

Title:

Metadata and health information skills: two examples of e - literacy.

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Abstract

Introduction

The paper reports on two projects which move conventional training programs to learning by means of a self-paced CD. The first project is a metadata skills course, which has been developed for large organisations with distributed authoring of intranet and internet files. The second project addresses the need that most clinicians have for information skills when using the web, where they have not necessarily received education for this during their basic training.

Discussion

Project 1. At the 11th Information Online Conference and Exhibition in January 2003, Anne described an e-learning process that was under development and which could be used to assess and train authors in allocating metadata. In the intervening two years the process has been revised and further developed with a number of participants, to reflect their requests for the most workable training program.

Project 2. The Health Informatics Education Unit of the Monash Institute of Health Services Research (MIHSR) serves as a focal point for industry, government, academia and the various disciplines of medicine seeking to integrate technology with health care. All its courses are delivered via distance education. A new CD course has been developed for medical practitioners which follows the structure of the successful *Advanced Webskills for Pharmacists* also presented by the Unit. Wendy is the head of this Unit.

Methods

Both CDs are presented as self-paced modules supported with email communications. The paper will report progress and evaluate the process of moving a didactic information literacy process to an online environment.

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Introduction

This presentation has a wonderful sense of déjà vu about it – but don't leave yet as the content beyond this slide is different to last Online 2003. Last time the conference Session theme was “metadata” - this time the theme is “changing roles”. The presentation (1) started here two years ago, with an almost identical explanation about how I saw my role and how I explained metadata to a non-informationist. I said that much of how I spend my time is trying to make sense of situations that are not ordered or don't make a lot of sense to the people with whom I work. In trying to make sense of things, I make links between known things or known experiences to bring an understanding to the disordered situation. That explanation can apply as easily today. We're not yet out of work and although we may need to change the medium in which we communicate, the messages and the means to the end are often the same.

Today's presentation gives an update of how the metadata project has fared over the last two years and describes another project designed to help clinicians improve their information skills. But first, given the session theme, a few moments on how traditional roles can change in undertaking information work such as this, and an explanation of the title.

E-learning roles discussed

Why the **e**? Allan Martin (2) says “Some critics are scathing of **e**, perceiving it as a gimmicky add-on which sidesteps the need to ask what it means: e is for empty (of meaning) or excuse (for avoiding definition). However, words survive in usage because they are successful in conveying meaning; and if e were not meaningful, it simply wouldn't be used. Even if we may not be able to be exact about it, we do know what sort of things e refers to, that is ways of doing things that have been made possible by electronic and digital technologies.”

E - Learning is a form of learning that doesn't exclusively take place in a classroom. With e-learning, the educational experience can take place anywhere, on campus and in the home using

a computer with an Internet connection. Usually e-learning takes place in interactive sessions where email is the main, or sole, means of communication.

As far as roles are concerned, a 2002 presentation by Schardt (3) believes that "Distance education presents new challenges in continuing education for both instructors and students. Instructors must develop innovative teaching strategies for learners who are not physically present, and students must modify their learning behaviors to engage in and absorb the course material" In her presentation, she said that her research had shown that distance education students rated their course higher than the classroom students, particularly in gaining knowledge and meeting course objectives. She concluded "The implication for future study is that distance education for CE [Continuing Education] ...may be a more effective teaching strategy than traditional classroom-based instruction". Schardt's conclusion fits with Wendy McPhee's opinion to me when we first started talking about this presentation together. She said simply "Students just like learning this way". Alternatively, Salisbury and Ellis (4) concluded that in their library instruction programs they were unable to endorse one mode of training delivery over another, so clearly there is still space for further research.

Information literacy roles discussed

There are good and explicit definitions of **Information literacy**. **Information literacy** is defined by the American Library Association: "Ultimately, information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand."(5). According to the ALA, an information literate individual is able to;

- Determine the extent of information needed (particularly relevant to Project 1&2)
- Access the needed information effectively and efficiently (particularly Project 2)
- Evaluate information and its sources critically (both Project 1&2)
- Incorporate selected information into their knowledge base (both Project 1&2)
- Use information effectively to accomplish a specific purpose (particularly Project 1), and
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally (particularly Project 2)

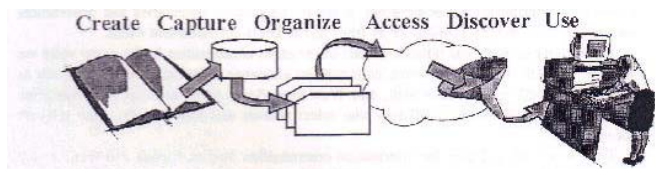
In short, information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and

extend their investigations, become more self-directed, and assume greater control over their own learning. A simpler explanation by Debbie Orr (7) at a recent Information Literacy seminar I attended was that “Learning for Life” included operation, discipline and critical literacy. All this is easier said than done, of course, and it is clear from the e-learning discussion that more work is needed on evaluating the effectiveness of information literacy delivery methods. Information professionals have a critical role to play in this evaluation process.

E-literacy roles discussed

In defining **e-literacy**, Gwyneth Price (7) adds ICT (information and Communication Technologies) literacy and moral literacy into the mix with information literacy and critical literacy. For me in preparing this presentation, the term **E-literacy** simply brought both the methods of e-learning and information literacy together. For the purposes of this presentation, an e-literate student is one who can demonstrate information literacy skills in an electronic/on-line context. From my direct contact with users each day I conclude that, for them, the **e** promises a speed in finding answers that isn't always borne out in practice. They really don't care about “how” we go about helping them with their e-literacy as long as they can quickly find what they need at the end of their time with us.

