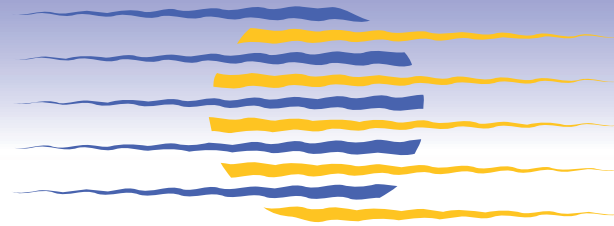


PAPER PRESENTED AT  
**ALIA 2004**



**challenging ideas**

## **Information and Work: Extending the Roles of Information Professionals**

*Dr Joyce Kirk Professor of Information Studies Dean, Faculty of Humanities and Social Sciences, University of Technology Sydney*

The increasing recognition of information as a vital asset and knowledge as a valuable resource is reflected in an emerging demand for people who are skilled in using information. But what does information literacy mean in the context of the work place? How might information professionals use their knowledge of information literacy and their capabilities in the planning of programs to contribute to the strategic directions and achievements of their organisation? This paper draws on a research project that uncovered the variety of ways in which senior managers use information in their work. It identifies several different information processes and explores the informational, organisational and personal elements that shape information use. These processes and elements offer information professionals opportunities for not only consolidating their traditional roles as information providers but also for extending those roles in organisations. The complexity of information use in organisations challenges information professionals to embrace new directions and different perspectives on their unique contributions to the organisations in which they practice.

The original impetus for the development of information literacy as both a concept and a dimension of information practice lies in schooling and more specifically in the development of information skills curricula and programs for students from kindergarten to senior secondary schools. Drawing primarily on the work of the British Library and the Schools Council in the United Kingdom (Marland, 1981) these curricula were developed in Australia in the late 1980's (see for example New South Wales Department of Education, 1988) with developments occurring at about the same time in the United States. The statement on information literacy developed by an American Library Association Presidential Commission (American Library Association, 1989) was one of the earliest documents that took information skills beyond the setting of the school to libraries but schools and later colleges and universities remained the dominant area of their application (see for example Eisenberg and Berkowitz, 1990). Many of the programs developed at this time were informed by an iterative process that involved students in analysing an information task to establish a need for information, locating and selecting needed information, synthesising and presenting information and reflecting on the effectiveness of the process as well as evaluating the presentation of information (see for example Kirk, 1987).

Fifteen years on there is now a greater acceptance of the importance of information literacy as a key element in lifelong learning, a requirement for participative citizenship, a capability for employment and a force for social justice and inclusion. The recent meeting of international experts on information literacy representing twenty three countries from all of the seven major continents and supported by UNESCO, indicates the strength of this acceptance. It represents a growing recognition of information literacy as one of the underpinnings of social, cultural and economic development of nations and communities, people and institutions. The communiqué from the meeting known as The Prague Declaration, echoes the process approach to information

literacy and describes information literacy as encompassing 'knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand' (Information Literacy Meeting of Experts, 2003).

### **Information literacy in the workplace**

Consistent with this broader view of information literacy as well as with the view of information as an organisational resource and asset (Eaton and Bawden, 1991) there is an emerging interest in information literacy in the workplace. A study of internal auditors has demonstrated the efficacy of information literacy and a process approach in a business setting (Cheuk, 1997) and a model of information literacy premised on the relation between people and information has emerged from a study of higher education workers (Bruce, 1999). A program for developing an information literate law firm has been reported (Gasteen and O'Sullivan, 2000) and links among information literacy and knowledge management have been confirmed in a legal setting (O'Sullivan, 2002). The particular environment of organisations has been explored in terms of the demands that are made on the information capabilities of people who work in them. The term 'corporate information literacy' has been coined to overlay the skills and competencies of information literacy with an understanding of the strategic value and significance of information and knowledge to an organisation (Abell and Oxbrow, 2001: 133–135). In a similar vein it has been argued that in the workplace an information literate person will be able to 'navigate the landscape...and understand its ecology' (Lloyd, 2003: 89)

