User Education, Bibliographic Instruction or
Information Literacy;
semantic argument or philosophical debate?

by

Justine MacShane Lester

Submitted to the Department of Library and Information Studies,
Victoria University of Wellington
in partial fulfilment of the requirements for the degree of
Master in Library and Information Studies

10 October 1997

h
AS741
VUW
A55
L642
U

Acknowledgments

In completing this extended essay I wish to thank the following people, without whom this task would have been an even bigger nightmare.

- * My supervisor, Heidi Julien, for her prompt and insightful responses to my questions and draft copies of chapters.
- * Robin Graham, Information Literacy Coordinator, Christchurch Polytechnic, for her advice and proof reading skills.
- * All my colleagues at Christchurch Polytechnic Library whose queries about my progress meant I had to make some.
- * The Christchurch Polytechnic Research and Development Committee for supporting research by polytechnic staff and for providing the funding for my enrolment in this course.
- * My partner, Nicholas, for disappearing fishing for long hours leaving me with little else to do except study.
- * And finally to Odin (the dog) whose insistence on a game of ball provided much needed study breaks.

Contents

	Page
Introduction	1
User Education	4
Bibliographic Instruction	14
Information Literacy	28
Models	44
Teaching	51
Conclusion	57
Reference List	60

Word Count: 17,692

Abstract

Information literacy, bibliographic instruction or user education? These terms are widely used to describe the programmes designed to assist library clients in their use of library resources. There are as many variations in these programmes as there libraries. This study is designed to satisfy a professional curiosity regarding the appropriate uses of the above terms. Whilst the terms are often used interchangeably in the literature, their definitions suggest that this should not be occurring. Models of information seeking behaviours are compared with the definitions for user education, information literacy and bibliographic instruction. The matching of programme aims and objectives with the definitions of the three terms is an important aspect in the correct usage of the terms.

Key Terms:

User education

Bibliographic instruction

Information literacy

Introduction

What are librarians actually doing to assist their users to make better use of the library and its resources? The need to provide instructional assistance for library clients is not a new concept. However the terms used to describe this instruction vary. A preliminary perusal of the literature reveals that librarians are not consistent in their use of the terms. The three predominant terms used are user education, bibliographic instruction and information literacy. Within the literature these terms are used as if they are interchangeable ways of describing a common concept. Further investigation of the literature reveals that these terms describe very different, though connected, processes. By using the terms in an interchangeable manner, librarians are decreasing the credibility of the terms, both within and outside the library profession. This use is no doubt confusing library clients. There are many examples of relative uniformity across libraries: catalogue and classification systems are a good example. Why not within the field of instructing library users? It seems rather unprofessional that an instructional course at one institution under the title 'information literacy' has the same content as a 'bibliographic instruction' course at another.

When the three terms are used alternately with existing literature, it is difficult to establish whether the author was in fact discussing the new concept or simply wanting to change the term used in order to relieve the 'boredom' of the reader. For that reason, each section in this essay on particular terms will use that term consistently. I apologise for any ensuing boredom due to the repetition of the term. However, as the terms relate to different concepts, swapping them around is not valid.

So why is there a variety of terms for the concept of instructing library users? Changes in technology are seen by many as necessitating a change in what is taught and how it is taught. Information technology has also increased the need for educating library users. It also provides excellent tools for interactive and creative teaching methods. Technological changes have not only changed the way an individual interacts with the library but also how they interact with society. Technology is seen as the main catalyst of the information explosion. At present science and technology data doubles every five and a half years. It is predicted that this doubling will soon occur every 20 months¹

That there is no consistent definition for the terms 'information literacy', 'user education' and 'bibliographic instruction' is the subject of numerous articles. Each article tends to conclude with yet another definition to add to the melting pot. Arp² suggests that neither information literacy nor bibliographic instruction is well defined by the literature. Early attempts to define user education are based on the assumption that to know how to use the library is an essential part of education for life and self education³. There is a strong argument that information literacy is the latest catch phrase. Its use to describe any library education programme has almost become an epidemic⁴. To add to the mix there are geographical variations with regard to the use of particular terms. America and Australia use the term information literacy. For America this represents a

¹Lori Arp, "Information Literacy or Bibliographic Instruction: Semantics or Philosophy,?" *RQ* 30, (1990):46-49.

²ibid.

³Nancy Fjallbrant and Malcom Stevenson, *User Education in Libraries*. (London: Bingley, 1978)

⁴Hannerlore Rader, "Library Instruction and Information Literacy - 1995," *RSR: Reference Services Review* 24, no.4 (1996):77-96.

shift away from the term bibliographic instruction⁵. Great Britain has a bibliographic instruction focus; Sweden uses the term user education as does China, while the Netherlands concentrate on information technology⁶.

There is no argument that some form of library instruction is a necessity. It attempts to enable a large percentage of library clients to be more independent in their use of library resources. Perhaps library instruction is needed because libraries are difficult to use and inefficient⁷, but that is another debate. On the surface there appear to be similarities between the terms information literacy, bibliographic instruction and user education. However closer inspection reveals that this is not the case. Linked to this is the course content for programmes taught under these terms. In order to have professional credibility, librarians need some consistency with regard to the definitions and uses of these terms. This essay attempts to clarify definitions for the terms information literacy, bibliographic instruction and user education. In doing so, differences between the terms will become obvious. Models of information seeking behaviours will be discussed in light of these definitions. Finally a matching of course content to the concept definitions with an investigation of who is likely to be best skilled at teaching particular parts will be discussed. This essay attempts to prove that these terms are philosophically different and that it is not simply a case of semantics. Their correct usage is vital to the credibility of the library profession, especially where the terms cross into other disciplines.

⁵Ian R.M. Mowat, *User Education in Academic Libraries*. (Loughborough: I Malley, 1979)

⁶Hannelore Rader, "User Education and Information Literacy for the Next Decade: An International Perspective," *RSR: Reference Services Review* 24 no.2 (1996):71-76.

⁷Nancy Fjallbrant and Malcom Stevenson, *User Education in Libraries*. (London: Bingley, 1978)

User Education

The concept of user education in libraries has existed for over a hundred years. At the 1881 American Library Association (ALA) conference Otis Hall Robinson requested that a definition be drawn up for the term user education. The resultant definition contained two objectives for students as a result of a user education session: one, that they develop the art of discrimination, the ability to evaluate information; two, that the session gives them the skills to become independent learners with regard to their use of the library. And finally that the sessions give them the skills to enable lifelong learning⁸. The origins of user education, in America, date back 170 years to Harvard College in the 1820s. Between 1870 and 1914 the popularity of user education varied. In the past library users were provided with access to the library's catalogues but the books were kept in closed stack. As library collections were made accessible, then the importance of user education has increased. From 1876 - 1932 user education literature showed a move from teaching the use of materials for research to instruction in access procedures. In the 1960s, Patricia Knapp⁹ introduced the concept of problem solving to user education. The 1960-70s saw a focus on access skills and bibliographic tools. In 1973 the Library Orientation Exchange Clearinghouse (LOEX) was established.

In practice, the term 'user education' has taken on a narrower meaning than that discussed at the ALA Conference of 1881. There are as many variations on the user education theme as there are libraries with user education programmes. Most involve the user in some form of instruction, education and exploration of the library. Whilst the aims of sessions may vary there

⁸A.J. Evans and Ian Malley, *Educating the User*. (London: Library Association, 1979)

⁹Nancy Master, "Taking the Mystery Out of the Library: User Education at UNLV's Dickinson Library," *The Reference Librarian* no.48 (1995)115-129.

is a uniting thread, taking the mystery out of the library¹⁰. Most user education programmes aim to make the library user more effective, efficient and independent in their use of sources, resources and library services. User education is also seen as a means for taking pressure off the reference staff. The focus of a user education session is the use of one library, its materials and resources, with the end result teaching users how to make effective use of the library system. To do this, user education involves the 'transmission of basic library skills having relevance to students operating in a particular setting with content governed by the immediate needs of a narrowly defined course'¹¹. User education often focuses on teaching subject based content techniques and the acquisition of particular skills, relating to how to find information using library tools, such as bibliographic sources.

There is an increasing recognition that one cannot be taught to use a library in isolation. Every interaction between library staff and the library user can and should have some educative value. User education has aimed to maximise the value of this interaction. One aspect of this is to provide training in specific databases rather than general transferable search skills. Early attempts to justify user education focused on education for life with regard to library skills¹². Methods of user education are still very similar to those proposed by the Royal Society Scientific Information Conference in 1948, those being that new students receive an introduction to the library. Advanced students received instruction on the structure of literature in a given subject area. However nothing was suggested in the way of more advanced levels or refresher courses.

¹⁰ibid.

¹¹John Cowley and Nancy Hammond, *Educating Information Users in Universities, Polytechnics and Colleges*. (London: British Library Research and Development Department, 1987), 3.

¹²Nancy Fjallbrant and Ian Malley, *User Education in Libraries*. 2nd ed. (London: Bingley, 1984), 7.

Convincing academic staff within education institutions of the validity and value of user education programmes is an ongoing challenge for many librarians.

Some of the more recent changes in the practice of user education result from changes in technology. Within an information and technology age, the term and concept of user education can be seen as being insufficient. One of the main catalysts for changes in user education has been information technology. The time line of technology changes has to some degree been reflected in changes in the need for user education. Printed indexes and information sources are often seen as able to be used independently of the librarian. Electronic sources have however meant that librarians need to be involved in the learning process. The aim of user education is also to encourage co-operative participation between the librarian and the subject tutor. In the past it has been satisfactory for the librarian to take responsibility for teaching general skills and general knowledge related to library and information tools. More specialised information was seen as the domain of the academic tutor. However with changes in technology it is the librarian who is in the best position to become the 'expert' in the use of this new information technology.

The role of user education is to make users aware of information resources and to enable the user to 'enjoy' the search for information¹³. Due to the complexity of library information systems it could be suggested that the necessity for user education is of librarian's own making. Instruction is given to users to help them make the best use of the library. Perhaps making the library systems easier to use would reduce the need to have librarians in a teaching role. This of course is unlikely to happen in the near future. As the volume of information increases so too will

¹³Nancy Fjallbrant, "Why User Education and How Can Information Technology Help?" *IFLA Journal* 16, no.4 (1990):405-413.

the need to be able to access the particular information required successfully. Through training in the use of indexing and full-text databases, user education is preparing users for the continued expansion of information. User education forms a buffer that links the subject curriculum with appropriate library resources. Use of the library and its resources is the main focus of most user education programmes. Unfortunately user education programmes are often based on finding as many results as possible for a particular search. The relevance of the information found and the critical evaluation of it is not a factor.

Adding to the confusion between the terms 'user education', 'bibliographic instruction' and 'information literacy' are the job titles and team names given to the library staff responsible for the education of library users. In many cases there is a mismatch between the librarian's job title, their programme name and what they are actually teaching. An example of this is where user education programmes are taught by the bibliographic instruction section librarians¹⁴.

In her 1992 bibliography, Rader¹⁵ noted that user education publications continued to deal with teaching users how to access information, including on-line searching, online systems use and bibliographic computer applications. There is a huge variety of user education programmes from basic information searches to more advanced literature searches. Printed guides and subject lists are included as a form of user education. User education also includes signage within the library, or it can take the form of instructional guides and additions, such as help screens, to computer databases. In an online environment, user education tends to focus on the scope and features of

¹⁴Nancy Master, "Taking the Mystery Out of the Library: User Education at UNLV's Dickinson Library." *The Reference Librarian* no.48 (1995):155-129.

¹⁵Hannelore Rader, "Library Orientation and Instruction - 1991." *Reference Services Review* 20, no.4 (1992):69-84.

the information resources available, preparation for and the carrying out of searches. As a result software packages are often the focus of user education programmes. The ability to use these packages is an essential part of information retrieval. The ultimate goal of the training session is that the student has the ability, relatively independently, to carry out searches online. Types of online user education include guidance in online use, computer skills and concept or search strategy formulation. The latter involves the analysis, synthesis and development of an information need into a search strategy. There are three main skills that are required in order to be successful in carrying out a search. These are subject knowledge, the ability to use a computer terminal and knowledge of the system being used, with regard to, for example, its scope and search commands.

