

Curtin University of Technology
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**Information literacy and news libraries: The challenge of developing
information literacy instruction programs in a special library
environment**

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Abstract

This study examines the current situation of training provided to journalists by news librarians in the United States and Australia. The study examines the factors affecting the provision of training and the potential for information literacy instruction to comprise most of the training provided. The definition of information literacy was explored in the context of journalists and news organisations. The study questions the adaptability of the concept to a workplace environment, where organisational and individual development is important.

The results of a self-administered questionnaire are presented. Respondents indicated that news librarians are very willing to plan and conduct training, a clear majority agreeing that they should train journalists to search for their own information. Respondents also expressed a need for more training themselves with regard to the skills needed to deliver instruction. The results also found that training is at an early stage in news libraries, with few hours available for planning and conducting training, and mixed success with different training methodologies.

A model is suggested as a method of selecting information literacy competencies for individual journalists. The model describes the relationships between individual, organisation, and occupation determined competencies. The study also discusses the implications of the lack of workplace training for journalists, which has impacted upon news libraries' ability to introduce training services. News librarians are providing training, and are pro-active in providing services and information to journalists, but managers do not yet recognise this as a major role for librarians in news organisations. Information literacy instruction needs to become an organisational goal in order to succeed.

The difficulties of assessing and evaluating information literacy instruction in the workplace are outlined. The need for measurable outcomes and pre-evaluation in training are emphasised.

Several considerations for further research are detailed, including the need for further clarification of the nature of information literacy in the workplace, as well as the relationship between the role of information literacy instruction in formal university education and the workplace.

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

Signature:.....

Date:

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Chapter 1. Statement of the problem

1.1. Purpose of the study

The purpose of this study was to analyse the current situation of training provided by news libraries to journalists. In particular, the study examined the variables affecting the provision of training such as resources, curricula, competencies, and support from management. The potential of training as a new work role for news librarians was explored. The study also explored information literacy instruction as the backbone of training provided by news librarians. Definitions of information literacy, skills, competencies, and standards were explored in the context of journalists and news organisations.

The study addressed these issues within the context of five research questions:

1. What information literacy skills do journalists need?
2. What factors motivate news librarians to introduce information literacy instruction?
3. What resources do news libraries need in order to provide information literacy instruction?
4. What training methodologies are appropriate for news librarians to use to train journalists in information literacy skills?
5. Why is the issue of providing training for journalists in the workplace often neglected?

A primary study was carried out using an online, self-administered questionnaire distributed to members of the NEWSLIB-L mailing list. The results of the study and literature review were used to answer the research questions.

The goal of this study was to determine the factors that impact upon the provision of information literacy instruction and other training to journalists by news libraries in news organisations. The results of this study will enable news librarians to be more aware of these factors when planning and conducting such training in the future. The study also provides data about training in the news library sector, which will enable librarians to determine how their training compares to others in the sector.

The study aimed to build upon the literature of journalists' information seeking behaviour, journalism competencies, and information literacy competencies as defined by librarians. The exploration of how specific information literacy competencies for journalists can be defined in each news organisation will enable news librarians to more easily identify and target areas of individual competency strength and weakness in training.

The study was motivated by a professional need for research pertaining to the conduct of training by news librarians. The study was also motivated by a desire to understand the reasons why several news libraries closed in recent years, and sought to discover if perhaps those libraries might have continued to play a larger role in those organisations if they had provided training.

1.2. Background to the problem

News libraries are entering a time of necessary change. Libraries need to evolve to ensure that their services remain relevant to journalists. Although news libraries have been described as being at a point of crisis due to declining reliance on librarians for mediated searching (Paul & Hansen, 2002), they have an opportunity to undertake new roles to ensure that the library remains an essential part of the news process. In particular, librarians have an opportunity in evaluating and managing information in news organisations (Paul, 1999). Training is another opportunity for news librarians, that has been identified widely in the literature (Hansen & Ward, 1993; Metcalf, 1993; Paul, 1997a; Paul & Hansen, 2002). Information literacy

instruction encompasses both of these roles. As yet however, there is no research available that identifies the information literacy skills that are important for journalists.

Although there has been significant growth in the literature addressing journalists' need for workplace training (Ha, 2000; Hu, 2001), there have not been any studies examining what skills they need to learn, or which methodologies are most appropriate for delivering training. Some exploratory work has been completed which explored the many competencies that journalists need to do their job (*Competence in the newsroom: A Poynter conference*, 1998). The viability of information literacy instruction is the subject of this study, which examines the extent to which such training could address training needs of journalists as identified by librarians.

Although the news library literature discusses information needs and seeking (Paul, 1997b; Ward, Hansen, & McLeod, 1998), information literacy is not addressed. There is a small body of literature on information literacy in other special libraries, particularly law (Boelens, 2001; Gasteen & O'Sullivan, 2000; Oman, 2001; O'Sullivan, 2001). This study aims to define information literacy in journalism and workplace contexts, as the majority of relevant literature on information literacy is framed in a higher education context.

Journalists once relied on librarians to complete their search requests. More recently, however, journalists have had to become more responsible for their searching behaviour due to the decline of mediated searching brought about in part by increasing sophistication of search tools available to end-users (Garrison, 2000). Many journalists now have access to the Internet and databases on their desktop, and thus do not have to go to the library to find information. However, this change necessitates the development of search skills in order to effectively find information. In particular, journalists need to develop evaluation skills so that they can distinguish the characteristics of good information (Bell, 1991). Most journalists have learnt how to use the Internet by teaching themselves (Paul & Hansen, 2002).

Journalists are requesting training more than ever, but on-the-job training still dominates in an environment where managers do not have the time or money to send journalists to external training (Avieson, 1991; Hu, 2001; Quinn, 1998).

In order to determine what searching skills journalists need to develop, their information search behaviour can be studied to find gaps in skills and strategies. Information search behaviour describes those steps that a person takes to solve an information problem or information need (Dervin & Dewdney, 1986; Dervin & Nilan, 1986). Identification of which behaviours a journalist uses can help librarians to provide more meaningful and timely information, and to better determine training needs. A journalist's satisfaction with the way they find and use information is an important part of information search behaviour (Dervin & Nilan, 1986). Librarians can assess a journalist's level of satisfaction with information by using a variety of methods to further clarify training needs.

Once information search behaviours have been identified, and training needs have been assessed, librarians can begin to implement an information literacy instruction program for journalists. There are many definitions of information literacy, but one widely used is that of the American Library Association (*Presidential committee on information literacy: final report*, 1989), which defined information literacy by describing the information literate individual -

To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.

Information literacy instruction refers to the training designed to achieve an individual's information literacy (Grassian & Kaplowitz, 2001). News librarians need to develop information literacy instruction with reference to the many standards and definitions that have been developed in different environments, and rethinking the concept of information literacy in the context of news organisations. In particular, what differentiates news organisations and journalists and their

information problems from higher education, or law libraries, and how does this impact upon our known assumptions about information literacy as a concept (Bruce, 1999)? What is the role of librarians in information literacy, and to what extent should they intervene when journalists are seeking information (Bundy, 1999; Kuhlthau, 1996)? The answer to these questions will also have an impact upon how information literacy is defined in individual news organisations. As relatively little is known about information literacy in the workplace (Bruce, 2000; Corcoran, 2001; Marcum, 2002; Oman, 2001; O'Sullivan, 2001), news librarians can have a great impact upon the way in which it is defined. The study of information literacy from both the individual and organisational approach, in which the pursuit of common information literacy goals becomes an organisational goal (Bruce, 1997a; Gasteen & O'Sullivan, 2000; Grassian & Kaplowitz, 2001; Oman, 2001), is also an area in which news librarians can impact on knowledge about how information literacy is defined outside of higher education.

The differences between the contextualisation of information literacy from a pedagogical and an andragogical perspective are yet to be considered in the literature. Andragogy describes a student-centred, and often self-directed methodology of learning, as opposed to pedagogy which is teacher-centred (Knowles, 1990; Smith, 1998). This consideration may or may not impact upon information literacy in a workplace environment due to the way problems are approached and resolved, and the differences in training methodologies that are best suited to teach information literacy. This study considers this problem, and how information literacy as currently defined might differ when examined from an andragogical perspective.

Regardless of how information literacy is ultimately defined in news libraries, any instruction that librarians choose to introduce must be planned. Skills gaps must be identified (Grassian & Kaplowitz, 2001), outcomes must be measurable (Noe, 2002; Paul & Hansen, 2002), and criteria for evaluation and assessment must be defined (Noe, 2002; Smith, 1998). Librarians should select training methodologies that suit journalists, librarians, available resources, and the material being taught (Breivik, 1982; Roberts & Blandy, 1989; Svinicki & Schwartz, 1988).

1.3. Scope of the study

This study examined the literature of Australia, the US, UK, and other countries. However, the primary study was limited to news librarians in the US and Australia. The literature review does not cover literature published after January 2003.

The primary data collected in the survey has limitations. The scope of the data collected was limited, due to time and resource constraints.

1.4. Methodology

A literature review was carried out in order to identify the research questions for this study. The literature of news libraries, information seeking behaviour, information literacy, news libraries, journalism, and workplace training was studied.

The study's population included all librarians employed in news libraries located in the US and Australia. The known population was the approximately 500 members of the News Library Division of the Special Library Association. The main study of the population was conducted via an Internet-based, self-administered questionnaire. This study used a non-experimental, non-probability sampling method. In order to find and identify members of the known population, it was assumed that members of the News Library Division of the Special Library Association also subscribe to the NEWSLIB-L email list, where the questionnaire was publicised. It was also assumed that little sample bias would be caused against non-Internet users, as Internet use is near total in this population.

An Internet-based questionnaire instrument was chosen due to the geographical spread of the population, and the high cost of surveying the population by other methods such as mail or telephone. The questionnaire was distributed in June-August 2002, with follow-up interviews conducted in October 2002. The

questionnaire was designed using multiple-choice and Likert scales. Additional comments could be made at the end of the questionnaire, a facility which many respondents utilised to clarify their answers, and to discuss their responses. The questionnaire was anonymous and confidential, with email data being collected on an opt-in basis. Other personal data such as organisation type and location was collected for sample identification purposes.

Approval was granted by the Human Research Ethics Committee of Curtin University of Technology for this study.

1.5. Outcomes

The main outcome of this study is the identification of the factors that impact upon the planning, conducting, evaluation and assessment of training and information literacy instruction by news librarians for journalists. This study also examines the assumptions and definitions of information literacy from a journalism perspective in a workplace environment.

This study also presents a model that can be used to identify competency standards for individual journalists in a news organisation. These three outcomes will enable news librarians to more effectively develop appropriate and effective training based on an assessment of resources, journalists' needs, and reference to competency standards.

1.6. Structure of the thesis

Chapter 1 of this thesis comprises discussion of the statement of the problem.

Chapter 2 presents the results of the literature review. The literature review encompasses the literature of information search behaviour, information literacy, news libraries, journalism, and workplace training.

Chapter 3 reports on the selected methodology. It discusses the methods used to conduct the literature review and the primary study. There is discussion of the selection of sampling methodology, survey instrument, data analysis software, ethical clearance, and data storage.

Chapter 4 introduces the results of the primary study.

Chapter 5 discusses the results of the study and analyses relationships between aspects of the data.

Chapter 6 explores the research questions, and discusses the results in the context of identifying an information literacy competency set for journalists.

Chapter 7 makes recommendations for future research based on the results and discussion.

Chapter 8 makes concluding remarks about the study.

The remainder of the work comprises the list of bibliographic references and appendices.

Chapter 2. Literature Review

2.1 The news library and news librarians

News libraries have two main functions - to assist journalists, and to manage several profit-making operations of news organisations. There are two main types of news libraries - newspaper and broadcast. Newspaper libraries operate in newspapers of all sizes from local papers to state and national publications. Broadcast libraries operate in radio and television organisations. Other news libraries may be found in organisations producing online or magazine publications.

The main collections of these libraries contain databases, news magazines, newspapers, tapes of broadcast newscasts and ready-reference books. Some collections are more extensive, and include general works on a wide range of subjects. The library's archives, depending on the type of library, may contain photographs, articles, or tapes of stories that went to air (Semonche, 1993).

Hansen and Ward (1993) describe the roles of librarians and journalists in information searching and research as shared. They outline the uses that journalists make of news libraries which have contributed to the development of shared roles; particularly fact checking, research, and finding out how other publications covered a story. Paul (1999) also sees the role of news librarians and journalists as that of partners in the newsgathering and packaging process. She argues that journalists need to change their reporting methods to maintain a competitive edge and to provide a deeper analysis of events. Librarians are best suited to assist in this transition, she argues, because of their training in "understanding, evaluating, cataloguing, and compiling information." (Paul, 1999:88)

News librarians have had three successive roles over time according to Paul (1997c). First, they were information gatekeepers, then information intermediaries, and they are now making a transition to being end-user coaches and guides. News libraries and their librarians need to continue to change to ensure that they remain relevant to journalists. They need to provide journalists with access to services that filter news sources, maintain a current awareness service, and take on a highly collaborative role to keep ahead of the organisation's competitors (Paul, 1999).

Several authors (Hansen & Ward, 1993; Metcalf, 1993; Paul, 1997a; Paul & Hansen, 2002) have identified training as a key role for news librarians. These writers describe training for specific software packages, rather than training in information skills. The time when new software packages are implemented is the best opportunity for training (Hansen & Ward, 1993; Metcalf, 1993). Hansen and Ward (1993) have found that many journalists say that they are not as confident using technology as they would like to be. This is an area that needs further investigation to determine what skills and training journalists require. The articles do not give an insight into how the need for training is assessed, nor which methods of training are used.

Increasingly, news libraries have become profit centres (Hansen & Ward, 1993; Nelms, 1997; Paul, 1997). Newspaper libraries may charge for answering inquires or providing copies of articles and photographs to the public. News libraries are often the centres responsible for uploading articles to the newspaper's website or to commercial databases (Nelms, 1997; Outing, 1996)). Conflicts of interest may arise for librarians when they receive an information request from the public, and they then pass information about that search on to journalists. (MacDonald, 1999).

Paul and Hansen (2002) have undertaken a study of news libraries in the US in order to determine what roles news libraries will play in the future. They describe news libraries as being in 'crisis' due to staff cuts, declining budgets, and usage of the news library by journalists. Many libraries have cut back services, reduced staff numbers, or closed altogether in recent years (Gawne, 2001;

Kuczynski, 2001). Paul and Hansen (2002) list value-added provision of information, information architecture, revenue creation, improving journalists' search skills, and identifying new technology trends as areas that news libraries need to address.

2.1.1 The Librarian-Journalist Relationship

Librarians and journalists now have a highly collaborative relationship. Librarians are involved in story meetings, to the extent that some librarians receive by-line credit for their research contributions, and some librarians have taken to helping write articles (Hansen & Ward, 1993; Outing, 1996).

Trust is an important aspect of the librarian-journalist relationship. Journalists need to trust that librarians who gather information on their behalf will provide them with data that is timely and accurate (Kenney, 1993; MacDonald, 1999). Librarians and journalists are alike in that their professional ethics contain commitments to freedom of information, freedom of speech and accountability according to MacDonald (1999). However, there are some potentially delicate ethical areas of which both parties need to be aware. Privacy and confidentiality are critical issues for journalists while a story is being researched. Journalists may not reveal all the details of their research to librarians, which can hinder the search process. At the same time, news librarians are under pressure to provide correct and complete data to reporters to minimise the possibility of legal action arising from defamation or libel cases (MacDonald, 1999). Conflict can also arise between librarians and journalists because journalists do not understand why librarians are so willing to provide information to anyone who asks for it when a journalist's role is often to keep information secret until the story is printed or aired to stay ahead of the competition (Kenney, 1993).

Paul believes that librarians have a key role to play in every stage of the news making process (Paul, 1997c), and suggests that it is up to libraries to market themselves to ensure that they are included in these processes.

2.1.2 Information literacy

Information literacy is not covered in any of the literature on news libraries, although some articles in the literature discuss information needs and seeking (Paul, 1997b; Ward et al., 1998). The reason for this is unclear. It could be because librarians currently fill most search requests, or because news librarians do not see it as a relevant issue. However, considering the focus on information needs and seeking in the journalism literature, as well as the finding by Hansen and Ward (1993) that many journalists are not completely confident using information technology, it is vital that there be further research in this area.

2.1.3 Technological change in news libraries

News library studies in recent decades have focused on technological changes in newsrooms and libraries, and how these changes have impacted upon the role of news libraries. Kenney (1993) describes how it was previously believed that once newspaper clippings were automated or digitised, the news library would no longer be needed. However, automation facilitated the need for ongoing training and collaboration with journalists due to the introduction of electronic databases and Computer Assisted Reporting.

Computer Assisted Reporting (CAR), has been the most significant change to the way reporters perform their job in recent decades, and this change has also affected the way librarians work in news organisations. CAR involves the use of computer based tools such as spreadsheets, databases, and statistical tools (Koch as cited in Fabritius, 1998). Withey (1999) argues that CAR is a threat to some media organisations, because it allows organisations of all sizes to gain access to a larger range of resources than before. Outing (1996) notes that this competition has affected librarians, who have been forced to work night shifts and take on some reporting roles to keep up with the demands of new technology. Librarians are being asked to upload publications to commercial databases and online web sites through the night.

Databases have also changed the nature of reporting. Most organisations restrict access to commercial databases such as Lexis-Nexis and Dow Jones Interactive to librarians only. Librarians are considered to be better skilled at searching such databases, which keeps costs down (Hansen & Ward, 1993). Although journalists are not permitted to search commercial databases, they are expected to be able to search their organisation's online archives (Hansen & Ward, 1993). Librarians fill search requests by filtering the information that is found on databases and only presenting journalists with the most relevant references to save time and effort. Unfortunately, because most of this work is hidden from journalists they may not realise the effort or the skill involved (Kenney, 1993). Journalists as a result may not have as well developed search skills when information searching shifts from librarian to journalist as a result of the decline of mediated searching by librarians.

2.2 Journalists

2.2.1 The role of news and journalists

News "exists to serve the right to know" (Herbert, 1998:266). News stories are a result of decisions made about source material, information gathering, agenda, and relevance to the public. Facts have no meaning on their own, and so news stories enable facts to become information (Ericson, Chan, & Baranek, 1989). Journalists have an obligation to ensure that they are using the most appropriate methods of seeking, verifying and using information in order to provide correct and timely information to the public.

Journalists present stories of interest to the public that the public could not easily source themselves. They locate sources, research background information, and assemble these facts into stories that are printed in newspapers or magazines, or broadcast on television or radio (Morgan, 1998).

2.2.2

Newsgathering and news sources

Journalists use a variety of methods, in a range of formats to find facts. They use interviewing, observation and documentary techniques (Ericson, Chan, & Baranek, 1987) to collect data from sources such as speeches, press conferences, media releases, reports, past stories, and news agency copy (Bell, 1991).

Despite the wide variety of information sources and methodologies of finding information, including databases, reports, footage, statistics, and quotes from members of the public, journalists will often limit themselves to the information sources and methodologies they use most often, and rely on personal sources for facts and quotes (Ericson et al., 1989). Journalists have their own established criteria of objectivity, balance and fairness when writing a story, and tend not to question those criteria while researching a story (Ericson et al., 1989). Those criteria may be challenged when journalists become more responsible for their own information searching with the decline of mediated searching.

There is often too much data available to be included within the constraints of news stories, and so journalists must decide what is worth reporting, how much data is needed, what information is important, and how the story will be presented (Dennis & Merrill, 1991). News executives are ultimately responsible for agenda setting in the news. They set policy, but do not participate in daily news production (Bell, 1991). Even from a distance however, the decisions of news executives have an effect on what the public ultimately sees and/or hears.

Responsibility for the news agenda begins with editors who assign journalists to stories and edit copy (Bell, 1991). A story is rarely written by one journalist, because there is not enough time for them to reflect on gaps in what they have written (Bell, 1991). The consequences of this method of writing on information search behaviour are unknown. This methodology could either lead to collaborative cognition, with members of a team creating knowledge together, or it could weaken a journalist's individual cognition. There is an absence of literature exploring these situations.

2.2.3 Verifying information

Inaccurate and incomplete information is a problem for journalists (Rich, Mencher, Izard et al. as cited in Garrison, 2000). Journalists are now relying on online information that may be less reliable than other sources of information, and thus they need to develop standards to verify the accuracy of online information (Cannon, 2001; Garrison, 2000). Existing subject expertise is the primary method of verifying information on the Internet when using controversial sources (Nicholas, Williams, Cole, & Martin, 2000).

Information flows in newsrooms are complex. At each level, information is added and subtracted, or changed. "Gatekeepers" decide what information should be passed on, and what should be filtered out (Watson, 1998). Many gate keeping roles are now performed by journalists, in part because they now have more responsibility for their own information searching. They require more analytical skills than ever before to filter and use information effectively. (Garrison, 2000). Because news librarians no longer perform routine information searches, journalists have had to develop information seeking skills to assess information (Garrison, 2000). Quinn (2002) proposes that journalists need to become knowledge managers, and develop highly developed communication, workflow and technology skills. In particular, Quinn points to the disorganisation of expertise that journalists have accrued, and urges journalists to reference sources and data collected during the newsgathering process so that others can access it. Yet, while Quinn does acknowledge the skills that librarians have in information and knowledge management and says that journalists should see them as a model, he does not suggest that journalists work with news libraries in order to develop knowledge management (Quinn, 2002).

Wien (2000) describes the ability to communicate needs as one of the most important skills of a journalist. Ericson, Chan, and Baranek (1987) assert that good writing is more important than specialised knowledge because journalists are generalists. Writing, reporting and grammar skills are highly valued, but editors rate graduates from journalism schools poorly in these areas (Dickson & Brandon, 2000).

Communication skills are often learned on the job in order to develop a writing method that conforms with the organisation's own style (Ericson et al., 1989).

2.2.4 Key values of journalism

Objectivity is a complex concept, and has many interpretations. It can mean that stories are emotionally detached (Dennis & Merrill, 1991), or that responsibility for content rests with the sources (Donsbach & Klett, 1993). It can be used to measure the predictability of several stories on one subject, given a set criteria (Avieson, 1991).

Avieson (1991) says that audiences have many choices, and will choose the media that best suits their needs and values. Journalists must respond to audience demands by writing stories that appeal to their consumers. Avieson emphasises that journalists have an innate sense of knowing what stories are right for their audience.

The media can only present facets of reality (Avieson, 1991; Dennis & Merrill, 1991; Donsbach & Klett, 1993; Ericson et al., 1987) There is always much more to a story than the media is able to present, and thus journalists must select the most important data to tell a story (Dennis & Merrill, 1991). Ericson, Chan and Baranek (1987) state that the concept of objectivity is problematic because truth is not found in isolated facts, but in the interpretation of those facts. Regardless of the definition used, objectivity is an essential skill, and a key part of Codes of Practice produced by journalism associations in the US and Australia, amongst others, which governs the way journalists work (*Codes of Ethics*, 1997; *Codes of Ethics*, 2001).

Ethics is defined as the "study and application of journalistic standards of conduct and moral choices" (Dennis & Merrill, 1991) Ethics is a subjective value, and deals with degrees of being "right" and being "wrong" (Dennis & Merrill, 1991). There is great conflict in journalism between the reporter who wants to report the truth to the audience, and the source who wants to be presented positively (Dennis & Merrill, 1991). News only has meaning when it is constructed

(Ericson et al., 1989), so it is up to individual journalists to determine what the purpose of their story is and how the public will perceive it (Dennis & Merrill, 1991) in order to determine whether their presentation of the facts was 'ethical'. Journalism associations worldwide have Codes of Ethics or Practice that guide journalists about sources, presentation of facts, and correction of errors (*Codes of Ethics*, 1997; *Codes of Ethics*, 2001). Journalists share many values with librarians, such as freedom of information, freedom of speech and accountability (MacDonald, 1999), which enables journalists and librarians to work together more harmoniously.

2.2.5 Computer Assisted Reporting

The goal of Computer Assisted Reporting is not to change the way journalists report the news, but to improve the process by using tools such as spreadsheets and databases (Koch as cited in Fabritius, 1998). Inadequate training of journalists reportedly has led to tools such as databases being used inefficiently (Kerr & Neibauer as cited in Hansen & Ward, 1993). While journalists are expected to be experts at navigating their organisation's archives, they are also expected to use a mediator for navigating commercial databases (Hansen & Ward, 1993). It has been assumed in the journalism literature that Computer Assisted Reporting is just the same method of reporting with new tools, and thus little attention has been paid to the impact of databases on reporting (DeFleur, 1997; Koch as cited in Fabritius, 1998). Quinn (2002) asserts that knowledge management associated with the use of new technology tools is important, but somewhat lacking in today's newsrooms. Technology will enable journalists to record sources that were found in the newsgathering process but not used in the end story. Thus one of the goals of Computer Assisted Reporting is personal information management, to enable journalists to track their sources and data, and then to share it with others (Quinn, 2002).