It is evident that the capabilities required for information literacy in the workplace need to take account of the environment and situation in which a task or problem requiring the use of information occurs. This has been reinforced by more recent

research into information seeking and use which has established the need to explore information behaviour in the context in which it occurs (Dervin, 1997 and Wilson, 1997). Although confusion among the terms 'environment', 'situation' and 'context' remain, there is little doubt that research approaches that ignore the context of information seeking and use are unhelpful in clarifying aspects of information behaviour and designing information systems and services. Recent research into information literacy in the workplace also takes account of the context of information use as seen for example in a study of information practices among fire fighters. It emerged that information was accessed from a range of sources that included 'social, corporeal and textual sites of knowledge' and that people within the workplace play different roles in 'mediating, affording and interpreting access to information' (Lloyd, 2004: 218). Information practices and processes are embedded in the social relationships that are an essential part of every workplace and they contrast significantly with the focus on information discovery that characterises many information literacy programs in schools, college and universities.

### Information use and information literacy

It is evident that a key component of information literacy is information use. One of the most widely cited definitions describes information literacy as an understanding and set of abilities that enable individuals to 'recognise when information is needed and have the capacity to locate, evaluate, and use effectively the needed information' (American Library Association, 1989: 4). The influential relational model of information literacy (Bruce, 1997) identifies information use as one of the three elements in each of seven faces of information literacy and one that moves from being marginal to becoming focal across the seven faces. The Prague Declaration also refers to information use in its definition of information literacy (Information Literacy Meeting of Experts, 2003).

Once described as 'one of the most neglected areas of study' in information behaviour (Wilson, 1981: 5) information use research shows some signs of increasing attention from researchers who in the past have focussed more on information needs and information seeking than on information use. As information behaviour research more commonly adopts cognitive and constructivist viewpoints on the interactions between people and information it is moving beyond information seeking as an end point and focussing on the ways in which information is actually used (Vakkari, 1997: 461).

### Senior managers and their information use

The research project on which this paper is based used a phenomenographic approach to uncover the qualitatively different experiences of information use by senior managers. This approach adopts a relational view and assumes that the experience of a phenomenon, in this case information use, is 'of its essence nondualistic being neither physical nor psychological, located in neither people nor the world, and neither mind nor matter' (Marton and Booth, 1997: 122). A way of experiencing a phenomenon is a representation of the relation between the subject, and the object. The representation reflects the experience of the phenomenon from the perspective of the phenomenon as it is experienced (Marton, 1986: 1986). In this study the phenomenon of information use was explored through

the different relations between senior managers as the subject and information as the object.

Fifteen senior managers from two public sector organisations in the cultural industries sector participated in the study. One organisation had a national charter and almost 4,200 employees and the other had a state charter and almost 450 employees. The managers were part of the senior executive group responsible for the implementation of the organisation's strategic plan and were accountable for the performance of the division or branch they managed. The primary data came from semi-structured interviews with each manager lasting from 55 to 105 minutes. Secondary data included notes made by the researcher immediately following each interview and documents given to the researcher by some of the managers during the course of the interviews. The interviews were regarded as conversations with the managers who were asked to describe two situations that arose in their work roles and to reflect in depth on their experience of information use in each of those situations.

Analysis of the totality of the experiences of information use revealed five qualitatively different ways of experiencing the phenomenon: packaging information, enabling the flow of information, developing new knowledge and insights, shaping judgements and decisions and influencing others. Each of these different ways of experiencing information use is described with a focus on information use processes. Attention is also given to the factors that shape information use. In each experience of information use these were related to information, the organisation and to the senior managers themselves.

### 1. Information use experienced as packaging information

Information use involved the development of documents in a variety of forms and formats: issues papers and reports, training manuals and action plans, paper and electronic, analogue and digital, text-based and image-based, work-in-progress and final versions. The purposes of the information packages included documenting progress, reporting on accountabilities to external agencies and initiating discussions in the organisation. The process of developing information packages was essentially one of getting information in, manipulating it and then getting it out. Rather than strictly linear phases these represent the dominant activities in what was usually an iterative process.