User education courses vary according to the library, the teacher, the subject and the students. Programmes in user education operate on a number of levels as well as having a variety of parts. These can include an introduction to the course of study or a tour of the library which includes the location and nature of important bibliographical tools. There are two predominant parts to user education. The first students tend to encounter is the orientation of the library. This session tends to focus on the main areas of the library. There are often many aims for this session. These can include the transmission of attitudes and information that are essentially a form of marketing designed to make a student confident with regard to library staff and their willingness to assist them. Another aim is to encourage the students to come back to the library. Orientations can also focus on basic level general technical library use, what is available, its organisation and layout.

One sample of second level user education is called bibliographic instruction, that being

an introduction to the use of particular subject area resources and techniques for using these¹⁶. Practical work related to sessions may involve the principals of subject searching (selection of terms and search tools such as boolean logic) and a subject search practical. The use of the term bibliographic instruction within the context of a user education activity is an example of the use of these terms that adds to the confusion. Second level user education sessions can include skills related to identifying one's information need, finding information, evaluating found information and selecting the best fit between found information and the information need. In the online setting, the end objective is for the students to have the skills to carry out their own search. As with any form of education the goal and objectives of user education courses vary according to a number of factors. Included in these factors are the students' needs, assignment requirements, available bibliographic tools, subject area and teaching skills. An example course is that from Chalmers University of Technology¹⁷. Their course includes library orientation, information retrieval, a session focusing on how to use the catalogue and reference material, and advanced sessions that cover how to use electronic databases. Goals are as seemingly simple, yet vital, such as the ability to find and use books in a particular subject area. At a more advanced level it can involve an in-depth knowledge of sources and their appropriateness to a given information need. In all cases it is important to establish a link between library resources and subject taught. The manner in which these skills are taught also varies. Widely recognised is the importance of practical work as a means of learning.

¹⁶Nancy Fjallbrant, "Why User Education and How Can Information Technology Help?" *IFLA Journal* 16, no.4 (1990):405-413.

¹⁷Hugh Fleming, *User Education in Academic Libraries*. (London: Bingley, 1990)

Fjallbrant and Stevenson¹⁸ state that user education is concerned with the whole of information and the communication process. The search strategy approach as a conceptual framework for teaching research skills has dominated user education since the 1970s¹⁹. Search strategies are skills that can be transferred to other databases and therefore other occasions when information is needed. Search skills represent a systematic approach to information seeking. Teaching critical thinking skills is an important addition to information finding skills. Independence with regard to the accessing and use of information sources has tended to be the main aim of user education programmes. Built into this is the assumption that users recognise when they require assistance and know where to seek this assistance. However teaching library users how to use retrieval devices such as catalogues and indexes are still core components in the majority of programmes. User education programmes are designed to help the student get the right answer to a particular problem. Progression from basic information retrieval to more advanced techniques should follow the development of the students' skills and needs. The teaching of what is often seen as basic skills is important. Knowledge of what information is available and how to locate it is an important part of the process. These skills form the foundation for further skills acquisition, such as critical thinking. Students should be encouraged to develop logical, creative and critical approaches to the subjects studied. Critical thinking is a key skill related to the location and use of information. It is also a key component of information literacy. Critical thinking skills are implicit in any successful information seeking and use, but are not always taught.

¹⁸Nancy Fjallbrant and Ian Malley, *User Education in Libraries*. 2nd ed. (London: Bingley, 1984)

¹⁹*ibid.*

There are a large variety of programmes taught under the heading 'user education'. However there does appear to be a base consensus for what should be included. There exists strong opinion as to what is appropriate for the librarian to teach as part of the user education process. Two studies contribute to this area. The first was completed in 1988 by Cowley²⁰. It surveyed libraries to establish what user education programmes were being carried out. The titles given to the sessions give an indication of the content. The second study involved the survey of New Zealand academic libraries in 1997²¹. The similarity of the questions, allows a comparison between the studies and provides insight into changes, over time, in librarians' perception of the acceptable content of user education programmes. Cowley's study found that 96% of respondent libraries carried out basic introductions and library induction as part of their user education programme. Numbers decrease as programme areas become more specialised and require a higher level of knowledge and teaching skill on the part of the librarian. General library skills were taught by 59% of libraries with 52% teaching the use of subject or course related literature. Assistance with students' project work was provided by 38% of libraries. Of most interest, in terms of librarians teaching information literacy, was the response levels for the non-library skills. Only 1.5% of respondent libraries included study skills and communication skills, such as note taking or report writing in their user education programmes. These skills are not used or not applicable for 65% of the libraries surveyed. They make up a key part of information literacy. It is of interest when considering that we claim to teach information literacy within libraries, through the naming of our library programmes. The survey shows that we are either not teaching all the components of information literacy or we do not perceive the non-library areas of

²⁰John Cowley, *A Survey of Information Skills Teaching in UK Higher Education*. (London: British Library, Research and Development Department, 1988)

²¹Heidi Julien. *Report of User Education in New Zealand Tertiary Libraries Survey, 1997*. (12 September 1997.) <http://www.netlink.co.nz/~nzlia/conf97/useredrep.htm>

information literacy as being part of our teaching role. These opinions are repeated in the results of Julien's study. Her study showed that librarians draw a line between the skills that should be covered by library staff and those for which they should take partial or no responsibility. Although 92% of respondents thought that the ability to critically analyse and evaluate information was part of information literacy, only 68.4% believed that librarians should take only partial responsibility for this area with 18.4% stating librarians should take no responsibility. Recognising when information is needed is one of the first steps in many information literacy models. Julien's study found that 65.8% believed librarians should take a partial role in this skill and 21.1% were in favour of librarians taking no responsibility. Although the literature states that critical thinking skills are part of user education, bibliographic instruction and information literacy, only 35% of the respondents see these skills as an element of information literacy. Their responses were evenly divided between those who thought librarians should have no responsibility and those who believed they should take partial responsibility for teaching this skill. The more recent of the two studies reveals that librarians are still stating that the teaching of non-library skill areas is not totally their responsibility. These skill areas are key elements of the majority of definitions of information literacy. They are what separates information literacy from user education or bibliographic instruction. It is of note that as librarians, we are pushing for our students to become information literate yet we are not teaching all the skills involved. Literature related to information literacy focuses little attention on the role of other experts, such as subject tutors, in providing some of the skills that make up information literacy. There is, therefore, a gap between the terms we use to describe our own programmes and their actual content.

The literature suggests that if the students are learning how to locate material for one information need then they should be able to apply those skills to future information needs. The

ability to do this depends in part on the scope of the user education programme. This requires a teaching style that emphasises the transferability of the skills being learnt. Transferable skills are those that the student could use, with confidence, to attain information whatever the situation or setting. Without this aspect to user education, end users can be left with a narrow range of skills, often related only to a particular tool or library. A changing trend in user education is that mere use is insufficient. This acknowledges that current practices of user education have limitations and will need to change. Future predictions include that library user education needs to support the concept of educating for life long learning. This concept brings user education closer to the definitions of information literacy. Should information literacy become an objective of user education programmes? This could only be achieved through the expansion of objectives, materials and methods related to user education. Will user education evolve into information literacy like the evolution that has taken place from library orientation to bibliographic instruction. One of the challenges of user education is the variations in prior knowledge and skills that users bring to the teaching session. For some, their information need is articulated and well defined; for others, there is a largely unknown need that is driven by an assignment or task required by their subject tutors.

So what then is user education? User education is wider than bibliographic instruction but narrower than information literacy. It encompasses anything that we do within the library to assist our users to become independent in their use of library resources. Database guides and signage, printed material, self-paced guides and computer based tutorials can be included in user education. Basically any tool, including teaching sessions, created by library staff and designed to ease the interface between their clients and the library's resources is a form of user education.

Bibliographic Instruction

The term 'orientation' has historically been used to describe any attempt at instructing students in using the library. Recently it has come to have a more limited meaning. It now tends to describe a tour related to the physical layout of the library. These tours are often guided by library staff but can also include self-guided, audio and stationary orientations. Bibliographic instruction is, in some ways, a backlash against the library tour. Tutors often see the library tour as being all their students need in order to know everything about the library. Library staff, especially those on the reference desk, know that this is not the case. Renford and Hendrickson²² view bibliographic instruction as a grass roots service which was started by reference or undergraduate librarians. Instruction programmes are devised as a solution to a specific assignment question or one of the many problems encountered at the library front desk. Bibliographic instruction therefore is often a response to insufficient library knowledge and skills (perceived or actual) on the part of library users. All users of libraries have some level of library skills, from those who are competent in database searching to those who rely on shelf browsing. Bibliographic instruction attempts to increase students' skills to various levels with regard to particular resources, for example, teaching a class how to use a particular subject resource. In this way bibliographic instruction is an activity that facilitates the process of interaction between the individual and the complex organisation of the library.

There are many definitions offered for the term 'bibliographic instruction'. Bibliographic instruction '...encompasses all activities designed to teach the user about library resources and

²²Beverley Renford and Linnea Hendrickson, *Bibliographic Instruction: A Handbook*. (New York: Neal-Schuman Publishers, c1980)

research techniques²³. Bibliographic instruction attempts to clarify the relationship between information and the individual by teaching the individual how to use the library most efficiently. The fundamentals of library and information organisation provide the teaching basis of bibliographic instruction. It involves the introduction of the user to the information resources available in particular subject disciplines and the techniques for making use of these resources²⁴. Another definition is that bibliographic instruction 'is the systematic nature of the effort to teach something - a set of principles or search strategies relating to the library, its collections, or services - using predetermined methods in order to accomplish a predefined set of objectives'²⁵. Subject focused bibliographic instruction also includes the nuts and bolts of the nature and function of libraries including the classification systems, online catalogues and how to find a particular book on the shelves.

Bibliographic instruction, as a means of educating library users, exists in a variety of forms. The major modes of bibliographic instruction are: 1. printed materials, 2. audio/visual presentation, 3. point of use explanations, 4. programmed instruction, 5. formal courses, and 6. tutorials. Sessions that involve interaction with students can vary from formal class settings, such as credit courses, to small group discussions or one-to-one instruction. Bibliographic instruction resources used in these sessions include printed guides, course related handouts, workbooks and computer assisted instruction. Bibliographic instruction resources that users often access independently from library staff can include written guides and brochures, audio visual guides, and

²³ibid., 184.

²⁴Diane Nahl-Jakobovits and Leon Jakobovits, "Bibliographic Instruction Design for Information Literacy: Integrating Affective and Cognitive Objectives," *Research Strategies* 11, no.2 (Spring 1993):73-88.

²⁵Cerise Oberman and Katina Strauch, *Theories of Bibliographic Instruction: Design for Teaching*. (New York: R.R. Bowler Co., 1982), 32.

computer assisted packages. Library users are able to access these at their own time and pace. There may also be a variety of handouts designed to assist students, such as bibliographies and topical guides which list resources on a particular topic or discipline. These topical guides can include lists of subject headings, relevant reference books and indexes. Guides to particular sections of the library (for example journals and the reference section) enable students, to a certain degree, to access particular resources independently from library staff. In many ways this is a pseudo independence that has been created by the library staff through the creation of the subject guides as part of the library's bibliographic instruction programme. The combination of offerings in the bibliographic instruction programme is determined predominately by the library type and the perceived student need.