2.2.6 Use of the Internet by journalists

Most studies concerned with journalists as users of information focus on the impact of the Internet as a research tool (Millen & Dray, 2000; Nicholas, Centre, & Aslib, 1998; Nicholas et al., 2000; Wien, 2000). These reports say that the Internet has had little impact on the way journalists gather information. However others have suggested that there is a difference in the way the Internet is used as a research tool as opposed to other kinds of information sources (Choo, Detlor, & Turnbull, 1998, 2000). Research in the UK hypothesised that there was an expectation that journalists would be early adopters of the Internet, which did not turn out to be the case (Nicholas et al., 1998; Nicholas et al., 2000). The study found that the Internet was mostly used as an additional tool along with other information research tools already available in the newsroom. A study conducted in 1997 found that use of the Internet by Australian journalists was well below that of journalists in the United States (Quinn, 1998). Many journalists are self-taught in using the Internet as they either did not have training available to them or felt they did not have the time to attend training (Nicholas et al., 1998; Paul & Hansen, 2002; Quinn, 1998). Additionally, journalists who do not use the Internet perceive information overload as more of a problem than those who do use it. Journalists feel that they already have to cope with significant amounts of information, and the Internet does not greatly contribute to the amount of information, because it is easy to ignore (Nicholas et al., 2000).

2.2.7 Training of journalists

In recent years, a number of journalism training organisations have been established in the United States (Association for Education in Journalism and Mass Education, Broadcast Education Association, Journalism Education Association, Freedom Forum, NICAR, Poynter Institute for Journalism). Some of these organisations have Australian or Asian divisions (Journalism Education Association – South Pacific). The main goal of these groups is to provide training

seminars and workshops focusing on concepts such as ethics, Computer Assisted Reporting, and writing skills.

However, despite the growth of such organisations, journalists still believe that there are not enough locally available training options (Hu, 2001), and many journalists and editors say that they do not have the time to send staff to lengthy out of town workshops (Hu, 2001). Training is still considered a 'luxury' in Australian newsrooms (Quinn, 1998).

Many concepts of journalism are self-taught on the job (Avieson, 1991; Quinn, 1998). Objectivity, information seeking, and writing are learnt by experience and from other colleagues (Ericson et al., 1987). Formal journalism education gained from university is sometimes perceived to be of little value by managers and editors, because it is too theoretical (Dickson & Brandon, 2000). However, there is often no formal learning in the workplace apart from on-the-job learning, and new journalists may not always know where they can improve their stories (Ericson et al., 1987).

Many managers are reluctant to send journalists to training because it can be difficult to measure the output (Ha, 2000), and the cost of external training is high (Hu, 2001). Yet, Journalists want training (Ha, 2000), even if it is at their own cost (Hu, 2001). Garrison (2000) sees training as the answer to common problems like finding and verifying information. Personal information management is seen as another important area of training need (Quinn, 2002).

2.3 Information seeking

2.3.1 Definitions of information seeking

Information seeking refers to the sequence of steps and strategies used to solve information problems or satisfy information needs. Information problems or

needs are defined by the individual's situation, intended use of the data, and gaps in their existing knowledge (Dervin & Dewdney, 1986; Dervin & Nilan, 1986). No single strategy adequately describes the behaviour of all individuals.

The literature identifies information seeking behaviour as a dynamic process which involves different strategies based on the stage which an individual has reached in the information seeking process and the kind of information they seek. (Kelly as cited in Kuhlthau, 1993a; Kuhlthau et al, 1992; Lin & Belkin, 2000).

2.3.2 Theories of information seeking

Many theories of information seeking have been developed (Belkin, Oddy, & Brooks, 1982; Choo et al., 2000; Dervin & Nilan, 1986; Eisenberg & Berkowitz, 1990; Ellis, 1989; Ingwersen, 1996; Kuhlthau, 1998; Limberg, 1998; Marchionini, 1995; Saracevic, 1996). The theories attempt to describe an individual's strategies as they search for information. Some theories are linear, meaning that the steps must be performed in a set manner (Kuhlthau et al., 1992) and others are non-linear (Eisenberg & Berkowitz, 1990). Non-linear theories suggest that an individual passes through different stages at different times depending on their information need. Users choose an information seeking strategy depending on what information they need and what they need it for. These theories conclude that progression in the information seeking process is based on shifts in the individual's cognition, and methods used to solve an information problem are dependent on the individual's situation (Dervin & Nilan, 1986; Eisenberg & Berkowitz, 1990; Ellis, 1989). All writers identify that librarians must have well-developed skills in order to determine what information individuals need.

2.3.2.1 *Kuhlthau*

The information search process consists of distinct stages that are marked by changes in the individual's cognition and experience (Bates, Belkin and Marchetti as cited in Kuhlthau et al., 1992). Kuhlthau's (1993b) model is linear and consists of six stages; initiation, selection, exploration, collection, presentation and assessment. Information needs change as the individual's understanding of their information problem becomes more clear (Bates, Belkin and Marchetti as cited in Kuhlthau et al., 1992). The information search process is dynamic because it involves learning during the search.

The information search process is a cognitive behavioural model which describes the feelings of users at each stage. Kuhlthau (1992) describes how the feelings of users change from uncertainty to certainty about their information problem as they progress through the six stages.

Kuhlthau (1993b; 1996) states that intermediaries such as librarians can help the individual to define their information problem and goals during reference interviews. Kuhlthau's zone of intervention describes the point at which it is appropriate for librarians to intervene in the individual's information search process. The concept of the zone of intervention is useful for helping librarians conducting reference interviews to evaluate what search stage the individual is in, and what information is appropriate for that stage (Kuhlthau, 1996). Kuhlthau asks if intermediaries such as librarians should be trained in the cognitive process in order to better understand users' search strategies and problem formulation. (Kuhlthau, 1993b; Kuhlthau et al., 1992)

2.3.2.2 *Eisenberg and Berkowitz*

The Big Six Skills describe a problem-based approach to solving information problems (Eisenberg & Berkowitz, 1990). The Big Six Skills are non-linear, and stages can be repeated if necessary. To solve a problem, the learner needs to define the problem, decide which sources are appropriate to solve that problem, and develop skills to physically locate these sources. Learners then need to extract information from the sources they have found, apply the information to the problem they have defined, and then evaluate how effectively they solved the problem. Like Kuhlthau (1993b; 1992), Eisenberg and Berkowitz see developing information seeking skills as an area that is lacking in library education programs, and something that practitioners need to learn more about (Eisenberg & Berkowitz, 1990).

2.3.2.3 *Dervin*

Dervin's sense-making theory describes the need to gain a 'sense' about new data before an individual can move on in the information search process (Dervin & Dewdney, 1986). An individual's information need is determined by their situation, information gaps in their existing knowledge, and intended use of the data (Dervin & Dewdney, 1986). Dervin proposes that information is constructed by an individual, and does not have an existence independent of that individual. All individuals that encounter the same data must develop their own 'sense' or cognition about that data to incorporate it into their existing body of knowledge (Dervin as cited in Dervin & Dewdney, 1986).

Neutral questioning is a useful approach for helping librarians to understand what the individual really wants to know. Neutral questioning is important for information seekers because it allows their thoughts and questions to be kept relevant. Librarians can use a combination of questioning strategies in order

to understand the learner's underlying information situation, gaps and use (Dervin & Dewdney, 1986).

2.3.2.4 *Ellis*

Ellis' model has eight stages, which are similar to those of Kuhlthau (1992), and Eisenberg & Berkowitz (1990). The model is non-linear, and the relationship between the stages is dependent on the individual's specific problem and situation (Ellis, Cox, & Hall, 1993). Ellis' model has been used in conjunction with a model of information seeking on the Internet developed by Choo, Detlor & Turnbull (1998; 2000).

2.3.2.5 *Belkin*

Belkin's (1982) anomalous state of knowledge is related to Dervin's (1986) theory of sense-making. Belkin (1982) argues that individuals cannot have information needs, only situations and problems, as individuals do not know what they need nor how to ask for it. An individual's state of knowledge changes as they pass through different stages of the information seeking process, as in Dervin's sense-making approach, and Kuhlthau's (1992) model. Individuals may employ a range of information seeking methods depending on the particular information seeking stage they are in (Spink as cited in Lin & Belkin, 2000).

An individual's information situation becomes an information problem when their cognitive state cannot clarify the new data (Lin & Belkin, 2000). Like sense-making, individuals must develop clarity about the new data before they can move on to the next stage in the information seeking process (Schutz and Luckmann as cited in Lin & Belkin, 2000).

2.3.2.6 *Satisfaction*

Satisfaction is an indicator of the success of the individual's information seeking process (Dervin & Nilan, 1986). Several models include evaluation as the final stage in the information seeking process (Choo et al., 1998; Dervin & Nilan, 1986; Eisenberg & Berkowitz, 1990), which involves analysing the methods used to seek information, and a determination of how successful an individual was with that process. However, Ellis (1993) and Kuhlthau (1993b) do not include evaluation in their models.

Satisfaction is "a state of mind which represents the composite of a user's *material* and *emotional* responses to the information seeking context" (H. Bruce, 1998). Satisfaction is a complex variable. In the cognitive models, satisfaction can be measured by the level of integration and synthesis of the new data the individual has encountered in the information seeking process (Davis, 1999). The value of the individual's new-found information is a function of how well that information satisfied their needs (Walker as cited in Dervin & Dewdney, 1986).

2.3.3 **Information seeking in the Workplace**

It has been argued that information seeking in the workplace is not linear (Cheuk, 1998). This behaviour supports Eisenberg & Berkowitz's (1990) non-linear approach to information seeking behaviour, as opposed to Kuhlthau's (1992) linear approach in a workplace information seeking context.

Law has similarities with journalism in that lawyers require timely and accurate information quickly, and are bound by codes of ethical conduct. As there has been some research on how information seeking behaviour is applied in law, this research is presented as an example of how developments in related fields to news librarianship can be adapted.

Many cognitive skills such as critical analysis required in law are acquired on the job. Research skills are now assessed in conjunction with other skills during performance appraisals. The aim of research training in law encourages lawyers to develop critical thinking, not just their search and retrieval skills (Gasteen & O'Sullivan, 2000). Boelens (2001) found that many new lawyers find it difficult to know what to ask for and where to start when beginning research. Senior lawyers are often reluctant to take part in research and information skills training sessions because they rate their information seeking skills higher than they actually are (Boelens, 2001). This is a common problem amongst all types of library users (Belkin et al., 1982; Katz, 1997).

2.3.4 Information seeking on the Internet

Information seeking on the Internet is guided by assertions by users about the quality and authority of the information they find. Studies by Choo, Detlor and Turnbull (1998) have found that scholars used four types of information seeking behaviour simultaneously on the Internet. Users employ a range of behaviours ranging from undirected viewing (general browsing), to conditioned viewing (browsing on specific subjects), informal search (specific queries), and formal search (in-depth searching). The behaviours are based on Ellis' model (Choo et al., 1998). Another perspective is that a completely new approach to information seeking on the Internet is needed, since what is found on the Internet is often not information, but data (Brabazon, 2002). Information users may have never truly encountered unfiltered data before, and thus may not have the skills to effectively handle it.

2.4 Information literacy

2.4.1 The concept of information literacy

As noted in the introduction, there are several definitions and approaches to the concept of information literacy.

Information literacy was first defined by Paul Zurkowski (as cited in Snavely & Cooper, 1997) –

People trained in the application of information resources to their work can be called information literates. They have learned techniques and skills for using the wide range of information tools as well as primary sources in molding information solutions to their problems

There are many definitions of information literacy, but common themes form the core of most definitions of the concept. These themes include a recognition that the person is involved in the information search process, that the person locates and interacts with information (Eisenberg & Brown as cited in Grassian & Kaplowitz, 2001), and that information literacy prepares people for lifelong learning (*Presidential committee on information literacy: final report*, 1989). Yet, there is still some disagreement about what defines the concept as being different from bibliographic instruction, knowledge management, or other information concepts (Bruce, 1997a; Foster, 1993; Grassian & Kaplowitz, 2001; Snavely & Cooper, 1997). Some definitions of information literacy are poorly conceived. This lack of clarity complicates the ability to apply the concept to other skills, industries and professions.

Several writers in the literature dispute the concept of information literacy itself. Foster (1993) questions whether there is a genuine need for the concept, as competence can be difficult to measure. Furthermore, there are no established criteria to identify information illiterate individuals. Foster (1993) suggests that information literacy is –

...largely an exercise in public relations. It is a response to being ignored by the establishment, an effort to deny the ancillary status of librarianship by inventing a social malady with which librarians as “information professionals” are uniquely qualified to deal

Grassian and Kaplowitz (2001) seem to be in agreement with Foster at least where it comes to information literacy in special libraries. They see information literacy in this environment as more of a marketing exercise than an attempt to empower the learner.

Information literacy has been described as a concept that is only understood by librarians (Bruce, 1997a; Marcum, 2002; Mutch, 2000). The concept may have parallels with other skills commonly in the workplace, but this has not yet been widely explored (Marcum, 2002). In the context of journalists, it is important to consider those definitions that do not rely on the library as the source of information, as the library is not likely to be their major source of information in every situation.

Bruce (1997a) states that most information literacy research makes too many assumptions about the phenomenon of information literacy and does not question our existing understanding of it. According to Bruce (1997a), researchers have also tended to wrongly assume that information literacy is transferable across different information problems, and that attributes of the phenomenon can be adjusted to fit specific situations. Additionally, Marcum (2002) argues that information literacy has been extended beyond its original definition, and that the concept is unadaptable to the totality of literacy environments.

Bruce (1997) conceives of information literacy as being composed of five separate elements:

- Computer literacy
- Information technology literacy
- Library skills
- Information skills
- Learning to learn

All of these elements must be mastered in order to become an information literate individual.

Spitzer, Eisenberg and Lowe (1998) conceive of information literacy being composed of separate elements in a similar way to Bruce. Their elements are:

- Visual literacy
- Media Literacy
- Computer Literacy
- Network Literacy

A weakness of these definitions is that they use literacy as part of the core definition and elements. Several definitions of information literacy assume familiarity with literacy as a concept, and do not define it within the definition statement of information literacy. This may lead to misunderstanding and confusion about the concept. Definitions also appear to focus on information literate individuals rather than information literacy as a construct. This limits the ability to define the concept in terms other than the individual. In this study, information literacy as it relates to the context of journalism will be further explored in subsequent chapters.

O'Sullivan (2001) and Bruce (1999) have found that companies and other workplaces tended to focus only on computer literacy and ignore other elements of information literacy. This may be because managers do not yet

understand what information literacy is (Bundy, 1999; Marcum, 2002; O'Sullivan, 2001).

Marcum (2002) argues that few have considered the role of other literacies, especially visual literacy. Thus Spitzer, Eisenberg and Lowe's (1998) elements of information literacy are important to consider as so many others have not included visual literacy in their definitions of the concept. Yet, the ability of information literacy to be extended to literacies beyond text and information is still not yet known (Bruce, 1997a; Marcum, 2002). It is entirely possible that Information Technology literacy is not really part of information literacy. Considering journalists, who frequently use visual and auditory sources in stories, it is important to address the question of how to incorporate non-text literacies into information literacy, and if they should be included at all.

Information literacy is not just about skills. It is also related to creating knowledge and cognition about the information that has been found and used. This aspect of information literacy builds upon the cognitive development acquired during the information seeking process (Dervin & Dewdney, 1986; Eisenberg & Berkowitz, 1990; Kuhlthau, 1993b). The two concepts are linked, with one of the aims of information literacy being to improve the information seeking process of individuals.

2.4.2 The role of librarians in information literacy

Grassian and Kaplowitz (2001) see information professionals as information literate. It is their job to pass their knowledge on to library users, who are not information literate. Kuhlthau (1996) believes that users need assistance, and that it is a librarian's job to intervene in the individual's information search process. Bruce (1997), however, says that there is too much emphasis on the intermediary, and that this distorts the information seeking process. Bundy (1999) proposes that librarians must not only be deeply involved in information literacy as an

intermediary, but they must also be at the forefront of the concept itself to ensure that others are aware of the assistance provided by librarians in organisations.

2.4.3 Information literacy in the workplace

Little has been written about information literacy in the workplace (Bruce, 2000; Bundy, 1999; Corcoran, 2001; Marcum, 2002; Oman, 2001; O'Sullivan, 2001). Information literacy is just one of many workplace practices that influence the success of employees and corporations, and should be studied in combination with other practices (Mutch, 2001). Additionally, several writers (Bruce, 1999; Foster, 1993; Marcum, 2002; O'Sullivan, 2001) propose that information literacy may already exist in organisations, but may just be known in separate elements under different names.

A new approach to information literacy, different from those that have already been proposed and used widely in higher education and other library environments, is needed to adequately define the concept in the workplace due to the nature of information problems in that environment (Mutch, 2000). Problems in the workplace tend to be less structured and bounded by subject disciplines than in higher education, where most definitions of information literacy have been developed (Mutch, 2000). Marcum (2002) suggests that information literacy may not be tenable in the workplace, due to its focus on competence as opposed to expertise. Marcum also postulates that the concept of information literacy has been overextended, and applied to literacies that the original definition did not address such as visual literacy, and technological literacy. Bruce (1999) however, proposes that the emphasis on Information Technology literacy in the workplace is already too great.

An additional aspect of information literacy in the workplace environment is the control of knowledge. For example, in a law firm, controlling knowledge allows firms to compete, or to be able to manipulate information for the benefit of the firm (Mutch, 2000). Another critical aspect of information literacy in

the workplace is the ability to organise and retrieve information for use at another date. (Bjorner as cited in Grassian & Kaplowitz, 2001). This concept is related to knowledge management, which is highly valued in the workplace (O'Sullivan, 2001).

Information literacy in the workplace is not always an individual's concern. Businesses have realised that the "information literate firm" or organisation is just as important as the "information literate individual" (Bruce, 1999; Gasteen & O'Sullivan, 2000). Bruce's (1997) definition of information literacy as a set of expectations or conceptions marks a shift away from thinking about information literacy in terms of the individual to relationships and an organisation as a whole (Bruce, 1997a, 1999; Gasteen & O'Sullivan, 2000). Information literacy then becomes a way of fulfilling the organisation's goals (Bruce, 1999; Gasteen & O'Sullivan, 2000; Grassian & Kaplowitz, 2001). In a collaborative environment such as the newsroom, this way of thinking is preferable to the individual approach, because the members of the newsroom team are working towards common goals.

Grassian and Kaplowitz (2001) see information literacy instruction in the workplace as an opportunity to promote the library, not necessarily to teach employees how to use resources. Bundy (1999) agrees that information literacy can be a marketing tool. However, they also agree that learning about the library will allow employees to become more efficient and to know what information is available. Because having timely and accurate information at hand is essential in law, lifelong learning in information skills is a necessity (Gasteen & O'Sullivan, 2000). Boelens (2001) uses general information sessions to introduce the library to new employees at a law firm, and 'just-in-time' training to deepen an employee's knowledge about information resources such as databases when they ask research questions. This approach allows training to be more relevant to individual employees.

Despite most knowledge workers (people who rely on other's expertise to do their jobs) rating themselves highly on their information skills, most have had no information literacy instruction (Corcoran, 2001). Those who rate themselves highly on these skills may be less likely to seek assistance from librarians when they need it (Boelens, 2001). Adult learners are strongly motivated by practical

outcomes, or “what’s in it for me” (Oman, 2001). Time is a major factor in workplace instruction. Many employees can be reluctant to take time away from their job to learn skills for which they may have difficulty measuring the value (Grassian & Kaplowitz, 2001).

There are a number of steps involved in introducing an information literacy plan in the workplace. The information infrastructure, demographics of employees, and workplace determined competencies for information literacy must be studied prior to introducing a plan (Oman, 2001). Pre-assessment before commencing instruction is essential, to ensure that curricula match individual needs (Bundy, 1999). The organisation’s goals are also important if taking an “information literate firm” approach (Gasteen & O’Sullivan, 2000). Special libraries often need to consider tangible outcomes more than other library sectors. Libraries planning information literacy programs should consider how training would affect profit and productivity (Oman, 2001).

Oman (2001) suggests working together with other departments in order to integrate IL competencies into other established competencies within the organisation. Oman also suggests reviewing established research practices throughout the organisation in order to discover if information literacy competencies are already part of those practices.

Businesses have recognised that information literacy skills are vital to keeping abreast of changes in information technology, whether they know them by the name information literacy or not, and the American Library Association sees understanding information literacy in the workplace as an important area for continued research (Bruce, 1997a). Yet it can be argued that there remains a major hurdle as most managers, and indeed many professionals outside of the information professions, are not aware of the concept (Marcum, 2002; Mutch, 2000). Many organisations may already be supporting aspects of information literacy under different names, such as knowledge management. Knowledge management is advocated in the literature as a major skill required by journalists (Mutch, 2000; Quinn, 2002). However if librarians want to be at the forefront of this concept and its

instruction in organisations they will need to bridge this language barrier (Bundy, 1999; Marcum, 2002; O'Sullivan, 2001).

2.4.4 Information literacy instruction

Libraries have long taught users essential skills for navigating the library and its information. Before information literacy instruction, libraries taught bibliographic instruction and user education (Bruce, 1997a). There are opposing perspectives on the evolution of education in libraries, with some advancing the idea that information literacy is an extension of past educational practices, and others seeing the concept as being completely separate from libraries' training efforts of the past (Grassian & Kaplowitz, 2001).

Several approaches to information literacy curricula have been developed, but none adequately describe exactly what librarians should teach to their users. Most of these curricula are aimed at higher education students, and have limited usefulness in the workplace or special library environment (Bruce, 1997a). The information seeking models presented in the previous section are often used as a basis for information literacy instruction, but these are not comprehensive for all situations and users.

Outcomes of information literacy training should be measurable (Bruce, 1997a; Grassian & Kaplowitz, 2001). The difficulty arises when attempting to measure changes in a person's ability that may be purely cognitive against set competencies (Bruce, 1997a).

2.5 Training

Workplace training can be defined as “a planned effort by a company to facilitate employees’ learning of job-related competencies. These competencies include knowledge, skills, or behaviours that are critical for successful job performance” (Noe, 2002: 4). Most definitions of training define it as the acquisition of job-related skills (Smith, 1998). Employee training and development is essential, due to links between salary, career development, and the acquisition of skills by employees (Smith, 1998). Training in this study can be divided into two types - training for journalists, and training for librarians. Training for journalists aims to improve the skills that they need to do their job effectively. Training for librarians aims to give them the skills that are needed to train other people effectively.

In order to develop a training program for journalists, librarians need to select those theories, methodologies and strategies that are best suited to the information or skills that are being taught. In news organisations the skills that are taught could include techniques for using search engines on the Internet, database searching skills, or interviewing and writing skills. Librarians may conduct training for journalists in these skills, or information literacy skills. Evaluation is an important issue in information literacy instruction, as it is a way to measure what has been learned and how effective the instruction program has been in terms of its cost to the organisation (Oman, 2001).

2.5.1 Learning theories

Several educational theories have been developed to explain how people learn, and the role of the teacher. The discovery that people learn in different ways has led to the development of several theories of adult learning, with Knowles' (1990) theory of andragogy being the most widely known. Knowles popularised the term andragogy to describe a theory where the learner is able to have an influence in what is being taught and how it is taught (Knowles, 1990;

Smith, 1998). Many pedagogical theories on the other hand, give responsibility for all aspects of the learning process to the teacher (Noe, 2002).

Andragogy makes six assumptions about the way that people learn, which outline the factors that contribute to success in learning (Knowles, 1990):

- The need to know
- Learner's self-concept
- Role of the learner's experience
- Readiness to learn
- Orientation to learning
- Motivation

As learning is often a choice for adults, especially in the workplace, an adult's attitude towards training is conditioned by their prior experiences and motivation (Knowles, 1990).

There are many studies detailing self-directed and student-centred methodologies of learning (Rossi, 2002), yet there is not yet any information literacy instruction program devised using a purely andragogical, learner-centred approach. Research to date has focused on information literacy in a pedagogical framework, giving responsibility for training to the teacher (Barrett & Trahn, 1999). This increases the difficulty of adapting existing programs from other library contexts, such as academic libraries, to the workplace.

2.5.1.1 Motivation

Motivation is a critical factor in adult training and education. Motivation cannot be directly measured, but it is an essential element in understanding an adult's attitude towards training, as motivation drives our choices and behaviour (Wlodkowski, 1990). Motivation is unstable, as people can lose interest in a topic or get distracted easily by something else that becomes more

important. Simply getting a journalist to attend a training session can be quite difficult.