The managers' experiences suggested that the process was primarily action oriented although it had cognitive and affective dimensions to it. Activities such as gathering, compiling and pulling together information from different sources were described. The physicality of the process was captured by a branch manager who demonstrated the way in which she laid out the draft text of an annual equity report on the electronic whiteboard in her office. Sections of text and photographs were colour coded and arranged in a matrix based on the report's headings and the relevant legislation and then shifted around as the report was compiled.

A major consideration in getting information in was the quality of information gathered from various sources. Quality was related to both the credibility of sources and the validity of the information provided. Information from one source, such as the Internet, was verified by information from other sources, such as the published literature and recognised experts. Making judgements on the quality of information about the potential impact of digitisation

on public programs was a difficult experience for one manager because of the paucity of available literature coupled with people's general inexperience of, and lack of familiarity with, digitisation projects. The quantity of information also presented difficulties. In one instance, the information a division manager needed to develop a marketing plan had not been collected systematically in the organisation and was not available. In another instance volumes of information were available to a branch manager developing a training package for volunteers but much of it was of doubtful quality and ambiguous authority.

In manipulating information the sense of audience helped shape the approach to presenting the information package. One branch manager puzzled about the reaction of the group she was addressing in a briefing paper. Another established a reference group of senior managers within the organisation to consider a consultant's report based on private sector remuneration practices when developing an enterprise agreement. He wanted to ensure that the agreement met the needs of the organisation and he was very mindful of the different approaches to performance management and the recognition of different levels of performance in private and public sector organisations. Another branch manager recounted her experience of misjudging an audience's understanding of an issue. As a consequence she had to prepare an additional paper that presented a rationale for the proposed restructure of the branch she managed. Although the manager acknowledged that she was disappointed at the time, developing the rationale allowed her to construct the arguments that were needed later to secure the branch's acceptance of the changes that were being made.

The presentation and style of the information package were key considerations in getting information out. There were suggestions that the compilation of the information package was routine or formulaic and it was likened by a division manager to doing a jigsaw puzzle or a crossword, especially when the form of presentation was prescribed by workbooks and templates. This manager commented that the first time she prepared an information package was often the most difficult because there was nothing to work from. Not all information packages were routine or predictable in their presentation. A division manager who prepared an issues paper on digitisation for the organisation's governing board approached the task as an academic exercise and argued a position based on an analysis of the literature and interviews with experts. Citations, footnotes and a bibliography were included in the paper. Another important aspect of presentation was the discourse and style described by one branch manager as 'government sort of speak'.

The information factors that shaped information use were related to the credibility of information sources and the validity of information used in preparing and presenting information packages. This distinction between sources and the information they carry was one that the senior managers made. The organisation had a role in making information not only accessible but also available to people. However information overload and its converse, information underload, shaped the information use of senior managers. Capabilities in selecting, preparing and presenting information in different forms and formats were required. More importantly perhaps, senior managers needed to be able to anticipate the information needs of the audiences that the different packages were addressing.

## **2. Information use as enabling the flow of information**

The transfer and exchange of information using different directions, channels and media were central to information use experienced in this way and information flow was understood by senior managers to be of value to the organisation. Information was shifted across within and across work groups as well as across functional boundaries. Information flow kept people in the organisation informed of activities, events and issues and at the same time it affirmed any progress towards the goals of the organisation.

The structure of an organisation and its communication channels, both formal and informal, had an impact on information flow, so much so that in one organisation informal communication pathways and mechanisms were invented and used by some of the senior managers until formal mechanisms had been put in place following the introduction of a flatter structure. Strategies and mechanisms for the transfer and exchange of information, for example meetings, newsletters and bulletin boards, needed to have a clear purpose to avoid becoming ritualistic. In establishing a climate that fostered and valued a willingness and commitment to the flow of information, the example set by the chief executive officer was seen as very significant in setting expectations, although senior managers saw themselves as playing a part as conduits and go-betweens in enabling the flow of information throughout the organisation.

This information use process was not as clearly defined as that for packaging information. It had an identifiable starting point with the recognition that information needed to be transferred or exchanged with others and it involved some observable activity that required thoughtful planning and management. In one instance a division manager crafted a daylong workshop to share information about a new direction for the organisation and seek people's initial responses to it and in another a branch manager planned information sharing sessions so that people other than the manager addressed a large group about its changing functions and guided the discussion. In this way the manager avoided being seen as intervening in the exchange of information and ideas.