Bibliographic instruction in the formal class setting has traditionally started with the fifty minute lecture²⁶. A bibliographic instruction course is a series of these one-shot lectures. Session content varies and the order of presentation of each of the sessions is important. Sessions may focus on specific families of facts and finding tools within a particular subject area, for example: indexes, encyclopedias, dictionaries, library catalogues, and periodicals. Some sessions focus on more specific and specialised resources, such as government documents, laws, and maps. Completion of library skills workbooks that include text and exercises may be used as learning aids in some sessions, for example library handouts with gaps for students to fill in using information gained during sessions. Technological advances mean that computer programmes can be developed to assist with bibliographic instruction programmes. These computer programmes usually provide information regarding how to access particular subject tools.

²⁶Beverley Renford and Linnea Hendrickson, *Bibliographic Instruction: A Handbook*. (New York: Neal-Schuman Publishers, c1980)

Assessment in these computer programmes is based on the need for a correct answer or information to proceed.

To understand the true focus of bibliographic instruction, one needs to look at the term bibliography. Although in the past it has involved a focus on book material, the term is more commonly used within libraries to refer to a particular subject. Bibliographic instruction is very subject focused. It is the aspects, resources, sources and tools relating to a particular subject that the bibliographic instruction librarians are responsible for teaching. This use of the term has developed from the notion of a bibliographer, that is the person, often the librarian, responsible for searching for material in a particular subject area, selection of relevant material, creating descriptions of the selected material and finally organising the descriptions. In this way librarians have created wholesale bibliographies. Beaubien²⁷ suggests that students need to be able to access these bibliographies in order to create their own pragmatic bibliographies. The underlying idea for this is that students create their own bibliographic resource of materials and resources found during their use of the more formal bibliographies held within libraries.

Bibliographic instruction is related to a particular subject and how knowledge is organised and created within it. In this way it is something more than just basic orientation. Bibliographic instruction is most important and useful within the context of a particular information need. In some libraries, the staff responsible for the sessions vary according to their subject specialization. Bibliographic instruction puts a lot of emphasis on the way information organization takes place within a discipline and how it therefore varies between disciplines. The America Library

²⁷ Anne K. Beaubien and others, *Learning the Library: Concepts and Methods for Effective Bibliographic Instruction*. (New York: Bowker, 1982)

Association Model Statement²⁸ described bibliographic instruction as being about 1. how information is identified and defined, 2. how information is structured, 3. how information is intellectually accessed and 4. the physical organisation of information. If the way in which information and knowledge is created varies according to disciplines then bibliographic instruction must also vary across disciplines. This represents the application of bibliographic theory to bibliographic instruction²⁹. The two key areas where the creation of knowledge varies is between the sciences and the humanities. Part of this is the way in which the research process varies according to the discipline area. Bibliographic instruction therefore needs to be carried out by librarians specially trained in the interdisciplinary science of research or by librarians with subject specialist backgrounds in the relevant discipline³⁰.

Course related instruction includes library skills and bibliographic information necessary to complete the objectives of a particular subject course. In order to be relevant and useful to the students this needs to relate directly to the course outline. Unlike basic library instruction, course related bibliographic instruction requires a larger time commitment in terms of actual hours of teaching, not to mention preparation and planning. Course related bibliographic instruction usually supports a pre-existing assignment. Often bibliographic instruction is taught as a component of a larger course. An example of such a course is from BASK. In this example that

²⁸Carolyn Dusenbury and others, *Read This First: An Owner's Guide to the New Model Statement of Objectives for Academic Bibliographic Instruction*. (Chicago: American Library Association, 1991)

²⁹Ross Atkinson. *Back to the Books: Bibliographic Instruction and the Theory of Information Sources: Papers Presented at the 101st Annual Conference of the American Library Association, ACRL-Bibliographic Instruction Section*. (Chicago: American Library Association, 1983)

³⁰Carolyn Kirkendall, ed., *Directions for the Decade: Library Instruction in the 1980's*. (Michigan: Pierian Press, 1981)

larger course is related to reading, writing and research skills³¹. The course includes bibliographic instruction sessions relating to the following topics: 1. an overview of sources, 2. the use of abstracts for finding journal information, 3. finding and using statistics, 4. the use of government sources, 5. information on resources related to subject access, 6. access to bibliographies, 7. the use of indexes, 8. using reference sources and 9. evaluation of resources. In many ways this is a mini reference librarian training course. Credit instruction means that students, upon successful completion of the course, can add the credits towards their qualification. Credit courses involve separate sessions of instruction in bibliographies. This integrated instruction is incorporated into the course timetable. Programmes (especially credit courses) need goals and objectives. Librarians need to be able to articulate why they are doing a particular activity. Objectives need to be set in order to ensure goals are met and teaching practices are consistent. Faculty support is critical to the success of any library programme, especially those taught within existing subject courses. In some cases the involvement of library staff is due to faculties no longer teaching research or library methods as part of the curriculum³². Previously it was common for the subject lecturer to show students how to use parts of the library. This 'tour' was often based on the lecturers' own experiences of finding information. As technologies have changed, the face of information searching and retrieval, subject lecturers are not necessarily able to explain correctly how to use these resources.

The main publication related to bibliographic instruction in libraries, especially in America, is the 'Owners Guide to the new Model Statement of Objectives for Academic Bibliographic

³¹Jon Lindgren. "Library use instruction and the basic learning process," in *Bibliographic instruction and the Learning Process: Theory, Style, and Motivation*, ed. Carolyn Kirkendall (1982), 71-72.

³²Anne Beaubien and others, *Learning the Library: Concepts and Methods for Effective Bibliographic Instruction*. (New York: Bowker, 1982), 65.

Instruction'³³. This publication involved the revision of the 1979 statement on bibliographic instruction to reflect the trend away from tool based to concept based bibliographic instruction. It involved a dramatic departure from the 1979 document. The purpose of the guide is to stimulate debate on the issues of bibliographic instruction and provide a catalyst for the redirection of bibliographic instruction programmes. The role of bibliographic instruction is seen as firstly providing students with the specific skills needed to complete an assignment successfully, secondly to provide the skills of life long use of information sources and systems. There is a strong focus on processes rather than tools. This means a shift away from teaching students how to use the subject resources in a particular area. One of the goals is that the skills taught should assist in the lifelong use of resources. This signals a need to teach skills that are transferable across subjects and time.

The Model Statement is designed as a checklist for bibliographic instruction librarians as well as a resource to assist in the development of new courses. It is designed as a paradigm activity for information gathering³⁴. It involves four levels: 1. Information recognition - how information is created and communicated, 2. Information structure - organisation of information into recorded and unrecorded sources, 3. Information access - information selection using a number of access points and sources, 4. Physical access - the actual retrieval of the identified information. The above four attributes form the structural basis of bibliographic instruction. The underlying philosophy is that bibliographic instruction is more than just education in learning how to use information sources. Bibliographic instruction should provide a cognitive framework for

³³Carolyn Dusenbury and others, *Read This First: an Owner's Guide to the New Model Statement of Objectives for Academic Bibliographic Instruction*. (Chicago: American Library Association, 1991)

³⁴ibid., 16.

the lifelong use of information. The target group of these goals are users of academic libraries. The model statement is best for librarians with some experience in bibliographic instruction; for others it will appear rather daunting. The statement is divided into terminal and general objectives. Terminal objectives are discrete and measurable results that usually involve demonstrating a behaviour. General objectives relate to the process of information gathering. Each of the objectives has a series of terminal and general objectives.

The first area of the statement relates to how information is identified and defined by experts. The desired outcome of this is an understanding of how information is defined and a recognition that this affects how one searches for information. In order to teach these skills library staff need to have experience and expertise in particular subject areas. These skills are often a result of the librarian's own tertiary study area. This assumes that the librarian has completed tertiary study which is not always the case. One could therefore imply that the librarian is skilled in using information in this subject area. It does not mean that they have skills related to the study of how information is created in that area. For the students, this means that the information they are being taught is very subject specific and as a result, tool-based. For the students to understand how information creation varies between disciplines, a multiple teaching approach would be required, with the librarian contributing in their degree subject area. This approach has implications for the employment of staff within libraries, particularly in the sections responsible for bibliographic instruction. It means that the library should employ a subject specialist in each area where it intended teaching bibliographic instruction. It also requires the librarian teaching a particular subject to identify themselves as part of that discipline. I would suggest that most librarians identify themselves primarily with the library discipline and secondly, with their degree subject major. In order for bibliographic instruction to appear relevant and

interesting to students it must relate to their information needs. An awareness of how information is created in other disciplines is part of the model statement. Science students are unlikely to see any relevance in knowing how information is created within the humanities. This skill area also includes knowing how a search can be refined into a question and how to construct a search strategy appropriate to the anticipated result. In many ways, these skills require an objective of their own. The ability to form a search statement from an information need can be a complex process.

The second objective relates to how information sources are structured. This requires the students to gain in-depth, but essential skills, related to accessing information sources. This is one area of bibliographic instruction that lends itself to transferable skills. Most information sources are created according to particular rules, such as alphabetical organisation, controlled vocabulary and subject headings. Once the students are aware of these rules, their ability to use a variety of information sources increases. Knowledge of how information is organised assists students when they are articulating their information need. For bibliographic instruction librarians, this implies that they have the skills to explain the reasoning behind particular forms of information structuring. How information sources are intellectually accessed by users is the third objective. This links well with, and extends the second objective. The general objective is for the user to be able to identify useful information from a variety of information sources or systems. This requires that the student is aware of access points to information. This objective requires that the student is able to choose a particular information source and access it. It also requires the critical analysis of the found information in terms of the information need. Bibliographic instruction librarians therefore need to teach critical thinking and evaluation skills as part of their programme. These skills form part of the information literacy paradigm and push bibliographic instruction

beyond a tool based activity. However, this is in conflict with the rest of the statement which focuses on just the ability to use information tools. It also assumes that students can and should critically evaluate material from a citation rather than looking at the actual book or article. Objective 4 relates to how information sources are physically organized and accessed. The general objective is to understand the way collections of information sources are physically organized and accessed. This objective contains basic skills such as the ability to find material on the shelves to the more advanced skills related to thinking about other information providers. The basic skills relate to the actual physical arrangement of material within libraries, usually through the use of a classification system. An interesting objective is for students to be aware that skill and expertise may vary between library staff.

The goals of the Model Statement of Bibliographic Instruction are very detailed. Testing some of the attributes would be time consuming and in many cases difficult. However the statement is important as it involves a shift from the subject-tool focus of bibliographic instruction to a process, transferable skills basis. Although somewhat daunting it provides a good framework for designing bibliographic instruction programmes. It represents the best practice for bibliographic instruction librarians to aim for. It also provides the library profession with a definition for bibliographic instruction that is likely to be accepted across the profession.

So, given the Model Statement of Bibliographic Instruction, what is actually included in bibliographic instruction programmes? The following example³⁵ uses a variety of levels for their bibliographic instruction programme. This example has been chosen because it recognises that

³⁵James Rice, *Teaching Library Use: a Guide for Library Instruction*. (Westport, Conn: Greenwood Press, 1981)

bibliographic instruction can exist on a variety of levels. Firstly, they use the orientation as a means of showing students the physical layout of the library. Orientations often take place as part of the students first day orientation to the wider campus. The amount of information students retain about any part of the process is probably limited. As a result, in many libraries, orientations are seen as a marketing opportunity to promote the library as a friendly welcoming place and to encourage students to come back. The example used has four levels within the bibliographic instruction programme. Level 1 looks at basic methods of public inquiry. The first stage involves a lecture that focuses on the search strategy, reference sources, topic ideas, and the changing of topic ideas to fit the available literature and time frame. The second part of the session is a practical exercise. Students are required to take topic ideas and browse bibliographies, use general and specific subject reference tools, and the catalogue. There is a need to understand screen displays and the differences between subject searching and keyword. Also the ability to use journal indexes, to understand citations, evaluate search results and locate material in the library is tested. Students are required to consult a librarian regarding access to certain resources and interloan procedures. The acquisition of these skills is useful in two respects. Firstly, it provides students with library survival skills to keep them going until they are able to learn more in-depth skills. Secondly, it acts as a basis for building the in-depth level skills, such as those in level 2 of the example. Level 2 of the bibliographic instruction programme involves information about knowledge and bibliographic inquiry. Topics covered include the idea that knowledge is a complex dynamic human enterprise and the knowledge cycle involves a publication sequence, development of disciplines and the evolution of concepts and theories. Also covered is the contribution of academic disciplines, characteristics of scholarly literature, bibliographic systems, pragmatic bibliographies, and primary and secondary sources. Finally it looks at reference sources as a history of the development of knowledge. Level 3 focuses on the subject major of the

student group and covers relevant general and specific reference sources, computer databases and how to use them and any gaps in literature. Level 4 looks at specialised bibliographic resources, research skills, problem analysis, and how to narrow and define your search subject. As the levels increase so too does the specificity of the information. In many ways this is the opposite to the Model Statement of Bibliographic Instruction. The model starts with specific information about knowledge within particular subject areas and then moves to information sources. The above example looks firstly at general information sources and then develops into more specific areas and sources. This closely matches the study progress of students within New Zealand universities. At stage 1 and 2, students take a variety of courses that may cross discipline areas. It is usually in their second or third year that they begin to focus solely on their major subject.