There are several factors that affect motivation to learn. Learners need to enjoy the learning experience, especially if past experiences have not been satisfactory (Wlodkowski, 1990). Enjoyment of training is affected by six factors according to Svinicki and Schwartz (1988) -

- Need to know
- Curiosity
- Relevance
- Success
- Interest value of the subject
- The role of the trainer

Ideally, learners will be entering a training environment where they have to learn the skill that is being taught, but they are also interested in it, and are successful at learning the material. In reality however, this is often not the case.

Svinicki and Schwartz (1988) omit reward from their list of motivators. Success is limited to the confines of the training program, whereas reward is gained as a result of training, but may be known to the learner in advance. For example, a journalist may know that if they complete a training course on using databases, they will receive a salary bonus. Completing a training program may allow the learner to take on extra responsibility or skills (Noe, 2002). Other writers (Catts, 2000; Knowles, 1990) have suggested that reward can be an important motivator, as long as the reward is one that the learner wants.

Journalism is becoming increasingly computer-based, and journalists are being encouraged to learn how to use the new technology available to them. If a journalist is learning a new computer-based skill, and has little success at performing the tasks required by the trainer, they will lose motivation. This is an important factor with regard to older journalists, who may find younger colleagues having more success with technology. In this instance, librarians need to be able to vary

assessment and reward the learner during the training course so that the journalist is able to find some success with the new skill (Knowles, 1990). This will help the journalist to remain motivated to continue learning new computer-based skills.

If journalists understand why they are learning a new skill, they will be more motivated. Learning that is directly connected with their job may be more successful, as the learner can immediately see why they need to learn a new skill and when they would use it (Svinicki & Schwartz, 1988). In the workplace, many training situations arise in response to specific problems that journalists have.

The role of the trainer in identifying and adapting to the needs of the learner is essential. Trainers themselves need to have had adequate training in planning, conducting and evaluating training to ensure that training programs suit the learner. An enthusiastic trainer can also help to maintain a learner's motivation (Svinicki & Schwartz, 1988). Often, however, librarians in news organisations lack adequate skills in designing training programs.

Learners will be motivated if they can collaborate with the trainer on the design of training or if they can choose the topics that are taught (Bryant, 1990; Knowles, 1990; Mayfield, 1993). Many journalists want to learn new skills, but not necessarily the same skills that management, editors or librarians want them to learn. This can lead to resentment if journalists feel that learning priorities are not the same. If trainers and journalists collaborate on what is to be taught, journalists will feel more committed to the training process as they feel that their input is valued (Bryant, 1990; Knowles, 1990)

2.5.2 Needs analysis

A needs analysis should be conducted before training. Needs are analysed to determine learning priorities, availability of resources, and abilities of learners (Noe, 2002). A needs analysis is a crucial aspect of the planning process, because an incorrect analysis can lead to poorly selected training methodologies or

misidentified training priorities (Noe, 2002). When analysing individual needs, librarians should focus on what they think is best for journalists. Librarians need to be able to communicate openly with journalists in order to discern their needs by observing journalists, reviewing library usage statistics, distributing questionnaires to journalists and managers, or meeting with journalists to discuss their needs (Grassian & Kaplowitz, 2001; Noe, 2002).

Librarians should analyse the needs of both journalists who currently use the library and those that do not, as training may encourage some non-users to become users of the library (Birch, Bergman, & Arrington, 1990; Grassian & Kaplowitz, 2001). In this instance, training can be used as a marketing opportunity to increase patronage and awareness of the services that the library provides (Grassian & Kaplowitz, 2001). Grassian and Kaplowitz advance the idea that in special libraries, training programs are predominantly provided in order to increase awareness of the library. While it is true that such programs do serve this purpose, training programs in special libraries provide as important a training function as in any other type of library. Many journalists in news libraries may never have been reached by information literacy instruction, particularly if they do not have a university degree or graduated some years ago.

Ideally, training programs should be designed for the learner rather than the librarian, using methods that are appropriate for the learner, and conducted in an environment and time that suits the learner (Breivik, 1982; Knowles, 1990; Roberts & Blandy, 1989). This may mean that training is conducted outside of the library, or at different hours throughout the day. In reality however, there will need to be compromise between journalists and librarians on these issues in light of staffing, resource, or budgetary constraints. Breivik (1982) argues that the budget should be ignored in order to achieve an ideal learning environment. However, in today's news organisations, budgets can constrict needs analyses, and individual needs must be considered within these limitations.

Once journalists' training needs have been analysed, librarians need to assess what level journalists are currently at with each skill (Grassian & Kaplowitz, 2001). Skill levels will vary greatly between journalists especially if they are

computer-based. Many younger journalists have received extensive computer training while at university, while many older journalists may never have received computer-based training skills before. Addressing an individual's skills gap is essential for adult learners, in order to ensure that trainers are only delivering information that the learner will find important, and therefore to keep motivation high.

2.5.3 Outcomes and competency

Outcomes should be set in a training program in order to assess the level of competence that a learner has reached (Smith, 1998). These outcomes may be used to justify the continuation of the program by measuring cost effectiveness or skills attained by learners. Examples of measurable outcomes in a news library could include a decrease in the number of retractions and corrections, or decreased database costs associated with more productive use of these resources.

Competency based training is common in the workplace. This method measures learners against a set criteria, with learners either being deemed competent or not competent. The set criteria are made up of competency standards, which outline the performance criteria that need to be achieved (Smith, 1998). The call for directly measurable and observable outcomes and competencies from managers has led to the tendency to define competencies that are narrow, and may not actually be related to an employee's job. Additionally, some job skills may go unmeasured if competencies can not be designed for them (Smith, 1998).

There are five types of outcomes (Noe, 2002; Smith, 1998) – cognitive, skill-based, affective, results, and return on investment or cost-benefit. Cognitive outcomes measure the learner's familiarity with techniques and facts taught during a training course (Noe, 2002; Smith, 1998). For example, how well has a journalist retained information on how to use a new database interface. Skill based outcomes measure the learner's motor skills (Noe, 2002; Smith, 1998). For example, having learned the ways in which a database can be used, how well can a journalist

physically navigate the database. Affective outcomes measure the learner's attitude and motivation, and are a measure of how much the learner enjoyed the training program (Noe, 2002; Smith, 1998). Results analyse the success of the learner in completing assessment during the training course. Return on investment or cost-benefit outcomes seek to discover the reward to the organisation as a result of training (Noe, 2002; Smith, 1998). Benefits could include reduced staff turnover, or higher productivity. Cost-benefit outcomes are especially important in organisations that want to justify the investment made on training. Libraries that want to introduce information literacy instruction should pay close attention to how it may affect organisational profit and productivity (Oman, 2001).

However, some outcomes are more measurable than others. For example, it is possible for a learner to demonstrate their ability to use a computer program, but it can be difficult for them to express how well they understand that skill. In information literacy instruction, Catts (2000) suggests that there is a lack of tools for measuring outcomes. This is due to the cognitive base nature of many information literacy skills that cannot be directly observed. As other writers (Noe, 2002; Smith, 1998) have proposed, cognitive outcomes are just one aspect of all the outcomes that trainers need to outline. Librarians need to develop outcomes that are based on skills, results, and return on investment in order to create a holistic set of outcomes for information literacy instruction programs. Utilising other types of outcomes may lead to more measurable results.

Oman (2001) suggests that librarians consult other departments in the organisation in order to integrate information literacy competencies with other established competencies in the organisation. This may make acceptance of information literacy easier in some organisations. Librarians should also review existing practices throughout the organisation to see if there are already competencies resembling information literacy competencies in the organisation (Marcum, 2002; Oman, 2001; O'Sullivan, 2001). An avoidance of 'reinventing the wheel' may save time and money, as well as promoting integration of library services into other sectors of the organisation.

Mayfield (Mayfield, 1993) proposes that it is unrealistic for librarians to expect that all learners will be able to achieve a common outcome at a pre-defined level of competency. He postulates that it is better for a learner to have a sense of competency about their own abilities based on their levels of interest and potential in that particular skill (Catts, 2000). This concept is also known as self-efficacy, or the sense that a person has confidence in their own abilities to do their job or perform a task (Noe, 2002). In the workplace, it can be the case that a learner's own feeling of confidence with a particular skill is more important than meeting a set criteria, which may or may not exist (Knowles, 1990; Mayfield, 1993). To include self-efficacy in a training program, the librarian should discuss the learner's expectations about what level of competence they hope to achieve. Self-efficacy is a useful measure of the success of training, but cannot be considered in isolation from other types of outcomes.

2.5.4 Training methodologies

Training methodologies describe the methods used to carry out training. Methodologies used by news organisations include on-the-job, one-on-one, workshops, workbooks, computer-based, and self-directed learning. Training methodologies need to be flexible, and match both the abilities and interests of librarians and journalists (Breivik, 1982; Roberts & Blandy, 1989; Svinicki & Schwartz, 1988). Different training methodologies will need to be chosen depending on what is being taught (Breivik, 1982; Noe, 2002; Roberts & Blandy, 1989; Smith, 1998; Svinicki & Schwartz, 1988). Some skills, such as learning to use the library's OPAC, are more suited to computer-based or workbook learning than abstract skills, such as evaluating information sources. The choice of training methodology is also a factor of resources and time available for a training program (Roberts & Blandy, 1989; Svinicki & Schwartz, 1988). News libraries tend to have fewer staff than academic libraries. This can make it difficult for librarians to find time to plan and conduct training, and may also have an effect on the choice of methodology as some methods require more planning than others (Birch et al., 1990). Breivik (1982) suggests that using a combination of training methodologies in a program will enable individual strengths to be catered for, and will increase the success of the training program.

Due to staff and budget constraints, one-on-one training is often a popular methodology in special libraries. In situations where training arises as a response to a specific problem that a journalist has, one-on-one training can also be completely tailored to the individual (Birch et al., 1990). Breivik (1982) suggests that one-on-one training can be successful, but stresses that librarians should take time to plan a more structured program when using this methodology. Some librarians may neglect to adequately plan, perceiving that one-on-one should be less complex or time consuming than using a workshop or group training methodology. It can actually be the case that one-on-one training is more time consuming than other methods, if it is used in response to specific questions that journalists have, as the training may have to be substantially redesigned every time it is delivered.

Group discussions can be a successful training methodology when used to teach concepts that have both theoretical and practical aspects (Smith, 1998). This methodology allows learners to participate with other members of the group, as well as have time to practise skills on their own. This method could be successful to teach database or Internet searching skills, as long as the journalists have a similar learning style. If journalists are able to choose who they are in a group with, this method will be more successful (Roberts & Blandy, 1989). Choosing participants may encourage participants to speak more freely and ask questions. However, there will need to be a balance between selecting participants that journalists want to learn with, and journalists that are well suited to each other in learning style.

In some instances, self-directed learning may be an appropriate methodology of learning (Mayfield, 1993; Noe, 2002; Rossi, 2002). This method is independent of the librarian, and can be undertaken at the journalist's own pace. However, only some people are suited to this methodology, as it requires a high level of curiosity and motivation (Noe, 2002; Roberts & Blandy, 1989). The development of self-directed training programs can also be quite costly and time-consuming, as librarians would need to accommodate many different learning styles and abilities (Noe, 2002).

On-the-job training is the dominant training methodology used by journalists in the workplace (Avieson, 1991; Quinn, 1998). Journalists learn many key skills like editing, writing, and interviewing by experience and by asking for advice from their colleagues. On-the-job training is useful for new employees as well as those who have new job responsibilities. However, there is a risk that colleagues may pass on bad habits as well as good information (Noe, 2002). It has only been in recent years that more structured training programs have been introduced as a response to requests from journalists and the availability of external training programs. While many external training opportunities now exist, managers may be reluctant to provide time or funding for journalists to attend these sessions (Ha, 2000; Hu, 2001). Hence, on-the-job training can be a popular, timely and cost-effective alternative. In reality, a combination of training programs delivered by librarians and on-the-job training delivered by journalists may be more successful.

While librarians have specialised knowledge in databases and information literacy (Grassian & Kaplowitz, 2001), journalists may have more knowledge about many aspects of their work that they can teach to colleagues.

Regardless of which training methodology is chosen, librarians should always ensure that the content of their training programs only includes the most relevant information. Librarians should also take care to only give information about resources that journalists will get a chance to use (Svinicki & Schwartz, 1988). It is argued that there is no use in training a journalist to use a particular database if they will never get access to that particular resource.

2.5.5 Evaluation and assessment

Evaluation and assessment are essential aspects of designing a training course. Smith (Smith, 1998: 187) differentiates between the two –

Assessment focuses on the success of the trainee at mastering the skills and competencies around which the training is designed. Evaluation focuses on the training program and attempts to determine the success of training at a number of levels in the organisation

Evaluation has two purposes, formative and summative (Noe, 2002; Smith, 1998). Formative evaluation measures how well the training was organised and conducted, and how satisfied the learners are with the program. It aims to analyse how the training program could be improved. Summative evaluation aims to measure how much the learners have changed as a result, and this can be measured in terms of attitude, knowledge, or new skills (Noe, 2002; Smith, 1998).

Organisations are spending increasing amounts of money on training, and in return they want to be able to measure the outcomes of that investment (Noe, 2002). Hence, evaluation is an essential part of training as it is the way in which we measure the results of training against outcomes or set criteria (Noe, 2002; Smith, 1998).

Evaluation is closely linked to the outcomes that are set for the training course. It should be continuous, and conducted throughout the training course, not just at the end (Smith, 1998). Bundy (1999) asserts that pre-evaluation prior to commencing an information literacy instruction program is particularly crucial in order to meet individual needs. Training can be evaluated using questionnaires, tests, interviews, observation, group discussions, or cost-benefit analysis (Grassian & Kaplowitz, 2001; Noe, 2002; Smith, 1998). Evaluation methods are chosen depending on objectives being measured, and the type of desired results.

In a competency-based training program, assessment measures the learner's performance against a set criteria on a pass or fail basis (Smith, 1998). Measures of assessment need to be valid, reliable, flexible and fair (Grassian & Kaplowitz, 2001; Noe, 2002; Smith, 1998). Librarians need to ensure that they pay close attention to designing assessment that meets all four of these criteria to ensure that training is successful.

Many different methodologies can be used to assess learners, adhering to the criteria above. Methodologies commonly used in the workplace include direct observation, skills tests, simulation techniques, and questioning techniques (Smith, 1998). Some are more suited to different outcomes than others. For example, questioning techniques are unsuited to skill-based outcomes, but can be useful for affective outcomes. Direct observation can work well for news librarians, who often work closely with journalists. News libraries have an advantage in that most of their clients are internal staff, and so it is possible to observe them on a regular basis, unlike academic libraries for instance, where a student may not go to the library regularly or be easily contactable.

2.5.6 Training for librarians

In order to design, conduct, and evaluate a successful training program, librarians need to have specific skills in training. These skills may be acquired in formal train-the-trainer programs, or through self-study. News librarians are at a disadvantage to some other librarians since they often do not have adequate staff or funding to attend lengthy, external training courses.

Some training packages have been developed in the academic library sector that could be modified to suit special librarians. The Teaching Skills for Internet Skills Librarians program at the University of New South Wales aims to teach librarians how to plan, conduct and review training (Barrett & Trahn, 1999). The package is delivered online, which may help librarians that are unable to take days off from work to attend a block of training. Workplace training and assessment packages are accredited in Australia by the Australian National Training Authority as described in their training package, Assessment and Workplace Training. This training package focuses on planning, conducting, and assessing competency-based instruction in the workplace.

Chapter 3. Methodology

This chapter describes the methodologies used for this research study. The development of the study's primary research instrument, a self-administered questionnaire, is discussed as well as the population, design and ethical considerations. Further details about the conduct and results of the study are then considered in the following chapter.

3.1 Literature review

A literature review was carried out in order to formulate research questions and identify trends in the field. Literature in the fields of news libraries, information seeking behaviour, information literacy, and journalism was studied. The literature review explored the definitions of information seeking behaviour and information literacy, considering the manner in which alternate definitions were related to how journalists perform in the workplace.

Literature was found by searching databases, bibliographies, and web sites. The main databases used were Library and Information Science Abstracts (LISA), InfoTrac OneFile and Ingenta. Many references were also found on the World Wide Web. The literature review located journal articles, books, conference proceedings, and online documents. The literature search was limited to materials written in English. The literature review covers material published between 1980 and 2002.

3.2 Design

The study was designed to collect data from the population of librarians serving journalists in news libraries in the US and Australia. The aim of this study's design was to collect data that could be applied to a population, and, in turn, be used to answer the study's research questions.

3.2.1 Population

The study's population was all librarians employed in news libraries located in the United States of America and Australia. News libraries were defined as libraries whose parent organisations are involved in the production of newspapers, broadcast television, radio, online publications, magazines or other media. The known population was the approximately 500 librarians and organisations that are members of the News Library Division of the Special Library Association as at June 2002 (*Special Libraries Association News Library Division*). The sample is chosen from those librarians that subscribe to the News Library Division's email list, NEWSLIB-L (newslib-l@listserv.unc.edu).

The decision to include news librarians from the United States of America in the population was made because Australia has too few news libraries to provide a representative sample, and many librarians were difficult to contact. Most research on news libraries has also been published in the US. There was no distinction made between MLS or degree qualified librarians or other library workers in the study.

The study's research questions required the population to be chosen based on the following variables:

- Respondents must be librarians working in a news library
- Respondents must be resident in the US or Australia

- Respondents must work in a newspaper, television, radio, online, or magazine news organisation

3.2.2 Sampling

This study used a non-experimental sampling method (Busha & Harter, 1980). A non-probability method was selected. Respondents were asked to answer a series of three questions that determined whether they fit into the population. As the study excluded persons who do not work in the USA or Australia, it was necessary to be able to exclude those that did not fit the variable.

This method was preferable to a quota or stratified method, as there are an uneven number of library types and news organisations in the population. There are more librarians who work for newspaper libraries (Graveline, 1998; Paul & Hansen, 2002), and thus using a quota method would have over-represented radio libraries, for example. The low response rate to the questionnaire means that some sectors of the news library population may have been over sampled.

3.2.3 Assumptions

There were several assumptions made in the study's design. Firstly, it was assumed that as Internet use amongst news librarians is near total, there would be little sample bias against those librarians who do not use the Internet.

It was assumed that members of the News Library Division of the Special Library Association are also subscribers of the NEWSLIB-L email list.

It was assumed that national news organisations would be located closer to major metropolitan areas than local or rural news organisations.

It was assumed that librarians who responded to this study work closely enough with journalists to be able to observe their work behaviour.

3.2.4 Limitations

Due to the exploratory nature of the study design, the results are not generalisable, i.e. they cannot be applied to any other populations. This includes news libraries outside of the response areas defined by this study (the US and Australia). This may also include news libraries with different staffing levels, different levels of contact with journalists, and types of news libraries that were underrepresented in the study, for example, radio and online. Additionally, the results may not be applicable to other types of libraries, whether they be special or academic libraries.

The results of the study are based on the respondents' impressions of journalists' behaviour and skills. Thus the results may differ from studies that question journalists directly.

3.3 Questionnaire

An online, self-administered questionnaire was chosen as the primary instrument for this study (Appendix B). This was due to the geographical spread of the population, and the high cost of surveying the population by mail or telephone. This method had the advantage of being distributed to the entire population simultaneously at low cost. The questionnaire was also quick and easy for respondents to complete. The completed questionnaires were sent electronically, which made data entry easier, and reduced entry error.

3.3.1 Design

The questionnaire was designed for librarians to answer based on their observations and opinions about journalists' behaviours in their organisation. There were two reasons for using this approach instead of questioning journalists directly. Firstly, the literature review found that librarians provide information or assistance based on their assessment of a journalist's needs by talking to them, asking questions, and observing their behaviour (Kuhlthau, 1996). Therefore, the questionnaire was designed in order to determine if there was any trend in librarians' evaluation of journalists' information behaviour. Secondly, another study by librarians which questioned journalists directly had a poor response rate, but had a similar series of questions to this questionnaire (Paul & Hansen, 2001a). Other studies of journalists' information behaviour have also been conducted, so it was deemed that there was sufficient data available on this topic from the journalists' perspective (Garrison, 2000; Nicholas, 1996; Nicholas et al., 1998; Paul & Hansen, 2001a; Quinn, 2002).

The questionnaire design and distribution had two stages. The first stage involved a pre-test distributed in June 2002, where the questionnaire was distributed to news librarians drawn from the sample. Their completed questionnaire and feedback was used to fine-tune the wording of the final questionnaire.

Questionnaires from previous studies were analysed for structure and content (Hansen & Paul, 2001; Nicholas & Williams, 1998). Some of the questions in this study draw upon prior studies, and other questions have not been previously asked of news librarians in a formal study. For example, this study asks questions about the kinds of training that are available to journalists and the resources available to provide this training. These questions have not been asked before in a study of this type. This study revisits the impressions that librarians have about journalists' Internet searching skills (Hansen & Paul, 2001; Nicholas & Williams, 1998). Prior studies on news libraries that used the Internet to administer the instrument generally

used a self-administered, multiple-choice format (Hansen & Paul, 2001; Nicholas & Williams, 1998; Paul & Hansen, 2002).

The questionnaire for this study was structured using multiple-choice options and Likert scales. Questions using Likert scales asked respondents to rank their opinion on a given statement from Strongly Disagree to Strongly Agree. The aim was to design a quantitative study so that it would be easier to analyse a standard range of results. Room was provided at the end of the questionnaire to make qualitative comments about any aspect of the study. Respondents were also able to send an email if necessary to clarify their understanding of how the questionnaire should be completed or their interpretation of a question.

3.3.2 Distribution

Both the pre-test and final questionnaire were self administered. The questionnaire was hosted on a personal website, and was made available as a HTML document that asked respondents to click a box to provide their responses. Completed questionnaires were sent via a CGI gateway to an email address. The questionnaire was publicised on the NEWSLIB-L email list on three occasions over the course of five weeks during June and July 2002.

3.3.3 Problems

The main problem with the questionnaire was interpretation. Two respondents from the USA noted that they do not use the term “evaluate”. Instead, they interpreted the question to mean “check facts”. This problem was not identified in the pre-test. This misunderstanding did not have an impact on the results, but it is a factor to bear in mind when conducting international surveys.

The response rate may have been improved by using a combination of survey methods, such as mail and Internet, and offering a reward, however this would have increased the cost and time required to complete the study.

3.4 In-Depth Interviews

A semi-structured follow-up interview was conducted via email with a subset of the questionnaire respondents (Appendix C). The interviews allowed more qualitative data to be gained from the participants. It was decided to conduct the interviews via email due to lower costs, and the difficulty of arranging telephone interviews in disparate time zones. This method also allowed respondents a greater level of confidentiality (Busha & Harter, 1980).

3.5 Data Analysis

Data was coded in order to facilitate analysis by the software program (Appendix E). Likert scale answers were assigned a number from 1 to 5, where 1 was for Strongly Disagree and 5 for Strongly Agree. The data was then imported into SPSS for Students, Version 9 for Windows. Data was analysed using descriptive statistics (frequency) and cross tabulations.

3.6 Ethical issues

Approval was granted by the Curtin University of Technology Human Research Ethics Committee for this study. This study did not collect any identifiable personal information such as names, organisations, or cultural information to ensure complete confidentiality. Email addresses were only collected voluntarily. Individuals were not identifiable in the coded data. Participants were made aware of their rights before taking part in any aspect of the study, and could withdraw their consent at any time (Appendix A and D).

The questionnaire was anonymous and confidential to encourage more librarians to respond. Organisation type, size (audience) and location (state) data

were collected. This helped to identify if respondents were eligible for inclusion in the sample, but also ensured that specific organisations were not identifiable. Respondents could opt to list their email address if they wanted to be contacted for a follow up interview or to receive the results of the study (Appendix B).

Each respondent was assigned a randomly generated control number. This allowed them to quickly and easily withdraw from the study if they no longer wished to participate by inputting the number into a form. The number was also used to input the results into the statistical software (Appendix D).

3.6.2 Data storage

A commitment has been made to store the data for 15 years. Access shall be restricted to parties within the thesis committee. Any personal data, such as email addresses, shall be kept separately from the rest of the data. All files will be password protected, and backups will be made on Compact Discs.

Chapter 4. Results

This chapter presents the findings of the survey. The results are presented in six sections, following the format of the self-administered questionnaire. Where major findings were discovered, these are discussed with reference to prior studies. Discussion follows this chapter, analysing the results in greater depth in order to answer the study's research questions, which are addressed in chapter six.