Managing information flow, especially across the organisation, required confidence on the part of senior managers because of the risks to their credibility and their capacity to meet the commitments and undertakings they made. It also required a degree of resilience and persistence. Approaches to the transfer and exchange of information were seen as closely aligned to the culture of the organisation and sometimes changed as the culture changed. A division manager suggested that more varied face-to-face communication strategies were needed to enable the flow of information following the departure of a very directive chief executive officer. He believed that these strategies would help rebuild the confidence and capacity of people in exchanging information and ideas.

Seen through the lens of the organisation the timeliness and relevance of the information that was transferred and exchanged complemented the credibility of information sources and the validity of information. The organisation's culture was a factor that shaped information use and it supported and fostered information transfer and exchange by establishing formal channels of communication and accountabilities for information flow. It could

also impede the flow of information as could the development of some information communication channels. Effective contributions to the flow of information relied to an extent on the senior managers' capabilities in managing the transfer and exchange of information and aligning strategies and mechanisms with the culture and values of the organisation.

### **3. Information use as developing new knowledge and insights**

New knowledge and insights were understood as constructs developed in a situation that had a forward-looking or strategic orientation and required an innovative approach or solution. The process of developing new knowledge and insights was understood by senior managers as a conceptual one. In contrast to the more physical and material processes of information packaging and enabling information flow this experience of information use was dominated by analysis and reflection, thinking and learning. To be effective it required a planning framework as a type of scaffold at the organisational level and a similar scaffold at the personal level. It required time and space to allow new knowledge and insights to emerge and sometimes senior managers preferred to remove themselves from their organisations to consider novel ideas and innovative solutions. The starting point of the process came with the realisation that current knowledge and knowledge states were inadequate for a task and the end point with the emergence of new knowledge and insights.

With its forward looking and strategic orientation this experience of information use challenged traditional work practices as well as the orthodoxies of professional practice. In one example the status of the fundamental indexing unit in archives was challenged by the capabilities of a search engine that offered searching flexibility unknown in paper-based archive systems. Tensions emerged between the current state of knowledge and the emerging knowledge and insights. One division manager struggled with new insights into the inadequacy of an accounting approach to the assets of an organisation that had considerable intellectual assets and that contributed to the social and cultural lives of the community.

Moving into the new and the unknown presented personal and organisational risks and these were reflected in the doubts and fears, relief and elation that were experienced. The affective dimension associated with information use was evident in the tension that stemmed from a disjunction between the current knowledge states and emerging insights and in the pride shown in the achievement of a significant breakthrough in professional practice. One branch manager puzzled about the distance between her thinking and that of her colleagues and another was concerned at losing touch with her peers as her thinking changed. Moving into the new and the unknown presented risks and these were reflected in the elation, relief, doubts and fears that were expressed.

Information came from different sources, predominantly from people with similar portfolios in other organisations and from professional contacts but sometimes from documentary sources. Determining the credibility of information sources takes on an additional dimension in this experience of information use because much of the information used came from personal contacts and professional colleagues. Because of the nature of the new knowledge that was being developed there was likely to be little published literature available. In the absence of sources or means of assessing the validity of information it is its

trustworthiness that needs to be assessed although this can be difficult. The currency of information rather than its timeliness was critical particularly in developing novel solutions to an emerging problem or developing an innovative approach to the work of the organisation. Provision needs to be made for re-using information that assumes a different meaning in another situation.

The organisational factors that shape the development of new knowledge and insights include a clearly articulated framework and approach for project planning and management and the availability of resources that encourage interactions with people inside and outside the organisation. Some flexibility in the allocation of time and work spaces to encourage creative thought and reflection is also necessary. In order to develop new knowledge and insights people need capabilities in identifying trends and directions as well as in dealing with new ideas and assimilating or rejecting them. These intellectual demands need to be complemented by the interpersonal skills that are necessary for networking and maintaining contacts as well as the resilience that is required for challenging accepted work practices or the orthodoxies of professional practice and industry standards.

