



4th International Lifelong Learning Conference
14 June 2006

Evaluation in curriculum development for information literacy: An Australian example using a Canadian questionnaire

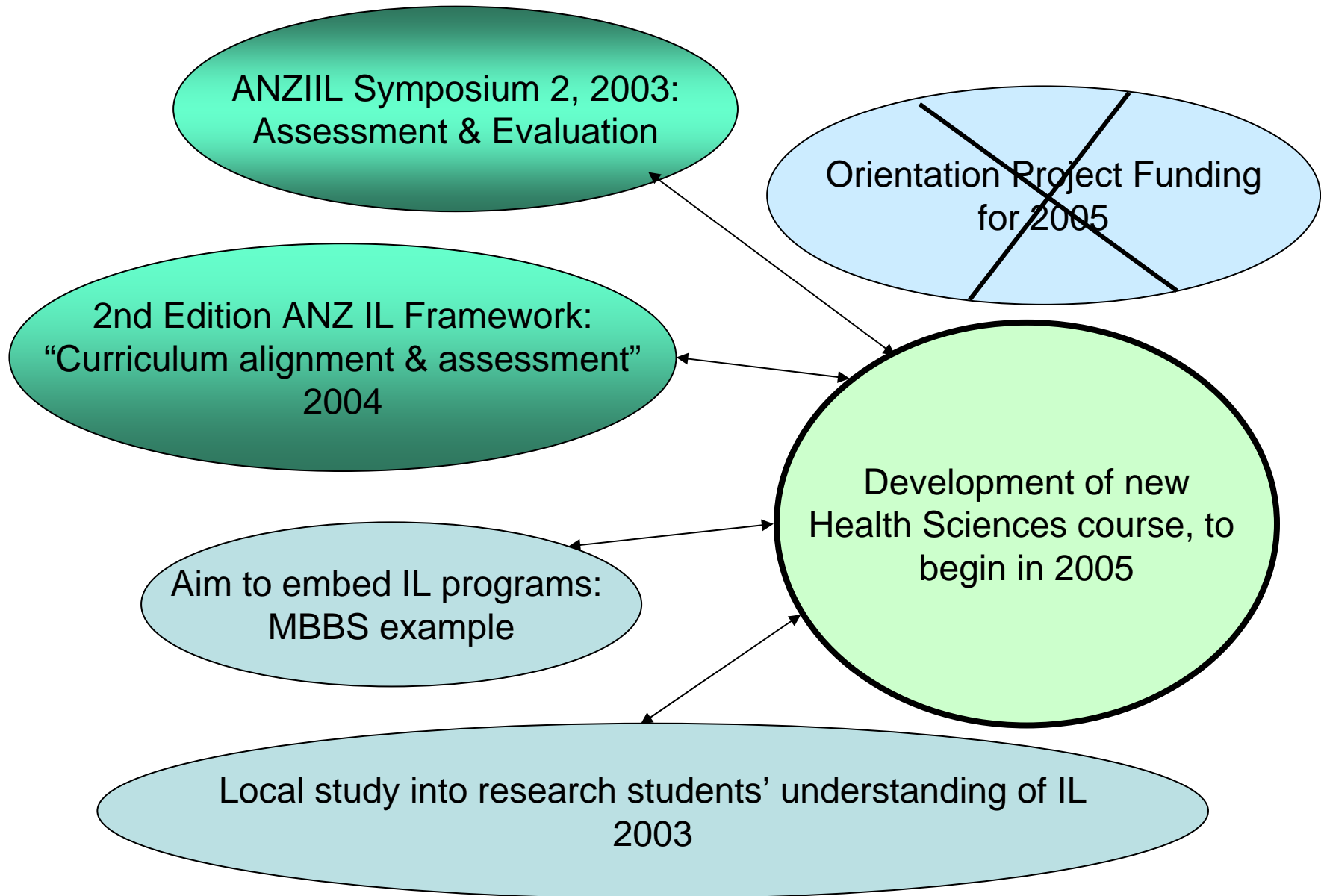
Vivienne Bernath & Joyce Jenkin

Definition

“...*assessment* refers to measuring and describing student learning while *evaluation* is feedback for the educator regarding the effectiveness of the curriculum and teaching.”