The results are based on questions which asked respondents about their impressions of journalists' skills in using the Internet, print-sources, and other information. The decision to focus on librarians' observations was made due to several reasons. Firstly, librarians interact with journalists during the information search process based on information gained from journalists. For example, a librarian may ask questions about what information a journalist is seeking, and then ask what the journalist has done to find information so far. Librarians then prepare information for journalists based on this data. Thus, the observations that librarians make are important in determining the information that journalists ultimately receive. Secondly, the study also examines the role that observation and feedback play in information literacy instruction. These issues are further discussed in the methodology chapter, where the rationale for questioning librarians about journalists' information habits is outlined.

4.1 Response Rates

The questionnaire was distributed to subscribers of the Special Library Association News Library Division's Newslib-L mailing list, with 39 responses for a response rate of 7.8% of the population of approximately 500 libraries and librarians.

Low response rates are a problem in this field, as no survey conducted of the US news library population has had a response rate of more than 25% of the

total population (Hansen & Paul, 2001). There have also been very few formal studies conducted in this field, with the majority of literature comprised of case studies of the writer's own organisation (Edds, 1996; Malesky, 1993; Semonche, 1993). This study offered no reward apart from receiving a summary of the results. The low response rates means that these results can not be considered conclusive, however they are still indicative of trends in the field and areas for further exploration.

4.2 Distribution of Respondents

The majority of respondents were from newspaper libraries (71.8%, Table 1), a similar demographic to the most recent prior study (Paul & Hansen, 2002) which found that 88% of respondents worked in newspaper libraries.

There were five responses from news libraries in Australia. There are very few news libraries in Australia, due to the concentration of media ownership between the Fairfax and News Limited companies, the relatively small size and number of Australian news organisations compared to the United States, and budget cuts. Several libraries in Australia, such as the Special Broadcasting Service's television print library, have closed recently. Others have undergone major restructuring, with staff cutbacks affecting library services at Australian Consolidated Press (ACP), and the Australian Broadcasting Corporation (Banham, 2001). Many major media organisations in Australia do not have news libraries, unlike organisations of a similar size in the United States. The Special Broadcasting Service (SBS), Nine Network and Ten Network no longer have dedicated news libraries. As a result, the population of news libraries in Australia was very small, and too small to be significant.

Table 1. Cross-Tabulation: Type of news organisation / Location of library

		What state is your news library located in? a.			
		USA	Australia	Total	
Type of News organisation	Newspaper	Count	26	2	28
		% of Total	66.7	5.1	71.8
Radio		Count	2		2
		% of Total	5.1		5.1
Television		Count	3	1	4
		% of Total	7.7	2.6	10.3
Online b.		Count			
		% of Total			
Magazine		Count	1	2	3
		% of Total	2.6	5.1	7.7
Other		Count	2		2
		% of Total	5.1		5.1
Total		Count	34	5	39
		% of Total	87.2	12.8	100

Note. N=39

a. State information discarded, respondents sorted by country

b. No response for "online"

4.3 Questionnaire Results

This study assumed that newspaper organisations with national audiences have a larger circulation than organisations with a local or rural audience. On average, Rural and Local newspapers had circulation between 50 000 and 180 000 copies, state -based newspapers between 300 000 – 500 000 copies, and national newspapers between 700 000 – 1 000 000 copies or more according to circulation audit figures compiled by the Audit Bureau of Circulations in the US.

Table 2 shows the distribution of respondents across different audiences. There was an even number of respondents across the categories of national, state, and local/rural audience across all types of news libraries. There were few respondents from news organisations with international audiences. This may be due to the lack of any respondents from online news libraries (Table 1).

Table 2. The news organisation's primary audience

	Count	Percent
International	3	7.7
National	11	28.2
State	13	33.3
Local/Rural	11	28.2
Missing	1	2.6
Total	39	100

Note. N=39

4.3.1 Database Access

43.6% of respondents said that access to databases in the library is restricted to librarians only. Access to databases is restricted in some way in 61.5% of libraries (Table 3).

Table 3. Access to databases in the news library

	Count	Percent
Librarians only - Journalists may ask librarians to search on their behalf	17	43.6
Editors and librarians only a.		
All staff may search systems, with mediation or supervision	7	17.9
All staff may search systems, without mediation or supervision	15	38.5
Total	39	100

Note. N=39

a. No response for "editors and librarians only"

Cost was cited by 48.7% of respondents as one of the reasons why access to databases is restricted in the library (Table 4). The results suggest that some librarians are not confident of journalists' abilities to search databases, with 12.8% of responses agreeing that databases are too difficult for journalists to use, and 28.2% agreeing that it is quicker and easier for librarians to perform searches on a journalist's behalf.

Table 4. Reasons why access to databases in the library is restricted

	Count	Percent
The databases and information systems are too difficult for journalists to use	5	12.8
Journalists have not been trained to use the systems	13	33.3
It is quicker and easier for me to use the system on their behalf	11	28.2
Access costs are prohibitive	19	48.7

Note. More than one response permitted.

Some respondents noted that access to databases was determined by the cost of each individual resource. Access to less expensive databases was unrestricted, but access to databases such as Lexis-Nexis or Dow Jones was restricted in some libraries due to the high cost of these services.

As one respondent said —

Of our databases only a few are available to the journalist, the remainder are handled by the library staff. This is usually due to costs and complexity.

Another respondent added —

We make some databases (Nexis, Dow Jones) available to every person on the news staff and allow them unlimited access. Other databases, which may be either more expensive or more complicated to use, are accessed only through members of the News Research/Library staff.

Cost and training are barriers to journalists having unrestricted access to databases in the library. If these barriers were removed, journalists may have far greater access to databases. Given that 61.5% of responses have restricted

journalists' access to databases in their libraries (Table 3), these barriers impact upon the majority of journalists.

4.3.2 Journalists' use of Internet information

There is division between respondents who agreed that journalists use a wide range of search methods on the Internet, and those that disagreed. 48.7% of respondents agreed or strongly agreed that journalists use a wide range of search methods, and 38.5% disagreed (Table 5).

Table 5. Journalists use a wide range of search methods to find information on the Internet

	Count	Percent
Strongly Disagree		
Disagree	15	38.5
Neutral/No Opinion	4	10.3
Agree	16	41.0
Strongly Agree	3	7.7
Missing	1	2.6
Total	39	100

Note. N=39.

These results infer that there may be a need for further training in the use of the Internet for some journalists. One respondent indicated that there are differing levels of ability in searching by journalists within their organisation -

I find wide variation in journalists' use of the Internet and commercial databases. Some are skilled searchers, but many know only the basics and don't take full advantage of what is available to them.

4.3.3 Journalists' use of print sources

The results indicate that 51.3% of respondents agreed or strongly agreed that journalists use a wide range of print sources to find information (Table 6). However, 28.2% of respondents disagreed or strongly disagreed with this statement. This points to several possibilities, for example that there is a need for further training in the use of print sources, or that some journalists don't need to use a wide range of print sources.

Table 6. Journalists use a wide variety of print sources to find information

	Count	Percent
Strongly Disagree	1	2.6
Disagree	10	25.6
Neutral/No Opinion	7	17.9
Agree	16	41.0
Strongly Agree	4	10.3
Missing	1	2.6
Total	39	100

Note. N=39.

17.9% of respondents answered "no opinion" to this question, which suggests that some librarians may not be as familiar with journalists' print searching behaviour as they are with journalists' Internet searching behaviour (Table 5).

Table 7 compares the respondents' assessment of journalists' usage of print and Internet sources. 32.4% of journalists use a wide variety of print and Internet sources according to respondents. There was disparity in usage of print and Internet sources in 29.7% of cases (Table 7). This includes:

- 16.2% of respondents who disagreed that journalists use a wide range of print sources, but agreed that they used a wide range of Internet sources;

- 13.5% of respondents who agreed or strongly agreed that journalists use a wide variety of print sources, but disagreed that they use a wide range of Internet sources

These results suggest that journalists may employ different information seeking behaviours depending on the type of resource that they are using, or that they may need to use either print or Internet sources more often due to the tasks that they perform.

Table 7. Cross-Tabulation: Journalists use a wide range of search methods to find information on the Internet / Journalists use a wide variety of print sources to find information

		Journalists use a wide variety of print sources to find information				Total
		Strongly Disagree	Disagree	Neutral/No Opinion	Agree	Strongly Agree
Journalists use a wide range of search methods to find information on the Internet	Strongly Disagree	1	4	5	4	1
	% of Total	2.7	10.8	13.5	10.8	2.7
Disagree	Count					
	% of Total					
Neutral/No Opinion	Count			2	1	1
	% of Total			5.4	2.7	2.7
Agree	Count		6		8	2
	% of Total		16.2		21.6	5.4
Strongly Agree	Count				2	2
	% of Total				5.4	5.4
Total		1	10	7	15	4
		2.7	27.0	18.9	40.5	10.8

Note. N=39.

Table 8. Journalists prefer to use Internet sources rather than print sources to gather facts

	Count	Percent
Strongly Disagree		
Disagree	14	35.9
Neutral/No Opinion	8	20.5
Agree	13	33.3
Strongly Agree	3	7.7
Missing	1	2.6
Total	39	100

Note. N=39.

41% of respondents agreed or strongly agreed that journalists prefer to use the Internet rather than print sources for fact gathering (Table 8). Yet many (35.9%) respondents indicated that journalists do not prefer to use the Internet for this purpose (Table 8). This result points to a divide in the usage of Internet resources by staff in different news organisations. This divide may be temporary, and is possibly related to changing demographics and education levels in the newsroom.

As one respondent commented -

The computer literacy of the younger journalist set has increased dramatically. As a result, most new reporters and editors usually come equipped with the basic skill set needed to search online. Librarians still do the bulk of online searching for the "older" crowd. As this demographic is replaced by the younger set, the amount of online work done directly by librarians is decreasing.

Another noted --

Younger journalists arrive much more aware of the availability of information sources.

4.3.4 Evaluation of work

Table 9. Evaluation of work by journalists

	Count	Percent
Don't evaluate their work because they have too little time to reflect on it	8	20.5
Spend a lot of time evaluating their own work	9	23.1
Have their work evaluated by editors to check for accuracy	35	89.7

Note. N=39. More than one response permitted.

20.5% of journalists do not evaluate their work according to respondents (Table 9). Further, 89.7% of journalists have their work evaluated by editors. These results have an impact upon a journalist's information seeking behaviour, as evaluation of one's own work is a significant component of several models of information seeking behaviour (Choo et al., 1998; Eisenberg & Berkowitz, 1990; Ellis, 1989; Kuhlthau, 1998).

Table 10. Journalists verify the information they find on the Internet to determine its accuracy

	Count	Percent
Strongly Disagree		
Disagree	12	30.8
Neutral/No Opinion	11	28.2
Agree	15	38.5
Strongly Agree		
Missing	1	2.6
Total	39	100

Note. N=39.

30.8% of respondents disagreed that journalists verify the information that they find online (Table 10). This can be compared to the result obtained by Hansen and Paul (2002) who found that 65% of journalists do not routinely check the accuracy of news stories. A failure to check the accuracy of stories may lead to a rise in corrections, or a drop in credibility due to inaccurate reporting.

One respondent from a newspaper library noted that deadlines were a major factor in whether a journalist checked their work for accuracy -

This particular checking skill varies from reporter to reporter, I think. Editors complain about writers who spend so much time researching and verifying, they can never complete anything. Generally I believe reporters and editors at our paper do sufficient checking, but we put out a new product every single day. That's a big job and stuff does fall through the cracks sometimes. For special and investigative pieces, we have our lawyers look the [article] over and we hold the articles until everything is as perfect as possible.

This situation suggests that librarians may prefer journalists to undertake additional checking and evaluation of their work, but the restriction of time is a significant limiting factor. This may also account for the clustering of results in Table 11, with no respondents answering Strongly Disagree or Strongly Agree, and a considerable number of Neutral/No Opinion responses.

4.3.5 The role of the librarian in the Information Search Process

This series of questions sought to discover how librarians provide information to journalists, and at what stage of the Information Seeking Process journalists seek help from librarians. Knowing the stage of information seeking that a journalist is in provides librarians with information about what type of information should be provided to journalists (Kuhlthau, 1996).

97.1% of respondents either agreed or strongly agreed that librarians should filter search results for the most relevant information (Table 11).

Table 11. Cross-Tabulation: Librarians should find as much information as possible to give to journalists / Librarians should filter search results

Librarians should find as much information as possible to give to journalists	Librarians should filter search results				Total
	Strongly Disagree	Disagree	Neutral/No Opinion	Strongly Agree	
Strongly Disagree	Count	1	2.6	10	13
Disagree	% of Total	2.6	10	7	18
Neutral/No Opinion	Count	1	2.6	17.9	21.5
Agree	% of Total	2.6	10	17.9	32.5
Strongly Agree	Count	2	5.1	9	16.1
	% of Total	5.1	9	4	18.1
Total	Count	3	23.1	3	29.4
	% of Total	7.7	77	8.6	93.3
	Count	1	25	13	39
	% of Total	2.6	64.1	33.3	100

Note: N=39.

Respondents may have misunderstood this question, as 46.2% of respondents agreed that librarians should find as much information as possible for journalists, and also agreed that librarians should filter search results (Table 11). The responses could be seen as contradictory, but respondents may have interpreted the question about finding information to mean that they perform an exhaustive search of

information before filtering their results. Kenney (1993) asserts that librarians should filter information for information users, to save time and effort for that individual.

Table 12. Librarians should ask journalists what they intend to use the information for

	Count	Percent
Strongly Disagree		
Disagree	4	10.3
Neutral/No Opinion	1	2.6
Agree	22	56.4
Strongly Agree	12	30.8
Total	39	100

Note. N=39.

87.2% of respondents agreed or strongly agreed that librarians should ask journalists what they intend to use the information for (Table 12). Librarians are trained to ask users why they require information, so that only the most appropriate information for that particular problem is given (Katz, 1997). This allows librarians to assess the depth and quantity of information that should be given to journalists.

Table 13. Librarians should train journalists to search for their own information

	Count	Percent
Strongly Disagree		
Disagree	1	2.6
Neutral/No Opinion	2	5.1
Agree	25	64.1
Strongly Agree	11	28.2
Total	39	100

Note. N=39.

Most respondents (92.3%, Table 13) agreed or strongly agreed that librarians should train journalists to search for their own information. There was a minority that had no opinion or disagreed with this statement (7.7%, Table 13). The results in Table 13 suggest that librarians are more receptive to the idea of training when it focuses on specific training goals.

Paul and Hansen (2001a; 2001b) found that most librarians see their role as information retrieval experts, rather than trainers. However, a small

percentage of librarians (10%) saw their main role as trainers. Given Paul and Hansen's results and the results of this study, it can be suggested that librarians are increasingly looking to pursue a training role, as long as they can continue to play a major role in information retrieval. These two roles could conflict with each other if it is perceived that additional training to increase journalists' self-sufficiency in searching for information will cause them to use the library less often, and have less reason to require librarians to assist them with their information retrieval needs.

Table 14. Journalists usually seek help from a librarian when they are just browsing

	Count	Percent
Strongly Disagree	1	2.6
Disagree	20	51.3
Neutral/No Opinion	7	17.9
Agree	11	28.2
Strongly Agree		
Total	39	100

Note. N=39.

Table 14 shows that, on the whole, respondents believe that journalists do not seek help from librarians when they are browsing for information (53.9%). This indicates that some journalists do not involve librarians in the topic selection or exploration stage of information seeking behaviour (Kuhlthau, 1998), and that intervention by librarians occurs later in the information search process. However, there was also a considerable number of respondents who answered Neutral/No Opinion (17.9%) or Agree (28.2%), so there appear to be many journalists who do seek help from librarians at this early stage of the information seeking process.

Table 15. Journalists usually seek help from a librarian when they have just begun their search for information

	Count	Percent
Strongly Disagree		
Disagree	8	20.5
Neutral/No Opinion	10	25.6
Agree	20	51.3
Strongly Agree	1	2.6
Total	39	100

Note. N=39.

Table 15 indicates that some journalists (53.9%) seek help from librarians after they have determined their topic, but before they have found much information on that topic (Kuhlthau, 1998). However, there are still many journalists who have not involved librarians in their information search by this stage (20.5%). The large number of neutral respondents (25.6%) indicates that many librarians do not have sufficient familiarity with journalists' information seeking behaviours to be able to comment.

Table 16. Journalists usually seek help from a librarian when they would like to check facts

	Count	Percent
Strongly Disagree		
Disagree	4	10.3
Neutral/No Opinion	7	17.9
Agree	24	61.5
Strongly Agree	4	10.3
Total	39	100

Note. N=39.

Librarians tend to be involved in a journalist's information search during the latter stages of their search for information according to respondents (71.8%, Table 16). Librarians are involved at the fact checking stage, which occurs at the information use stage of the information seeking process (Dervin & Nilan, 1986; Kuhlthau et al., 1992; Lin & Belkin, 2000). These results are a departure from Paul and Hansen (2001a), whose study found that only 37% of journalists seek help with fact checking.

Table 17. Librarians don't wait for journalists to ask them for help – they approach journalists with information sources

	Count	Percent
Strongly Disagree	1	2.6
Disagree	9	23.1
Neutral/No Opinion	5	12.8
Agree	22	56.4
Strongly Agree	2	5.1
Total	39	100

Note. N=39.

Almost two-thirds (61.5%) of respondents agreed that they provide information sources to journalists before they ask (Table 17). Those that provide information before journalists ask may be more proactive in providing current awareness services, or marketing their resources.

4.3.6 Training provided by news libraries

Training for journalists was predominantly provided in the areas of searching information systems (89.7%), searching the organisation's archives (87.2%), and searching the Internet (79.5%, Table 18). More training is being provided than Paul and Hansen's (2001a) study found, where only 48% of respondents noted that there was someone responsible for training in information search and evaluation skills.

Table 18. Training for journalists is available to equip them with the following skills

	Count	Percent
Generic information literacy skills	19	48.7
Searching information systems including databases	35	89.7
Searching the organisation's newspaper archives	34	87.2
Searching the internet	31	79.5
Verifying information sources	20	51.3
Editing, writing and interviewing	14	35.9
Other	7	17.9
Training is not provided	1	2.6

Note. More than one response permitted.

Some form of training is available in 97.3% of all news libraries according to respondents (Table 18). The least training was provided for specific 'journalism skills' such as editing, writing and interviewing (35.9%). A relatively high percentage of respondents are providing training in generic information literacy skills (48.7%) and verifying information sources (51.3%), considering only 8.8% of libraries said that they had tested information literacy skills in their organisation (Table 19). These results suggest that information literacy skills have become a major component of the news organisation's training program.

Table 19. Have you ever tested the information literacy skills of journalists in your organisation?

	Count	Percent
Yes	3	7.7
No	35	89.7
Missing	1	2.6
Total	39	100

Note. N=39.

These results infer that there is potential for information literacy skill testing in those organisations that are currently providing training in information literacy skills, in order to determine which skills are needed the most.

One respondent however, was met with resistance when attempting to test information literacy skills in their organisation –

For testing the "information literacy skills", they would not cooperate, even under a management order.

Additionally, one respondent indicated that they concentrated their training or resources on younger journalists rather than those that had been with the organisation for some time. The respondent noted that –

Younger/newer journalists arrive much more aware of the availability of information sources, hence this library

concentrates on acquiring more resources for savvy journalistic staff.

Such an approach could lead to resentment amongst older workers. The OECD report, *Employment Outlook (Employment Outlook, 1999)*, found that there is a wide divide between the provision of training to younger workers and older workers. News librarians should aim to provide an equal amount of training to all journalists in their organisation regardless of age, depending on their needs and abilities.

Table 20. Training for journalists on library systems is provided

	Count	Percent
On request	28	71.8
To all new staff	22	56.4
When the opportunity arises	18	46.2
At regular intervals	11	28.2
A specified time after installation	15	38.5
Training is not provided		

Note. More than one response permitted.

Most training for journalists is provided on request according to 71.8% of respondents (Table 20). Many respondents said that they have difficulty attracting journalists to scheduled training sessions, which could explain the low number of libraries that provide training at regular intervals (28.2%) or a specified time after installation (38.5%). Some respondents noted that attracting new staff to training sessions was generally successful.

One respondent noted that it is hard for journalists to fit training in –

Training has to be squeezed into a very full work flow. The best of course are writers and editors who seek out training on their own. We have a trainer and a training room with banks of equipment.

Table 21. Cross-Tabulation: Training for journalists on library systems is provided / Training on library systems for journalists is conducted

		Library staff	Library staff and representatives...	External training provider	Journalists or editors	Other
On request	Count	25	10	3	8	3
	% of Total	64.1	25.6	7.7	20.5	7.7
To all new staff	Count	20	9	4	5	1
	% of Total	51.3	23.1	10.3	12.8	2.6
When the opportunity arises	Count	16	6		5	2
	% of Total	41.0	15.4		12.8	5.1
At regular intervals	Count	10	6	1	1	1
	% of Total	25.6	15.4	2.6	2.6	2.6
A specified time after the installation or acquisition of a new system or information	Count	13	8	2	2	3
	% of Total	33.3	20.5	5.1	5.1	7.7
Training is not provided	Count					
	% of Total					

Note. More than one response permitted.

Most training is provided on request (Table 21), but librarians also take advantage of providing training to new staff and when the opportunity arises. Types of training offered differ according to who is delivering the training. Training at regular intervals was less popular according to respondents when training is delivered by library staff and vendors, external training providers, or journalists and editors. Training for all new staff is popular no matter who delivers the training (Table 21).

Table 22. If the news library provides or co-ordinates training for journalists, why was it introduced?

	Count	Percent
It was requested by management	20	51.3
It was requested by staff	16	41
It was requested by library staff	22	56.4
Less expensive than external training	6	15.4
External training was not available	3	7.7

Note. More than one response permitted.

Table 22 shows that only 7.7% of respondents cited a lack of external training as a reason for introducing training. News libraries will need to develop

ways of assessing the impact of training if they are to keep training in-house. Many journalists have stated that they prefer external training (Hu, 2001), thus librarians will need to ensure that they are involved in management decisions about training provision in order to strike a compromise between what journalists and librarians prefer. If budgets are cut in the future, many librarians may find that either management transfers external training to in-house solutions, or cuts training altogether.

Table 23. Cross-Tabulation: Training for journalists on library systems is provided (Searching information systems including databases) / If the news library provides or co-ordinates training for journalists, why was it introduced?

		Searching information systems including databases	
		Count	Percent
Database access is restricted to	Librarians only - Journalists may ask librarians to search on their behalf	13	37.1
	Editors and librarians only		
	All staff may search systems, with mediation or supervision	7	20
	All staff may search systems, without mediation or supervision	15	42.9
Total		35	100

Note. N=35.

Where training is provided to journalists on searching database systems, they tend to have greater direct access to searching databases themselves (Table 23). However, as Table 24 shows, training is not the only major variable affecting access. The cost of databases has an impact on access, with 41% of respondents noting it as a reason why databases were restricted despite training being made available.

Table 24. Cross-Tabulation: Access to databases in the library is available to / Training for journalists is available to equip them with the following skills: Searching information systems including databases

	Searching information systems including databases	
	Count	Percent
The databases and information systems are too difficult for journalists to use	5	12.8
Journalists have not been trained to use the systems	10	25.6
It is quicker and easier for me to use the system on their behalf	10	25.6
Access costs are prohibitive	16	41.0

Note. More than one response permitted.

Table 25. Cross-Tabulation: How much time do library staff devote to planning training programs per week? / How much time to library staff devote to conducting training programs per week?

On average, how much time do library staff devote to planning training programs per week?	On average, how much time do library staff devote to conducting training programs per week?					Total
	Less than one hour per week					
	None	One to four hours per week	Four to ten hours per week	More than ten hours per week	Total	
None	Count 3	Count 10	Count 2	Count 15	Count 38	
Less than one hour per week	% of Total 7.9	% of Total 26.3	% of Total 5.3	% of Total 39.5	% of Total 39.5	
One to four hours per week	Count 9	Count 23.7	Count 5	Count 7	Count 39.5	
Four to ten hours per week	% of Total 23.7	% of Total 74.7	% of Total 15.8	% of Total 18.4	% of Total 18.4	
More than ten hours per week	Count 1	Count 13.2	Count 5.3	Count 1	Count 2.6	
	% of Total 2.6	% of Total 40.6	% of Total 16.2	% of Total 2.6	% of Total 2.6	
Total	Count 3	Count 19	Count 14	Count 2	Count 38	
	% of Total 7.9	% of Total 50.0	% of Total 36.8	% of Total 5.3	% of Total 100	

Note. N=38.