### **4. Information use as the shaping of judgements and decisions**

The situations in which judgements and decisions emerged were triggered mainly by developments in the organisation's external environment and so the outcomes were strategically important. The judgements and decisions foreshadowed significant change for the organisation and its programs and were shaped not only by information but also by principles, values and previous experience. Sometimes information and principles informed the judgements and decisions as they were emerging and at other times they reinforced the judgements and decisions that had been reached.

The process of shaping judgements and decisions was seen as a journey. Information as well as principles contributed to the process. The principles related to the manager's own values and beliefs and to the goals and directions of the organisation. They signalled a commitment to adding value to the services provided by the organisation and bringing benefit to those served by the organisation and its programs. There were two components to the process: verification of the information on which the judgements and decisions were based through desk research and conversations with trusted others and confirmation of the appropriateness of the judgements and decisions as they were emerging, again through conversations with trusted colleagues and others in the organisation. The interdependence of verification and confirmation was seen as a significant element in the appropriateness and effectiveness of those judgements and decisions. The process was reported as being more intuitive than rational with gut feeling seen by one branch manager as being far more important than information he sourced from documents.

The shaping of judgements and decisions was not without risks as managers applied their knowledge and experience to situations that were new to them personally and to the organisation. In one situation, a division manager's trust in a colleague from a partner organisation was diminished during the re-negotiation of an agreement. Information that had been shared previously was withheld and conversations were replaced with formal meetings and written records as the strength of the partnership was tested. The experience of information use was

distressing at times for the division manager and it led him to question the principles and values that guided him.

The information related factors in shaping judgements and decisions included the credibility of sources, the validity, trustworthiness, timeliness and relevance of information in addition to the value of information as evidence. The consistency of information with personal principles and values was also a factor in this experience of information use. The organisation related factors concerned the availability of information both inside and outside the organisation and the senior managers' access to it. The approaches and facilities for the collection and analysis of data generated by the organisation and its environmental scanning capabilities were also important. Managers required capabilities in action research, data analysis and interpretation and in reflecting on their experiences and applying their learning to similar situations. They needed to be aware of the values and principles that informed their judgements and decisions and to understand those of the organisation.

### **5. Information use as influencing others**

Influencing others was intended to alter people's understanding and behaviour so that the organisation could make significant changes to its programs and their delivery as well as its ways of thinking about itself and doing things. The situations in which information use was understood as influencing others were seen as moving the organisation forward, implicitly ensuring its sustainability and its future. Influence was directed towards those in the organisation as well those outside it, particularly funding agencies and partner organisations. This process of information use had a starting point when a need for a significant change for the organisation was recognised by those responsible for implementing it and the end point was identified when people directly acknowledged that their thinking or perspective had changed, new behaviours were observed or new approaches were mentioned in documents written by others.

Influencing others took time especially in building trust among people as well as trust in the organisation and its capacity to develop. The process relied mainly on face-to-face interaction, a rich medium that reduced the filters in communication among people. Effective interactions implied high levels of trust that assumed both personal and organisational dimensions. Conversations, discussions and forums that fostered immediacy and openness of communication required time as managers gathered information and considered ways of presenting it. Those who were influenced needed time to develop new understandings, adjust their thinking and adapt their behaviour, or at least accept the realities and implications of the change occurring around them. It took time to hear and consider their views and ideas as well as modify the extent and rate of change as necessary.

Influence was sometimes resisted and flexible responses were sometimes required. In one situation a branch manager modified his expectations of a group when it proved unreceptive to the development of a learning partnership and maintained its client-contractor relationship. In another situation a work group boycotted meetings and the division manager developed a range of strategies for involving the group. In the end the proposed changes were implemented and the resistance of the group was overtaken.

The information related factors that shaped information use as influencing others were similar to those in the experience of

information use as the shaping of judgements and decisions. The credibility of information sources and the validity and reliability of information were important but so too was the presentation of information in ways that other people could appreciate the imperative for change. Information when gathered in-house through action research techniques took on evidential value and provided a rationale for significant change. An organisation related factor that shaped the experience of information use was a clearly articulated sense of the goals and values of the organisation and another was a culture that reflects and fosters trust both within the organisation and externally. The ability to engender trust was a personal attribute required of managers if they are to influence others. Managers also needed to be able to present evidence and information in ways that would influence others and motivate them to change their thinking and their behaviour. There was a clear ethical dimension to this experience of information use and managers needed to be able to appreciate the political dimension of their information use as well as read the culture of the organisation. Influencing others required highly developed skills in communicating with others and especially in hearing their views, responding to them and modifying expectations as necessary.

