.

Figure 2 shows how the first unit is structured, with respect to content and features, which include:

- standard header with links to other units, the home page, the discussion group, etc.;
- contents list on the left, with each entry linked to content page;
- right-hand side used for links to relevant external web sites and ‘extras’ (extension work);
- page contents displayed dynamically (adjusts to browser settings) in the middle;
- ‘previous’, ‘next’ and ‘top’ buttons; and
- self-assessment activities integrated with the contents.

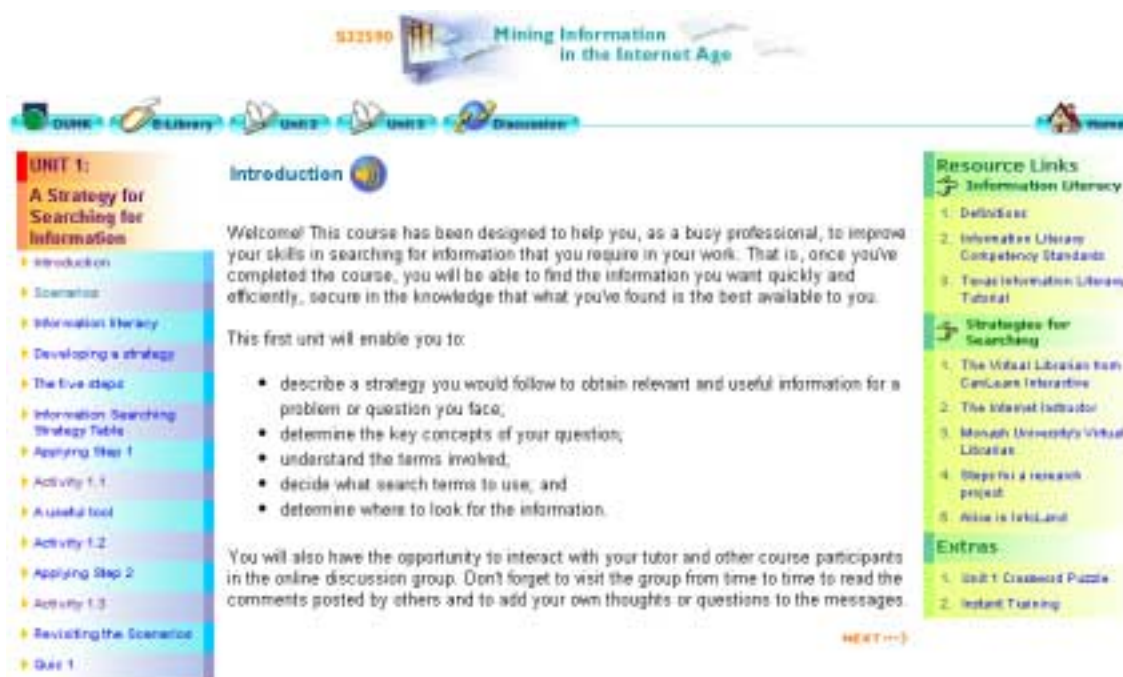


Figure 2: Example page from Unit 1

Multimedia elements in the course include audio introductions to each unit (see audio icon in Figure 2), and demonstrations of the use of software, developed using Camtasia (<http://www.camtasia.com/>). This product allows videos to be made of a computer screen, with added audio for explanation.

Activities and Assessment

As mentioned, activities are a key element of the course, enabling participants to both develop their skills and check their understanding of concepts and processes. Further, many of the activities were designed to encourage participants to pursue their own information searching needs or analyse their own information sources. Feedback is provided for all activities.

For example, the following activity is included in Unit 1:

Activity 1.3

- a) Consider the information sources that you have available to you, both at home, at work and in your local community. In order to make a record of these sources, complete the following table [note: table provided with categories of *home, work, nearest public library* and *other*].
- b) Think about recent instances of searching for information in your own daily life and/or work. For each example, note the source of information that you used, and then consider what alternatives you might have considered. As a simple example, you might have been planning a holiday, and used your travel agent to supply you with relevant information on tours and itineraries. An alternative might have been a travel program on television or use of the Internet. [note: dialogue boxes provided for input]
- c) Take one of your examples that includes the Internet as a source, and enter the key term(s) or concept(s) in the box below. Then consider alternative words or phrases that you might use, and enter these in the second box. You will use these in Unit 2 to undertake a search.