Some bibliographic instruction programmes focus on analysis of the assignment question as a means of building a search strategy³⁶. Steps involved in this are: 1. surveying the topic and clarifying any unfamiliar terms, 2. dividing the topic into subtopics, 3. determining appropriate formats for required information, for example primary or secondary materials, 4. establishing the quantity of information required, 5. specifying the quality of information required, 6. devising a time plan, 7. listing disciplines that information may be found in and 8. indicating categories and types of reference tools that will help identify and locate necessary resources. Other bibliographic instruction programmes focus on the one hour lecture. For these sessions, the librarian, usually in conjunction with the subject tutor, will decide on a particular skill or concept that will be taught during the session. Examples of these sessions include: 1. orientation and instruction of a particular section, 2. title only access to indexes, 3. single concept or skills in order to use a

³⁶ Anne Beaubien and others, *Learning the Library: Concepts and Methods for Effective Bibliographic Instruction*. (New York: Bowker, 1982), 65.

particular resource, 4. type of tool concept, how to use printed journal indexes, 5. question analysis, 6. the concepts relating to the search strategy, 7. information about the structure of information within a particular discipline, 8. formats of information, primary or secondary information, and 9. mix and match, a combination of the above. The Model Statement³⁷ in many ways encourages bibliographic instruction to focus on particular subject areas and associated resources. For this reason programme goals are usually related to particular subject areas. Within a particular subject area the student needs to be aware of how information is accessed, how information sources are bibliographically represented, how information is organised and accessed in the library, and the importance of evaluation. Students need to be aware that the nature of creation of knowledge varies according to disciplines³⁸, also that new ideas increase the body of knowledge and some of these ideas may conflict with the existing body of knowledge.

In the past, bibliographic instruction has been purely subject focused. Most of the recent changes have centred around changing the tools you need to teach. This suggests that bibliographic instruction is about learning how to learn, not just the facilitation of library use skills but the whole process of learning. A general theme relating to bibliographic instruction is that in order to survive, it must involve teaching something more than how to use specific subject tools. This move has blurred the boundaries between bibliographic instruction and information literacy. Therefore bibliographic instruction must be independent of tools or formats of information³⁹. For bibliographic skills to be transferable, instruction related to them must include general concepts,

³⁷Carolyn Dusenbury and others, *Read This First: an Owner's Guide to the New Model Statement of Objectives for Academic Bibliographic Instruction*. (Chicago: American Library Association, 1991)

³⁸Cerise Oberman and Katina Strauch, *Theories of Bibliographic Instruction: Design for Teaching*. (New York: R.R. Bowler Co., 1982), 32.

³⁹Carolyn Kirkendall, ed., *Directions for the Decade: Library Instruction in the 1980's*. (Michigan: Pierian Press, 1981)

not just subject related concepts. In this way it acts as a preparation for independence. Bibliographic instruction is not just confined to the realms of academia. Public libraries have an important role to play in community based life long learning. One of the major challenges is marketing the concept of bibliographic instruction to the wider community.

Nahl⁴⁰ adds another paradigm with the term bibliographic instruction design. This is seen as a shift from tool based library instruction to an interactive, access based approach focusing on active learning and critical thinking. Bibliographic instruction design is described as changing bibliographic instruction to include an information literacy focus. Nahl suggests that bibliographic instruction is the library part of an information literacy programme. Nahl uses a taxonomy of behavioural objectives of information literacy. This taxonomy should form the basis for the design of the bibliographic instruction section of information literacy programmes. The model consists of three levels and three cognitive phases. The levels indicate that information literacy is a process that involves lower level understandings needed to move on to information literacy functioning. The three behaviours are affective, cognitive and sensorimotor.

In conclusion bibliographic instruction is the teaching of library tools to library users. Instruction is done within a subject framework. Bibliographic instruction includes all information relating to how to use particular library tools, both printed and online. If bibliographic instruction was widened to include transferable skills and critical thinking, it would no longer be bibliographic instruction.

⁴⁰Diane Nahl-Jakobovits and Leon A. Jakobovits, "Bibliographic Instructional Design for Information Literacy: Integrating Affective and Cognitive Objectives," *Research Strategies: RS* 11, no.2 (Spring 1993):73-88.

Information Literacy

‘Trying to give a precise definition (to information literacy) ... is like trying to swim through treacle’⁴¹. A general definition used at the time the move from bibliographic instruction to information literacy began was that ‘information literacy is the ability to effectively access and evaluate information for a given need’⁴². This definition was developed by Martin Tessner in 1985. Information literacy expands information seeking behaviours to all times and places through the concept of life long learning. There are two common themes in information literacy: firstly the ability to access and evaluate information effectively for problem solving and decision making and secondly knowing how to be lifelong learners in an information environment. One of the core aspects of information literate people is that they have learned how to learn. Information literacy is the strategic use of information across all information sources and subject disciplines. It involves a range of skills related to finding, collecting, defining, analysing and evaluating information. Information literacy involves an understanding of the process and system for acquiring historical and current information. Included is the ability to evaluate the effectiveness and reliability of information sources, including librarians. The ability to manage one’s own information is seen by Rader⁴³ as being part of the mix that makes up information literacy. She cites the ability to create your own database and spreadsheet for the storage of information as being an important component. Information literacy has extended beyond bibliographic instruction to a transferable skill that enables use of the wider community of

⁴¹ Julianne Cheek and others, *Finding Out: Information Literacy for the 21st Century*. (South Melbourne: Macmillan Education Australia, 1995), 2.

⁴² Shirley J. Behrens, “Literacy and the Evolution Towards Information Literacy: An Exploratory study,” *South African Journal of Library and Information Science* 58, no.4 (1990):353-358.

⁴³ Hannelore Rader, “Bibliographic Instruction or Information Literacy,” *College & Research Libraries News* 51, no.1 (1990)18-20.

information. It is therefore a broader concept. Although the semantics of information literacy definitions vary, there are abilities, common to most definitions offered. Included in most definitions is the ability to effectively access and evaluate information for a given need. Information literacy is characterised by an integrated set of skills and knowledge that relates to research strategy skills and evaluation and knowledge of tools and resources. The American Library Association (ALA) report on information literacy suggests that the key skill of information literate people is that they have learned how to learn. An editorial⁴⁴ stated that teaching people how to do this has been the role of bibliographic instruction librarians for years. However, the major differences between the general definitions for the respective terms precludes this. It is the combination of the skills that make up information literacy that sets it apart from previous programmes in user education or bibliographic instruction. Doyle⁴⁵ describes an information literate person as one who recognises that accurate and complete information is the basis for intelligent decision making, recognises the need for information, formulates questions based on information needs, identifies potential sources of information, develops successful search strategies, (can) access sources of information including computer based and other technologies, evaluates information, organises information for practical application, integrates new information into an existing body of knowledge, (and) uses information in critical thinking and problem solving'. Moore⁴⁶ uses the above definition but disagrees with the section related to complete and accurate information as the basis for intelligent decision making. Moore suggests that decisions are often made on the basis of incomplete information.

⁴⁴"Bibliographic Instruction Libraries and Information Literacy." *Research Strategies* 8, no.2 (1990):50.

⁴⁵Christina Doyle, *Information Literacy in an Information Society: A Concept for the Information Age*. (Syracuse NY: ERIC Clearinghouse on Information and Technology, June 1994)

⁴⁶Penny Moore, "Information Literacy: Perspectives and Challenges." *New Zealand Libraries* 48, no.9/10 (June 1997):166-173.

The American Library Association Presidential Committee on Information Literacy⁴⁷ developed the following definition: 'to be information literate, a person must be able to recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information... Ultimately, information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organised, 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'⁴⁸. Does a person need to be aware that they are performing any of the above skills? For many it is a natural behaviour to seek information to assist in decision making. How do you test if someone has learned how to learn? What about students who learn how to survive the academic system by working out the particular views and attitudes of their lecturer? The ALA statement implies that one must be taught the process of learning. The wording of 'learnt how to learn' is very academic. Does this wording prevent people from feeling confident in thinking that they have this ability? The challenge of teaching people how to learn is faced by trained teachers every day. How do trained librarians teach people how to learn, especially within the library context? I suggest that the statement of information literacy assumes skills that are outside the teaching ability of the majority of librarians charged with delivering information literacy sessions. It highlights the need for information literacy to be taught by a team of experts with the librarian the expert in the library component.

⁴⁷American Library Association Presidential Committee on Information Literacy, *Final Report*. (Chicago: The Association, 1989), 1.

⁴⁸Jana Varlejs, ed., *Information Literacy: Learning How to Learn: Proceedings of the Twenty-Eight Annual Symposium of the Graduate Alumni and Faculty of the Rutgers School of Communication, Information and Library Studies*, 6 April 1990. (Jefferson, N.C.: McFarland & Co, c1991)

Information literacy, as a personal attribute, is developed through the acquisition of attitudes. Included in these, are persistence, attention to detail and critical evaluation⁴⁹. Gaining information literacy skills is a time and labour intensive process that is only successful if it is need driven. It needs to be related to a current information need, for example an assignment. McKie⁵⁰ states that information literacy is the ability to recognise the need for information; to find, organise, evaluate and use such information for effective decision making or problem solving; and to apply these skills to independent life long learning'⁵¹. Being information literate is sometimes seen as a higher level skill. One definition states that an information literate person has 'the capacity to execute high-level problem solving processes requiring a wide knowledge of information sources, systems, and technologies, as well as information retrieval, management, and evaluation strategies'⁵². It is more than bibliographic competence, including, for example, evaluation, synthesis, and communication skills, as well as the ability to locate and use information from sources beyond bibliographic networks. Essentially information literacy involves: mastery of the process of information seeking and use; knowledge of the world of information; and internalization of values which promote active information seeking and use a range of contexts.

⁴⁹Patricia Senn Breivik, "Putting Libraries Back in the Information Society." *American Libraries* (November 1985):723.

⁵⁰A. McKie, *Information literacy within the University of South Australia: a report*. (Unpublished, 1993)

⁵¹ibid.

⁵²Christine Bruce and Philip Candy, *Higher Education Contributions to Information Literacy Education: Towards a Checklist for Evaluating Curriculum and Institutional Culture*. (Canberra: HERDSA, 1994), 701.

The term information literacy was first used by Zurkoski in 1974⁵³. Its current meaning in American literature comes predominantly from education reform reports, including 'A Nation at Risk'. Although this report focused on the skills needed for individuals to cope in an information society it ignored the role of libraries in that information society. Definitions in the 1970s highlighted requirements for information literacy but didn't reach the stage of assigning actual skills and knowledge requirements. In 1976, Lee Burchinal stated that to be information literate requires a new set of skills. Included are the skills related to how to efficiently and effectively locate and use information needed in problem solving and decision making. In the 1980s information technology contributed to some of the main changes in the terms 'user education', 'bibliographic instruction' and 'information literacy'. In the 1990s, the literature is full of courses called information literacy. Information literacy represents a change in focus for librarians, a move away from focusing on resources within libraries. It does however raise the question, are librarians capable of or the right group to be attempting to teach all the skills related to information literacy? Information literacy is an attempt to instill a condition; there is a product as its outcome: an information literate person. Traditional, library based, bibliographic instruction on the other hand is a methodology that enables skills and concepts to be learned⁵⁴.