M. Lupton in *ANZ Information Literacy Framework* (p25)
<http://www.caul.edu.au/info-literacy/InfoLiteracyFramework.pdf>

Factors leading to the development of this project



Why evaluate

- **Relevance**

- Ability to design a program informed by an understanding of identified needs

- **Effectiveness**

- Are we making a difference?
- Identify areas of further need

Lifelong learning, evidence based practice and information literacy

- Health care professionals must be able to gain, assess, apply and integrate new knowledge and have the ability to adapt to changing circumstances throughout their professional life. Curricula to deliver these aptitudes need to be grounded in the five-step model of EBP, and informed by ongoing research. ...
- Observational studies suggest that one way to 'future-proof' health care graduates, is to train them in the necessary skills to support life-long learning through the five-step model of EBM. ...
- Skills should be taught in context “so that students not only learn the principles and skills, but learn how to incorporate these skills with their own life-long learning and patient care.”

Sicily statement on evidence-based practice. Dawes, Summerskill et al. *BMC Medical Education* 2005, 5:1

Information literacy and evidence-based practice

- **Information skills are central to EBP**
 - First three of the five steps
 - > **Focussed questioning**
 - > **Effective literature searches**
 - > **Critical appraisal of relevant literature**

Target group

- **Three streams within Diploma of Health Sciences**
 - Physiotherapy
 - Occupational Therapy
 - Health Sciences/Social work
- **Skill levels at transition to university?**
 - Local anecdotal evidence from librarians and academics about other groups
 - Evidence from studies elsewhere

What we did

- **Enrolment**
 - Questionnaire implemented - pretest
- **Orientation**
 - Presentation & prize draw
- **Lecture**
 - Feedback; introduction to scholarly literature
- **Tutorial**
 - Scenario-based active learning
- **End of semester**
 - Posttest, same questionnaire

What skills do students bring to university?

Information Literacy: Study of Incoming First-Year Undergraduates in Quebec

Diane Mittermeyer
Diane Quirion

Quebec study, 2003

http://crepuq.qc.ca/documents/bibl/formation/studies_Ang.pdf



'Quebec questionnaire' themes

Themes	Multiple-Choice Questionnaire
Concept Identification	3 questions on significant words
Search Strategy	5 questions on the selection of keywords, the Boolean operators "AND" and "OR", search indexes, and controlled vocabulary
Document Types	3 questions on document types
Search Tools	5 questions on library catalogues, databases, search engines and metasearch engines
Use of Results	4 questions on reading a bibliographic reference/citation, bibliographies, evaluating the information found on the Internet and the ethical use of information

You have to write a paper on the “*Treatment of depression*”. Which search strategy would find the least number of documents?

- a. depression and psychotherapy
- b. depression or psychotherapy or antidepressants
- c. depression and psychotherapy and antidepressants
- d. depression
- e. Other (please specify):
- f. Don't know

You found magazine articles and Web pages presenting different views on a current issue. You want to use this information to write your paper. In which case(s) do you need to include a reference to the source of information? [*select all that apply*]

- a. When you copy word for word a paragraph from a magazine article
- b. When you copy word for word a paragraph from a Web page
- c. When you write in your own words what is being said in a magazine article
- d. When you write in your own words what is being said in a Web page
- e. In none of the above cases
- f. Don't know

Which one of the following citations refers to a journal article?

- a. Miller, A.W. (1997). *Clinical disorders and stressful life events*. Madison, CT, International University Press.
- b. Anderson, K.H. (1999). "Ethical dilemmas and radioactive waste: A survey of the issues." *Environmental Ethics*, 2(3):37-42.
- c. Hartley, J.T. & D.A. Walsh. (2000). "Contemporary issues and new directions in adult development of learning and memory", in L.W. Poon (ed.), *Aging in the 1980s: Psychological issues*, Washington, D.C., American Psychological Association, pp. 239-252.
- d. Maccoby, E.E. & J. Martin. (1983). "Socialization in the context of the family: Parent-child interaction", in P.H. Mussen (ed.), *Child psychology: Socialization, personality, and social development*. New York, Wiley, vol. 4, pp. 1-101.
- e. Don't know