The data indicates that news libraries do not spend much time planning training (Table 25), with 57.9% of librarians spending no time or less than an hour planning per week. More time is spent conducting training per week, with

86.8% of librarians spending up to four hours per week conducting training (Table 25). There is also a strong correlation between the number of hours spent planning training and the number of hours spent conducting training, with most respondents spending less than an hour a week on both tasks. The OECD's *Employment Outlook* (*Employment Outlook*, 1999) based on the International Adult Literacy Survey found that the average number of training hours per employee per year was 61.3 in Australia, and 46.6 in the US. Australia ranked second in the survey of OECD countries, and the US ranked 5th. The survey results indicate that the average time spent on training is likely to be between one to two hours per week, thus news libraries are currently spending far less than the average national time per the OECD report on training. News libraries are currently spending, on average, 50 hours a year conducting training *per organisation*, as opposed to between 46.6 and 61.3 hours a year *per employee* (*Employment Outlook*, 1999). The hours of training provided by news libraries does not include training that may be provided by managers, external training, or training undertaken by individual employees.

Table 26. Cross-Tabulation: How much time to library staff devote to conducting training programs per week? / What state is your news library located in?

		On average, how much time do library staff devote to conducting training programs per week?					Total
		None	Less than one hour per week	One to four hours per week	Four to ten hours per week	More than ten hours per week	
What state is your news library located in? a.	USA	Count	3	15	13	2	33
		% of Total	7.9	39.5	34.2	5.3	86.8
	Australia	Count		4	1		5
		% of Total		10.5	2.6		13.2
Total		Count	3	19	14	2	38
		% of Total	7.9	50.0	36.8	5.3	100

Note. N=38.

a. State information discarded, respondents sorted by country

Although based on a small number of responses from Australian news libraries, the data suggests that these libraries spend less time than US news libraries on training (Table 26). Some Australian respondents noted that they would spend more time if not for cutbacks to the training budget -

Training and library departments have suffered steady but drastic cutbacks in the last two years. All training provided by librarians has to go via the training department, and thus these cutbacks have negatively affected our ability to train staff. We just don't have the time and resources to run training courses regularly.

Table 27. If you conduct training, what delivery methods are used?

	Count	Percent
"Just-in-time" or point-of-contact	20	51.3
Face to face (one on one)	31	79.5
Workshops	19	48.7
Printed training manuals	15	38.5
Intranet web site	11	28.2
Other	4	10.3

Note. More than one response permitted.

Most respondents used a one-on-one mode to deliver training (79.5%, Table 27). Considering the wide range of print and Internet sources used (Table 5 and 6), the chosen training methods could be a result of the difficulty of accommodating journalists' needs in a workshop or more structured training session. Given the small amount of time that news librarians spend on planning and conducting training (Table 25), the preference for one-on-one training could also be a result of not having enough time to train in a more formal environment, or the result of most training being provided on request (78.8%, Table 20).

Workshops were cited as a training mode by 48.7% of respondents (Table 27), but some noted that they had difficulty in getting journalists to these sessions. As one person responded -

There is rarely a training session where half of the trainees stay for more than an hour. We have scheduled sessions with vendor trainers where no one showed up, even the ones who signed up, and no breaking news.

Table 28. Cross-Tabulation: If you conduct training, what delivery methods are used? / Training for journalists is available to equip them with the following skills

If you conduct training, what delivery methods are used?	Just-in-time or point-of-contact	Training for journalists is available to equip them with the following skills									
		Generic information literacy skills	Searching information systems including databases	Searching the organisation's newspaper archives	Searching the internet	Verifying information sources	Editing, writing and interviewing	Other	Training is not provided		
	Count	10	19	19	16	11	8	5			
	% of Total	25.6	48.7	48.7	41.0	28.2	20.5	12.8			
Face to face (one on one)	Count	15	28	27	24	16	10	5	1		
	% of Total	38.5	71.8	69.2	61.5	41.0	25.6	12.8	2.6		
Workshops	Count	10	17	17	17	11	7	2			
	% of Total	25.6	43.6	43.6	43.6	28.2	17.9	5.1			
Printed training manuals	Count	7	14	14	11	9	7	3			
	% of Total	17.9	35.9	35.9	28.2	23.1	17.9	7.7			
Intranet web site	Count	6	11	9	8	8	6	1			
	% of Total	15.4	28.2	23.1	20.5	20.5	15.4	2.6			
Other	Count	4	3	4	4	3	3	3			
	% of Total	10.3	7.7	10.3	10.3	7.7	7.7	7.7			

Note. More than one response permitted.

A face-to-face methodology is most popular for all skills provided to journalists (Table 28). Just-in-time or point-of-contact and workshops were the second most popular methodologies in all skills, except for editing, writing and interviewing. Just-in-time, workshops and printed training manuals were almost equally popular in the editing writing and interviewing category.

Some libraries make training on in-house systems compulsory, which can be successful. As one respondent noted –

Our article database was specially designed for our organisation. It is compulsory for all journalists to be trained by the library to search over our databases. Journalists do their own internet search and the library is not involved in this. A journalist seeks the Librarian's help with special or in-depth search that they are unsure of.

Table 29. What resources do you need to conduct training that you don't currently have?

	Count	Percent
Additional staff to plan or conduct training	17	43.6
A training room, outside of the newsroom or library	10	25.6
Education for library staff in how to train ("Train the Trainer")	15	38.5
Funding	10	25.6
Printed training manuals	6	15.4
Intranet web site	7	17.9
Other	3	7.7

Note. More than one response permitted.

Additional staff (43.6%) and training for library staff (38.5%) are the two most important resources needed by news libraries to conduct training more effectively (Table 29). This correlates with Paul and Hansen's study (2002), which also found that additional staff and training were the two most important resources needed. The need for additional training skills is important, because the success of training largely rests on the expertise of the trainer to develop curricula that take into account learning styles, needs, and appropriate methodologies (Grassian &

Kaplowitz, 2001; Svinicki & Schwartz, 1988). It is positive that despite a large number of news libraries already providing training, they are seeking to improve their skills in training (Table 2.9). This need must be addressed to ensure that the most appropriate instruction is available to journalists.

Budgets, motivation, and management have all affected the provision of training in news libraries. Budget cuts have affected the provision of training by librarians in the US –

Training seems to be the first thing to go in a budget crunch, which is where we are at right now.

A lack of support from management was also cited as a constraint on the provision of training –

Training can't be done unless there is support from management for the library and trained librarians are included in the staffing levels.

Motivation to be trained is also lacking amongst some journalists, according to one news librarian –

Editors need to encourage journalists to be trained

These issues are important and must be overcome by librarians before they can effectively train journalists.

Table 30. Cross-Tabulation: If you conduct training, what delivery methods are used? / What resources do you need to conduct training that you don't currently have?

		What resources do you need to conduct training that you don't currently have?						
		A training room, outside of the newsroom or library	Education for library staff in how to train ("Train the Trainer")	Funding	Printed training manuals	Intranet web site	Other	
If you conduct training, what delivery methods are used?	Just-in-time or point-of-contact	11	7	8	4	4	2	
		% of Total Count	17.9	20.5	10.3	10.3	5.1	5.1
Face to face (one on one)		12	9	12	8	5	2	
		% of Total Count	23.1	30.8	20.5	12.8	15.4	5.1
Workshops		9	5	7	4	1	3	
		% of Total Count	12.8	17.9	10.3	2.6	7.7	2.6
Printed training manuals		9	4	6	4	2	3	
		% of Total Count	10.3	15.4	10.3	5.1	7.7	3
Intranet web site		7	3	7	3	2	1	
		% of Total Count	7.7	17.9	7.7	5.1	2.6	2.6
Other		1				1	1	
		% of Total Count	2.6			2.6	2.6	2.6

Note. More than one response permitted.

Resources are required to support training using a face-to-face methodology (Table 30). Just-in-time closely follows. This result infers that if librarians had sufficient resources and time to better plan and conduct just-in-time training, they would do so. In libraries where workshops are used as a training methodology, additional staff and education for library staff were the greatest need (Table 30). Further education for librarians may improve the success of this methodology, which some news librarians have found lacking with many journalists failing to attend scheduled sessions.

4.4 Follow-up interview results

The results of the follow-up interview will be discussed in chapter 6.

4.5 Major results

There are four major results arising from this study.

Firstly, news librarians are willing to plan and conduct training, with 92.3% of respondents agreeing that they should train journalists to search for their own information (Table 13).

Secondly, editors perform the task of evaluating work on behalf of journalists according to 89.7% of respondents (Table 9). 30.8% of journalists do not check the validity of Internet sources according to respondents (Table 10).

Third, there appears to be a growing divide between journalists who have Internet skills, and those that do not (Table 7). One respondent indicated that they focus training on younger journalists, which may have an adverse affect on older journalists.

Fourth, many respondents expressed a need for more training skills (Table 29), even though they are already providing training.

Chapter 5. Discussion

The responses from the survey presented in the previous chapter provide an overview of current training practices of news librarians. The data demonstrates emerging trends in training which in turn indicate the changing nature of news libraries and the evolving roles of the librarians who work in those libraries. These trends appear to be consistent with evidence gathered in other areas of librarianship, which are indicative of a shift from the gathering and providing of information to a role which emphasises the librarian's function as a guide to relevant information. The survey results identify that this change is being driven by technological changes, such as the Internet, and economic factors, which have impacted on the availability of external training and resources. These changes are central to the ongoing viability of news library services, as journalists and news organisations adapt to a new information environment.

This chapter will discuss the implications of the major results arising from the survey. It will do so by considering that data in the context of other available evidence which affects the role of news librarians. This will lead to conclusions about the future training role of news librarians, and address the key research questions underlying this project.

5.1 News librarians as trainers

5.1.1 Viability of training as a new role

As the literature review found, training has been identified as a key role for news librarians by several researchers in the field (Hansen & Ward, 1993; Metcalf, 1993; Paul & Hansen, 2002). Many news librarians have already begun to train journalists in a variety of skills, especially computer and Internet skills (Paul &

Hansen, 2002). Training is also an important role for librarians working in other kinds of libraries, particularly academic libraries. Training has grown in special libraries, especially in law (Boelens, 2001; Gasteen & O'Sullivan, 2000; Oman, 2001; O'Sullivan, 2001). These libraries have much in common with news libraries, due to the need for accurate and timely information by their users.

News librarians are willing to plan and conduct training. 92.3% of respondents to this study agreed that they should train journalists to search for their own information (Table 13). Instruction is required to learn how to use new tools in the newsroom such as the Internet, databases and Computer Assisted Reporting.

The key is to ensure that news librarians remain vital in news organisations despite changing roles and priorities. In light of recent changes in the sector, such as the closing of the Time Warner news library in favour of networked databases (Kuczynski, 2001), or the scaling-back of services at the Australian Broadcasting Corporation library (Banham, 2001), this fear is more heightened than ever. Unfortunately, news libraries are not alone. Many other special libraries are facing closure or reduction of staff (Gawne, 2001). Despite these challenges, the results of this study, indicating that librarians are more willing to train than before, coupled with the increasing importance of value-added information, point towards a change in role that will not lessen the library's relevance but in fact more tightly weave interaction between the newsroom and the library.

Others have suggested that librarians in news organisations may take on more traditional journalist roles in combination with more responsibility for uploading information to websites and databases (Kenney, 1993; Outing, 1996). Although librarians have fought hard to be included in the bylines of stories in newspapers as researchers, they also need to make sure that there remains a distinction between "reporter" and "researcher". Remaining a separate, unique entity from the newsroom is essential for the library's survival. Duplicating services that the newsroom already provides may make it difficult for managers to see a need for maintaining a library.

Mediated searching was the news library's main function until recently (Paul, 1997b; Paul & Hansen, 2002). As database price structures have changed and journalists have gained greater access to databases, this role has decreased. This study found that journalists had unrestricted use of databases in 38.5% of libraries (Table 3). While many journalists are still content to use the library for mediated searching, this role has decreased overall.

Despite the growth of training in news libraries to date, it is just one of several emerging roles that news librarians may emphasise in the future. In order to determine the viability and importance of training as a future role for news librarians, there needs to be an assessment of both current roles and other potential roles. Paul and Hansen (2002) have undertaken a study to assess current roles as part of a wider study on change in news libraries. They see great value in roles that can bring tangible financial rewards to the news organisation, such as database content creation, and selling content to the public. These roles have been suggested by several writers in the literature, as well as additional writing work (Kenney, 1993; Outing, 1996), value-added information provision, information skills training and identifying new technology trends (Paul & Hansen, 2002). This study focuses on information skills training, and the wider issue of information literacy in news organisations.

Roles that help to develop a stronger working relationship between journalists and librarians have become widespread (Hansen & Ward, 1993; Outing, 1996). Training can help to build this relationship due to the contact required to analyse training needs and conduct training. Because they work closely with journalists, librarians are able to observe journalists' work behaviour and discuss their training needs with them. This is an advantage that news librarians have over academic librarians, who have to design training programs for students that may have never been to the library before training. Training can also fulfil value-added information needs, by enabling journalists to develop higher-level skills in information use, evaluation, cognition and knowledge management (Quinn, 2002).

After current roles and other possible future roles have been assessed, librarians will need to assess their own organisation's readiness for training.

Librarians need to assess the extent to which their organisation sees training as an organisational goal –

- Does the organisation recognise training as the organisation's responsibility, and are they willing to give employees time and resources to pursue training, or do they pass responsibility for training to the individual?
- Are librarians able to draw upon a training budget, or will they have to reallocate funds from other areas in the library's budget?
- Will the library be able to employ someone to develop training, or will existing staff have to fit training in around other activities?
- And lastly, do librarians, journalists and managers value training as a priority in news organisations?

The answers to these questions will help librarians to determine the place of training in their organisation. Some news organisations may find that formal training does not fit their organisational structure, and may pursue other forms of staff development.

Paul and Hansen's (2001a; 2002) study found that managers and journalists do not perceive training as a librarian's primary role. Thus librarians need to ensure that they communicate the need for libraries to conduct training. On the contrary, this study found that respondents did not have difficulty in convincing managers of the need for libraries to conduct training. One respondent to the follow up questionnaire noted –

Our management values training as an indispensable tool

Another respondent added –

I don't need to convince them. I train all new reporters and do internet and other training as needed with full support from management

A third replied –

For the most part, we don't need to persuade managers that the news library should train journalists. Our newsroom's training budget is at a minimum, and our reporting staff is relatively young and inexperienced, so anything we can do to address those needs is welcomed.

The respondents to this study noted that in organisations where managers have realised the importance of training, this support has had a positive effect on librarians with managers more willing to provide resources and encouragement to journalists to attend training. One respondent noted –

I believe the new role of the news librarian is to support and train clients in using online systems and empowering them with the skills to use online databases - this can't be done however unless there is support from management for the library and trained librarians are included in the staffing levels.

However, respondents to the follow-up questions indicated that they did not yet have separate training budgets, which can complicate the process of justifying training when faced with performing a cost-benefit analysis.

The OECD (*Employment Outlook*, 1999) notes that the US and Australia provide an average of between 40 and 60 hours of training per employee per year. This figure shows that there is a growing recognition of the commitment to training by employers. Librarians can capitalise on this recognition when justifying training as a library role or goal.

5.1.2 Current training situation

Training is at an early stage in news libraries. Some respondents noted mixed success in training, especially in attracting journalists to workshops or sessions with vendor representatives. This suggests that news librarians are still in the early stages of determining successful training methodologies in news organizations.

As noted in the results, some respondents in this study expressed that they believed journalists were to blame for the lack of success in workshop and vendor sessions. Both librarians and journalists need to work together in order to determine the most effective training methodologies.

The popularity of workshop methodologies could be a consequence of the immature nature of training in special libraries. Workshops are a popular choice of methodology in academic libraries where there are many students studying the same subjects or topic. However, workshops may be less suited to special libraries, since each journalist will not necessarily have the same roles as any other in the same organisation.

News librarians are not yet spending a large proportion of their time on planning and conducting training. 92.2% of respondents spend less than four hours per week on planning or conducting training (Table 22). These results concur with the finding in this study that the most popular training methodologies were just-in-time and face-to-face. These methodologies are often chosen so that librarians can answer a journalist's specific query, but can suffer from a lack of adequate preparation (Breivik, 1982). The lack of time devoted to planning by respondents in this study suggests that librarians may not include one-on-one training in their figures of time spent planning and conducting training, or that they are not devoting many hours to structuring this type of training in response to questions that journalists frequently ask. (Table 22). These results show a promising approach to

training in news libraries, however libraries will need to ensure that they provide training that is meaningful, planned, and relevant to journalists.

There are few resources available in the field to assist librarians with planning and conducting training, but those that are available tend to be aimed at academic and school librarians. Respondents in this study replied that they find most of their ideas about training from magazines and occasional sessions at conferences.

Although several courses and workshops are available for librarians to learn and deliver information literacy instruction, they are also geared towards academic librarians. The Immersion program conducted by the National Information Literacy Institute in the US strongly emphasises the application of information literacy in an academic context, thus reducing the value of the training for librarians in a special library environment. Additionally, special librarians may find it difficult to arrange several days of leave to attend an Immersion program. The University of New South Wales's Teaching Skills for Information Skills Librarians program (Barrett & Trahn, 1999) teaches some of the same skills as the Immersion program, but also provides sessions in Workplace Training and Assessment. These sessions are more useful for special librarians as they are designed for the workplace environment.

For news librarians to be able to deliver effective training, more resources need to be developed. Since news librarianship is a small library sector, librarians could collaborate with other special librarians to develop resources. In particular, news librarians can look to law librarianship, where several programs and resources have been established (Boelens, 2001; Gasteen & O'Sullivan, 2000; Oman, 2001; O'Sullivan, 2001). Journalism professors may also have resources for journalists in the workplace.

News librarians have the advantage of being able to capitalise on the shift in attitudes towards training across all types of news organisations. The provision of training to journalists by employers is a relatively new phenomenon. Until recent years, the onus was on journalists to seek out training at their own expense, or to rely on on-the-job training. Formal journalism education was also

uncommon for several decades. Current research indicates a shift in thinking on training however, with journalists now requesting that employers provide them with the time and resources to attend external training. The transition to organisational responsibility for training in news organisations is in contrast to many other professions, which are in transition to an individual responsibility for training. This transition is in line with a global trend towards more training being provided by employers (*Employment Outlook*, 1999).

Training has now entered an interim stage in news organisations, with employers meeting journalists half way by providing in-house training, but not yet allowing journalists to have as much time to attend external training (Table 22). Librarians can benefit from this transitional stage, by helping to define areas of training need, and promoting in-house training solutions provided by the library. Librarians need to ensure that news organisations are aware of the importance of information literacy skills. The goal for librarians is to embed information literacy skills into organisational goals at a time when news organisations are still defining their training policies, curricula, and goals. One of the characteristics of information literacy in higher education is its embedding into university curricula, so that instruction becomes a transparent process (Grassian & Kaplowitz, 2001). Information literacy at work must achieve this same goal, by being embedded into workplace problems and needs, in order to succeed.

Although several researchers have identified training as a key role for news librarians, it has not been fully explored in the literature (Hansen & Ward, 1993; Metcalf, 1993; Paul, 1997b; Paul & Hansen, 2002). There is still little known about the skills that news librarians are teaching to journalists, how librarians learn about training, and what the impact of training has been on journalists. Additionally, these studies have considered training in the context of specific software skills, and not information literacy skills. Thus in order for training in news libraries to become successful, there needs to be a full exploration of these issues by conducting further research.

5.2 Editors perform the task of evaluating journalists' work

Editors perform the task of evaluating work on behalf of journalists according to 89.7% of respondents in this study (Table 9). The lack of evaluation by journalists has implications for their information seeking behaviour and information literacy skills.

Several writers identify evaluation as an essential component of information seeking behaviour (Choo et al., 1998, 2000; Eisenberg & Berkowitz, 1990). Evaluation allows journalists to reflect on their work, assess the methods they used to find information, judge their attention to objectivity, and integrate new data into existing knowledge. 30.8% of journalists do not check the validity of Internet sources according to respondents (Table 10). Not checking work leads to the possibility that errors will occur. Journalists should check all their sources to ensure that their work is as accurate as possible, to avoid having to make corrections or retractions after a story has been published or aired.

The inclusion or exclusion of evaluation has a major impact upon the identification of information search strategies. Those information search behaviours that do not include evaluation tend to be focused on the school age individual, working on an assignment (Kuhlthau et al., 1992). These assignments can be likened to news reporting assignments, in that journalists may be given a topic, sources, desired length, and contacts. However, journalists often have the freedom to some extent to choose their own assignments, which would again impact on the appropriateness of the use of a linear model of information seeking by journalists.

Evaluation allows an individual to reflect on their work and acknowledge the process. Self-evaluation cannot be replicated by peer-evaluation, as it cannot replicate the cognitive development that occurs during self-evaluation. It is possible that editors may be giving evaluative comments only about the final result, and not about the process. Yet the process is essential in determining the success of the final product. For example, the wrong keyword entered on a database has the

potential to completely alter the findings of a news story. If a journalist identifies an error early in the information search process and corrects it before the final product goes to air or is printed, the journalist will have learned from the mistake but an editor may not even be aware of it. Thus, the self-evaluation and peer-evaluation of the same story may be vastly different.

Additionally, information search behaviour models lacking evaluation also tend to be linear, meaning that all the stages are to be completed in order. These models are not ideal for journalists as information seeking in the workplace is not linear (Cheuk, 1998). Adults have a greater cognitive ability to incorporate changes into their Information Search Process during the process, and not just at the end as children do (Galbraith, 1990; Knowles, 1990). Thus, despite the sometimes-linear approach to news assignments, journalists should choose a non-linear model for their information search behaviour, such as the Big 6 model (Eisenberg & Berkowitz, 1990), and not a linear model such as Kuhlthau (1992).

5.3 Use of Internet sources by journalists

The study found that there was a divide between journalists in their use of Internet sources. Some respondents said that there was a wide range of abilities in using the Internet (Table 5). Research by Nicholas et al. (1998) discovered that older journalists were better at using Internet resources in 1997, but it now seems that even in this short space of time a generational shift has occurred as the skills acquired by new journalists are more advanced than the existing skills of older journalists. It is not necessarily that older journalists do not have adequate skills to use the Internet, just that their skills, in comparison with younger colleagues, do not seem as well developed on cursory inspection. Older colleagues have not been able to keep pace with the rate of technological change, due in part to the lack of formalised workplace training in most news organisations. As Avieson (1991) and Quinn (1998) found, most journalists learn communication and computer skills on the job.

This points to a generation gap as well as an indication of the changes that formal journalism education has brought to the profession. A generation ago, journalists entered the profession after high school on a cadetship. However, this generation of journalists has seen wide-sweeping changes, including the popularisation of university education for journalists. The result of these changes means that there are now effectively two types of journalists, the type that learnt their skills on the job, and the type that learnt at university. Each type has a different set of skills, and different training needs. Librarians need to recognise and accommodate these differences in training programs in order to provide training that is effective and meaningful. Within these two general types of journalists are many others, who learn in different ways and whose skills are developed at different levels, with different employment and socio-economic histories. This wide range of skills, abilities and experience between journalists can complicate the training design process immensely.

As discussed in the results of this research study, some respondents indicated that they concentrate their training efforts on younger journalists, who joined the organisation with Internet skills. This may lead to isolation or even resentment amongst other journalists who do not receive training or priority for new resources. There are discrepancies between the provision of workplace training to workers depending on their level of education in different OECD countries (*Employment Outlook*, 1999). News libraries should aim to train all journalists equally, depending on need, and not according to age or qualifications. A related problem is that some respondents assumed that journalists have highly developed Internet searching skills that they learnt during formal university study. While some journalists are entering the workplace with better-developed skills than their older peers, librarians should take care to not assume that journalists have in fact, learnt all they need to know, as the level of Internet training provided at different universities varies. It is not known if the trend of Internet skills being high amongst new journalists will continue.

Librarians need to ensure that they do not promote the use of Internet sources over all other information sources. One of the skills of a good journalist is to be able to use a variety of information sources in a story. Training needs to be

provided for other information sources equally. Bruce (1999) proposes that many workplaces tend to overemphasise the importance of computer skills at the expense of other information skills. It may be more beneficial to also provide training in generic information literacy skills, which gives journalists the ability to use and evaluate any information source they encounter. Respondents in this study said they observed that 30.8% of journalists do not check the validity of Internet sources (Table 10). This figure emphasises the importance of training for evaluation skills.

The fourth result arising from the questionnaire, that more training skills are required, will be discussed in the next chapter which addresses the research questions and training resources.

Chapter 6. Exploration of research questions

Five research questions formed the basis of this study –

1. What information literacy skills do journalists need?
2. What factors motivate news librarians to introduce information literacy instruction?
3. What resources do news libraries need in order to provide information literacy instruction?
4. What training methodologies are appropriate for news librarians to train journalists in information literacy skills?
5. Why is the issue of providing training for journalists in the workplace often neglected?

This chapter explores the research questions by examining the results of the questionnaire and follow-up interview questions in greater detail. The major results of the study, as discussed in the previous chapter, have provided some additional data which will be further explored by the research questions.