The concept of information literacy is based on the idea of an information society. Information literacy is seen as a survival skill for the information age in which we now live. To be information literate is to have the lifelong skills, the functional competencies, that we can

⁵³Trish Ridgeway, "Information Literacy: An Introductory Reading List," *College & Research Libraries News* 51, no.7 (1990):645-648.

⁵⁴Rigmor George and Rosemary Luke, "The Critical Place of Information Literacy in the Trend Towards Flexible Delivery in Higher Education Contexts," *Australian Academic and Research Libraries* 27, no.3(1996):204-212.

utilize in order to manage our lives and make decisions. An important aspect of information literacy that sets it apart from user education and bibliographic instruction is that it is not library dependent or just about information finding. There is a role for the library but it is not the only source of information. Neither is information literacy solely related to information finding. Library literacy is not information literacy as libraries are not the only sources of information. Information literacy involves changing the goals and future directions of library programmes. For many libraries the new goal is information literacy instead of library literacy. Lifelong learning, a main theme of information literacy, is not just about formal schooling. In response to an increased emphasis on information literacy, Rader changed the name of her bibliography to 'Library Instruction and Information Literacy' from 'Library Orientation and Instruction'⁵⁵. Although information literacy is seen as combined library and education issue, at present literature is mostly confined to library science.

However, information literacy is more than just library related. By using the term 'literacy' we move into the domain of educational science. Literacy is a continuum of which information literacy is part. Literacy is often seen as the skills needed for potential movement within society. 'Literacy is that demonstrated competence in communication skills which enables the individual to function, appropriate to age, independently in society with a potential for movement in society'⁵⁶. The literacy continuum extends beyond the fundamental requirements of reading and writing. The library section of information literacy has a number of names. Information skills as a term covers a wide range of instrumental and cognitive information

⁵⁵Hannelore Rader, "Library Instruction and Information Literacy," *RSR: Reference Services Review* 24, no.4 (1996):77.

⁵⁶R. Hillerich, "Towards an Accessible Definition of Literacy," *English Journal* 65 (1976):50.

handling skills. The term is often used synonymously with library skills. Library skills are in fact part of information skills. Information skills are seen as including those skills relating to reading, library, communication, study and thinking. Library and information skills as a part of information literacy provide a framework onto which one can build information literacy skills. The information literacy curriculum includes a variety of literacies, including computer tools, emerging technology, literacy and resources. Information literacy is the combination of a variety of literacies: it is our ability to combine these abilities that reflects the process of becoming information literate

What about the other types of literacy? Computer literacy is the ability to use computers. This is not enough in an information society. However, basic computer literacy is necessary to achieve information literacy. A computer literate person is not necessarily an information literate one. 'Access to, and critical use of information and of information technology is absolutely vital to lifelong learning, and accordingly no graduate - indeed no person - can be judged educated unless he or she is "information literate" and, to an extent, computer literate as well'⁵⁷. Information literacy encompasses computer literacy. A computer literate person who cannot use a printed index is not information literate. Information literacy is not just about new technologies. It is an integrated set of skills, including research strategy and evaluation, knowledge of tools and resources. Information literacy is not just reading but also comprehension. It 'is the ability to effectively access and evaluate information for a given need'⁵⁸. People who are information

⁵⁷Philip C Candy, *Cease not to Learn Until Thou Cease to Live: Report on the Enabling Characteristics of Undergraduate Education*. (Canberra: Higher Education Council and Australia Vice-Chancellors' Committee, 1994):pxii.

⁵⁸Shirley J. Behrens, "Literacy and the Evolution Towards Information Literacy: An Exploratory Study," *South African Journal of Library and Information* 58, no.4 (1990):355-358.

literate are able to handle information critically and productively no matter what its source. Critical thinking skills regarding evaluating the relevance and worth of information is an important aspect of information literacy.

With regard to the teaching of information literacy skills, integration into main stream courses is seen as being most productive. Information literacy fits well into other literacy and teaching programmes. This is an important factor when trying to integrate information literacy into the curriculum. So what are the skills related to information literacy? The behaviours or abilities required from a course in information literacy are many and varied. A common theme is that these behaviours, which in some cases include attitudes, are difficult to measure and assess. A sample information literacy programme from California University⁵⁹ includes ten core competencies that relate to the information literacy process. The competencies include task definition, information access, use and synthesis of information and evaluation of the information and methods used to gather it. In addition to these students are required to have a basic understanding of the body of literature for their particular discipline.

There are numerous models for information literacy. An Australian report states that information literacy needs to be related to employable attributes in the real world⁶⁰. Among the attributes listed is the knowledge of current major resources available in at least one field of study, the ability to frame reasonable questions in at least one field of study, skill at information retrieval from a variety of media, the ability to decode information in a variety of forms, such as

⁵⁹Information Competence in Specific Disciplines (5 February 1997.)
<http://multiweb.lib.cal.../infocomp/specific.html>

⁶⁰R.G. Crebert, *The Enabling Characteristics of Undergraduate Education: Advice of the National Board of Employment Education and Training and its Higher Education Council*. (Canberra: The Board, 1994)

writing, statistics, graphs, diagrams and tables. The set of skills shown by an information literate person stated by Behrens⁶¹ include: 1. an understanding of the process of acquiring information, including identification and delivery, 2. the ability to evaluate the effectiveness of various information channels including libraries, 3. mastering the basic skills for acquiring and storing their own information, 4. being articulate, responsible citizens in considering public policy issues relating to information, such as copyright, privacy.

Farah⁶² sees information literacy as a subset of critical thinking skills used to evaluate information. Her definition includes the following abilities: 1. recognise when information is needed, 2. recognise that accurate and complete information is a foundation for problem solving, 3. define the problem, 4. generate a question or hypothesis, 5. determine parameters for investigation, 6. develop search strategies, 7. identify information resources to solve problem, 8. evaluate information found, 9. integrate new information with prior knowledge, 10. organize information to solve problem and 11. apply information in a practical way. It is critical skills that set information literacy apart from user education and bibliographic instruction. Although thinking is a component in the later terms it does not often form part of their definitions. For information literacy the area of critical thinking relates to a variety of the skills involved. Critical thinking is necessary in the evaluation of information and information sources. It is also a key part of the processes related to identifying an information need and using the found information to assist in decision making. The ability to think critically enables to the acquisition of the skills to contribute to life long learning, another key area of information literacy.

⁶¹Shirley J. Behrens, "Literacy and the Evolution Towards Information Literacy: An Exploratory Study," *South African Journal of Library and Information* 58, no.4 (1990):353-358.

⁶²Barbara D. Farah, "Information Literacy: Retooling Evaluation Skills in the Electronic Information Environment," *Journal of Educational Technology Systems* 24, no.2 (1995):127-133.

In *Finding Out*,⁶³ a handbook designed as a self-paced guide to becoming information literate, the following stages of information literacy are discussed: 1. analysing the information need, decoding the question and instruction words, 2. reading for a purpose to locate information, using contents pages, 3. taking notes, 4. people as resources, the use of interviews and questionnaires, 5. field trips and observations, 6. decoding the reading list, 7. choosing a library, different types and locations, 8. inside the library, circulation information, call number and collection arrangement, 9. using the library catalogue, how to narrow or broaden your subject, 10. the reference collection, types of material likely to be found (bibliographies and encyclopedia), 11. is this book right for me, evaluate according to your needs, 12. journal articles, 13. using computers to search indexes and abstracts, skills need and computer literacy, 14 reading television shots, 15. how do I write my assignment, guides to writing in a variety of formats, 16. citation and 17. technology to access, process and represent information. Related to these stages of information literacy are four underlying steps: 1. define your information needs, 2. locate appropriate information sources, 3. critically select relevant information, 4. analyse, evaluate and interpret the found information.

Bruce⁶⁴ uses the ALA definition of characteristics of an information literate person but encourages interpretation according to specific context and disciplines. Within the context of the higher education community an expert panel from within the institution added to the definition. Additions included: 1. recognise need for information, 2. recognise complete and accurate information is the basis for intelligent decision making 3. identify potential sources of information,

⁶³Julianne Cheek and others, *Finding Out: Information Literacy for the 21st Century*. (South Melbourne: Macmillan Education Australia, 1995)

⁶⁴Christine Bruce, "Information Literacy: A Framework for Higher Education," *The Australian Library Journal* (Aug 1995):158-170.

4. conduct a successful search strategy, 5. access sources (computer technology based), 6. evaluate, 7. organise information for practical application, 8. integrate new information into existing body of knowledge, 9. use information in critical thinking and problem solving. They also identified seven key characteristics of an information literate person⁶⁵: 1. independent self-directed learning (includes informal networks), 2. implements information processes (search strategies), 3. uses information technology, 4. values information use - possesses an attitude that appreciates the value and power of information, uses added features of databases, for example the thesaurus, 5. has knowledge of the world of information, is familiar with many sources of information and the way in which information is structured, is aware of scholarly communication and 6. approaches information critically.

The above examples illustrate the different interpretations that have been put on the term information literacy. All of the definitions reinforce the idea that information literacy is more than bibliographic instruction or library skills. To be truly information literate, one must know what to do before and after visiting the information source.

Once someone has developed the above skills and become information literate do they then develop their own ways of dealing with information? Does the undergraduate seek information in the same way as the professor? Is one more information literate than the other as a result? How do we then judge those behaviours against information literacy definitions? As soon as one begins talking about information literacy the idea of faculty involvement comes into play. This emphasises the fact that some information literacy components are outside the realm

⁶⁵ibid.,160-162.

of the librarian. In order for students to integrate the process of information literacy subject tutors need to be involved in the process. It should not be a question of who needs to assume responsibility for the information literacy of the students, the faculty or the librarian. All parties involved in the teaching and assessment of students need to be involved in any information literacy programme. If the faculty is setting an assignment that involves writing a literature review it is their responsibility to ensure that the students know how to write a literature review. Responsibility for sections of information literacy need to be taken by the people with expertise in that area. Librarians are the experts in using information systems and sources to locate information. An example of lack of consistency was an attempt by Baker College⁶⁶ to incorporate information literacy into the curriculum. Only when subject instructors were unable to find time to design a library exercise as part of the curricula did they decide to include librarians, and then only to receive copies of all curriculum package so that they were familiar with course expectations and needs. This method of working assumes an in-depth knowledge of the library resources and organisation on the part of subject tutors. Surely it would have been easier to include the information specialist, the librarian, at all stages. An information literacy programme being driven at curriculum level rather than by the librarians would be the ideal situation for many librarians who have trouble getting faculty support for their programmes. However ignoring the valuable input that the librarians could make is only making matters difficult for the students involved. For example, the definition of the term information literacy used in this case study is the 'ability to recognise when information is needed, locate it employing the latest technology, evaluate it and effectively use the needed information'⁶⁷. The latest technology is not

⁶⁶Cherie L. Dishan, "Moving Information Literacy From Theory to Practice," *Media Spectrum* 23, no.1 (1996):16-18.

⁶⁷*ibid.*, 17.

necessarily available or the most appropriate. The role of librarians should be in partnership with faculty or other tutors. Librarians should teach the bibliographic instruction or user education parts of the information literacy programme. Teaching these skills as part of the curriculum bridges the gap that exists between classroom instruction and the library. Assignments that involve problem solving are a good link. Learning information literacy is most productive when it is linked to a real information need, for example an actual assignment. A librarian's input is as an information professional who is well versed in a variety of information sources. In order to survive and have some credibility, information literacy needs to be an integrated course across the curriculum not just a library course. Information literacy is for all students not just those destined for higher education. It is a survival skill for all ⁶⁸.