### **An overview of information use**

These five different experiences of information use represent the totality of experiences of the fifteen senior managers who participated in the study. These different experiences are related to each other and reflect different relations between people and information. In the first two experiences, that is information use experienced as the packaging of information and information use experienced as enabling the flow of information in the organisation, information is understood as being objective, external to people and part of the external environment in which people work. When information use is experienced as developing new knowledge and insights, information is understood to be subjective, that is internal to the person using it and meaningful to that person. Information is interpreted, sometimes accepted, sometimes rejected and sometimes modified and becomes part of what a person knows. When information is experienced as the shaping of judgements and decisions and as influencing others, information is understood to be transformative in the sense that information is itself transformed and it is able to transform others. Information is infused with the values, principles and experience of people as well as the organisation. The relationship among the experiences of information use and the relation between people and information is hierarchical and it reflects the focus of the senior managers on their own roles and tasks as well as on the organisation itself. The following diagram depicts the totality of the experiences of information use.

**Information use in organisations**

Understanding of information	Manager in foreground	Organisation in foreground
information as transformative	shaping judgements and decisions	influencing others
information as subjective	new knowledge and insights	
information as objective	packaging information	information flow
	Manager in foreground	Organisation in foreground

**Some tentative statements about information use and information literacy**

Although generalisations about the information use by senior managers based on this one study need to be approached with caution, there are some tentative statements that can be made in order to clarify the dimensions of information use, and by extension, information literacy in the workplace.

- Information use by senior managers, that is those who comprise the senior management or executive group in the organisation and those who report immediately to managers in this group, signifies diverse relationships between people and information which vary according to the ways in which managers experience information.
- Information use is not simply a cognitive process but is a multifaceted holistic process with physical, cognitive and affective dimensions. Principle and values as well as previous experience are also involved in information use.
- Information is understood by senior managers as being objective, subjective or transformative according to the context in which information use is experienced. Elements of the context include the tasks in which senior managers are engaged, the information that is being used, the organisation in which the roles of senior managers are enacted and the managers' capabilities in using information.
- The criteria for determining the quality of information varies with the different experiences of information use.
- There are personal or individual attributes of senior managers as well as features or characteristics of the organisation that are reflected in senior managers' experiences of information use.

These statements about information use in the workplace highlight the complexity of information literacy. It is a far more complex and differentiated set of behaviours, understandings and attitudes than that suggested by many of the earlier models derived from school and other educational settings that still persist. It would seem that many of these models, and particularly those focussed on information skills, are limited in the main to the experience of information use as the packaging of information, usually in the form of assignments or items for assessment. These models also assume that information use is an individual activity. The experiences of senior managers highlight the social use of information not only in relation to information sources but also in relation to the development of new knowledge and insights. Although it is the individual who develops new knowledge the process is often a highly social one that relies on the

exchange of information and interactions with trusted others. In shaping judgements and decisions and influencing others, senior managers engage not only with the social use of information but also with the culture and values of the organisation.

**A challenging role for information professionals**

The role of information professionals working with senior managers, and with some middle managers depending on their accountabilities in relation to ensuring that the organisation meets its strategic goals, is a particularly challenging one. These managers are highly accomplished and capable people who are heavily dependent on information to enable them to meet their responsibilities. They are very often the change agents of the organisation and it is in this role that the relations between people and information as subjective and as transformative become particularly significant. In a study of the information cultures of Finnish insurance firms that associated an open culture with the flexibility of the organisation to adapt to internal and external changes, managers at these levels were regarded as having an active role as an information and communication link and as the creators of a motivating environment. They were also seen by others as experts who used their knowledge in multi-faceted ways (Widen-Wulff, 2003: 82). These perceptions of the managers resonate with some of the experiences of information use focussed on the organisation, especially as enabling the flow of information and influencing others. However, these experiences of managers have not always relied on the support, advice or services developed by information professionals.

