A world of flux requires information literacies in the community and workplace

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Publication Details

This article was originally published as: Kriflik, L, and Kriflik, GK, A world of flux requires information literacies in the community and workplace, *International Journal of Learning, 12*(1), 2005, 286-293. To reproduce this article seek permission from the publisher Common Ground.
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Abstract
This paper outlines two studies that explored alternative methodologies that assisted individuals to identify and critically reflect on their preferred way of being. Central to both studies is the importance of critical reflection as the pathway to fully informed decisions. In one study the researcher explored how managers considered information issues that influenced their leadership style, including the risks that stem from individual attitudes and actions. The other explored consumer reactions to food system risk and the information desired to reduce such risk. Both studies highlight the need to facilitate the enhancement of information literacies in the workplace and in community settings if people are to consciously choose their preferred way of being. Too often the assumption is that the provision of information is enough to bring about behaviour change. However, as Beck (1992) and Giddens (1991) have observed, in today’s world of flux individuals are confronted with an array of decisions that are complicated by both overwhelming information and competing personal priorities. Academics have a responsibility to champion those approaches derived from research that enhance individual ability to recognise the information needed, including how to source this and the capacity to evaluate and use this (Lupton 2004). This encompasses becoming conscious of the gaps in the information required and the identification of reflexivity when making decisions. This can lead to a challenging of the political context of information access, and result in the adoption of alternative behaviours. The two studies exemplify how individuals proficient in information literacies are more able to contribute positively in resolving both workplace issues and acting to achieve common social goals.

Keywords
information literacies, workplace, leadership, community, consumers, risk

Disciplines
Business | Social and Behavioral Sciences

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A World of Flux Requires Information Literacies in the Community and Workplace.

**Main Description**

This paper outlines two studies that explored alternative methodologies that assisted individuals to identify and critically reflect on their preferred way of being. Central to both studies is the importance of critical reflection as the pathway to fully informed decisions. In one study the researcher explored how managers considered information issues that influenced their leadership style, including the risks that stem from individual attitudes and actions. The other explored consumer reactions to food system risk and the information desired to reduce such risk. Both studies highlight the need to facilitate the enhancement of information literacies in the workplace and in community settings if people are to consciously choose their preferred way of being. Too often the assumption is that the provision of information is enough to bring about behaviour change. However, as Beck (1992) and Giddens (1991) have observed, in today’s world of flux individuals are confronted with an array of decisions that are complicated by both overwhelming information and competing personal priorities.

Academics have a responsibility to champion those approaches derived from research that enhance individual ability to recognise the information needed, including how to source this and the capacity to evaluate and use this (Lupton 2004). This encompasses becoming conscious of the gaps in the information required and the identification of reflexivity when making decisions. This can lead to a challenging of the political context of information access, and result in the adoption of alternative behaviours. The two studies exemplify how individuals proficient in information literacies are more able to contribute positively in resolving both workplace issues and acting to achieve common social goals.

**Short Description**

Two studies assisted individuals to critically reflect on workplace and consumer issues. The studies recognised the need to enhance information literacies in workplace and community.

**Keywords**

information literacies
workplace
leadership
community
consumers
risk
Introduction

Information literacy is underpinned by the capacity to critically reflect on the value of information. This is a foundational learning concept and is vital not only to academic thinking but to the ability of individuals to prioritise the overwhelming amount of information that characterises modern society (Beck 1992). The acknowledged need for individuals to be able to evaluate and use information (Bruce and Candy 2000; Lupton 2004) is equally applicable to information disseminated as a result of social research. Often such research concludes with recommendations that suggest that a desired behaviour can be achieved through more information or education strategies, for example health campaigns or workplace communication strategies. However, a barrage of information can add density that complicates the numerous choices that individuals have to make on a daily basis. Work or lifestyle choices may involve decisions that have negative consequences or conflict with personal values but individuals still proceed because the focus is the immediate gain of that choice. This process of having to choose in a context of competing personal interests has been termed reflexivity (Giddens 1991; Beck 1992). The findings of the two studies presented here suggest that research methodologies that involve participants in critically thinking about significant issues may assist them to clarify and prioritise existing information.