There is a variety of levels of information literacy. These include basic level concerns such as the kinds of information available, possible sources, the way information is stored and catalogued and means of locating and retrieving the information. These are technical skills that are seen as the basis for higher level information literacy or deeper understanding, for example strategic decision making with regard to information gathering, and making connections between retrieved information and the students existing knowledge. So then, how do you grade information literacy? Is it only the A grade students who are truly information literate? Can you have each of the skills at varying levels of competency? Do students gain more complex skills as they progress? Is it therefore possible to become more information literate? I do not agree that skills related to library literacy are lower level mechanical skills. The design of a search strategy requires a high level of lateral thinking skills. In some ways information literacy has moved the

⁶⁸“Bibliographic Instruction Librarians and Information Literacy,” *Research Strategies* 8, no.2 (1990):50.

emphasis away from the librarian and has placed a lot of the responsibility for success on the user. What about those students who are information literate but choose not to use these skills. McCrank⁶⁹ describes this as 'aliteracy'. It is a much more economic use of their energy to simply rely on the skills of the librarian to interpret the question and assist in gathering the information. In many educational institutions, the same assignment question is posed to the reference librarian numerous times during a day.

Information literacy is seen as a paradigm shift with regard to bibliographic instruction. It is a response to the political and territorial problems related to bibliographic instruction. Its definition has expanded over the past 20 years. In order to survive, information literacy needs to spread into other disciplines. The use of the term information literacy sees the library profession aligning itself to the literacy movement in general. The term information literacy provides us with links to the non-library world. However in some ways it has just brought more uncertainty. There is little consensus regarding a definition of the term 'literacy'. There are facets of literacy, including reading/writing literacy, critical thinking, often seen as being able to interpret what is written. Literacy is often seen as a continuum - is there then a continuum of information literacy library skills, starting with user education and moving onto bibliographic instruction? Are these the names that should be given to the stages of the library skills section of information literacy? The use of the term information literacy to describe user education or bibliographic instruction programmes fails to impress those in disciplines other than librarianship. Correct use of the term is vital to prevent it becoming just another buzzword. Will information literacy follow the evolution pattern of user education and bibliographic instruction and change as technology

⁶⁹Lawrence J. McCrank, "Information Literacy: A Bogus Bandwagon? Is This Popular Front Good For Librarians," *Library Journal* 116, no.8 (1991):38-42.

continues to change? Is the World Wide Web the thin edge of the wedge that will enable individuals to become information literate without any assistance from librarians.

Information literacy represents a wide role for librarians. Behrens⁷⁰ suggests that American library professionals adopted the term as a response to being left out of the educational reform process. In a political context, information literacy is more impressive sounding and a more valid use of resources in an information society. If librarians cannot agree on the meaning of information literacy it is little wonder the academics within our educational institutions, whom we are trying to impress with the term, do not have a reasonable grasp of the concept. In order to use the concept of information literacy as a unifying, clarifying tool to identify us as a profession and define our social role, we need to have a consistent definition. Without this, the term information literacy means little to those involved in other disciplines. It makes the concept of information literacy into an exercise in public relations. Apart from the numerous definitions of the term information literacy, there is also a number of questions the definitions raise⁷¹. If information literacy is a skill that every well educated person has acquired, does this mean that uneducated people are information illiterate? If we have information literate people we therefore must have information illiterate people. How do we distinguish those who have learned how to learn from those who haven't or those who have learnt how to work the system to their advantage? Information literacy is an abstract concept. A number of the skills related to information literacy are not testable, for example definitions that include the acquisition of attitudes such as persistence and attention to detail. If information literacy is associated with an

⁷⁰Shirley J. Behrens, "Literacy and the Evolution Towards Information Literacy: An Exploratory Study," *South African Journal of Library and Information* 58, no.4 (1990):353-358.

⁷¹Stephen Foster, "Information Literacy Misgivings," *American Libraries* 24, no.4 (1993)344-346.

expected product, then what happens if at the end of an information literacy programme the product hasn't been produced?

In conclusion information literacy is more than user education and bibliographic instruction and much more than just libraries. The main difference is the inclusion of the skills required before and after the search for and finding of information.

Models

Definitions and uses of the terms 'information literacy', 'bibliographic instruction' and 'user education', have been discussed. A comparison with models of information seeking behaviour is now necessary. Are these models actually information literacy, user education or bibliographic instruction by another name? The common conception is that the models discussed below are more closely aligned with information literacy than either user education or bibliographic instruction. There is a number of models that discuss the information seeking behaviours of students. Among them there are two predominant models. These are the Big Six⁷² and Kuhlthau's⁷³ model that focuses on cognitive modelling of the information search process. These models are discussed in relation to the previously outlined definitions of the terms information literacy, bibliographic instruction and user education.

A popular model of the information seeking process is Eisenberg and Berkowitz's Big Six. This model outlines six skills related to the information seeking process. It is a problem solving based model that discusses six logical steps for solving an information problem. For library and information skills instructors it provides a 'general approach to information problem-solving that can be applied to any information problem situation'⁷⁴. Critical thinking is an important aspect of the model. This links to one of the key aspects of information literacy that separates it from

⁷²Michael Eisenberg and Robert Berkowitz, *Information Problem Solving: the Big Six Skills Approach to Library & Information Skills*. (Norwood: Ablex Publishing Co, 1990)

⁷³Carol Collier Kuhlthau, *A Process Approach to Library Skills Instruction*. Paper presented at the Annual Meeting of the American Association of School Librarians, Atlanta, October 31 - November 4, 1984. (ERIC: ED25433, 1984)

⁷⁴Michael Eisenberg and Robert Berkowitz, *Information Problem Solving: the Big Six Skills Approach to Library & Information Skills*. (Norwood: Ablex Publishing Co, 1990), 10.

bibliographic instruction and user education. Different levels of critical thinking are recognised; for example, knowing that an information source exists involves a different level of critical thinking than that required for actual use of the source. The Big Six can be seen as a critical thinking hierarchy that relates to cognitive development of students. It is applicable across grades and age, although the example courses used tend to focus on pre-tertiary level students. An appealing aspect of the Big Six model is that it recognises differing abilities between students. As such it does not require all students to do things in exactly the same way or at the same speed. The acquisition of the related skills is not necessarily a linear process. This in turn affects the means of assessment used for the model and goes some way to answering the problems that arise when attempting to assess information literacy or bibliographic instruction sessions.

As its name suggests there are six core skill areas in the Big Skill model. Although these follow the information literacy definition given previously they do not amount to true information literacy. The first of the six skills relates to task definition. This requires clear articulation of the problem from an information need perspective. Part of this understanding of the information need involves the setting of parameters for the problem. The second stage involves devising information seeking strategies, analysis of the range of potential information sources to assist in solving the problem. As part of this analysis, students need to assess information sources against criteria such as accuracy, reliability, ease of use and comprehensibility. The first two stages match well with the definition of information literacy. The focus of teaching is on a problem solving framework and it is in this aspect that the Big Six differs from bibliographic instruction.

Location and accessing information sources form the third of the Big Six skills. This stage is related to the actual searching for and locating of information. Students carry out the

information seeking strategy decided upon during the previous stages. Being able to actually physically locate material using access tools is just as important as getting appropriate information from the source. In other words it is not enough to know how to find a particular book on the library shelves. Students need to have the skills to access the information within the book. This involves the use of contents pages and indexes as well as an awareness of the arrangement of information within chapters. The skills required at this stage relate closely to the traditional library use and tool based instruction of user education and bibliographic instruction programmes. Examples of skills taught as part of this section are the use of access tools, arrangement of material in libraries, parts of a book and strategies for searching computer resources⁷⁵. The fourth skills relates to the use of found information. It is at this stage that the skills again relate more to information literacy than bibliographic instruction or user education. Indeed it is suggested that a number of these skills should be taught by the subject tutor, or, in the case of lower grade students, the class teacher. This division in teaching areas recognises that it is often the subject tutor who has the skills in this area. These are skills related to reading, viewing and note taking. The role of the librarian should be as a support person at this stage. In openly suggesting that the librarian is not always the best teacher for all parts of the process the model moves on from the definition of information literacy. Throughout my research into the use of any of the three terms, there was no suggestion that librarians should not be teaching all aspects. Literature that referred to faculty involvement concentrated on the information literacy, bibliographic instruction or user education programme linking with a particular assignment and being taught during class time. Even examples of credit courses did not discuss the possibility that there was any skill area within the course where it would be more appropriate for anyone else

⁷⁵ibid., 7.

to contribute.

The fifth of the six skills relates to the synthesis of information. Students are required to apply the found information to the previously defined task or information need. This may involve some repackaging of the information in order to meet the requirements of the defined task. This can be as simple as providing a factual answer or as complex as writing a report or essay. There should be a heavy involvement from the subject tutor at this stage. This particular skill links to definitions of information literacy but not to user education or bibliographic instruction. In the past the library has concentrated on helping the student find information. What the student did with the information was not part of the instruction programme. This division in fact represents the skill expertise of the parties involved, the librarian and the subject tutor. Previously it was left to the tutor to ensure that the students had the skills to use the found information. However, this area of skills fits into the information literacy paradigm. As a result it has been included in the definition and therefore into many information literacy programmes run by libraries. This combination has ignored the fact that these skills are not necessarily part of the librarian's skill base. Any teaching that librarians do in this area is often based on their own experience and survival skills learnt as students, rather than actual training related to teaching these skills. Librarians should teach the library skill component of an information literacy programme. In some ways this means that we are teaching the user education or bibliographic instruction section of information literacy programmes.

The final skill in the Big Six makes it unique from the definitions of information literacy, bibliographic instruction and user education. I believe that this skill is an essential part of the information literacy process. Although one could argue that its inclusion is implied, I believe it

is important enough to require individual mention. The sixth skill is a critical element of the Big Six, evaluation. This involves the evaluation of the information seeking process, all previous five stages of the Big Six. When evaluation is mentioned as a part of an information literacy, user education or bibliographic instruction process, it is always the evaluation of the found information. Within the Big Six process, it requires the examination and assessment of the information problem solving process. This evaluation is a loop back to any part of the Big Six process. Inclusion of this phase in the definitions of information literacy is essential. It would also provide a reflective element to sessions related to user education and bibliographic instruction. Reflection on the usefulness of the process and analysis of what one could have done differently assists in the transferability of the skills learnt.

Kuhlthau has also developed a six stage model. Her model is based on facilitating information seeking through cognitive modelling of the search process. The model concentrates on the cognitive and affective symptoms relating to changes in thoughts and feelings as the search stages progress. For the purposes of this study, I am concerned only with the stages of the model. The underlying theme of the model is that information searching is a process of construction, enabling the individual to move from an anomalous state of knowledge to understanding⁷⁶. The model makes no mention of any form of library user education. The main focus is on student's actual behaviour when confronted with an information need.

The first stage relates to initiating a research assignment. At this point students are aware that they have to do an assignment. In the second stage students spend time deciding on a

⁷⁶Carol Collier Kuhlthau, *A Process Approach to Library Skills Instruction. Paper Presented at the Annual Meeting of the American Association of School Librarians, Atlanta, October 31 - November 4, 1984.* (ERIC: ED 25433, 1984),1.

possible topic. Kuhlthau suggests that possible topics are weighed against certain criteria. Included in these criteria are assignment requirements, information available and the time frame. At this stage it is assumed that students are aware of information resources available for the range of topics they may have under consideration. The model states that libraries are rarely used at this stage, but that the library would be useful in assisting the topic decision. Stage 3 involves exploring information in order to form a focus for the chosen topic. Students should use a wide range of information sources at this stage, sources that they are not taught to use. A focus for the research is formed at the fourth stage. This is formed from information found on the general topic. The focus should meet the criteria of the information need as discussed previously. Information is gathered during the fifth stage. This information should define, explore and support the research focus. The model suggests that students will at this stage be using library sources independently. As part of this, they need to learn how to make a comprehensive search of all the sources in the library. This level of skill in searching a variety of sources is a tall order for students who have received no library training as part of the previous stages. The sixth stage involves the preparation for presentation of the found material. The model states that students need to learn to recognise when library resources have been exhausted. After completing the six stages, students are encouraged to reflect on the process undertaken. At this stage the model links with the Big Six in its use of reflection. Kuhlthau's model provides an interesting comparison between how students actually approach an information need and library education programmes. Recognising and linking with the various stages of the model when students need assistance in using information sources would be more productive than simply conducting library resource skills sessions according to a timetable most suitable to library staff.