Writing on information professionals in knowledge environments, taken to mean organisations that place high value on their information resources and the knowledge of their employees, an experienced information consultant suggests that there are three primary roles: providing information products and services tailored to the needs of the organisation, educating people in the use of those products and services and facilitating the sharing of information and knowledge (Henczel, 2004: 15). While these might seem to be the core roles of information professionals generally, in a knowledge environment these responsibilities are exercised very clearly within the framework of the organisation's goals and strategies. It is argued that a knowledge environment requires the reframing of the three primary roles of information professionals in two directions (Henczel, 2004:17). The first direction is a shift from a technical

and process focus to a more people-oriented focus. This shift is consistent with subjective and transformative views of information and recognises that information is more than a commodity that can be dissected from its meaningful context and content and acknowledges that 'information is part of an ongoing, organic cultural system' (Sandstrom, 2004:13). The second is a shift from the concept of providing a service to being part of the core business of the organisation. This requires information professionals to be fully attuned to the organisation's directions but more importantly to its values and its culture. Information professionals will also need to be able to read the information politics of the organisation and identify any barriers to the transfer, exchange and sharing of information. Both of these shifts imply that information professionals are involved in the building of relationships, not only to mediate between the organisation and information suppliers and service providers but also within the organisation, in particular with senior and middle managers. It is these relationships that will ensure that the roles of information professionals are enacted effectively.

Of these three primary roles it is the second that is most relevant to this discussion of information use and information literacy in the workplace: educating people in using information products and services. This is not to suggest that the roles of providing information products and services and sharing information and knowledge are not relevant to information literacy but rather that the education role is dependent to a large extent on these two roles. It is unlikely that senior managers will need education and training in the use of individual information products and services or indeed an information literacy program. They are after all recognised as being highly capable people who have developed expertise in their fields of practice. There are though some areas where guidance from an information professional might be useful, not only as a member of a team working with senior managers on projects that are strategically significant to the organisation but also on the basis of their knowledge and expertise in collecting, organising, storing, retrieving and presenting information. The information professional is able to bring knowledge of the world of information and developments in that world to the organisation and to the benefit of the senior managers in their planning and decision making. It must be acknowledged that to date most of that information is understood as being objective and most information retrieval and delivery systems are based on assumptions about routine tasks and queries. By contrast, much of the work of senior managers is by its nature non-routine especially in planning and developing strategies for the sustainability of the organisation. Although the planning and development processes that are used might be familiar, the information on which these processes are based changes and so does its meaning for the senior managers who are involved.

Some of the areas where guidance from an information professional in the use of information could be useful include the development of simple but effective personal information management systems so that senior managers can keep found information found, especially when it might need to be reused. Another area might be assistance in the strategic development and use of the organisation's intranet and web site as well as in the use of information and communication technologies that will enhance the effectiveness and efficiency of the manager's work. Yet another area is advice on access routes to high quality information. An information professional is also able to prepare and present information packages, especially those that rely on

both externally available and internally generated information that is of high quality. Another area is the provision of high quality alerting and current awareness services, especially in relation to the organisation's partners and competitors. The focus of this guidance to senior managers is very much on personalisation that adds value to the work of senior managers, either individually or as a group, and to the organisation. It is through personalisation, based on close working relationships among the senior managers and the information professional, that information understood as subjective and transformative, can be brought to bear on the achievements and future of the organisation.

The growing interest in information literacy in the workplace presents new opportunities for information professionals to extend their expertise by adopting a more people-oriented focus in their practice and engaging in the core business of the organisation. While membership of teams with senior managers will bring information professionals into close contact with the organisations' goals and strategies it demands a keen appreciation of the variation in senior managers' experiences of information use and the different relations between people and information that underpin them. These differences make demands on information professionals but by attending to the informational, organisational and personal elements that shape information use there remains the prospect of offering personalised information services to senior managers that will benefit the organisation.