Metadata skills



I will first discuss the metadata training package. The change of roles in this example is well illustrated in Christian's (8) image

of the information life cycle process. It can be applied to describing the process of moving the responsibility for metadata allocation from centralised to decentralised management. Traditionally an author would *create* while a librarian *captured* and *organised* the information.

In deciding on a distributed authoring model in metadata creation for web files, organisations are asking authors to not only move beyond *creation* to *capture* of their information but also to have an appreciation of *how* to organise the information and *why* this needs to be done. Organisations are asking the authors to have information literacy skills in this area and to demonstrate their literacy in an **e** context. My experience over the past two years confirms the work done by Greenberg (9), which indicated that most web authors are well able to assign metadata to their files once they are competent in this skill and may in fact supply a better result than an information professional because they know their work best.



Metadata training package

The CD package was written following a more traditional classroom delivery for a large Australian government authority.

The package is in four separate modules;

- Module 1: Introduction to metadata
- Module 2: Metadata schema
- Module 3: Creating metadata
- Module 4: Metadata tips and summary.



The Australian public service audience for the package determined the content to Modules 2 and 3, although Modules 1 and 4 could be more generic in their content. Each module concludes with short assessment exercises and there is a month's extension to the package to allow for a portfolio of work to be submitted.

In more detail; **Module 1** is generic in content and aims to introduce the participant to the “why” of metadata, basics of metadata use and how it can be applied to electronic information.



Module 2 has content which is determined by the audience. After a brief introduction to Dublin Core and other schema, it aims to describe the AGLS (Australian Government Locator Service) scheme and the organisation-specific metadata fields that are used primarily for internal administration of the files.

Module 3 starts with a practical focus and includes copies of practice worksheets and screen dumps of the authoring software which they will be using once they are competent in metadata allocation. It also aims to explain the decision and management pathways of the author's work.

Module 4 was, in some ways, the hardest to write as it aims to condense an informationist's “cataloguing” knowledge and work practices simply and quickly. It aims to make authors comfortable with the thought that they can successfully apply metadata to their own work.

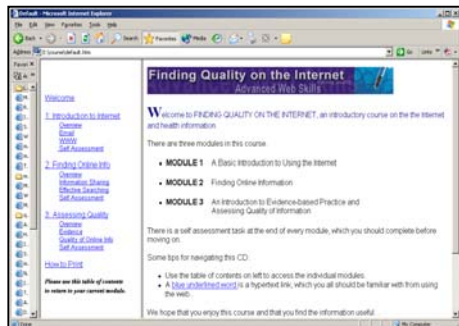
Health information skills

Health Informatics Education (10) provides excellence in medical informatics in the areas of teaching, research and development, and community service. It serves as a focal point for industry, government, academia and the various disciplines of medicine seeking to integrate technology with health care. The Unit delivers all of its postgraduate education by distance learning, allowing students to study in the environment of their choice at the time that suits their lifestyle. The aim is to make study as enjoyable as possible while making sure that the teaching is effective learning for the students. All course material is written in a personable fashion, often using the first person with the lecturer's personality evident. Many different methods of teaching are used: online from a website, from a CD Rom and in paper. All communications are integrated with emails to each other, threaded discussion and many live chat sessions – both during working hours and after hours.

Finding quality on the Internet

This CD was grafted from the highly successful course: [Advanced web skills for pharmacists](#),

funded by the Third Community Pharmacy Agreement, Research and Development Grant in 2002.



The vast majority of Australian Health Workers have no formal IT training yet face many years of future practice in an IT rich environment. Health information management and information and communications technology (IM&ICT) is transforming the ways health

care is managed and delivered. It is empowering consumers and improving the quality and safety of care.

The context for this initiative is illustrated at the recent National Health Information Summit (11). The Summit explored key themes and priorities for information management & information & communications technology (IM&ICT) in Australia's health sector and explored governance and resource frameworks for the future

The major themes for consideration were:

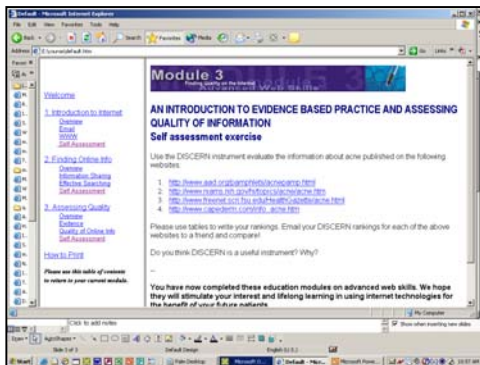
- The evolution of health IM&ICT as an integral part of appropriate health care delivery;
- Improving patient safety and the quality of health care through IM&ICT;
- Empowering consumers and transforming the patient-clinician relationship;
- Australia's electronic health records network;

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- Health IM&ICT for public health and population research; and
- Building the IM&ICT capacity of the health workforce.

Finding quality on the internet is currently marketed to Health Professionals and taught to undergraduate Monash University students.

The self loading CD Rom consists of three modules with the following objectives:



Module 1: A basic Introduction to using the Internet. Its objectives are to understand why the Internet is important and understand the difference between online resources, catalogues and search engines. Its duration is 1 hour.

Module 2: Finding on line Information. Its objectives are to learn to use basic listservs, explore discussion and chat technologies and understand their value as information exchange forums, understand the scope of electronic publishing from on-line Medline to automatic forwarding of documents, and creating and refining searches using standard engines like Google and catalogues such as Yahoo. Its duration is 3 hours.

Module 3: An Introduction to evidence based practice and assessing quality of information. Its objectives are to be able to articulate the principles of evidence based practice, to understand the importance of being able to critically appraise a research paper and to assess the quality of online information. Its duration is 3 hours also.



Each of the three modules has a self assessment task to be completed.

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