Critical reflection has been identified within the adult learning literature as a process of considering information and questioning its value (Brookfield 2001; Mezirow 1991). As a result of reconsidering information individuals may identify inconsistencies in their previously accepted truths and develop new perspectives on the world and events (Fay 1987). This may lead to the challenging of the existing social order but being able to participate actively and deliberately in a constantly changing modern society requires individuals to be information literate in the fullest sense. CAUL defines information literacy as 'an understanding and set of abilities enabling individuals to recognise when information is needed and have a capacity to locate, evaluate, and use effectively the needed information' (CAUL 2001, p.1). This definition recognises the importance of access to information but it is the active seeking and appropriate use of such that contributes to the learning of the individual.

Active learning differs to passive information reception in the critique of the quality, source and intent of the messages received (McTaggart 1993). When individuals assume responsibility for their own learning, rather than accepting the mass of simplified information often presented as the answer to resolving social issues, there is potential for independent assessment leading to the adoption of citizenship behaviour. A willingness to continuously engage with information has been identified by Lupton as the essence of the 'life long learning' (2004, p.12) required for full and active participation in the workplace and community. The individual attempts to discern connections between influences and impacts prior to making decisions, rather than acting reflexively.
This cognitive process requires reflection time but, within consumer societies, time is constructed as in short supply (Hamilton 2003). Alignment with this perception may reinforce individual beliefs that time to critically reflect, and thus learn, is not available and the consequence may be the acceptance of hegemonies that do not allow for equity and social justice (Brookfield 2001; Chomsky 2004). If it is accepted that social research should contribute to societal well being (Labonte 2005) then apart from the gleaning of new knowledge, researchers have the additional responsibility to assist research participants to gain from the process. Involving participants in research requires the acknowledgement that this very act may influence participants and provide the fateful moment that Giddens (1991) has identified as the catalyst for behaviour change. This is not to say the intent of research is to influence participants' behaviour, but to recognise that research questions set an agenda and that engagement with these brings into focus issues that may previously have been secondary. This paper argues that research participation is an opportunity to enhance information literacy by facilitating individual contemplation of own knowledge and critical reflection on the social influences that affect personal choices.

A qualitative interview approach that stimulated thinking on the given issues was chosen for the research studies described below. The value of the interview situation is that “through dialogue between individuals and groups in the setting, people are able to explore other ways of seeing their world and interpreting their situation” (Stringer 1993, p.158). Study 1 researched the degree to which consumers considered environmental health risks when making food choices. Study 2 explored the degree to which supervisors considered the influence of their own behaviours and attitudes on those of their subordinates. Of equal importance to both studies was an assessment of the effectiveness of the methodology as an educational and information literacy tool. The validity of the process depends on active involvement and in both Study 1 and 2 participants were encouraged to raise and explore their own questions.

**Methodology**

Study 1 was a form of action research as participants were actively engaged in reflecting on food choices and making decisions about the adequacy of these. This involved twenty six self-selected participants from a district of New South Wales, Australia, in an iterative interview process over eighteen months. The district is inclusive of diverse demographic and cultural groups. The data compiled from the first interviews were used as the basis for further questions and to provide feedback to participants who then met in groups. The initial questions provided a context but then the research proceeded from participant concerns.

Advertisements for Study 1 participants were placed in a range of public places and professional offices, including a government workplace, gym, doctor's surgery, neighbourhood centre, massage therapy clinic, community library and local shops. It was planned to recruit 30 participants as it was anticipated that this number was likely to result in a broad enough base to reach data saturation.
A World of Flux Requires Information Literacies in the Community and Workplace.

Men were not as actively recruited given the primary role of women in food choices (Goodman and Redcliff 1991; Bell and Valentine 1997; Worsley and Scott 2000). Having a range of ages was important to provide the historical perspective of participants’ interpretations of food system changes.

Female participants included young women, single and in partnerships (N=4), mothers (N=9) whose children ranged from babies through to post school, and post family/mature women (N=7). All the males (N=6) were in relationships and most of these had families. Low, moderate and high income levels were spanned, with unemployed and aged pension participants involved. Education levels ranged from completion of secondary education to tertiary qualifications. At least four participants had a non-English speaking heritage.

Study 2 developed a theoretical model which highlighted that ‘leadership’ was most likely when a supervisor was reflective and as a consequence modified their behaviour and/or attitude. Initially participants were from a large public sector bureaucracy so as to represent all hierarchal levels and now participant are specifically senior managers, from various organisations. The current focus is on how leadership abilities are learnt, hence the importance of critical reflection and information literacy.

