# How do public librarians constitute information literacy?

## Andrew Demasson

Information Systems School, Science and Engineering Faculty, Queensland University of Technology (QUT), Australia

## Helen Partridge

Scholarly Information and Learning Services, University of Southern Queensland (USQ), Australia

## Christine Bruce

Information Systems School, Science and Engineering Faculty, Queensland University of Technology (QUT), Australia

## Abstract

The public library has historically been entrusted with the design and delivery of services and programmes aimed at supporting the information literacy needs of the community-at-large. However, despite that central role little research has been devoted to understanding the ways in which public librarians, the conduit between the programme and the public, constitute the very concept (information literacy) they are delivering. This study has sought to redress that inequity by way of a phenomenographic study into the ways in which public librarians constitute information literacy. Data was collected via twenty semi-structured, one-on-one interviews with public librarians working in Queensland, Australia. The study revealed that the respondents constituted information literacy in four ways, as: intellectual process, technical skills, navigating the social world and gaining the desired result. Those findings and the attending study will help to provide a new evidence base that assists in the design and delivery of activities supporting future information literacy endeavors in the nation's public libraries.

## Keywords

## Introduction

Information literacy is a necessity for everyday life decisions (Julien and Hoffmann, 2008) and considered so essential that it was endorsed by UNESCO's 'Information for All' program as a basic human right (Catts and Lau, 2008; UNESCO, 2005). In 2009, United States President Barack Obama proclaimed information literacy as a new type of literacy' essential to the 'functioning of our modern democratic society' and necessary in order to 'effectively navigate the Information Age' in which we live (The White House, 2009: page 1).  Public libraries, due to the lifelong nature of their relationship with a broad and diverse client base and the significant part they already play in the educational life of their communities (Bundy, 2012), are ideally placed to lead the way in developing and supporting people's information literacy engagement. However, to date few studies have attempted to explore information literacy within the context of the public library (Hall, 2010; Harding, 2008) and only one, a pilot study conducted by the authors of this paper (Demasson, Partridge and Bruce, 2010), has sought to examine how public librarians constitute information literacy. That is despite the public librarian's key role in the delivery of information literacy programs and their position as the group entrusted with information literacy education for the general public (Godwin and Parker, 2012; O'Beirne, 2010). To that end, this study fills the existing research gap by examining, via phenomenographic methodology, the qualitatively different ways in which public librarians, in South-East Queensland, Australia, constitute information literacy.  The results will have value to a broad audience which includes Australia's public library

profession, Australian individuals and communities; the Australian Government;

information literacy and library researchers.

## Literature review

Public libraries, due to their significance in the educational life of a diverse client base

are considered to be perfectly situated for developing and promoting information literacy

engagement (Bundy, 2012; Harding, 2008; Skov, 2004). However, despite their potential

as regards information literacy engagement, there remains a significant gap in research

documenting the ways in which public librarians cognize such a key concept (Harding,

2008; Walter 2007; Hart, 2006). Research that has been conducted to date has primarily

looked at either the importance of public libraries in developing community information

literacy (Balapanidou, 2015; Bradley, 2013; Bundy, 2012; Cirella, 2012) or the efforts

made by public libraries to develop information literacy programs (Connolly, Curran,

Lynch and O'Shea, 2013; Butcher and Street, 2009; Lai, 2011; Collen, 2008).

In regard to the first context, Julien and Hoffman's study of information literacy training

in Canada's public libraries (Julien and Hoffmann, 2008) is of great interest. Their work

outlines a study exploring the role of Canada's public libraries in developing the public's

information literacy skills and documents the second phase of a larger study, which

included semi-structured interviews of library staff and patrons as well as site

observations conducted at five public libraries. However, while the study covered many

areas of information literacy engagement, such as information literacy training practices

and information literacy experiences of individuals who visit public libraries to access the

Internet it didn't connect with the ways in which the public librarians understood

information literacy. Of similar value is Crawford, Irving, Foreman and Higgison's (Crawford, Irving, Foreman and Higgison, 2013) study of information literacy and lifelong learning. Not only does it identify the value of information literacy and its connection to lifelong learning but it also ties it to community issues such as the development of employability skills, personal health management and informal learning in areas such as information policy issues, information usage and training needs and skills development. That emphasis on attributes and understandings that are vitally important in a person's everyday life echoes UNESCO's claim that information literacy can help to 'empower people of all walks of life' to 'achieve their personal, social, occupational and educational goals' (UNESCO, 2005: page 1). Other studies dealing with the importance of the public library in relation to information literacy engagement have typically focussed on either the role the public library should play (Balapanidou, 2015; Widdowson and Smart, 2013; Godwin and Parker, 2012; O'Beirne, 2010) or perceptions the community holds regarding that role (Nielsen and Borlund, 2011). Widdowson and Smart's article is interesting in its argument that due to most public library users being unfamiliar with information literacy concepts, it is an essential component of library services and must be an integral part of the public librarian's role.