The above models are two of many relating to information seeking behaviours. It is

necessary to take these models in to account when planning programmes in information literacy, bibliographic instruction or user education. Linking teaching with the students' actual behaviour, and therefore needs, would be a far more productive use of time. Often the sequencing of courses is limited by constraints that library staff have no control over. A number of programmes have developed from librarians' perception of students' needs. It is invaluable to combine this with the student's perception of their own information use training needs.

Teaching

There is little doubt that there is a commitment to teaching within the library profession. Due to the variety of libraries and resources, actual teaching methods and the forms of instruction vary greatly. Some of the variance is dependent on the teaching facilities provided within the institution. Teaching aids can range from chalk and talk to data projectors and custom designed computer suites. The preparation of guides as well as the actual teaching takes time, effort and creativity. Different sources of information and formats require different teaching methods. The use of case studies and practical work is a common combination. In-house and CD-ROM databases have made it possible to teach databases at the users' speed, allowing them plenty of time to practise the skills learnt. Recognition of prior knowledge is an important factor that is often not taken into consideration prior to or during the teaching session. Self education can be part of user education programmes with regard to teaching methods used. These sessions can include self-paced tutorials, projects and guided reading. For this style of delivery there is less emphasis on lecturing. The shift towards transferable skills has meant a move away from technical skills to a conceptual framework as a basis for teaching. Resource based learning and problem solving are useful tools for teaching the skills related to information literacy. To be successful teaching should include instruction within the framework of technology, intellectual understanding and practical methods for information gathering. Some sessions end with assessment in the form of tests and questions. Evaluation of the teaching or the content of sessions is important for their further development.

Within the framework of user education, bibliographic instruction and information literacy there is still a tendency to teach the student what we think they need to know. This list of skills

often springs from the observed behaviours of people using the library resources. A session may develop as a result of a number of reference enquiries related to a particular assignment. In this situation the librarian responsible for teaching may contact the subject tutor and arrange for the students to be brought into the library for a formal session. This approach ignores factors that may have contributed to the reference enquiries, for example it may be that the assignment is worded in such a way that students are unable to determine what information is required. In this situation the interpretation of their assignment is part of the reference question. There are numerous articles written about what each library is doing with regard to programmes designed to assist their users. However there is very little information relating to what libraries are hoping to achieve through these programmes. Most articles focus on methods of teaching rather than the content. McClure⁷⁷ suggests that clients want to use the system, not learn how to use it. As they become more experienced they will see what they cannot do. At the beginning of the session it is often a case of not knowing what it is you do not know. The ultimate goal, should be, to enable all recipients of the instruction to be able to use the library. There are many aspects of the library that make it a confusing place for users. The controlled, and American English, language of our catalogues and the processes of boolean logic and relevance ranking are confusing to many users. Programmes should not just teach people about traditional library resources but also about all resources related to their information need.

Technology has created the ideal interface for the librarian to establish a niche position between the technology and the user in order to make the systems more user-friendly. As technology changes, subject tutors are no longer necessarily the best people to explain information

⁷⁷Charles R. McClure, "A User Perspective on Developing Internet Services," *Computers in Libraries* 12, no.4 (1992):53-55.

resources to their students. This is especially the case in the polytechnic and technical institute environment where a large number of teaching staff have an industry rather than educational background. Due to the fact that these new systems exist within libraries, librarians tend to have the skills to utilise all the capabilities of the new systems. As a result, there is a need for faculty to incorporate library skills time into their curriculum. Many librarians responsible for educating library users spend a lot of time attempting to get their courses integrated into the curriculum. Users are often aware only of the facilities that they are currently using. Without the intervention of the library staff they will only find out more through experimentation, which is something few of them have time for, as many only use the library only when they have a pressing need for information.

Fleming⁷⁸ states that educational theories are missing from user education programmes and techniques. There is a credibility issue when user education, bibliographic instruction or information literacy courses are taught by librarians without teaching qualification or with little teaching experience. In the case of information literacy, where a number of the skills are not library skills, this is of particular concern. With regard to bibliographic instruction it is important that the teaching librarian has subject related knowledge of the area that they are teaching in. Librarians without teacher training may be unaware of the complexities of planning a session. In New Zealand some Colleges of Education offer teacher training for librarians through their Certificate in Adult Teaching courses. Without these skills, courses may be developed without identified goals, objectives and entry level skills. Strategies also need to be developed regarding which resources will be taught, how they are taught and how the sessions will be evaluated or

⁷⁸Hugh Fleming, *User Education in Academic Libraries*. (London: Library Association, 1990)

assessed. Breivik⁷⁹ identified key content areas that need to be considered when planning a session. These include the actual logistics of using the library and the information tools as well as deciding on the content, for example, teaching the organisation of information, particular resources and search strategies. Course aims are many and varied. Fleming⁸⁰ noted that students attending user education sessions should have the ability to read critically, think logically and creatively, communicate clearly, isolate, formulate and solve problems, set knowledge in social context, and finally transfer skills acquired in the course. This is a rather daunting skill set that is more aligned with the definitions of information literacy than user education. There would need to be a series of sessions covering these skills. The ability to communicate these skills to students is a challenge for those trained to teach. Is it one hoop too many for the user education librarian? Do we start to lose our validity when we attempt to teach skills that, although we may possess them, require complex teaching skills? Should we just stick to the books?

The changes in the use of the terms 'user education', 'information literacy' and 'bibliographic instruction' suggest that education of library users should focus on the many sources of information available not just on the mechanics of using a particular system. However, at some stage, library users need to know how to use the information tools. It would be a step backwards just to teach the concepts without including the practical. This also goes against some of the main educational theories, that suggest that what we learn, we learn by doing. Teaching materials and media should encourage the student to interact with the various library systems. Part of the drive towards teaching concepts rather than actual tools is the notion that,

⁷⁹Patricia Senn Breivik, *Planning the Library Instruction Program*. (Chicago: American Library Association, 1982)

⁸⁰Hugh Fleming, *User Education in Academic Libraries*. (London: Library Association, 1990), 52-72.

while, the instruction usually concentrates on a particular library and its resources, it is at its best when it can be generalized to other libraries⁸¹. However in an age of users pays, when the use of many academic libraries is restricted to that institution, students' skills that are transferable between libraries are largely redundant. Of more use are skills that can be transferable to the next assignment or information need, whether in the same or a different subject area. Another issue to take into account is the information seeking behaviours of successful professionals in either the academic or commercial environment.

Course related point of need instruction is most useful whether the instruction is user education, bibliographic instruction or information literacy. However it is important that the session's content and title match. Lesson objectives also need to match the session content. If the goals of a session are for the users to learn about information resources in a particular subject area, be able to access the tools, locate and evaluate information then these skills must be taught as part of the session. For these objectives to be met, students need to know how to develop a search strategy, identify and use information tools, understand how the library has organised material, and apply evaluation techniques to the found information. An example of a mismatch between the course name and the content is the following bibliographic instruction course. Rice⁸² identifies three levels of library instruction of which bibliographic instruction is the third or highest level. The example bibliographic instruction course has content related to information and its organization, types of information sources, search strategies, planning and writing a research paper, note taking and referencing styles. This course exists in the grey area between information

⁸¹James Rice, *Teaching Library Use: A Guide for Library Instruction*. (Westport, Conn.: Greenwood Press, 1981),3.

⁸²ibid.

literacy and bibliographic instruction. It includes some elements of information literacy, but not all, and the inclusion of these moves the course beyond bibliographic instruction. Most notably the course does not include the initial steps of information literacy related to identifying the information need.

A good example of a programme with content to match its title is an information literacy course offered to nursing students⁸³. For this course the acquisition of information was not the only goal. The synthesis of information into new knowledge is also important. The model statement of bibliographic instruction was used as the foundation for including information literacy in nursing education programmes. Within their programmes, information literacy has replaced the bibliographic instruction component. The objectives of the programme include that students understand library organization and services, have the skills for locating and evaluating information accuracy, make appropriate use of information seeking strategies, and have the skills and knowledge to emulate scholarly activities of professional nurses. This course is integrated into the curriculum and its objectives match the nursing research course. At each level, the students received instruction that related directly to their current assignment and the course objectives. The students worked through a number of assignments designed to develop their information literacy skills. At each level all of their required skills, in both finding information and using it, became more advanced⁸⁴.

⁸³Lynne Fox, and others, "Pathways to Information Literacy," *Journal of Nursing Education* 28, no.9 (1989):422-425.

⁸⁴ibid.

Conclusion

There are fundamental differences between the terms 'information literacy', 'user education' and 'bibliographic instruction'. It is essential that these variants are taken into consideration when using any of the above terms. To continue to use them in an interchangeable manner will decrease the credibility of the library profession. Concerns regarding which term is most fashionable must be put aside. All three terms have a part to play as librarians assume a role in assisting people to locate information. Any continued use of the terms should be in association with a clear definition for any of the terms. Information literacy needs to be recognised as a much wider concept than user education or bibliographic instruction. The latter two tend to concentrate on the actual searching for information. Information literacy includes skills needed before and after the seeking of actual information. This is a difficult area as librarians are often attempting to teach searching skills to students who have no idea what their information need actually is. What is done with found information is also of concern. This lack of skills is often most obvious during the information search stage. During information searching sessions the librarian is in the perfect situation to notice the lack of these skills, often before the tutor is aware of the problem. Perhaps this is the reason that librarians have embraced the concept of information literacy? It is of course easier to teach information search strategies to students who have already identified their information need. If information literacy is seen as an essential skill in an information society, then librarians' futures are guaranteed if they are seen as the providers of this skill. Having recognised the need for this thing called information literacy, are librarians prepared to let other professionals in on the act? There are other professionals, including subject tutors, who are better skilled in particular areas of information literacy than librarians. It is essential that these professionals are encouraged to contribute to information literacy programmes. If librarians see

information literacy as a key element for the survival of their profession in the new millennium, they need to be sure that they include their partners in the information literacy paradigm. Without the involvement of other professionals, then, by librarians' own definitions, they are not actually teaching information literacy.

Bibliographic instruction, with its subject tool focus, is an important part of getting students started in their search for information. A number of teaching models are based on the assumption that relevance is an important aspect with regard to learning. Bibliographic instruction meets this need. What could be more relevant to a student, than teaching them how to use the particular database that will provide them with the required information for a particular assignment? Teaching students how to use a particular information tool forms a basis for the transfer of skills to another information need.

User education has so many parts that to discontinue it would be a disaster. The indirect forms of user education, such as, signage, database manuals and subject guides are an essential part of library services. User education represents everything librarians do to assist their users to make best use of library resources. Bibliographic instruction forms part of many user education programmes. Both user education and bibliographic instruction are part of information literacy, the library part. Without becoming complacent, librarians need to acknowledge that what they have been doing has, for the most part, fitted the needs of their clients. Changes in technology have allowed for the development of new resources and enabled the inclusion of creative options with regard to teaching techniques.

The future of any form of library instruction is dependent on the consistent and correct

usage of the terms 'user education', 'bibliographic instruction' and 'information literacy'. Models of information seeking behaviour provide a theoretical background for the planning of teaching sessions. Library instruction sessions of any type should be planned with clearly defined and measurable aims and objectives. All three terms, when used correctly, form part of the essence of library work. It is essential, however, that the philosophical differences between the terms are recognised and that these differences are not seen as mere semantics.