The data collected for all parts of Study 2 has been strictly within a Glaserian grounded theory methodology (Kriflik 2002; Kriflik & Jones 2004), in a way that “accounts for a pattern of behaviour …” (Glaser 1978, p.93). In accounting for such a pattern of behaviour, the significance of critical reflection has been prominent, and there is clear evidence that a lower level of information literacy has the capacity to inhibit the learning and personal development of the participants.

For both studies the interviews took up to 80 minutes and were audio-recorded with the consent of the participants, with handling of data and participant anonymity adhering to ethics committee approvals. Transcripts of the interviews were analysed using NVivo (QSR 2001), a qualitative program that facilitates the coding of information to identify categories and patterns. Categories were based on terms used by participants and interpretation included discourse analysis of the text unit to ensure the integrity of the comment was retained. Participants are referred to in the findings only by their pseudonyms.

Findings and Discussion

The reflective process was, for most participants, an opportunity to think about workplace or food system issues that are usually not considered in detail. The findings presented here focus on this interactive research process while keeping intact the context of participant contributions. The overview of Study 1 and 2 describe the impact of the reflective process, with participants drawing on their own knowledge to develop a critical perspective of the influences affecting food choices and workplace relationships. Study 1 describes the three steps of considering, evaluating and responding to information and Study 2 embeds these steps within the specific case examples. Excerpts from several individual
interviews and focus group discussions are presented below to exemplify the impact of the reflection process.

**Study 1**

The methodology enabled participants’ concerns to be captured and avoided directing responses according to a predetermined agenda. Their clarification of the influences that determine food safety and security helped them to identify reflexive behaviour and to prioritise the information literacy support they required to facilitate sustainable food choices. Participants indicated that the availability of food in Australia combined with the frantic pace of daily living meant that food may be taken for granted. Time and budget were described as limiting close deliberation on the information available to consumers on the food system. Participants who had not previously connected food choice and the environment found themselves reconsidering their perception of the environment as 'out there' and of secondary concern. Others were already engaged in a process of critical reflection that influenced their food choices.

**Reconsidering Information**

For most participants the interviews increased interest in the topic and a desire to know more, as evidenced by Travis' comment, "...give me something to expand my mind about, now that we have started". (Ind. Interview) Often participants' comments were qualified by stating a self perceived lack of knowledge about food production and its impacts. The discourse, however, revealed previously unconsidered participant knowledge of food system impacts. For example, when talking about pesticides, Livia would often pause and reflect on her own comments; "I never expected to be talking about this stuff... the consequences are enormous..." (Ind. Interview). This highlights how reflection on one's own information facilitates the linking of diverse issues, as described by Hogan (2000). This also happened for Lila; talking about water quality unearthed connections that she wanted to consider further, "We can come back...there is something big I have missed, I will have to think about that one" (Ind. Interview). Lila returned to water runoff as a food production issue because of potential chemical contamination.

The difference between the personal ideal of food production and dissatisfaction with how it is actually produced could be described as a tension (Kriflik and Yeatman 2003). For example, several participants discussed examples of people who, though sceptical about food issues, chose not to actively seek information because knowing about, and responding to the diversity of risks, made choices difficult. An example of this was provided in one family's reaction to media reports of antibiotics in chicken, "... the chicken scare - ... I don't eat chicken ... but my family do and they were for one week talking about it and the next thing they are buying chicken..." Geri (Ind. Interview). Such tensions exemplify reflexivity because even if there is a known negative consequence for the choice, this will still have to be made (Giddens 1991; Beck 1992).
These reflective comments demonstrated the value of dialogue in exploring situations not previously considered (Stringer 1993). The result was often a desire to be consulted on significant changes to food production when individual values conflicted with the characteristics of mass produced food.

**Evaluating Information**

Food labeling was indicated by participants as one way of assisting consumers in food choices. However, it was stated that labeling currently did not enable consumers to easily identify the presence of unexpected substances, methods of production or to make decisions about food from locations considered risky.

In advocating for food labels, the participants admitted that busy routines often constrained reading the labels. Regardless, the preference was for labeling that indicated the processes used, as highlighted by the following comment: "…as much labeling as possible... if anything says genetically modified or anything has an additive it has to be on there so you can make informed decision ... so I can... buy the scrappy old one that has not been irradiated…” Dannielle (Ind. Interview).