A slightly different perspective, but of significance to this research, is Lai and Wang's (2012) study into the information literacy, self-directed learning readiness and e-learning attitudes of Taiwanese public libraries. They utilised a survey-based study to determine how public librarians in three Taiwanese cities view their information literacy skills, as well as related learning skills. Unlike this research, Lai and Wang's study didn't address

the way in which public librarians constitute information literacy. Instead, they focussed on their conception of an existing information literacy skill set.

In respect to the second context, development of information literacy programs, there are several notable contributions. Darbandi, Waite and Medlock (2013) detailed a partnership between Credo and Lancashire Library Service (UK) to train library staff on information literacy concepts and then to promote IL to the public through programming and events. While there was no in-depth examination of the librarian's pre-existing information literacy understanding, their study did highlight the conceptual difficulties inherent in information literacy and the lack of prior studies within the public library domain. Similarly, Connolly, Curran, Lynch and O'Shea's (2013) examination of information literacy efforts being made across Irish society addresses the role of the public librarian and the value of the public library in information literacy education but doesn't provide any examination of the ways in which information literacy is understood by public librarians. A notable (for this paper) contribution from Australia is Pieper's (2010) discussion of the way in which public library information literacy programs can be assisted by the implementation of Web 2.0 tools in order to reach library patrons that are resistant to formal programs as well as extending the reach of the library into the community. She uses an example from the Gold Coast library of an online book club, book coasters, that builds community identity, promotes reading and access to digital skills without being instructional in nature. Again, there is no discussion of the public librarian's constitution of information literacy. However, the material further emphasises how vital the public library is for information literacy education and development.

Outside of that work, there is a significant research gap within the Australian context. Of the few studies that have been conducted the focus has been on topics such as the place public libraries can play in fostering information literacy (Bundy, 2012) the public library as developer of social capital (Ferguson, 2012) and, the potential of Web 2.0 tools for the development of public library information literacy programs (Pieper, 2010). The only study that has examined the ways in which public librarians understand or constitute information literacy was a pilot study conducted by Demasson, Partridge and Bruce (2010) This paper, by the same authors, is informed by that pilot study but constitutes a wholly new piece of work and body of research.

# The Research Project

## Approach

Phenomenography, a research method that maps the qualitatively different ways in which people 'experience, conceptualise, perceive and understand various aspects of, and phenomena in, the world around them' (Marton, 1986, p.31) was used to address this study's central question, *how do public librarians constitute information literacy?* With its suitability for 'describing conceptions of the world around us' (Marton, 1994: page 428) exposing critical variation in the number of ways a phenomenon is experienced and understanding the varied approaches taken to learning and teaching that are not directly related to education (Bowden, 2000; Bruce, Stoodley & Pham, 2009) phenomenography was deemed to be the most appropriate choice of method for this research.

## Participants

Twenty participants, all currently employed as librarians and sourced from public libraries throughout Queensland, Australia, were interviewed. The study included 13 female and 7 male participants with an average age (two participants elected not to indicate their age) of 42 and an average period of time within the library sector of 16 years. Eighteen of the participants were employed as branch librarians with one being a community and information service librarian and one information and digital services librarian. Seventeen of the participants had gained their library qualification in Queensland with one attaining it in Victoria and two in New South Wales. Participants were recruited via advertisement on the ALIA e-list as well as snowball sampling in which one suitable participant recommended another.

## Data Collection and analysis

As is consistent with phenomenographic research [31], data for this study was gathered via a series of focused, semi-structured and one-on-one interviews. The aim of the interview questions was to draw out the participant's experience and understanding of the phenomenon under examination [29]. Interviews varied in length from 25 through to 45 minutes. Each interview was audio recorded and transcribed for the purposes of close analysis. In order to ensure confidentiality, the names of individual persons and their workplaces were not required. Further confidentiality was ensured by conducting interviews at locations (physical or virtual) proposed by participants, in which they would feel emotionally and psychologically secure. The interview questions were also designed to be free of any inflammatory language and did not require the interviewee to make any statement that might be injurious to their social networks or relationships with others.

Participants were also provided with detailed information regarding the nature of the nature of the study and their right to withdraw from it at their convenience at any stage of the process.

 Questions utilised were:

- Describe your experience of being an 'effective information user'
- Tell me what you think it means for your clients to be 'effective information users'
- Describe how you provide/design/deliver services to help your clients be 'effective information users'
- If you were to describe an ideal 'effective information user' what would they be like?
- What do you understand by the term 'information literacy'?