For this activity, the feedback is not of course a correct ‘answer’, but includes examples of the kinds of sources that might appear in a list. Note that each unit also includes a crossword puzzle that enables participants to check their understanding of key terms.

One of the most challenging activities, both for the development team and for participants, is found in Unit 3. The aim of the activity is to improve skills in assessing the quality of information obtained from the Internet. First, there is an outline of eight key criteria (relevance, coverage, etc.) that can be used for such evaluation of information. This is summarised in a table called the Quality of Information Evaluation Tool (QUIET), shown in Figure 3.

Quality of Information Evaluation Tool (QuiET)

Criteria	Issue/Questions	Quality				
		1 (Low)	2	3	4	5 (High)
1 Relevance	Is the information relevant to my problem? Is it directly related to the topic I am pursuing?					
2 Intended audience	Who was this information written for? At what level is it pitched?					
3 Coverage	What range of information is present? Does it have the level of detail I require?					
4 Authorship/ authority	Who is the author? What are their qualifications/credentials? Can they be contacted?					
5 URL affiliation	Who is responsible for the site? What kind of organization produced this site? From what country?					
6 Currency	Is the information up-to-date? When was the site produced/last updated?					
7 Accuracy	Is the information correct? Are you able to check it against other sources?					
8 Objectivity	Why was this page written, and for whom? Is the information biased?					

Figure 3: Tool for evaluating we resources

The activity allows participants to use the tool directly to evaluate the quality of three websites for each of four possible scenarios. Activity 3.1 is shown in Figure 4.

Activity 3.1

Choose two of the following scenarios, and use the QuiET to evaluate the three Web sites provided for each scenario. In doing so, put yourself in the position of the person in the scenario, and imagine what their information needs are. As you complete the QuiET for each site, you can check how your overall rating compares with the average of previous persons who have done this activity. Click the titles of the scenarios you choose to go to the activity.

Scenario 1: Health

You have just come home from a visit to the doctor. She has warned you that you have high cholesterol levels and will need to change your diet, so you decide to find out about it on the Internet.

Scenario 2: Property

You and your partner have decided that you'd like to buy a flat. You are not sure whether or not to buy a new one, and want advice on buying property in Hong Kong. As a first step, you try the Internet.

Scenario 3: Study Assignment

You are a student teacher who has been asked to prepare a paper for other teachers on the advantages and disadvantages of online learning.

Scenario 4: Education

Education You are a Hong Kong family who has decided to send your first child overseas for their education. You are looking on the Internet for information on either:
[\(a\) a good school in Australia,](#) or
[\(b\) a good university in Canada.](#)
 Choose either (a) or (b), and evaluate the three sites.

If you'd like to discuss your findings from this activity with other course participants, visit the Discussion Group. There you can share your thoughts with others, and see if they agree with your conclusions about the quality of the sites you've visited.

Figure 4: Detail of Activity 3.1

By clicking on the scenario of their choice, participants are taken to a page that allows them to use the evaluation tool to directly investigate and assess a web site. An example is presented in Figure 5, which shows one of the web sites used for Scenario 3.



Figure 5: Scenario 3 of Activity 3.1

Participants complete an evaluation of three web sites for each of their chosen scenarios. On submission they are then shown their scores for each site, along with the average of all ratings from previous assessors.