6.1 Information literacy skills

Bruce (1997) asserts that researchers wrongly assume that information literacy is a transferable skill across different information problems. If this is so, we can theorise that one aspect of information literacy does not actually refer to having a set of skills, but rather, that information literacy is about having an understanding that when faced with a recognised information problem, a person senses the need to acquire a skill in order to find information, and eventually to solve that problem.

The key concept of information literacy is that by learning a certain skill to help solve one problem, the person can use that skill again when solving another problem. The CAUL standards (*Information literacy standards, 2001*) assume that individuals already have all the skills they require, and that they are able to choose amongst them in order to solve a problem. However, if a person cannot conceive that their next information problem in fact requires the same skill that they have just acquired and used, they are in effect starting all over again from an information-illiterate perspective.

As lifelong learning research has found, it cannot be assumed that your current skill set is adequate for all the tasks and roles that may be pursued in life, formal education and work. The OECD report (*Employment Outlook, 1999*) categorises skills across the duration of a person's life, and emphasises that skill acquisition is ongoing. Skills are not finite. Not only are new skills being defined, but old skills are constantly being redefined simultaneously.

Therefore, the most important aspect of information literacy is the ability of a person to recognise that when they encounter an information problem, that they need to analyse their current skill-set. An information literate individual is a person who has the ability to *acquire* skills in order to fulfil a particular information need.

More fundamentally, the understanding of what is meant by skill needs to be clarified. There is a lack of definition of what a skill is in much of the literature on information literacy, which can lead to misunderstanding about the application of the concept. If skills are concrete, measurable tasks, then that will lead to a far different implementation of information literacy if a skill is linked to individual or group self-efficacy. For example, a person may require all the physical skills needed in order to access a database. However, if they lack the confidence in their own ability to do so, then this will impact on the way in which they access the database. As the literature has found, a person's self-efficacy, or confidence in their own abilities plays a large role in success with using skills (Noe, 2002). Likewise, a person that has great confidence in their own abilities but no physical skills, will have similar problems with the final result of their search. This is also a common

occurrence, where journalists over-estimate their ability (Katz, 1997). They may do this to avoid training if they are reluctant to attend, or to avoid admitting that they even require additional skills in the first place.

Therefore, if we conceive of skills as having behaviouristic, humanistic, and cognitive characteristics, we can more easily assess the competence of journalists in a particular skill. Kuhlthau (1992) has addressed this in part, as her skills comprise behaviouristic and cognitive aspects. Librarians need to take care to address each of these three characteristics when assessing and training journalists in information skills. Librarians can do this by using observation, interview and questionnaire techniques. They can also ask journalists to assess their own competence using self-evaluation techniques, comparing both sets of results (Noe, 2002; Rossi, 2002).

Some writers have noted that information literacy is not just about learning a particular 'skill' associated with using a particular database or Internet search engine (Bruce, 1997a; Bundy, 1999; Foster, 1993; Marcum, 2002). Information literacy involves creating knowledge and cognition about using and interacting with information (Bruce, 1997a; Mutch, 2000). The cognitive approach is particularly relevant in the workplace, where learners need to find how training is relevant to their work, and they learn in teams, interacting with many people about information problems. This approach provides the link between information seeking behaviour and information literacy. This is because the literature states that individuals must come to terms with information and create their own cognition about it to create knowledge during the information search process before they can utilise the new information (Dervin & Nilan, 1986; Eisenberg & Berkowitz, 1990; Kuhlthau, 1993b). Information literacy provides the standards for identifying optimal information search behaviour in its descriptions of how information literate individuals seek and use information.

6.1.1 Information literacy skills required by journalists

To develop an information literacy instruction program for journalists, the skills that journalists need in order to perform their job effectively must be identified. There is no single competency set defined that adequately covers all of the roles that a journalist performs. Competencies addressing some aspects of journalists' work roles have been developed by the Committee of Concerned Journalists and the Poynter Institute in the United States (*Competence in the newsroom: A Poynter conference*, 1998; *The elements of competency*, 1998). Some additional competencies can be found in the training package for Film, TV, Radio and Multimedia developed by Create Australia and approved by the Australian National Training Authority (*Film, TV, Radio and Multimedia Training Package*, 2002). The Create Australia competencies are designed for the Vocational Education and Training industry, and are used to measure the outcome of certificate and diploma courses. However, they contain some competencies that are relevant to this study, particularly in identifying the required skills of new journalists. A consultancy process by Create Australia has begun to define a specific reporting competency set, but it has not yet been completed (*Writing, publishing and journalism scoping study*, 2002). Journalism literature also provides a list of skills required by professional journalists (Dennis & Merrill, 1991; Ericson et al., 1987; Garrison, 1996, 2000; Wien, 2000). Librarians could consider consultation with journalism educators and organisations, as well as editors and managers within their own organisation in order to develop curricula. Librarians may also consult professionals in other fields where significant information handling is involved, such as health and law.

The results of this survey indicated that 89.7% of respondents had not tested the information literacy skills of journalists in their organisation (Table 19). It is important for librarians to conduct this assessment, whether by interview, observation, or survey in order to analyse information skill needs in their organisation prior to training. Additionally, pre-testing of skills and abilities prior to each instructional session will enable training to be better targeted (Bundy, 1999). Once this task has been completed, librarians can continue to develop information

literacy standards with greater confidence as to what type and level of training will be relevant.

Information literacy is not limited to information skills in the library. There is some debate as to whether information literacy is in fact a unique concept, or a joining together of pre-existing workplace skills (Foster, 1993; Marcum, 2002; O'Sullivan, 2001). No matter the origin of the identification of skills, organisations need to analyse how the concept applies to them and their staff. One of the main considerations of information literacy in a workplace should be how the concept can be applied across the organisation, as the library is not always the main source of information for many professionals. For example, although journalists use libraries extensively to find background materials, facts and statistics, they also rely on external sources of information such as interviews, footage, news wire feeds and so on. Marcum (2002) argues that there has been insufficient analysis of the adaptability of information literacy skills to non-information-based literacies, such as visual literacy. Journalists use visual and auditory mediums to communicate in the broadcast and radio media, and thus need to have highly developed skills in handling these types of information. Thus the true test of the applicability of information literacy in the workplace is its ability to adapt and be used to teach information gathering and use skills that are not in traditional formats or mediums. Additionally, in journalism the use and dissemination of information to the public is just as important as the process of selecting information during the information search process. Librarians will therefore need to pay greater attention to this aspect of information literacy as it is not emphasised to the same extent as information selection and evaluation in current information literacy standards.

Selecting competencies with an information component will provide a guide as to the kinds of skills librarians should teach in information literacy instruction programs. Identifying priorities will ensure that training is relevant and useful to journalists. The literature identifies several skills that journalists need in the workplace that have an information component:

- Newsgathering techniques and sources (Ericson et al., 1987)
- Objectivity, balance and fairness (Ericson et al., 1987)

- Selecting information (Dennis & Merrill, 1991)
- Verifying information on the Internet (Cannon, 2001; Garrison, 2000)
- Gatekeeping, information management and knowledge management (Garrison, 2000; Quinn, 2002; Watson, 1998)
- Information seeking (Garrison, 2000; Nicholas et al., 1998; Quinn, 2002)
- Computer Assisted Reporting (Ericson et al., 1987; Quinn, 2002; Wien, 2000)

Competencies identified by the Poynter Institute with information aspects are (*Competence in the newsroom: A Poynter conference*, 1998):

- News judgement
- Reporting
- Technology

Competencies identified by Create Australia for journalists with informational aspects are (*Film, TV, Radio and Multimedia Training Package*, 2002):

- Collect and organise information
 - Collect relevant information
 - Assess the information
 - Organise the information
 - Communicate the information

- Develop and maintain the general knowledge required by presenters
 - Research information
 - Develop and maintain general knowledge

These competencies can be mapped against information literacy competencies designed by librarians. Appendix F, Comparison of information literacy and journalism competencies, shows how these competencies can be mapped to the Council of Australian University Librarians (CAUL) standards (*Information literacy standards*, 2001). The CAUL competencies have been developed using the

Association of College and Research Libraries (ACRL) standards as a framework (*Information literacy competency standards for higher education*, 2000). The CAUL standards include competencies for information need, accessing information, evaluating information, organising and storing information, creating new knowledge, understanding issues around the use of information, the importance of lifelong learning.

Bruce (2000) asserts that librarians should not assume that our definitions of information literacy are correct. In analysing the competency mapping, it can be seen that there are differences in the way information is defined and managed between the library perspectives and the journalism perspective. One of the most interesting differences is between the CAUL standards and the Create Australia standards on accessing information (see Appendix F). The library approach emphasises the methods used to access information, whereas the Create approach emphasises the sources used. This standard highlights the difference between the environments in which each standard was developed, with the CAUL standards based in a higher education setting, and the Create Australia standards designed for the workplace. The CAUL standards almost seem to assume that the source of information will be worthwhile and valid. In practice in journalism, both method and source are important. In many instances, it is the source that gives credibility to the method.

The CAUL standards lack a competency for use of information (*Information literacy standards*, 2001). A journalists' main role is to communicate information, and thus this competency is essential. The Create Australia standards include a competency for communicating information, including the importance of feedback. It is important to note, however, that evaluative techniques in the journalism standards designed by Create Australia focus on feedback and evaluation as separate from the information need, search, and use process (*Film, TV, Radio and Multimedia Training Package*, 2002). Feedback is a process external to the information search process because it occurs after the information search process has already concluded. While journalists can use feedback to determine if their story was factually accurate and effective, the impact on a journalist's information search behaviour may be limited. The public is not privy to the methods that a journalist

used to find information, nor the news writing process. They can only provide feedback based on a final product. Therefore an additional competency for evaluation by the journalist throughout the information search process needs to be developed. It is essential for such a competency to note the importance both of evaluation by editors and peers, as well as self-evaluation.

Another aspect of journalists' work is that they are often dealing with data, not information (Quinn, 2002). Journalists are in fact, the creators of information when they put together a story (Watson, 1998), and so they must deal with raw data on a regular basis. This may affect the definition and application of information literacy in news organisations, as there is insufficient focus on the handling of unfiltered data, as opposed to information, in information literacy standards.

Additionally, respondents to the follow-up questionnaire indicated that journalists require many information skills. One respondent said that the most important information skills were to:

Question any research results for validity of the source.
Follow up any web Internet information with a phone call to the information provider to make certain that the information is accurate, timely

Another responded that journalists need the:

Ability to recognise good information, reliable updated.
Ability to evaluate sources. Ability to make connections

An Internet-specific competency may need to be developed for journalists. Choo, Detlor, and Turnbull's (1998) study found that professionals use different search behaviours on the Internet than with other types of information sources. Thus the ways in which Internet searching behaviours differ from print searching behaviours need to be identified and built into information literacy

standards, to ensure that journalists develop their skills in using the Internet appropriately.

Objectivity means many things, but it is an essential skill for journalists as it enables them to write stories that piece together a selection of facts to present a coherent whole, relying on the source for responsibility for interpretation, and not the story itself (Avieson, 1991; Dennis & Merrill, 1991; Donsbach & Klett, 1993; Ericson et al., 1987). Information literacy skills can assist journalists in developing this skill if competencies on evaluation or assessment of information are taught during information literacy instruction delivered by librarians. Journalists can also use information literacy competencies as defined by CAUL, such as "The information literate person evaluates information and its sources critically and incorporates selected information into their knowledge base and value system" (*Information literacy standards*, 2001), in order to further develop their skills in ethics.

Little attention has been paid to the way in which journalists use Computer Assisted Reporting tools as differentiated from the use of non-computer-based newsgathering tools. (DeFleur 1997; Koch as cited in Fabritius 1998) The use of tools such as databases, word processors and spreadsheets is an essential component of Information Technology information literacy, which is one of the five elements of information literacy (Bruce, 1997a). Journalists also frequently use news-specific software to download and compile news reports, such as Avstar. Librarians who take a broad-based approach to teaching IT skills in the context of information literacy instruction can also help journalists gain skills to use news-specific software at the same time that they learn about databases.

In the United States, schools offering journalism education programs can elect to be accredited by the Accrediting Council on Education in Journalism and Mass Communications (*Accrediting standards*, 2001). The Council's standards do not cover research or information skills. Accreditation is based on lab sizes and administrative support. Hence, there is no national standard or competency level in the US for graduating journalists. Such standards would enable librarians to analyse the level of a new journalist's competency in the use of the Internet, databases, and

general information use against the organisation's competencies when they join the news organisation.

Bruce calls for a balance between what she identifies as the five elements of information literacy (1997) –

- Computer literacy
- IT literacy
- Library skills
- Information skills
- Learning to learn

None of the standards adequately address all of these aspects. Bruce's five aspects of information literacy are important to keep in mind for balance. The CAUL standards are the only ones to include lifelong learning. Librarians can use Bruce's aspects of information literacy to determine whether they are favouring one type of literacy over another. Bruce (1999) notes that many organisations favour IT literacy over other types of information literacy as the costs and outcomes can be easier to measure. For information literacy and information skills instruction in news organisations to be effective, training programs need to recognise and incorporate aspects of all the standards.

There are not yet any standards that adequately describe how these competencies should be assessed. Both sets of information literacy standards for higher education include outcomes but not practical assessment guides (*Information literacy competency standards for higher education*, 2000; *Information literacy standards*, 2001). Create Australia suggests several types of assessment such as assignments and case studies, however they are not always practical in the workplace. Librarians can draw on workplace training literature in order to find assessment methodologies. Evaluation methods that are suitable in the workplace can include interviews, observation, group discussions, and cost-benefit analyses (Grassian & Kaplowitz, 2001; Noe, 2002; Smith, 1998). Librarians need to ensure that evaluation and assessment methodologies are valid, and can be applied

constantly over time. This is especially important if librarians take a competency-based approach to training, where learners are assessed against a set criteria. For example, librarians could design a training program around one of the CAUL competencies, with assessment focusing on one of the outcome points.

The specific makeup of competencies and outcomes will vary from organisation to organisation, and across different types of journalists. As not all journalists perform the same roles, there will need to be adjustment in competencies to accommodate newspaper, broadcast, freelance, foreign correspondent, and other types of journalists. Competencies may vary within organisations, as not all journalists within the same organisation perform the same roles. Some journalists may be assigned a beat, and only cover one type of story. Feature writers may approach information gathering in a different way to writers working on breaking stories, where sources, newsgathering depth, and time constraints differ. Hence, it may be impossible to design standards of competency that will apply equally to every journalist. While ideal standards can and should be designed at a national level in both the US and Australia, librarians will need to analyse their own staff and organisational needs when designing a training program.

One drawback of all the existing standards for information literacy is that they are framed in a pedagogical context. The ACRL and CAUL standards are designed for higher education, and the Create Australia standards for Vocational and Education Training (VET). The outcomes defined by these standards are not necessarily practical in the workplace. In order to ensure that standards are as effective and relevant as possible, it is necessary to reconceptualize standards from an andragogical point of view. It is entirely possible that an andragogical approach will result in no change to relevant methodologies and curricula, but this approach must be explored in order to ensure that current methodologies are appropriate.

If using an andragogical approach, librarians may take a more collaborative approach to standards design. Involving journalists in the process of determining their own individual standards ensures relevance, as well as fostering motivation (Bryant, 1990; Noe, 2002). Librarians will need to ensure that while

instruction can be personalised, it should still be guided by the organisation and profession's information literacy standards. Instruction needs to be designed with lifelong learning in mind, planning instruction not as a one-off session, but as a framework within which all further instruction evolves. The sum of all instruction programs needs to form a cohesive whole, with librarians linking knowledge in new instruction sessions to previous sessions. As information literacy is an aspect of lifelong learning, librarians need to ensure that lifelong learning is an organisational goal in order for information literacy, in turn, to succeed.

Beyond information literacy, there are general competencies that all people need to have in order to be effective and productive members of society. The OECD has developed general competencies, and analysed when each competency should be acquired (Keating, 2001). Several of the competencies are linked to lifelong learning, and may be applicable in an information literacy instruction program. The relevant competencies are:

- Literacy
- Numeracy
- Scientific method/Critical thinking
- Self-efficacy
- Meaning/Identity
- Group interaction
- Civic engagement

Self-efficacy is essential as it is the concept of a person having confidence in their own abilities to do their job (Noe, 2002). Self-efficacy has been widely recognised in the information literacy instruction and workplace training literature as an essential competency (Noe, 2002; Knowles, 1990; Mayfield 1993). If journalists gain confidence in their own ability to use new skills and new technology, they are more likely to use those new skills.

Having identified the competencies that could be part of an information literacy instruction program for journalists, the next step is to determine

how these competencies intersect. Not all journalists require the same skills, and not all journalists have the same existing expertise in a skill. Competencies vary from organisation to organisation, and from job to job. Understanding the relationship between competencies will enable librarians to identify and assess the relevant competencies for their staff more easily.

6.1.2 Individual, Workplace, and Organisational approaches to information literacy

In the workplace, the concept of the Information Literate organisation has been developed due to information literacy's importance to organisational goals and objectives (Bruce, 1999; Gasteen & O'Sullivan, 2000). Information literacy can fulfil organisational goals in information use, productivity, staff training and other areas. The organisational approach, fulfilling organisational goals, can be used in conjunction with the individual approach, which fulfils organisational goals and other individual work goals that journalists may have.

Taking this concept further, we can conceive of there actually being three approaches to information literacy competency in the workplace. These are -

- Occupation
- Organisation
- Individual

Adapting the OECD's proposed dynamic system for the definition and selection of competencies (Keating, 2001), we can then place these approaches to information literacy in context. Using a circular model adapted from Keating (2001), it can be seen that each higher approach has an impact upon the lower. The model (Figure 6.2) shows the occupation, organisation and individual approaches as they apply to information literacy. The current information literacy approach, which is based on the CAUL information literacy standards, is placed above the occupational,

organisation and individual approaches. The information literacy standards are nationally designed to apply to all types of information problems and persons (*Information literacy standards*, 2001). Although the CAUL standards are intended for use in higher education, they are at this time the only standards available for information literacy.

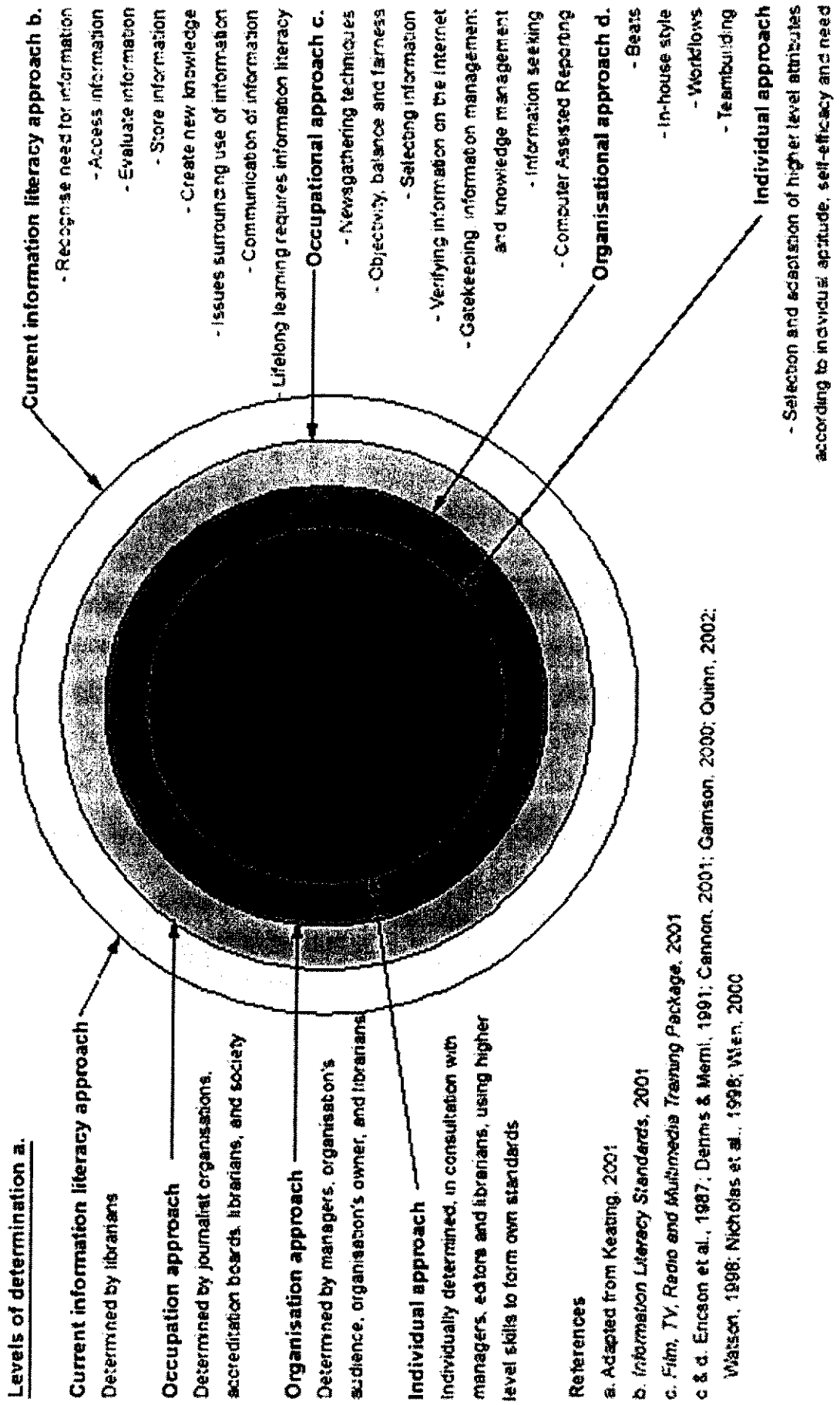
The occupational approach describes the competencies of the journalism profession as a whole. This approach includes concepts such as objectivity, bias, confidentiality of sources, and other generally held tenets of the profession. This approach is an adaptation of the higher education approach to information literacy standards, where it is assumed that all students learning the same curricula in a course require the same competencies.

The organisational approach includes organisational goals, and may incorporate organisational goals into information literacy curricula, such as the desire to have all journalists able to search a set of company databases, or report in a company way (Gasteen & O'Sullivan, 2000).

The individual approach describes specific competencies and information needs of individuals. We may talk of one person's individual need to change their search methods, which is related to Bruce's (2000) idea of conceiving of information literacy in terms of the individual.

The model allows librarians to identify which approach selected competencies for each journalist fits into. Librarians can use the model to determine if too much emphasis is placed on competencies drawn from the occupational approach from a journalism or librarianship perspective, or if there are not enough competencies drawn from the organisational level.

Figure 6.1 Approaches to information literacy in news organisations



Recognition of these three approaches to information literacy may lead librarians to develop standards that have a layered approach to competencies and outcomes instead of those currently defined by CAUL such as “An Information Literate person...”. These standards would also define the responsibilities of each approach towards ensuring that the standards are achieved. That is, what role does the workplace play in ensuring that journalists have learnt about in-house databases, if they are an essential part of a journalist’s job, for example. If a journalism association aims to have all journalists upholding their codes of ethics, how do they ensure that this is achieved? The approach model allows librarians to identify what training they should provide, and what should be provided by others in order to develop journalists’ information literacy skills. For example –

Figure 6.2 Information literacy standards using the three approaches

CAUL Standards	Occupational Approach	Organisational Approach	Individual Approach
Defined by: Librarians	Defined by: Journalism organisations	Defined by: Managers, in consultation with staff, editors, and librarians	Defined by: Individual, in consultation with librarians and managers
Existing standard: The information literate person recognises the need for information and determines the nature and extent of the information needed	Standard: The information journalist person recognises the need for information and determines the nature and extent of the information needed	Standard: The information literate news organisation ensures that information needs can be met by teams and individuals	Standard: The information literate journalist recognises the need for information and determines the nature and extent of the information needed
Outcome:	Outcome: upholding of quality standards of journalism and research across the profession	Outcome: decreased costs, increased productivity, co-operation between individuals in teams	Outcome: self-efficacy, improved accuracy

Figure 6.2 identifies responsibility and approaches for an existing CAUL standard, and how it would differ for each of the three approaches. Additionally, the development of such standards would need to take into account the differences in outcomes required. At the organisational approach, it is desirable to see fiscal, and productivity outcomes.

6.2 Reasons for the introduction of information literacy instruction by librarians

The reason why librarians introduce information literacy instruction is unclear. There were a high number of respondents who indicated that they were providing information literacy skills training (48.7%, Table 18) despite not having assessed the pre-existing skills of journalists in their organisation (89.7%, Table 19). The risk is that information literacy instruction could become a marketing exercise (Foster, 1993; Grassian & Kaplowitz, 2001) rather than a real effort to develop journalists' information behaviour and cognitive ability since librarians have not pre-tested to determine where specific skill needs lie (Bundy, 1999).