The difficulty is determining how to respond to information that complicates other aspects of life. For example, while some viewed food labels as a consumer victory that had occurred in response to health concerns the majority indicated that the value was limited. Reasons given included the technical language used, a lack of clarity with regard to ‘use by dates’, the absence of information about production methods and the knowledge that the provision of label information had incurred extra costs for consumers. The value of label information was weighed against this cost burden. These perspectives exemplify that reflexive decision making occurred when priorities conflicted and illustrate the importance of information literacy in evaluating consumer options.

There is a fundamental difference between consumers and food system stakeholders on the nature of information. This was reflected in the questioning of food production methods that participants objected to: "Well were we asked? Who made the choices..." (Heather, F/Group Rd2). Thompson (2001, p.835) articulated this as an expected courtesy: “One respects other persons when one obtains their consent before exposing them to risk”. However, the situation has arisen whereby the food industry and government agencies make decisions on behalf of the public without seeking consent for food system risks, while ignoring public opposition to the imposition of these (Nestle 2003). Thus it could be predicted that the issue of the information provided will become more contested with the combining of animal and plant genes that are unacceptable to groups on religious or ethical grounds.

The education that industry and its advocates have argued that consumers need to encourage acceptance of resisted technologies (Knox 2000; Martineau 2001) does not align with the consumer needs identified by participants. Their consensus that consumers require access to comprehensive information reflected the significance of personal food values and helps to explain consumer frustration with currently available information.
Responding to Information

Another frustration cited by participants was trying to do the perceived right thing for their own health and the environment, only to later find that the original information was inaccurate or incomplete. This included discrepancies between health messages promoting fresh food and the negative effects on such food of mass production, harvesting and storage practices.

The difficulty of obtaining information about food production is a rebuttal of the notion that consumers can enforce their values through purchasing decisions (Korthals 2001). "... you think you are doing the right thing but you keep finding... you don't have the information..." Julie (F/Group Rd2). The experience of participants more accurately reflected the monopoly that the food industry retains on information, a finding that aligns with research on eco-labelling (Ibanez and Stenger 2000; Johnston, Wessels et al. 2001). It has been found that alerts to potential environmental contaminants do influence consumer behaviour (Yeung and Morris 2001; Frewer and Salter 2002), placing pressure on industry to modify production processes to maintain consumer confidence. Another perspective on health messages is that caution needs to be taken in citing scientific research to validate public health messages. Too often it is vested interests which produce the research that informs health campaigns (Ruibal-Mendieta and Lints 1998) but information literate consumers are more likely to recognise the variance in scientific opinions of risk to health and environment.

Concerns about the control of imposed risks may contribute to an increase in the self-reliant sourcing of information. Those participants who self-identified as environmentally aware and active indicated that they had researched elements of the food system and questioned the value of many changes in food production methods. Such self-reliant behaviour can be the response to an incident that undermines trust and has been described as re-educating the self to increase control and reduce risk (Giddens 1991). For most participants the opportunity to reflect on the food system was a fateful moment that facilitated an appraisal of the food system. Participants indicated that a critical view was in contrast with the generally ambivalent food attitudes held by consumers. They described the common perception as being that changes to the nature of food, including the rise in ready prepared meals (Anderson 2000), were progress and for consumer benefit. That some participants moved from this ambivalent acceptance may indicate that achieving greater understanding of an issue can be the catalyst for becoming more self-reliant.

Study 1 participants demonstrated that involvement in a process that was essentially educational can lead to behaviour change and citizenship actions. For example, considering the food system resulted in Livia identifying unease with this, and for "ethical reasons" she changed her buying habits to resolve areas of personal tension. Similarly, Tom stated that change required "people (to) become more educated and take more responsibility for themselves... doing what we can in what we consume... to get a better outcome, not only as an individual but as society..." (F/GroupRd2). This and his call for more food system lobbyists,
A World of Flux Requires Information Literacies in the Community and Workplace.

Evidenced Tom linking information literacy with education and transformative action (Fay 1987).