## References

- Abell, A. and Oxbrow, N. (2001) *Competing with knowledge: the information professional in the knowledge age*, Library Association, London.
- American Library Association (1989) *Presidential Committee on Information Literacy: final report*, American Library Association, Chicago.
- Bruce, C. (1997) *Seven faces of information literacy*, Auslib Press, Adelaide.
- Bruce, C. (1999) Workplace experiences of information literacy. *International Journal of Information Management*, **19**, 33–47.
- Cheuk, B. W.–y. (1997) An experience based information literacy model in the workplace: case studies from Singapore. In *Information literacy: the professional issue: proceedings of the Third National Information Literacy Conference*, University of South Australia Library, Adelaide, pp. 74–82.
- Dervin, B. (1997) Given a context by any other name: methodological tools for taming the unruly beast. In *Information seeking in context: proceedings of an international conference on research in information needs, seeking and use in different contexts, 14–16 August 1996*, (Eds, Vakkari, P., Savolainen, R. and Dervin, B.) Taylor Graham, London, pp. 13–38.
- Eaton, J. J. and Bawden, D. (1991) What kind of resource is information? *International Journal of Information Management*, **11**, 156–165.
- Eisenberg, M. B. and Berkowitz, R. E. (1990) *Information problem-solving: the Big Six skills approach to library and information skills instruction*, Ablex, Norwood NJ.
- Gasteen, G. and O'Sullivan, C. (2000) Working towards an information literate law firm. In *Information literacy around the world: advances in programs and research*, (Eds, Bruce, C. and Candy, P.) Centre for Information Studies, Charles Sturt University, Wagga Wagga, NSW.

- Henczel, S. (2004) Supporting the KM environment: the roles, responsibilities and rights of information professionals. *Information Outlook*, **8**, 13–19.
- Information Literacy Meeting of Experts (2003). The Prague declaration: towards an information literate society. <http://www.nclis.gov/libinter/infolitconf&meet/post-infolitconf&meet/PragueDeclaration.pdf>
- Kirk, J. (1987) Information skills in schools. *Australian Library Journal*, **36**, 82–87.
- Lloyd, A. (2003) Information literacy: the met-competency of the knowledge age? an exploratory paper. *Journal of Librarianship and Information Science*, **35**, 87–92.
- Lloyd, A. (2004) Working (in)formation: conceptualizing information literacy in the workplace. In *Lifelong learning: whose responsibility and what is your contribution? Refereed papers from the 3rd International Lifelong Learning Conference: Yeppoon 13–16 June 2004*, (Eds, Danaher, P. A., McPherson, C., Nouwens, F. and Orr, D.) Central Queensland University Press, Rockhampton, Qld, pp. 218–224.
- Marland, M. (Ed.) (1981) *Information skills in the secondary curriculum: the recommendations of a working group sponsored by the British Library and the Schools Council*, Methuen Educational, London.
- Marton, F. (1986) Phenomenography: a research approach to investigating different understandings of reality. *Journal of Thought*, **21**, 28–49.
- Marton, F. and Booth, S. (1997) *Learning and awareness*, Lawrence Erlbaum Associates, Mahwah, NJ.
- New South Wales Department of Education (1988) *Information skills K–12*, [New South Wales Government, [Sydney].
- O'Sullivan, C. (2002) Is information relevant in the real world? *Reference Services Review*, **30**, 7–14.
- Sandstrom, P. E. (2004) Anthropological approaches to information systems and behavior. *Bulletin of the American Society for Information Science*, **30**, 12–16.
- Vakkari, P. (Ed.) (1997) Information seeking in context: a challenging metatheory. *Information seeking in context: a challenging metatheory*, Taylor Graham, London.
- Widen-Wulff, G. (2003) Information as a resource and the insurance business: the impact of structures and processes on organization information behavior. *New Review of Information Behaviour Research*, **2**, 79–94.
- Wilson, T., D. (1981) On user studies and information needs. *Journal of Documentation*, **37**, 3–15.
- Wilson, T., D. (1997) Information behaviour: an interdisciplinary perspective. In *Information seeking in context: proceedings of an international conference on research in information needs, seeking and use in different contexts, 14–16 August 1996* (Eds, Vakkari, P., Savolainen, R. and Dervin, B.) Taylor Graham, London, pp. 39–50.

**Key words:** information use, managers, organisations, workplace, information literacy