Reference List

American Library Association Presidential Committee on Information Literacy, Final Report. Chicago: The Association, 1989.

Arp, Lori. "Information Literacy or Bibliographic Instruction: Semantics or Philosophy?" *RQ* 30, (1990):46-49.

Atkinson, Ross. *Back to the Books : Bibliographic Instruction and the Theory of Information Sources*: papers presented at the 101st Annual Conference of the American Library Association, ACRL-Bibliographic Instruction Section. Chicago: American Library Association, 1983.

Beaubien, Anne K., Sharon A. Hogan, and Mary W. George. *Learning the Library: Concepts and Methods for Effective Bibliographic Instruction*. New York: Bowker, 1982.

Behrens, Shirley J. "A Conceptual Analysis and Historical Overview of Information Literacy." *College & Research Libraries* 55, (July 1994):309-322.

Behrens, Shirley J. "Literacy and the Evolution Towards Information Literacy: An Exploratory Study." *South African journal of library and information* 58, no.4 (1990):353-358.

"Bibliographic Instruction Librarians and Information Literacy". *Research Strategies* 8, no.2 (1990):50.

Booker, Di, ed. *The Learning Link: Information Literacy in Practice*. Adelaide: Auslib Press, 1995.

Breivik, Patricia Senn. and Gordon E. Gee. *Information Literacy: Revolution in the Library*. New York: American Council on Education, c1989.

Breivik, Patricia Senn. "Information Literacy." *Bulletin of the Medical Library Association* 79, no.2 (1991):226-229.

Breivik, Patricia Senn. *Planning the Library Instruction Program*. Chicago: American Library Association, 1982.

Breivik, Patricia Senn. "Putting Libraries Back into the Information Society." *American Libraries* (November 1985):723.

Brock, Kathy Thomas. "Developing Information Literacy Through the Information Intermediary Process: A Model for Teacher-Librarians and Others." *Emergency Librarian* 22, no.1 (1994):16-20.

Bruce, Christine. "Information Literacy: A Framework for Higher Education." *The Australian Library Journal* (Aug 1995),158-170.

Bruce, Christine, and Philip Candy, *Higher Education Contributions to Information Literacy Education: Towards a Checklist for Evaluating Curriculum and Institutional Culture*. Canberra: HERDSA, 1994.

Candy, Philip C. *Crease Not to Learne Until Thou Cease to Live: Report on the Enabling Characteristics of Undergraduate Education*. Canberra: Higher Education Council and Australia Vice-Chancellors' Committee, 1994.

Cheek, Julianne, P. Hill, Irene Doskatsch and L. Walsh. *Finding Out: Information Literacy for the 21st Century*. South Melbourne: Macmillan Education Australia, 1995.

Cowley, John and Nancy Hammond. *Educating Information Users in Universities, Polytechnics and Colleges*. London: British Library Research and Development Department, 1987.

Cowley, John. *A Survey of Information Skills Teaching in UK Higher Education*. London: British Library, Research and Development Department, 1988.

Crebert, R.G. *The Enabling Characteristics of Undergraduate Education: Advice of the National Board of Employment and Training and The Higher Education Council*. Canberra: The Board, 1994.

Dishan, Cherie L. "Moving Information Literacy From Theory to Practice." *Media Spectrum* 23, no.1 (1996):16-18.

Doyle, Christina. *Information Literacy in an Information Society: A Concept for the Information Age*. Syracuse NY: Eric Clearinghouse on Information and Technology, June 1994.

Dusenbury, Carolyn, and others. *Read This First: An Owner's Guide to the New Model Statement of Objectives for Academic Bibliographic Instruction*. Chicago: Bibliographic Instruction Section, Association of College and Research Libraries, American Library Association, 1991.

Eisenberg, Michael and Robert Berkowitz. *Information Problem Solving: The Big Six Skills Approach to Library and Information Skills*. Norwood: Ablex Publishing Co, 1990.

Evans, A. J. and Ian Malley. *Educating the User*. London: Library Association, 1979.

Farah, Barbara D. "Information Literacy: Retooling Evaluation Skills in the Electronic Information Environment." *Journal of Educational Technology Systems* 24, no.2 (1995):127-133.

Fjallbrant, Nancy and Ian Malley. *User Education in Libraries*. 2nd ed. London: Bingley, 1984.

Fjallbrant, Nancy and Malcom Stevenson. *User Education in Libraries*. London: Bingley, 1978.

Fjallbrant, Nancy. "Recent Trends in Online User Education." *IATUL Quarterly: A Journal of Library Management* 2, no.4 (1988):228-236.

Fjallbrant, Nancy. "Why User Education and How Can Information Technology Help?" *IFLA Journal* 16, no.4 (1990):405-413.

Fleming, Hugh. *User Education in Academic Libraries*. London: Library Association, 1990.

Ford, Barbara J. "Information Literacy." *College & Research Libraries News* 50, no.10 (1989):892-893.

Foster, Stephen. "Information Literacy Misgivings." *American Libraries* 24, no.4 (1993):344-346.

Fox, Lynne M., Judith M Richter, and Nancy White. "Pathways to Information Literacy." *JNE. Journal of Nursing Education* 28, no.9 (1989):422-425.

Fox, Peter. *Library User Education: Are New Approaches Needed?: proceedings of a*

conference, Trinity College, Cambridge, 1979. London: British Library, c1980.

Freeman, Mike. "Introducing the Concept of 'User Education' to the Central and State Training Institute Librarians of India, 1990-93." *The Vocational Aspect of Education* 46, no.1 (1994):31-39.

George, Rigmor and Rosemary Luke. "The Critical Place of Information Literacy in the Trend Towards Flexible Delivery in Higher Education Contexts". *Australian Academic and Research Libraries* 27, no.3 (1996):204-212.

Hardesty, Larry L., John P. Schmitt, and John Mark Tucker. *User Instruction in Academic Libraries: A Century of Selected Readings*. Metuchen, N.J.: Scarecrow Press, 1986.

Hillerich, R. "Towards an Accessible Definition of Literacy." *English Journal* 65 (1976):50.

Information Competence in Specific Disciplines (5 February 1997.)
<http://www.multiweb.lib.cal.../infocomp/specific.html>

Julien, Heidi. *Report of User Education in New Zealand Tertiary Libraries Survey, 1997*. (12 September 1997.) <http://www.netlink.co.nz/~nzlia/conf97/useredrep.htm>

Kirkendall, Carolyn A., ed. *Bibliographic Instruction and the Learning Process: Theory, Style, and Motivation: papers presented at the Twelfth Annual Library Instruction conference held at Eastern Michigan University, 6-7 May, 1982*. Michigan: Pierian Press, 1984.

Kirkendall, Carolyn A., ed. *Directions for the Decade: Library Instruction in the 1980s: papers presented at the Tenth Annual conference on Library Orientation for Academic Libraries, held at Eastern Michigan University, 8-9 May, 1980*. Michigan: Pierian Press, 1981.

Kuhlthau, Carol Collier. *A Process Approach to Library Skills Instruction: papers presented at the Annual meeting of the American Association of School Librarians, Atlanta, October 31 - November 4, 1984*. ERIC: ED25433, 1984.

Kuhlthau, Carol Collier. "Developing a Model of Library Search Process: Cognitive and Affective Aspects." *RQ* (Winter 1988):232-242.

Lockwood, Deborah L. *Library Instruction: A Bibliography*. Westport, Conn.: Greenwood Press,

1979.

Lowry, Anita Kay. "Beyond BI: Information Literacy in the Electronic Age." *Research strategies* 8, no.1 (1990):22-27.

MacAdam, Barbara. "Information Literacy: Models for the Curriculum." *College & research Libraries News* 51, no.10 (1990):948-951.

Malley, Ian. *Education in the Use of Libraries and Information: A Bibliography pt. 2. 1955-1969*. Loughborough, Leicestershire, U.K.: I. Malley, 1980.

Martin, Lynne M., ed. *Library Instruction Revisited: Bibliographic Instruction Comes of Age*. New York: The Haworth Press, 1995.

Master, Nancy. "Taking the Mystery Out of the Library: User Education at UNLV's Dickinson Library". *The Reference Librarian* no.48, (1995):115-129.

McClure, Charles A. "A User Perspective on Developing Internet Services." *Computers in Libraries* 12, no.4 (1992):52-55.

McClure, Charles A. *The Knowledge Economy: The Nature of Information in the 21st Century*. (23 April 1997) <http://www.aspeninst.org/dir/polpro/CSP/IIS/93-94/McClure.html>

McCrank, Lawrence J. "Information Literacy: A Bogus Bandwagon? Is this latest popular front good for librarians?" *Library Journal* 116, no.8 (1991):38-42.

McKie, A. *Information Literacy within the University of South Australia: A Report* (unpublished, 1993)

Mellon, Constance A., ed. *Bibliographic Instruction: The Second Generation*. Littleton, Colo.: Libraries Unlimited, 1987.

Moore, Penny. "Information Literacy: Perspectives and Challenges." *New Zealand Libraries* 48, no.9/10 (June 1997):166-173.

Mowat, Ian R.M. *User Education in Academic Libraries*. Loughborough: I. Malley, 1979.

Nahl-Jakobovits, Diane, and Leon A. Jakobovits. "Bibliographic Instructional Design for Information Literacy: Integrating Affective and Cognitive Objectives." *Research Strategies: RS* 11, no.2 (Spring 1993):73-88.

Oberman, Cerise and Katina Strauch. *Theories of Bibliographic Education: Designs for Teaching*. New York: R.R. Bowker Co., 1982.

Rader, Hannelore B. "Bibliographic Instruction or Information Literacy." *College & Research Libraries News* 51, no.1 (1990):18-20.

Rader, Hannelore B. "Library Orientation and Instruction - 1991." *Reference Services Review* 20, no.4 (1992):69-84.

Rader, Hannelore B. "Library Orientation and Instruction - 1992." *RSR: Reference Services Review* 22, no.2 (1994):79-95.

Rader, Hannelore B. "Library Instruction and Information Literacy - 1995." *RSR: Reference Services Review* 24, no.4 (1996):77-96.

Rader, Hannelore B. "User Education and Information Literacy for the Next Decade: An International Perspective." *RSR: Reference Services Review* 24, no.2 (1996):71-76.

Renford, Beverly, and Linnea Hendrickson. *Bibliographic Instruction: A Handbook*. New York: Neal-Schuman Publishers, c1980.

Rice, James. *Teaching Library Use: A Guide for Library Instruction*. Westport, Conn.: Greenwood Press, 1981.

Ridgeway, Trish. "Information Literacy: An Introductory Reading List." *College & Research Libraries News* 51, no.7 (1990):645-648.

Snavelly, Loanne, and Natasha Cooper. "The Information Literacy Debate." *Journal of Academic Librarianship* 23, no.1 (1997):9-14.

Stevenson, M. B. *User Education Programmes: A Study of Their Development, Organization, Methods, and Assessment*. London: British Library, 1977.

Svinicki, Marilla D., and Barbara A. Schwartz A. *Designing Instruction for Library Users: A Practical Guide*. New York: M. Dekker, c1988.

Taylor, Peter J., Colin Harris, and Daphne Clark. *The Education of Users of Library and Information Services: An International Bibliography, 1926-1976*. London: Aslib, 1979.

Tiefel, Virginia M. "Library User Education: Examining Its Past, Projecting Its Future." *Library Trends* 44, no.2 (1995):318-338.

Varlejs, Jana, ed. *Information Literacy: Learning How to Learn: Proceedings of the Twenty-Eighth Annual Symposium of the Graduate Alumni and Faculty of the Rutgers School of Communication, Information, and Library Studies, 6 April 1990*. Jefferson N.C.: McFarland & Co., c1991.