Other researchers have recognised that the educational process, supported by the provision of appropriate and adequate information and resources, is crucial for the adoption of behaviours that would benefit personal and environmental health (Beck 1992; Shove and Ward 2002). This may involve consumers questioning regulations and control, as participants did, and enhanced ability to evaluate and use information may result in a safer and more sustainable food supply, benefiting society. The critical reflection process was regarded by participants as clarifying the access they needed to information about the food system. This also led to their reconsideration of available information and, for some, it resulted in changes to their food choices based on personal priorities.

**Study 2**

Supervisors, as leaders, are confronted with many choices about how to effectively facilitate good performance by their subordinates. Such choices are on two fronts. Firstly, what is good performance and how do supervisors know it is being achieved and secondly, if they have determined the measure of good performance and have defined targets in such a way, how to facilitate the achievement of such targets.

Both these issues rely on information literacy for resolution. In this context information literacy is both the recognition of the need for specific information and the capacity to locate, evaluate, and effectively utilise such information (CAUL 2001, p.1). The first aspect of this “information literacy for supervisors” is more easily overcome. It usually requires a ‘critical incident’ to trigger awareness of the supervisor’s a need for information, but once over this ‘threshold’ a supervisor is likely to progressively enhance this awareness. The problem arises, however, when supervisors begin to seek such information. They can be confronted with a plethora of sources, making the choice of appropriate information difficult. Information literacy encompasses the ability to evaluate this plethora of sources and quickly reject those sources which are questionable, if not outright dubious.

In research which involves asking participants to reflect on their past behaviours or attitudes in relation to a critical incident (an event at their workplace which caused them a level of discomfort), it may be the probing by an interviewer that provides the fateful moment for the supervisor (Giddens 1991). In this regard, this critical incident has moved the participant from uncritical acceptance to a conscious awareness of the influence of their behaviour. This is the move from reflexivity to deliberate leadership decisions (Beck 1992).

If this supervisor realises the need for leadership behaviour then information literacy can make a significant difference between the supervisor able to take on a leadership role as needed, and the supervisor unable to assume such a role. Whether a supervisor is able to or unable to will not usually be apparent until that supervisor finds him/herself in a position similar to Lewis:
It was frustration and it was late at night and we were under a lot of pressure to get an answer out. It was frustration that, I guess, I'd taken my eye off the ball in terms of this person's performance and I'd got back these results which weren't correct in some way and that made us all look bad. So I guess I'm blaming myself for it … I became angry at the piece of paper that was sitting there in front of me with this person there who was looking at me in astonishment and we then sat down and struggled on and finished it. (Ind. Interview).

What had taken place for Lewis was a realisation that he was responsible for the outcome which had not been achieved. He had believed that he had provided adequate direction and that the outcome had been agreed on and was thus clearly understood. Lewis realised at the time of the incident that he had failed in some aspect of his role as a supervisor because his subordinate had not achieved that agreed outcome. As he reflected on that incident Lewis remembered the look of astonishment from the subordinate at the anger Lewis had vented at the piece of paper. For Lewis this triggered awareness that close consideration of an incident could help him behave differently. He knew he should develop the ability to better manage such situations with tardy or insufficiently skilled subordinates, and without venting anger.

The first aspect of information literacy had, therefore, come into play. Now, proceeding to seek this knowledge can be a confronting experience if Lewis does not have information literacy, the experience of evaluating sources of information, and the ability to find an appropriate source for his specific needs.

Vera clearly lacked information literacy and found her new office environment confronting:

I didn’t even know we had a filing system for six months in the office, I was just putting in little piles because I’d asked [her supervisor] and he said put it in a file but I don’t know which file to put it in so I’ll just leave it for the girls and when the girls didn’t know which file to put it in I actually had to tell them and Lynn goes “oh, I can give you a list of the files?” “Oh, you have a list of files do you” (Ind. Interview).

Information literacy in an office relates to a knowledge of office procedures and systems. Vera did not have such knowledge even though similar systems would have existed in her previous office. However, in an interview nearly two years later it was evident that Vera had enhanced her information literacy. In response to further critical incidents, for example interacting with a difficult subordinate, Vera identified a need for information and sought to fulfil that need: “I was at my wits end with him, I’ve tried being nice, I’ve tried being assertive, I’ve tried all these things …” (Ind. Interview).