Given the lack of literature in news librarianship on the subject of information literacy, it is unclear to say where the drive to introduce information literacy instruction in news libraries is coming from. Since information literacy is a popular topic in librarianship, it could be an issue of keeping up with all other types of libraries. Training was introduced at the request of library staff according to 56.4% of respondents (Table 22). These figures indicate that much of the demand for training is driven by librarians, which may or may not meet journalists' needs.

Although journalists have been more proactive in requesting training in recent years ("No train, no gain," 1993), there has not yet been a formal study on what kinds of training they are requesting. The importance of information skills to journalists would also help to establish the role of information literacy instruction in news organisations.

6.3 Resources needed for information literacy instruction

Given staff, budget, and resource constraints, librarians need to juggle limited resources in order to design, conduct and evaluate instruction. A successful instruction program relies on a number of variables, which all need to be adequately

developed in order to contribute positively to instruction as a whole. These variables include curricula, staff education, motivation, time, finances, evaluation and organisational support.

As previously discussed, there are few options available for news library staff to learn skills for developing information literacy instruction. Given that both this study (Table 29) and a prior study have both found that training for library staff is needed (Paul & Hansen, 2002), further exploration into the development of training resources for librarians is essential. Training need not take the form of seminars or workshops. One important factor to consider is that special libraries often do not have the staff to spare to attend out-of-town events apart from major conferences. Holding training sessions in conjunction with events that librarians already attend not only ensures that such events will be well attended, but that news librarians will have the best opportunity to attend. Indeed, one respondent to the follow-up questionnaire noted that conferences and seminars are where they find much of their training information –

Usually gather good information at SLA news division seminars and from the NewsLib listserv plus information provided by our vendors

Similarly, additional staff is required in order to reduce the amount of time taken away from other library roles in order to plan, conduct and review training. This will continue to have an impact upon the expansion of training in news libraries in the future.

Curriculum development is closely related to the identification of instruction goals, and competencies. Many resources are available for teaching journalist skills such as Computer Assisted Reporting and news gathering, and for information literacy in a higher education context, but none bring these two halves together.

Funding is an important consideration for a number of reasons. Firstly, because training costs money, cost-benefit analyses may need to be conducted. It can

be hard to identify clear fiscal outcomes from training, or even clear changes in skills, however librarians should point to benefits such as decreased database costs due to more efficient usage, or decreases in corrections in order to justify training. Further research could be conducted into the impact of fiscal imperatives on choice of training methodology. It would be interesting to see if the need for clear, observable outcomes leads to a tendency to choose high-profile training methodologies such as workshops and lectures, in favour of less visible methodologies such as Intranet sites or printed training manuals.

Another issue in funding is the allocation of a budget. Some respondents to this study noted that they did not have a separate budget for training. This means that training may need to be costed from existing library funds, putting pressure on other library operations. It also makes training easier to cut in times of economic downturn (South, 2001). This is one area where news libraries are at a disadvantage compared to many other types of special libraries and academic libraries. Because news organisations are largely for-profit enterprises, fiscal outcomes are extremely important in order to maintain return to stakeholders and investors. Librarians may not have the opportunity to experiment with different methodologies or skills in order to determine what works best in their organisation. Hence it is crucial for training to become an organisational goal in order to establish support.

Evaluation and assessment are integral parts of training. Evaluation allows librarians to analyse how well they have been able to deliver training in view of the curricula's competencies (Noe, 2002; Smith, 1998). Evaluation is crucial for justifying training to managers. Assessment is equally important. The difficulty lies in establishing assessment criteria for competencies that cannot be directly measured. In this instance, librarians need to establish support for self-efficacy and self-assessment.

News librarians may also encounter tension between their new role as a trainer and existing roles, given constraints on resources, and changes in the way that librarians work with journalists. Some librarians may feel threatened if they see

more traditional news library roles reduced. Additionally, Paul and Hansen (2001a) found that managers do not yet see training as a major role for librarians. This may cause conflict in the workplace while training is being developed. Strategies to demonstrate the outcomes of training to management need to be developed in order to ensure the continuation of training. In order to address conflict, librarians need to establish clear goals and review those goals frequently so that needs of managers, journalists and librarians can be addressed. Librarians may gain more confidence and recognition of their training if they are able to access Train-The-Trainer instruction which many respondents to this study indicated they needed.

6.3.1 Appropriate training methodologies in news libraries

The face-to-face (one-on-one) training method was the most popular in this study, with the method being used by 79.5% of respondents (Table 27). The second most popular method was “Just-in-time” or point-of-contact, with 51.3% of respondents using this method (Table 27).

The advantage of a one-on-one methodology is that training can be tailored to the individual, addressing personal needs. This can also be a disadvantage in common with a just-in-time methodology, as there may be a tendency to focus only on a specific problem and not on the general application of an information skill (Breivik, 1982).

Workshops were also widely used (48.7%, Table 27), however some participants noted that this method was often unsuccessful due to the reluctance of journalists to attend these sessions. This result suggests that workshops may not always be an appropriate training methodology in news libraries, depending on the skill being taught. Workshops can be effective when used to teach a skill that does not require individual reinforcement or personalised instruction. However, they can be unsuccessful where individuals prefer a self-paced approach, or where individuals may be reluctant to ask questions in a group setting. Workshops were a popular methodology choice for searching information systems, searching the organisation’s newspaper archives, and searching the Internet. Workshops were not the most

popular methodology in any skill category, usually ranking second or third (Table 28). Librarians need to analyse where workshops are unsuccessful, and determine the appropriateness of alternative methodologies. Journalists may prefer self-paced training using printed training manuals, or one-on-one training for skills such as searching the Internet.

The selection of an appropriate training methodology is a combination of factors, including: available resources, cost, time, subject matter, and the preference of both participants and trainers. Librarians need to be willing to experiment with their choice of training methodologies, and to refrain from making assumptions about what will and will not work. Respondents who blamed journalists for not attending workshop sessions may find that poor attendance is due to a number of factors, including a dislike for the content matter and delivery by journalists, a preference for an alternative methodology, or a lack of time to be trained in a formal setting. Reluctance to attend any kind of training may not necessarily be because they are not interested in the subject matter.

Librarians need to develop their training skills in order to better plan, conduct and assess training. Librarians' own enthusiasm for training will shine through to journalists. Enthusiasm can encourage journalists to attend training and increase their motivation (Svinicki & Schwartz, 1988). As one respondent to the study noted –

We do our best to train the newsroom, but even though librarians are experts, they don't have the personality to train, they are plain boring.... people hate to go, they go because they must use the sources and want to do the searching on their own. I believe trainers should be fun, entertaining, and a bit of a performer....well, where are those librarians?

Librarians can analyse which methodologies work best in their organisation by delivering training on a specific skill using two or three different methodologies. This way, librarians can not only narrow down which approach works best for journalists in their organisation, but also help to accommodate the

many differences in learning styles that may occur across their organisation. Such an approach need not be overly time consuming. It would be relatively simple to convert workshop notes into an Intranet site, or training manual. The difficulty, however, would lie in monitoring and analysing the use of multiple training methodologies, and in justifying this approach to management who want to see measurable cost-benefit outcomes.

Information literacy skills are often taught in news libraries using methodologies that may not be most conducive to meeting journalists' long-term needs. 25.6% of respondents used a just-in-time or workshop methodology (Table 27), noting that workshops in particular were prone to absenteeism and a lack of enthusiasm by journalists. It is promising that 38.5% of librarians use a face-to-face (one-on-one) methodology to teach information literacy skills according to respondents, which provides an individualised approach (Table 27). However, this methodology does not allow for collaboration with other staff in order to facilitate development of the organisation and occupational approaches to information literacy. Librarians could consider using a combination of methodologies, such as a face-to-face (one-on-one) and group discussion method in order to develop skills at the individual and organisational approaches.

The selection of an appropriate training methodology is impacted by the subject matter. Analysing skills taught to journalists and methodologies used, we can determine if methods used were appropriate given the subject matter. Most librarians seem to have an instinctive feel for the most appropriate methodologies. Yet given the limitation of the data, we cannot say whether the preference for one methodology over another is due to resources, or lack of time, or not actually knowing what is the most appropriate methodology. These intersecting variables make it impossible to determine appropriate methodologies for certain skills without a review of an individual organisation's environment.

Regardless of which methodologies are chosen, librarians always need to ensure that they develop training from the journalists' perspective. Librarians need to take training out of the library and to journalists' desks, and deliver training at a time suitable for journalists. Many librarians have already achieved this by having

librarians work permanently in the news room area. Others have the advantage of having the library situated immediately next to the news room, which maximises the ease of access for journalists.

6.4 The role of the librarian in the information search process

News librarians tend to be involved in a journalist's information search process during the latter stages of the search. Librarians are consulted during the fact checking stage in 71.5% of searches, according to respondents of this study (Table 16). It is important for librarians to be able to identify the stage that an information seeker is in. This will allow the librarian to provide appropriate information and assistance to journalists.

As Bell (1991) has stated, journalists are not alone responsible for their work because they do not have enough time to reflect on it. This may impact upon a journalist's ability to acquire cognition and skills in relation to a specific information problem. As previously discussed, journalists receive evaluation and feedback both from peers (such as editors or colleagues), as well as the public. Further research needs to be conducted in order to determine the cognitive impact of self-evaluation as opposed to external evaluation (from peers or the public). This research would help librarians in designing information literacy instruction for journalists because it would establish the extent to which journalists change their behaviour depending on the type of evaluation. It would also help to determine the extent to which a lack of self-evaluation impacts upon the quality of the final product arising from information problems which, in the case of journalists, are the news stories they produce.

Additional research into the role of intermediaries, such as librarians, during the information seeking process also needs to be conducted in order to determine the level of distortion in a journalist's behaviour due to intervention. For example, does the intervention of librarians by providing information at different

stages of the information search process equate to a “library agenda”, thus having a major impact upon the final product. Or, are librarians generally a passive, non-influencing source of information. Even more important, if training is provided at a point-of-contact or when the opportunity arises, how do newly acquired skills impact on the remainder of that particular information search. These questions also relate strongly to the influence of filtering. 97.3% of librarians indicated in Table 11 that they should filter information for journalists. If the librarian does not correctly assess the journalist’s information seeking stage or specific need for information, it is possible that information provision could have an adverse effect on the final product. Librarians need to be aware that they can be as much an influencing source on the news as an interviewee, or as the data they provide to journalists.

Librarians should not make the mistake of assuming that we, ourselves, are information literate, as Grassian and Kaplowitz (2001) assume. Although we may know the mechanics and theories of different search techniques, there are always new skills, techniques, and methodologies to be learnt. Librarians who undertake a truly collaborative information literacy instruction and review program will benefit most, by ensuring that training is always relevant to both journalists and librarians.

6.5 The difficulty of introducing information literacy instruction in special libraries

A lack of clarity in a definition of information literacy or standards for the workplace has resulted in the lack of a consistent and tested base from which special librarians can develop instructional programs. Widening information literacy from an individual to an organisational focus is also difficult. Information literacy is not a concept well understood outside of librarianship, which may create difficulties in justifying the concept (Marcum, 2002). Additionally, the lack of separate training budgets, the problems in identifying measurable, cost-benefit outcomes and the reluctance of some journalists to attend training have compounded the issue.

As the literature review has found, there has been little attention paid to information literacy instruction in the workplace in formal research, as well as a lack of standards that are directly relevant to the workplace. Some writers have questioned whether the concept is in fact distinct, or whether it is simply a renaming of pre-existing work practices (Foster, 1993; Marcum, 2002). Establishing the boundaries of the concept is essential in order to determine where information literacy fits into the organisation's learning goals, if at all (Foster, 1993; Gasteen & O'Sullivan, 2000; Marcum, 2002). It is possible that some organisations may find that they are already providing information literacy instruction, but it may be known by another name (or names) and be delivered by trainers or colleagues that are not librarians.

Definitions and standards for information literacy have been developed in a pedagogical context. How the concept might be different if an andragogical perspective was used is not known. Yet it has been identified that information problems in the workplace are different from those in schools and higher education (Cheuk, 1998; Mutch, 2000), which necessitates analysis of the assumptions about information behaviour models. Some models of information behaviour describe individuals progressing through stages of seeking, use and evaluation in a linear sequence, as opposed to a reiterative model that allows individuals to jump between stages and repeat them in any order. The information literacy standards do not yet fully embrace the non-linear models of information seeking. Additionally, as opposed to discipline-based instruction, instruction in the workplace will tend to be problem-based. That is, the exploration of the concept will tend to be framed in relation to what problems are currently faced by employees, whether they are crises or simply challenges arising from their position. The questions arise as to how to develop instruction that can be tailored to the individual in these circumstances, and what kind of role this type of instruction plays with relation to developing cognition and creating knowledge.

Some writers have questioned the suitability of information literacy to be adapted to teach other types of literacy. Although writers such as Spitzer, Eisenberg and Lowe (1998) include visual literacy in their definitions, Marcum

(2002) questions the ability of the concept to adequately deal with these types of literacies. Visual and auditory literacies are very important for journalists, who often work in a non-written world (*Competence in the newsroom: A Poynter conference*, 1998). The nature of communication in journalism may preclude the use of information literacy to deal with all of a journalist's literacy deficiencies, and so alternative models of instruction need to be found.

The ability of information literacy to be adapted to individual and organisational approaches is essential for the concept to succeed in the workplace, but has not yet been fully explored (Marcum, 2002). Gasteen & O'Sullivan (2000) investigated this idea with reference to law libraries, but more research is needed. The three approaches presented in this study (Fig. 6.1) can also be used to link the levels ranging between the individual and wider society.

This study found that librarians need more training and staff to effectively plan and conduct information literacy instruction. Paul and Hansen's (2002) study also supports this finding. Opportunities for professional development may be constrained by factors such as a lack of budget, time off, or a lack of available training. 38.5% of respondents in this study said that they needed education to learn how to train (Table 29). 43.6% of respondents expressed a need for more staff to assist with planning and conducting training (Table 29). Until education and more staff are available, it is likely that the level of training currently being provided will remain low (Table 25).

Budget is an ongoing concern in for-profit organisations. The majority of news organisations are private enterprises, funded by advertising, circulation and other revenue. One participant noted that training budgets are often "the first to get cut in a crunch". Several respondents also noted that there is no separate budget allocated for training in news libraries. This impacts upon the ability of the library to perform cost-benefit analyses when training funds have to be found from general library funds. Additionally, many information literacy competencies are based on cognitive development and creating knowledge (Bundy, 1999). Such competencies are difficult to measure in fiscal terms (Bundy, 1999; Foster, 1993; Marcum, 2002).

Yet in order to provide accountability, librarians need to ensure that what outcomes they do devise are measurable.

The success of training relies on co-operation between departments, managerial support and the willingness of librarians and journalists to work together to design effective programs (Gasteen & O'Sullivan, 2000; Grassian & Kaplowitz, 2001). It is possible that for some organisations, while training does occur, information literacy may not be feasible.

6.5.1 Curricula design

Having identified those factors which impact upon the provision of training to journalists in news organisations, the task of determining how those factors interplay in curricula design begins. As noted, pre-evaluation is essential to ensure that needs can be assessed, training targeted accordingly, and outcomes measured effectively. This step can be accomplished by interviewing, observing, or testing journalists.

Once skills gaps and needs have been assessed, competencies need to be developed. They will vary depending on the type of training being offered, as well as each journalist's needs and management needs for their staff. Using the circular model outlined in figure 6.2, librarians can select competencies from higher and lower approaches in consultation with journalists, managers, editors and colleagues. Information literacy is related to the development of an individual's cognitive ability in information search behaviour. Observation of an individual's information search behaviour can give an insight into their level of information literacy, and thus observation can be a very useful tool when used as a pre-evaluation tool.

The goal of training must be clear, and agreed on by journalists, managers, and librarians. The goals of training will be affected by the training methodologies selected, and level of existing competence in a skill. For example, in a one-on-one situation a journalist may be seeking to solve a particular information

problem, rather than build cognition about how to perform a certain task in general. Targeting in this instance will be focused on solving the information problem at that time, with the possibility of returning to competence in a wider context at a later date.

The complexity of individual resources, training needs, and desired competency makes curricula design a difficult process given the multitude of variables. Yet it is an essential process to ensure that training is relevant, and maximises the use of scarce resources.

6.6 The lack of workplace training for journalists

Research question five asked why training for journalists has been neglected. Several studies cite a lack of funds and adequate time off from work as reasons why there is not enough training ("No train, no gain," 1993; Hu, 2001; Quinn, 1998). This study found that there are several other contributing factors.

Journalists, like many information users, tend to overestimate their competence at searching and using information systems (Nicholas et al., 1998; Paul & Hansen, 2001a). Librarians in this study noted that there are varying degrees of skill amongst journalists in searching information systems. Librarians on the whole expressed the view that journalists do not use a wide range of search methods on the Internet, indicating that they lack advanced skills in this area.

As a flow-on effect, journalists who feel that their information skills are adequate are less likely to attend training. Librarians in this study noted that those who have the least skills are often the least likely to seek further training in that area, and those that have the most skills are often more likely to see additional training. As some respondents to this study noted, encouraging journalists to attend training is often difficult, for many reasons. Time, motivation, and resources all contribute to this problem.

In previous studies, many journalists expressed a preference for external training, rather than that provided in-house (Hu, 2001). Yet decisions by news libraries to conduct training were not motivated by the availability of external training options (Table 22). Journalists prefer external training because it gives them a break from their regular working environment. However, external training is often expensive, and given limited budgets, is not always a viable option. The lack of external training provided by organisations could give the impression that training is not as valuable to the organisation as other aspects of their operations. Managers need to ensure that their commitment to training is communicated to journalists.

News libraries are not seen as a training provider by management or journalists (Paul & Hansen, 2001a). They have expressed the view that the main role of the news library is in information retrieval, even though there is considerable training being provided by the library. This could be due to journalists not recognising that one-on-one instruction on how to use library information systems is in fact training, or a lack of marketing by libraries to inform journalists of their role as a training provider.

Formal journalism education at university does not yet provide all the skills that journalists will need in their working career. On the job learning still has a place in journalism, with many specifics of the job such as beats and software still taught in house. Other organisation-specific aspects of journalism such as editorial guidelines and in-house publishing and writing styles are also more suited to on-the-job or peer training than university (Avieson, 1991; Ericson et al., 1987; Quinn, 1998).

One problem that some respondents have encountered is that some older journalists are reluctant to attend training. Since formal workplace training is a relatively new phenomenon in news organisations, it is possible that some older journalists have never encountered such training before, and may question its usefulness when they are used to unstructured, on-the-job learning. One way to combat this problem is to change this impression amongst younger journalists. If new

journalists are socialised to participate in workplace learning when they start working in the profession, it may be easier to encourage them to attend training in later years.

Chapter 7. Further recommendations and research

Throughout the research conducted for this study, several questions emerged that could not be filled by this study due to the constraints on its scope. Further research is required in several key areas in order to fully understand the role and impact of training in news libraries.

It came to light that there is a lack of research examining the transition in learning in university and workplace environments. Such a study would bridge the gap between understanding the impact of changing from a pedagogical to an andragogical learning environment. This knowledge would allow librarians to better tailor programs to new journalists using methodologies that they are more familiar with, establishing a positive relationship between journalist and training to facilitate lifelong learning.

Further research needs to be conducted in order to gain more insight into how news librarians can work together in order to develop training resources. During the course of this study, the results indicated that there are few resources for giving librarians training skills, selecting methodologies, or evaluating training. There is also a lack of workbooks or reference materials that contain sample information literacy instruction programs available. Further research in this area could aim to develop a model curriculum for librarians to use and adapt in their own libraries, without needing to take the time and effort to design their own from scratch.

Greater detail is needed to find out exactly what skills news librarians are teaching, what their evaluation methods are, and what the impact of training is on journalists. This study found that news librarians are providing instruction in a wide range of skills, but it was beyond the scope of this study to provide an in-depth examination of how each skill is being delivered in news libraries. Future research

could examine how one or two particular skills, such as information literacy instruction or searching archives is addressed by news libraries.

The reason why librarians introduce information literacy instruction needs to be further explored. The question was asked by this study, but was not fully resolved. Analysis of this will enable other news librarians to determine if information literacy is appropriate for their organisation. It may also help to establish the benefits of information literacy instruction in different environments.

Further research into information literacy standards modelling using an andragogical framework will ensure that information literacy is as relevant as possible to librarians in workplace environments.

Lastly, a follow-up study could be conducted in five years time to assess the change in training as a role for news librarians. Such a study could determine if news librarians have embraced training, or found another role. The study could also survey journalists, to determine how they perceive the library's role as trainer, and how training has impacted on their work performance.

Chapter 8. Conclusion

Although most news libraries are providing some form of training according to the respondents of this study, they are not yet being recognised as trainers by those outside of the library. Paul and Hansen's (2002) study found that managers and editors do not yet see news librarians' main role as a trainer. The journalism literature too, does not yet acknowledge that librarians have a role in training developing searching and knowledge management skills (Quinn, 2002). The challenge for librarians is to assert their skills and knowledge and to position the library as the organisation's learning centre. News librarians are already pro-active in providing information to journalists (Table 17), now they need to be pro-active in marketing their training services to ensure that journalists are not only aware of what training is available, but also take advantage of using it.

The exact nature of information literacy in the workplace is still unknown. There are as yet no information literacy standards designed for special libraries or the workplace, and debate as to whether information literacy is relevant at all in the workplace continues (Marcum, 2002). The results of this study have found that there are gaps in respondents' knowledge about how journalists find and use information in their work. These gaps in knowledge must be closed before librarians can develop information literacy instruction in their organisations, to ensure that training is as relevant as possible.

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Information Literacy and news libraries: The challenges of developing information literacy programs in a special library environment

Questionnaire conducted by Fiona Bradley bradleyf@ses.curtin.edu.au

For partial fulfilment of the award of Master of Arts
School of Media and Information
Curtin University of Technology
May/June 2002

Introduction

This questionnaire is being conducted as part of a thesis for the partial fulfilment of the award of Master of Arts at Curtin University of Technology, Bentley, Western Australia. The thesis will discuss information literacy training for journalists. The role of the news library in providing this training will be assessed. The objective of this study is to gather knowledge to determine how news librarians can best develop training for journalists.

The aim of the questionnaire

The aim of this questionnaire is to gather information about the perceptions that librarians have of journalists' information seeking and information literacy skills, as well as to gather information about resources and training skills available in a wide range of news libraries in the USA and Australia. The results of this study may show that news librarians have the potential to improve journalists' information seeking skills through in-house training programs.

Who may complete the survey

Any librarian employed in a news library in the United States of America or Australia may complete this survey. All responses are completely confidential, please see confidentiality for more details.

Publication of results

The findings of this study will be published in a thesis, and may also be published in journal articles or presented at conferences. There is an option in the questionnaire about receiving results of the study.

Confidentiality and consent to participate

This study will be completely confidential, and you will not be identifiable in the published results. If you are uncertain about any aspect of this study, then you may decline to participate at any time. Your name or employer is not required for this study.

In accordance with ethical research guidelines, we require your consent for your participation in this study. Your participation in this study is voluntary. If you would like to participate, please click "Yes, I agree with the terms of this study and I would like to participate" at the end of this page, and you will then be able to complete the questionnaire.

If you no longer wish to participate in the study after returning the questionnaire, please click "withdraw from questionnaire" at the end of this page, which will take you to a form. You may withdraw your participation at any time if you feel that your participation could cause harm to you or others indirectly involved in the study.

By choosing to participate in this study, you have agreed to the terms outlined in this document. Do not answer the questionnaire if you disagree with any of the terms.

How to complete the questionnaire

The questionnaire should take around 15 minutes to complete. Please answer each question as

Appendix A.

directed. Some questions will only allow you to select one answer, more answers may be given where directed. To select your answer, simply click on the button next to your choice. To select an answer from a drop-down menu, click on the list and use the scroll bar to browse choices. To finish the questionnaire, click the button at the bottom of the page called Submit. Your answers will then be emailed. If you have any difficulty completing the questionnaire, please email Fiona Bradley.

You will be issued with a random control number, which is used if you wish to withdraw from the study. Please enter the number you are given in the box, and then write it down for future reference.

Some participants may be contacted for a follow-up interview. The interview will cover the topics in the questionnaire in more depth. If you would like to be contacted, please select "yes" on the questionnaire and enter your email address in the box. If you would not like to be contacted, please answer "no" to this question in the questionnaire.

Please complete this questionnaire at your earliest convenience, thank you.

Yes, I agree with the terms of this study and I would like to participate

I would like to withdraw from the questionnaire

For further details or questions about this study, please email [Fiona Bradley](#).