Assessment is through a series of online quizzes, one for each of the three units. Each consists of multiple-choice items, and participants are given up to three attempts to pass. For Unit 1, only one test is used, but for Units 2 and 3, three different versions are supplied. Failure on one version directs participants to an alternative version. Examples of items from the tests include:

In the Library of Congress Classification scheme, the subclass AE is for:

- dictionaries
- directories
- encyclopedias
- indexes
- periodicals

Article 143 of the Basic Law of the Hong Kong SAR of the PRC concerns the issue of:

- education
- elections
- health
- monetary policy
- sport

In the National Library of Canada, the History section's first Research Guide is 'From Colony to Country: A Reader's Guide to Canadian Military History'. The first paragraph notes that Canadians have been described as:

- a) outgoing people
- b) an unmilitary people
- c) an uneducated people
- d) unsophisticated
- e) harmonious

When checking the objectivity of a site, we are trying to find out:

- a) if it includes the information we seek
- b) what type of objects are in the site
- c) whether the information is biased
- d) if the information is accurate
- e) the range of information it offers

The test items are in general either of the recall type or assessing the ability of participants to locate information from both specified and unspecified sites.




Evaluation

An online evaluation instrument was devised to obtain feedback from participants. The questionnaire is a combination of Likert-type items (with a 5-point scale ranging from 'strongly disagree' through to 'strongly agree') and open-ended questions concerning both the course and the Electronic Library.

Useable responses to the evaluation questionnaire were obtained from 27 of the 33 OUHK staff who completed the course. Overall reactions were positive, and examples of evaluation items and the responses from these participants include:




Question (9) I now have a useful strategy for locating and evaluating information.

- 1. Strongly disagree
- 2. Disagree
- 3. Neutral or mixed opinion
- 4. Agree
- 5. Strongly agree

Answer	Value	Frequency Distribution	
1	0%	0	
2	0%	0	
3	0%	3	
4	0%	18	
5	0%	6	




N	Mean	SD	Median	Mode	-	1	2	3	4	5
27	4.11	0.58	4.0	4	0	0	0	3	18	6
					0.0%	0.0%	0.0%	11.1%	66.7%	22.2%

Question (23) I found the activities useful to my learning.

Answer	Value	Frequency Distribution	
1	0%	0	
2	0%	0	
3	0%	2	
4	0%	19	
5	0%	6	

N	Mean	SD	Median	Mode	-	1	2	3	4	5
27	4.15	0.53	4.0	4	0 0.0%	0 0.0%	0 0.0%	2 7.4%	19 70.4%	6 22.2%

Question (30) I would recommend this course to my friends.

Answer	Value	Frequency Distribution	
1	0%	0	
2	0%	0	
3	0%	3	
4	0%	18	
5	0%	6	

N	Mean	SD	Median	Mode	-	1	2	3	4	5
27	4.11	0.58	4.0	4	0 0.0%	0 0.0%	0 0.0%	3 11.1%	18 66.7%	6 22.2%

A detailed report of evaluation findings and activity completion data for the OUHK staff group is found in Murphy (2002).

Conclusion

This case study provides an example of how online technologies can be applied appropriately to teaching and learning (Carr-Chellman & Duchastel, 2000), especially when the course content is related to the technology itself. As such, it further shows how an online learning environment can integrate a number of desirable features that make the most of the opportunities afforded by web-based education. However, as has been illustrated here, this does not necessarily lead to significant levels of interest from potential participants. As has been explained, in this case the situation has been alleviated by making the course available as a staff development opportunity.

References

Carr-Chellman, A. & Duchastel, P. (2000) 'The ideal online course', *British Journal of Educational Technology*, 31, 3, pp. 229-241.

Murphy, D., Walker, R. and Webb, G. (Eds) (2001) *Online Learning and Teaching With Technology: Case Studies, Experience and Practice*. London, Kogan Page.

Murphy, D. (2002) 'Who is Pam Shakespeare?: Researching Self-assessment Activities in Online Courses', Paper presented at the 2nd Conference on Research in Distance and Adult Learning in Asia, Open University of Hong Kong, June 5-7.

Schulman, J.H. (Ed) (1992) *Case Methods in Teacher Education*. Teachers College Press, Columbia University, New York.

Stake, R.E. (1995) *The Art of Case Study Research*. Sage, thousand Oaks, California.