Finding her attempts with this difficult subordinate failing finally triggered her awareness of the need for information. This information she sought in a book. A further example of Vera seeking information to further deal with the above issue was her approaching a personnel officer for advice. This person’s considerable experience proved valuable to Vera, giving her sources of much needed information.
When Gavin identified a significant challenge for him was dealing with under-performing subordinates, he found it particularly difficult because his “natural inclination is to avoid confrontation with people” (Ind. Interview). He felt he had to “learn how to operate outside the personality, your natural personality type and take on some skills …” (Ind. Interview). Gavin demonstrated a reasonable level of information literacy by exploring several options for sourcing the needed information; this evidenced that he had overcome these difficulties.

Cindy had highly developed her information literacy over 15 to 17 years of managing people, and clearly had the ability to discern not only the information she required but also the most appropriate source of that information. Cindy related this to her own development of leadership skills:

I’ve worked in a variety of different organisations … and I’ve been able to see the similarities across industries …, the things that are the same are the way that you deal with people. And if you deal with people appropriately then you can develop your leadership skills and actually have people follow you. (Ind. Interview)

For Cindy there was “a variety of ways to pick up skills”. She used the analogy of a tool box and some of the tools she referred to included TAFE and University education, books, and other publications. Some of Cindy’s triggers for the need for information included seeing others fail, and she felt confident in distinguishing “good leaders” from “ineffective leaders”. It was a particularly bad leader role model that initially prompted Cindy to enrol at TAFE as she “was determined that that wasn’t going to happen to me. I didn’t want to ever have one of my staff say the things about me as a manager that I was saying about my managers” (Ind. Interview).

Gregory presented the concept of information literacy in a different light. He had seen some monumental failures of managers to develop appropriate skills as they progressed through their careers. Eventually, some of these managers confronted larger problems because “instead of managing 300 [staff], they’re managing 3000” (Ind. Interview). Gregory engaged in a process of critical self research, which Kemmis & McTaggart (1993) identify as a collaborative learning process that results in the recognition of “the explicit possibility of acting differently as a result of progressively learning from experience”. Gregory believed that if people don’t understand the basic management skills required - they fail to engage in self-critical processes – so they don’t have any chance to develop such skills. Gregory was fully aware of the need to “… look to see what’s happening in management around the world” and perceived “a lot of me-tooism in management”. He perceived many of these managers to be information illiterate because they could only follow fads but were unable to source information themselves. Gregory clearly saw information literacy linked to capability: “There are some people who are fearless, who don’t understand the implications of a job …” (Ind. Interview).

The above examples clearly show that information literacy is one of those important competencies for supervisors that enables them to continually develop leadership knowledge and competencies and, clearly, to make their management decisions.
Conclusion

The results of the two studies reported here indicated that participants held sophisticated views of the relationships that influenced their decisions, whether this be workplace or food choices. Time to reflect on these was the necessary element for eliciting comment on these social factors. For example the Study 1 finding that participants linked food production activity, food safety, health and the environment contrasts with other research that suggests consumers lack the expertise to assess the risks of contamination and residues (Smith and Reithmuller 2000). In Study 2 this was firstly, learning to operate above the threshold of awareness (Goldberg 2002) and secondly, finding information needed to enable self-change strategies to be learnt (Kriflik & Jones 2004, p.12; Giddens 1991).

This demonstrated the empowering nature of the interactive process, discussed by writers including Mezirow (1991) and Webb (1996), and also highlighted where participants needed assistance to make non-reflexive choices. Just as importantly the process provided participants with an educative context in which “… attentiveness to information open up new possibilities of dealing with and avoiding risks” (Beck, p.35). It can used as an empowering technique to further demands for a fair say in decisions that impact on participants' lives, both in the workplace and as a consumer. The findings challenge academics working with research participants to contrast their current practices and strategies with the collaborative reflection identified by participants as influential in reconsidering personal behaviours.

References


Korthals, M. "Ethical dilemmas in sustainable agriculture." International Journal of Food Science and Technology 36, 2001: 813-820.


Kriflik, G K and Jones, R A “Leaders can learn to change; some do: a qualitative study”, 18th ANZAM Conference, Otago, New Zealand, 2004.


A World of Flux Requires Information Literacies in the Community and Workplace.


Bruce, C and Candy, P (Eds), Information literacy around the world, Centre for Information Studies, Wagga Wagga, 2000.