Thank you for taking the time to complete this survey. Your assistance is greatly appreciated.

Information Literacy and news libraries: The challenges of developing information literacy programs in a special library environment

Questionnaire conducted by Fiona Bradley bradleyf@ses.curtin.edu.au

For partial fulfilment of the award of Master of Arts
School of Media and Information
Curtin University of Technology
June 2002

The questionnaire should take around 15 minutes to complete. Please answer each question as directed. Some questions will only allow you to select one answer, more answers may be given where directed. If there are any questions which do not have any answers that apply to your organisation, please leave the answer blank and make a comment at the end. To finish the questionnaire, click the button at the bottom of the page called Submit. Your answers will then be emailed. If you have any difficulty completing the questionnaire, please email [Fiona Bradley](mailto:Fiona.Bradley).

Your organisation's details

<p>1.a. What type of news organisation do you work for? -</p> <table border="1"><tr><td><input type="radio"/> Newspaper</td></tr><tr><td><input type="radio"/> Radio</td></tr><tr><td><input type="radio"/> Television</td></tr><tr><td><input type="radio"/> Online</td></tr><tr><td><input type="radio"/> Magazine</td></tr><tr><td><input type="radio"/> Other</td></tr></table>	<input type="radio"/> Newspaper	<input type="radio"/> Radio	<input type="radio"/> Television	<input type="radio"/> Online	<input type="radio"/> Magazine	<input type="radio"/> Other
<input type="radio"/> Newspaper						
<input type="radio"/> Radio						
<input type="radio"/> Television						
<input type="radio"/> Online						
<input type="radio"/> Magazine						
<input type="radio"/> Other						
<p>1.b. What is the primary audience for your organisation's publications or programs?</p> <table border="1"><tr><td><input type="radio"/> International</td></tr><tr><td><input type="radio"/> National</td></tr><tr><td><input type="radio"/> State</td></tr><tr><td><input type="radio"/> Rural/Local</td></tr></table>	<input type="radio"/> International	<input type="radio"/> National	<input type="radio"/> State	<input type="radio"/> Rural/Local		
<input type="radio"/> International						
<input type="radio"/> National						
<input type="radio"/> State						
<input type="radio"/> Rural/Local						
<p>2. What state is your news library located in?</p> <table border="1"><tr><td>Australian respondents - Please select one</td></tr><tr><td>USA respondents - Please select one</td></tr></table>	Australian respondents - Please select one	USA respondents - Please select one				
Australian respondents - Please select one						
USA respondents - Please select one						

Part One - Your organisation's information systems and access

3. How many databases are available to journalists in your library and newsroom? (For example, Dow Jones, Lexis-Nexis)

- None
- 1-3
- 4-6
- More than 6

4. Access to databases in the library is available to –

- a. Librarians only - Journalists may ask librarians to search on their behalf
- b. Editors and librarians only
- c. All staff may search systems, with mediation or supervision
- d. All staff may search systems, without mediation or supervision

If you answered **A, B or C** to this question, go to **question 5**. If you answered **D**, go to **question 6**.

5. Database access is restricted because (you may select more than one) -

- The databases and information systems are too difficult for journalists to use
- Journalists have not been trained to use the systems
- It is quicker and easier for me to use the system on their behalf
- Access costs are prohibitive

Part Two - Journalists' information seeking and Information Literacy skills

6. How closely do you agree or disagree with the following statements about journalists' use of the Internet in your organisation –

6.a. Journalists use a wide range of search methods (such as multiple search engines and different queries) to find information on the Internet

- Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree
-

6.b. Journalists verify the information they find on the Internet to determine its accuracy

- Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree
-

6.c. Journalists use the Internet to gather ideas about stories they want to cover in the future

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

6.d. Journalists prefer to use Internet sources rather than the print sources to gather facts

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

7. How closely do you agree or disagree with the following statements about journalists' use of non-Internet information sources –

7.a. Journalists use a wide variety of print sources to find information

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

7.b. Journalists often run stories from wire services without double checking the facts

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

8. Journalists in our organisation (you may select more than one) -

8.a. Don't evaluate their work because they have too little time to reflect on it

8.b. Spend a lot of time evaluating their own work

8.c. Have their work evaluated by editors to check for accuracy

Part Three - The role of librarians in the Information Search Process

9. How closely do you agree or disagree with the following statements about the role of the librarian in the information search process -

9.a. When journalists ask a librarian for information on a subject, librarians should find as much information as possible to give to journalists

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

9.b. Librarians should filter search results for the most relevant information before giving it to journalists

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

9.c. Librarians should ask journalists what they intend to use the information for

Appendix B.

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

9.d. Librarians should train journalists to search for their own information

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

10. How closely do you agree or disagree with the following statements about the provision of assistance by librarians to journalists -

10.a. Journalists usually seek help from a librarian when they are just browsing

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

10.b. Journalists usually seek help from a librarian when they have just begun their search for information

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

10.c. Journalists usually seek help from a librarian when they would like to check facts

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

10.d. Librarians don't wait for journalists to ask them for help - they approach journalists with information sources

Strongly Disagree Disagree Neutral/No Opinion Agree Strongly Agree

Part Four - Training

11. Training for journalists is available to equip them with the following skills (you may select more than one) -

- Generic information literacy skills
- Searching information systems including databases
- Searching the organisation's newspaper archives
- Searching the internet
- Verifying information sources

Appendix B.

- Editing, writing and interviewing
- Other
- Training is not provided (**Go to question 19**)

12. Training for journalists on library systems is provided (you may select more than one) -

- On request
- To all new staff
- When the opportunity arises
- At regular intervals
- A specified time after the installation or acquisition of a new system or information source
- No training is provided

13. Training on library systems for journalists is conducted by (you may select more than one) -

- Library staff
- Library staff and representatives from the system's manufacturers
- External training provider
- Journalists or editors
- Other

14. If the news library provides or co-ordinates training for journalists, why was it introduced? (you may select more than one) -

- It was requested by management
- It was requested by staff
- It was requested by library staff
- Less expensive than external training
- External training was not available

15. On average, how much time do library staff devote to planning training programs per week?

- None
- Less than one hour per week
- One to three four per week

Appendix B.

- Four to ten hours per week
- More than ten hours per week

16. On average, how much time do library staff devote to conducting training programs per week?

- None
- Less than one hour per week
- One to four hours per week
- Four to ten hours per week
- More than ten hours per week

17. If you conduct training, what delivery methods are used? (you may select more than one)

- "Just-in-time" or point-of-contact
- Face to face (one on one)
- Workshops
- Printed training manuals
- Intranet web site
- Other, please list -

18. What resources do you need to conduct training that you don't currently have? (you may select more than one)

- Additional staff to plan or conduct training
- A training room, outside of the newsroom or library
- Education for library staff in how to train ("Train the Trainer")
- Funding
- Printed training manuals
- Intranet web site
- Other, please list -

19. Have you ever tested the information literacy skills of journalists in your organisation?

- Yes
- No

Part Five - Further comments and contact information

Do you have any further comments about the information and training services provided by news librarians to journalists in your organisation?

We may need to contact you for a follow-up interview about the information you have provided.

- Yes, please contact me for a follow-up interview
- No, please do not contact me for an interview

Would you like us to contact you with the results of this study when it has been completed?

- Yes, please send me information about the results of this study
- No, please don't send me any information

If you chose **yes** for either of the above questions, please enter your email address

Your control number is 791 Please type the control number into this box - and then write the number down for future reference.

Submit

Reset

Thank you for taking the time to complete this survey. Your assistance is greatly appreciated.

Appendix C.

Training and news library study – follow up questions

Thank you for completing the questionnaire, "Information Literacy and news libraries" at <http://www.blisspix.net/study/> recently. I am now seeking more details about specific aspects of training in news libraries. Would you have a few minutes spare to complete this follow-up interview? If so, please reply to this email answering the following questions at your earliest convenience. Thanks!

Fiona Bradley

Master of Arts Student
School of Media and Information
Curtin University of Technology

1. Do you attempt to convince managers that the news library should train journalists? And if so, how?
2. If your budget was cut, how would this impact upon the news library's ability to provide training?
3. How do you accommodate different skill levels amongst journalists in training programs?
4. Where do you find information on how to plan and conduct your training sessions?
5. What methods would you use to increase the motivation of journalists to attend training sessions?
6. How do you identify journalists' training needs?
7. What do you think are the most important information skills for journalists to have?

Appendix D.

Information Literacy and news libraries: The challenges of developing information literacy programs in a special library environment

If you have previously submitted a questionnaire but no longer wish to be involved with the study, you can withdraw using this form.

Enter your control number (the number you were given when you originally submitted the questionnaire) and click submit. If you do not know your control number, please email Fiona Bradley.

Your control number

Submit

Reset

For further details or questions about this study, please email [Fiona Bradley](#).

Appendix E - SPSS Code Book

For data entry into SPSS version 9 - Student Version for Windows

Variable Name	Variable Description	Variable Format	Variable Value	Notes
Control	Control Number	Number	1	Must be unique
Instrument	Instrument	Text	1	
Date	Date responseed	Date	1	
Your Organisation's Details				
1a What type of news organisation do you work for?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
1aa	Newspaper	Number	1	
1ab	Radio	Number	2	
1ac	Television	Number	3	
1ad	Online	Number	4	
1ae	Magazine	Number	5	
1af	Other	Number	6	
1b What is the primary audience for your organisation's publications or programs?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
1ba	International	Number	1	
1bb	National	Number	2	
1bc	State	Number	3	
1bd	Rural/Local	Number	4	
2 What state is your news library located in?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
2a	USA	Number	1	State given, country data used
2b	Australia	Number	2	State given, country data used
2c	Other	Number	3	Discarded

Part One - Your organisation's information systems and access				
3 How many databases are available in your library or newsroom?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
3a	None	Number	1	
3b	1 to 3	Number	2	
3c	4 to 6	Number	3	
3d	More than 6	Number	4	
4 Access to databases in the library is available to -				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
4a	Librarians only - Journalists may ask librarians to search on their behalf	Number	1	To question 5
4b	Editors and librarians only	Number	2	To question 5
4c	All staff may search systems, with mediation or supervision	Number	3	To question 5
4d	All staff may search systems, without mediation or supervision	Number	4	To question 6
5 Database access is restricted because -				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
5a	The databases and information systems are too difficult for journalists to use	Number	1	More than one response allowed
5b	Journalists have not been trained to use the systems	Number	2	More than one response allowed
5c	It is quicker and easier for me to use the system on their behalf	Number	3	More than one response allowed
5d	Access costs are prohibitive	Number	4	More than one response allowed

Part Two - Journalists' information seeking and Information Literacy skills					
6a Journalists use a wide range of search methods (such as multiple search engines and different queries) to find information on the Internet					
Variable Name	Variable Description	Variable Format	Variable Value	Notes	
6aa	Strongly Disagree	Number	1		
6ab	Disagree	Number	2		
6ac	Neutral/No Opinion	Number	3		
6ad	Agree	Number	4		
6ae	Strongly Agree	Number	5		
6b Journalists verify the information they find on the Internet to determine its accuracy					
Variable Name	Variable Description	Variable Format	Variable Value	Notes	
6ba	Strongly Disagree	Number	1		
6bb	Disagree	Number	2		
6bc	Neutral/No Opinion	Number	3		
6bd	Agree	Number	4		
6be	Strongly Agree	Number	5		
6c Journalists use the Internet to gather ideas about stories they want to cover in the future					
Variable Name	Variable Description	Variable Format	Variable Value	Notes	
6ca	Strongly Disagree	Number	1		
6cb	Disagree	Number	2		
6cc	Neutral/No Opinion	Number	3		
6cd	Agree	Number	4		
6ce	Strongly Agree	Number	5		
6d Journalists prefer to use Internet sources rather than the print sources to gather facts					
Variable Name	Variable Description	Variable Format	Variable Value	Notes	
6da	Strongly Disagree	Number	1		
6db	Disagree	Number	2		
6dc	Neutral/No Opinion	Number	3		
6dd	Agree	Number	4		
6de	Strongly Agree	Number	5		

7a Journalists use a wide variety of print sources to find information					
Variable Name	Variable Description	Variable Format	Variable Value	Notes	
7aa	Strongly Disagree	Number	1		
7ab	Disagree	Number	2		
7ac	Neutral/No Opinion	Number	3		
7ad	Agree	Number	4		
7ae	Strongly Agree	Number	5		
7b Journalists often run stories from wire services without double checking the facts					
Variable Name	Variable Description	Variable Format	Variable Value	Notes	
7ba	Strongly Disagree	Number	1		
7bb	Disagree	Number	2		
7bc	Neutral/No Opinion	Number	3		
7bd	Agree	Number	4		
7be	Strongly Agree	Number	5		
8 Journalists in our organisation -					
Variable Name	Variable Description	Variable Format	Variable Value	Notes	
8a	Don't evaluate their work because they have too little time to reflect on it	Number	1	More than one response allowed	
8b	Spend a lot of time evaluating their own work	Number	2	More than one response allowed	
8c	Have their work evaluated by editors to check for accuracy	Number	3	More than one response allowed	
Part Three - The role of librarians in the information Search Process					
9a When journalists ask a librarian for information on a subject, librarians should find as much information as possible to give to journalists					
Variable Name	Variable Description	Variable Format	Variable Value	Notes	
9aa	Strongly Disagree	Number	1		
9ab	Disagree	Number	2		
9ac	Neutral/No Opinion	Number	3		
9ad	Agree	Number	4		

9ae	Strongly Agree	Number	5	
9b Librarians should filter search results for the most relevant information before giving it to journalists				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
9ba	Strongly Disagree	Number	1	
9bb	Disagree	Number	2	
9bc	Neutral/No Opinion	Number	3	
9bd	Agree	Number	4	
9be	Strongly Agree	Number	5	
9c Librarians should ask journalists what they intend to use the information for				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
9ca	Strongly Disagree	Number	1	
9cb	Disagree	Number	2	
9cc	Neutral/No Opinion	Number	3	
9cd	Agree	Number	4	
9ce	Strongly Agree	Number	5	
9d Librarians should train journalists to search for their own information				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
9da	Strongly Disagree	Number	1	
9db	Disagree	Number	2	
9dc	Neutral/No Opinion	Number	3	
9dd	Agree	Number	4	
9de	Strongly Agree	Number	5	
10a Journalists usually seek help from a librarian when they are just browsing				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
10aa	Strongly Disagree	Number	1	
10ab	Disagree	Number	2	
10ac	Neutral/No Opinion	Number	3	
10ad	Agree	Number	4	
10ae	Strongly Agree	Number	5	

10b Journalists usually seek help from a librarian when they have just begun their search for information				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
10ba	Strongly Disagree	Number	1	
10bb	Disagree	Number	2	
10bc	Neutral/No Opinion	Number	3	
10bd	Agree	Number	4	
10be	Strongly Agree	Number	5	
10c Journalists usually seek help from a librarian when they would like to check facts				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
10ca	Strongly Disagree	Number	1	
10cb	Disagree	Number	2	
10cc	Neutral/No Opinion	Number	3	
10cd	Agree	Number	4	
10ce	Strongly Agree	Number	5	
10d Librarians don't wait for journalists to ask them for help - they approach journalists with information sources				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
10da	Strongly Disagree	Number	1	
10db	Disagree	Number	2	
10dc	Neutral/No Opinion	Number	3	
10dd	Agree	Number	4	
10de	Strongly Agree	Number	5	
Part Four - Training				
11 Training for journalists is available to equip them with the following skills				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
11a	Generic information literacy skills	Number	1	More than one response allowed
11b	Searching information systems including databases	Number	2	More than one response allowed
11c	Searching the organisation's newspaper archives	Number	3	More than one response allowed

11d	Searching the internet	Number	4	More than one response allowed
11e	Verifying information sources	Number	5	More than one response allowed
11f	Editing, writing and interviewing	Number	6	More than one response allowed
11g	Other	Number	7	More than one response allowed
11h	Training is not provided	Number	8	More than one response allowed
12 Training for journalists is available to equip them with the following skills				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
12a	On request	Number	1	More than one response allowed
12b	To all new staff	Number	2	More than one response allowed
12c	When the opportunity arises	Number	3	More than one response allowed
12d	At regular intervals	Number	4	More than one response allowed
12e	A specified time after the installation or acquisition of a new system or information source	Number	5	More than one response allowed
12f	Training is not provided	Number	6	More than one response allowed
13 Training on library systems for journalists is conducted by -				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
13a	Library staff	Number	1	More than one response allowed
13b	Library staff and representatives from the system's manufacturers	Number	2	More than one response allowed
13c	External training provider	Number	3	More than one response allowed
13d	Journalists or editors	Number	4	More than one response allowed
13e	Other	Number	5	More than one response allowed
14 If the news library provides or co-ordinates training for journalists, why was it introduced?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
14a	It was requested by management	Number	1	More than one response allowed
14b	It was requested by staff	Number	2	More than one response allowed
14c	It was requested by library staff	Number	3	More than one response allowed
14d	Less expensive than external training	Number	4	More than one response allowed
14e	External training was not available	Number	5	More than one response allowed

15 On average, how much time do library staff devote to planning training programs per week?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
15a	None	Number	1	
15b	Less than one hour per week	Number	2	
15c	One to three four per week	Number	3	
15d	Four to ten hours per week	Number	4	
15e	More than ten hours per week	Number	5	
16 On average, how much time do library staff devote to conducting training programs per week?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
16a	None	Number	1	
16b	Less than one hour per week	Number	2	
16c	One to three four per week	Number	3	
16d	Four to ten hours per week	Number	4	
16e	More than ten hours per week	Number	5	
17 If you conduct training, what delivery methods are used?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
17a	Just-in-time or point-of-contact	Number	1	More than one response allowed
17b	Face to face (one on one)	Number	2	More than one response allowed
17c	Workshops	Number	3	More than one response allowed
17d	Printed training manuals	Number	4	More than one response allowed
17e	Intranet web site	Number	5	More than one response allowed
17f	Other, please list -	Number	6	More than one response allowed
18 What resources do you need to conduct training that you don't currently have?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
18a	Additional staff to plan or conduct training	Number	1	More than one response allowed
18b	A training room, outside of the newsroom or library	Number	2	More than one response allowed
18c	Education for library staff in how to train ("Train the Trainer")	Number	3	More than one response allowed
18d	Funding	Number	4	More than one response allowed

18e	Printed training manuals	Number	5	More than one response allowed
18f	Intranet web site	Number	6	More than one response allowed
18g	Other, please list -	Number	7	More than one response allowed
19 Have you ever tested the information literacy skills of journalists in your organisation?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
19a	Yes	Number	1	
19b	No	Number	2	
Part Five - Further comments and contact information				
20 Do you have any further comments about the information and training services provided by news librarians to journalists in your organisation?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
20a	Text	Text		Not entered in SPSS
21 We may need to contact you for a follow-up interview about the information you have provided				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
21a	Yes, please contact me for a follow-up interview	Number	1	Not entered in SPSS
21b	No, please do not contact me for an interview	Number	2	Not entered in SPSS
22 Would you like us to contact you with the results of this study when it has been completed?				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
22a	Yes, please send me information about the results of this study	Number	1	Not entered in SPSS
22b	No, please don't send me any information	Number	2	Not entered in SPSS
23 If you chose yes for either of the above questions, please enter your email address				
Variable Name	Variable Description	Variable Format	Variable Value	Notes
23a	Email address	Text	1	Not entered in SPSS

Appendix F. Comparison of information literacy and journalism competencies

	CAUL (Information Literacy Standards, 2001)	ACRL (Information literacy competency standards for higher education, 2000)	Collect and organise information (Film, TV, Radio and Multimedia Training Package, 2002)	Develop and maintain the general knowledge required by presenters (Film, TV, Radio and Multimedia Training Package, 2002)
Competency	The information literate person recognises the need for information and determines the nature and extent of the information needed	The information literate student determines the nature and extent of the information needed		
Outcomes / Elements	The information literate person defines and articulates the need for information	The information literate student defines and articulates the need for information.		
	The information literate person understands the purpose, scope and appropriateness of a variety of information sources	The information literate student identifies a variety of types and formats of potential sources for information		
	The information literate person consciously considers the costs and benefits of acquiring the needed information	The information literate student considers the costs and benefits of acquiring the needed information		
	The information literate person re-evaluates the nature and extent of the information need	The information literate student reevaluates the nature and extent of the information need		
Competency	The information literate person accesses needed information effectively and efficiently	The information literate student accesses needed information effectively and efficiently	Collect relevant information	Research information
Outcomes	The information literate person selects the most appropriate investigative methods or Information access tools for finding the needed information	The information literate student selects the most appropriate investigative methods or information retrieval systems for accessing the needed information	Find out why the information is needed and what it will be used for	Identify and access information sources that are frequently used by presenters
	The information literate person constructs and implements effectively designed search strategies	The information literate student constructs and implements effectively-designed search strategies	Identify appropriate sources of information	Evaluate the credibility and reliability of the information source according to production requirements
	The information literate person retrieves information using a variety of methods	The information literate student retrieves information online or in person using a variety of methods	use appropriate sources to access the required information	Obtain information in a culturally and environmentally appropriate way
		The information literate student refines the search strategy if necessary		Assess and select information according to the needs of the production
		The information literate student extracts, records, and manages the information and its sources		Generate and update personal reference materials into a filing system that allows for quick and efficient access.
Competency	The information literate person evaluates information and its sources critically and incorporates selected information into their knowledge base and value system	The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system	Assess the information	
Outcomes	The information literate person assesses the utility of the information accessed	The information literate student summarizes the main ideas to be extracted from the information gathered	check the accuracy and currency of the information collected	
	The information literate person summarises the main ideas extracted from the information gathered	The information literate student articulates and applies initial criteria for evaluating both the information and its sources	check through the information collected and confirm that the information contains adequate detail to satisfy the purpose for which it was collected	
	The information literate person articulates and applies initial criteria for evaluating both the information and its sources	The information literate student synthesizes main ideas to construct new concepts	If necessary, collect further information	
	The information literate person validates understanding and interpretation of the information through discourse with other individuals, subject area experts, and/or practitioners	The information literate student compares new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information		
	The information literate person determines whether the initial query should be revised	The information literate student determines whether the new knowledge has an impact on the individual's value system and takes steps to reconcile differences		
		The information literate student validates understanding and interpretation of the information through discourse with other individuals, subject-area experts, and/or practitioners		
		The information literate student determines whether the initial query should be revised		

Competency	The information literate person classifies, stores, manipulates and redrafts information collected or generated		Organise the information	
Outcomes	The information literate person extracts, records, and manages the information and its sources		organise the information so that it will be easily understood	
	The information literate person preserves the integrity of information resources, equipment, systems and facilities		find out whether the information is organised in an appropriate format for its intended audience	
	The information literate person legally obtains, stores, and disseminates text, data, images, or sounds		reorganise or reformat the material if required	
Competency	The information literate person expands, reframes or creates new knowledge by integrating prior knowledge and new understandings individually or as a member of a group			Develop and maintain general knowledge
Outcomes	The information literate person applies prior and new information to the planning and creation of a particular product			Perform formal and information research to update existing general knowledge relating to presentation issues
	The information literate person synthesises main ideas to construct new concepts			Incorporate any new knowledge into presentations and or interviews in a culturally appropriate way
	The information literate person compares new understandings with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information			
	The information literate person revises the development process for the product			
	The information literate person communicates the product effectively to others			
Competency	The information literate person understands cultural, economic, legal, and social issues surrounding the use of information and accesses and uses information ethically, legally and respectfully	The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally		
Outcomes	The information literate person understands cultural, ethical, legal and socioeconomic issues surrounding information and information technology	The information literate student understands many of the ethical, legal and socio-economic issues surrounding information and information technology		
	The information literate person follows laws, regulations, institutional policies, and etiquette related to the access and use of information resources	The information literate student follows laws, regulations, institutional policies, and etiquette related to the access and use of information resources		
	The information literate person acknowledges the use of information sources in communicating the product	The information literate student acknowledges the use of information sources in communicating the product or performance		
Competency	The information literate person recognises that lifelong learning and participative citizenship requires information literacy			
Outcomes	The information literate person appreciates that information literacy requires an ongoing involvement with learning and information technologies so that independent lifelong learning is possible			
	The information literate person determines whether new information has implications for democratic institutions and the individual's value system and			

		The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose	communicate the information	
Outcomes		The information literate student applies new and prior information to the planning and creation of a particular product or performance	present information in a structure and format that is logical, and useful for the purpose intended	
		The information literate student revises the development process for the product or performance	communicate material to relevant individuals or groups using appropriate communication techniques by the required deadline	
		The information literate student communicates the product or performance effectively to others	seek feedback on how well the information collected and presented satisfied the purpose for which it was collected	
			use the feedback to improve future information collection and presentation	