In order to find more documents on your topic you can include synonyms in your search statement. To combine those synonyms in your statement, you use:

- a. AND
- b. +
- c. NOT
- d. OR
- e. Other (please specify):
- f. Don't know

To become familiar with a subject about which you know very little, first you consult:

- a. A journal
- b. An encyclopaedia
- c. A database
- d. A book
- e. Other (please specify):
- f. Don't know

Pretest results

- **Generally experienced in**
 - Searching the internet
 - Using Google
 - Concept identification

Pretest results

- **Could develop skills in**
 - Turning research questions into search strategies
 - > Combining terms appropriately
 - > Searching appropriate fields
 - > Knowledge of controlled vocabulary

Pretest results

- **Little experience with**
 - Finding journal articles
 - Using journal articles
 - Using subject-specific databases
 - Evaluating different sources of information
 - Interpreting citations
 - Acknowledging sources

Pretest: What students told us directly

- *I would be very appreciative if there was some program to assist me as a student, in learning more about research, etc., at the library. Thanks.*
- *I have basic knowledge on Internet use, bibliographies, etc., but need help with footnoting, catalogues, etc. Any help will be greatly appreciated. Thank you for all efforts to make uni life as efficient as possible.*
- *It looks like I'm going to have trouble finding what I need in the library!*
- *I feel that I have not had much prior exposure to journal article searching and retrieving, and would find a tutorial of some description very useful.*

Pre and Post-test comparison

- **Decrease in % correct - 4 questions**
- **No change in % correct - 5 questions**
- **Increase in % correct - 9 questions**
- **Great increase in % correct - 2 questions**
 - (Google vs database, when to cite)

- **Overall improvement, clear need for further development**

Post-test

- **Improved understanding of document types, scholarly literature, databases, citing and referencing**
- **Still some confusion about concept identification, selection and combination of search terms, search strategies**
- **Unclear about how to evaluate internet sites**

Post-test comments

- *I think they should make more classes compulsory to learn how to use and find journals. Also a class on referencing! ...*
- *The information sessions were extremely helpful to me.*
- *Finding information through catalogues and databases is not as difficult as I first anticipated it would be when I enrolled. It is much easier than expected and just took a little bit of effort.*

Some confounders to determining the effectiveness of the program

- **Additional students in target classes**
 - B Emergency Medicine (Paramedic)
- **IL was also addressed in subjects taken with other students**
 - Psychology
 - Biomedical Science
 - > Cells, Tissues and Organisms unit
- **Pretest respondents were not all identified in the post-test**
Cannot infer cause and effect

What have we achieved?

- **Relevance**

- Ability to design a program informed by identified needs ✓

- **Effectiveness**

- Are we making a difference? ?
- Identify areas of further need ✓

Positive outcomes

- **Assists in the development of the “information literate university”***
 - Promotes dialogue with staff and students
 - Practical illustration of skills described in ANZ IL Framework, promoting better understanding of IL
 - Local data is meaningful to curriculum coordinators
 - > “evidence” for articulating and scaffolding IL programs
- **Initiation of library IL evaluation process**
 - *Indication* of program effectiveness, areas of further need
 - Provides a basis for accountability

*B. Johnston and S. Webber. ‘The role of LIS faculty in the information literate university: taking over the academy?’ *New library world*, 105 (1/2), 2004, pp12-20

Further uses of questionnaire

- **Nutrition and Dietetics staff workshop**
 - Examination of information literacy, incoming students' needs
 - > Resulted in mapping of assessment tasks throughout course to ANZ IL Standards
- **Information Management & Systems students' tutorials**
 - Introduction to information literacy at personal and professional levels
 - Examination of validity of questions, usefulness of tool

What we have learned and what is planned

- **Evaluation is not an exact science**
 - The questionnaire provides an indicative rather than definitive measure
 - What would we gain with “perfection” – the results have been “good enough” to inform curriculum development
- **Useful exercise overall, worth continuing**
 - On lookout for tools which better evaluate behaviour and cognitive skills
- **Additional data will contribute to a more comprehensive evaluation of programs**
 - Students’ progress with course assessment
 - Students’ feedback on programs, further needs

Thank you