Given the acknowledged difficulty of asking people to construct meaning for an abstract concept like information literacy (Lupton, 2008) it was decided that the actual phrase not be introduced until the final question. Even though the interviewees were all qualified librarians working in an industry in which information literacy is central to much of their work it couldn't be assumed that they were conversant with the term. As a result, the phrase 'effective information use' was utilised. It was decided that establishing a rapport with the interviewee would be more difficult if they were put in a position where they may struggle from the beginning to engage with the interview questions. By the time the phrase 'information literacy' was introduced in the final question rapport had been established and there was no chance that engaging with a potentially difficult concept may disrupt the flow of the interview and limit the ability to generate meaningful data.

In a phenomenographic study, analysis of the data requires 'identifying relevant parts of the data, comparing extracts to find sources of variation or agreement, grouping similar segments of data, articulating preliminary categories, constructing labels for the categories and determining the logical relationships between the categories' (Bruce 1999, p.43). The researchers' task is uncover meaning and discern structure embedded in the material they have gathered, not from any preconceived ideas they might have. That identification of meaning needs to be done across all interviews and not on an individual basis. The aim is to unpack a collective description of variation, not an individualized one (Marton, 1994).

## Constitute

To 'constitute' is to create, compose, establish or enact which, therefore, allows for both a physical and cerebral representation of the information literacy concept. Subsequently, the flexibility of meaning 'constitute' offers is far greater than either of the more rigidly defined words, 'understood' or 'experienced'. That flexibility, in turn, allows the project to attain greater depth of understanding by producing a holistic picture of the ways in which public librarians construct information literacy as not only an abstract concept but as a practical application which informs and guides their work. That approach is consistent with Ference Marton's (1997) explanation of the intentional relationship that exists, in a phenomenographic study, between subject and object.

## Ethics Approval

In conducting this project, full ethical clearance was obtained from the Queensland University of Technology Ethics Committee which deemed it to be low-risk and to meet all requirements of the National Statement on Ethical Conduct in Human Research.

## Presenting the Findings

The aim of a phenomenographic study is to uncover the qualitatively different ways that a particular phenomenon is experienced or understood and to provide experiential descriptions that capture this variation in a form referred to as categories of description. As can be seen in Table 1, four categories of description, each describing a unique way of experiencing the phenomenon in question, were identified. Each category is described in regard to both meaning and structure of awareness. The meaning is constructed by the individual as the phenomenon they are experiencing becomes separate from and clearly defined against the context in which it is encountered (Marton, 2000). The structure of awareness relates to those elements occupying the foreground and background of a person's awareness and consists of a focus, background and margin.

The focus emerges from the individual's total awareness of their experience of a phenomenon (Booth, 1992) but entails one particular aspect they have engaged with (Edwards, 2005). The background refers to those parts of the individual's experience of a phenomenon which are clearly discerned but do not occupy their central focus (Booth, 1992). The margin, while related to the focal object resides just outside our perceptual awareness and refers to those elements that, while they may be relevant, do not form part of the individual's definition of the phenomenon. In those instances, where a margin is

not identifiable, as is the case with category one, the quality of the categories remains intact.

In this study, four dimensions of variation were also identified. The dimensions of variation are elements of awareness seen to exist either in all categories or in only a certain number of them (Marton and Booth, 1997). Where a dimension can be observed in multiple categories it will change in nature from one to the next. In doing so it provides a way in which the categories can be linked thematically while still retaining their own identity. The four dimensions of variation identified are information, information use, perspective and learning.

A description of each, as it is understood in the paper is as follows:

**Information** provides the base material for information use. It may be verbal, visual, wordless or abstract. Information is seen as that which informs and what may be considered information to one person or in one situation may not be considered such in or by another.

**Information use** refers to the ways in which information is utilised. There is no value judgment on the way in which it is made operational.

**Perspective** is the direction in which attention is directed during engagement with information. It can be either internal in which attention is directed to the individual

or external in which case attention is directed to an audience or entity separate from the individual. It is also possible for the perspective to be both internal and external within the same category. The term is not being applied in the way associated with psychology or philosophy. However, there is a connection in that 'the perspective' determines the dialogue that will exist between the person and information experience. When the perspective is internal the dialogue is between the individual and the information experience. When it is external the dialogue exists between entities outside of but connected to the individual.

**Learning** is a change in the awareness about something. It involves becoming aware of the resource differently as you go through evaluation.

## Ways of Constituting Information Literacy

After analysing the interview data in this project, four distinct categories emerged, each describing a unique way the phenomenon in question was constituted by the participants. They were:

- Intellectual process
- Technical skills
- Navigating the social world
- Gaining the desired result

The categories will now be explained in regard to their structure of awareness (meaning, focus, background and margin), their narrative structure (the description) and the dimensions of variation that emerged.

# Category 1: Intellectual process

## Structure of awareness

**Meaning**: Information literacy is understood as an intellectual process in which awareness and evaluative skills are utilised in order to find the ultimate 'best' answer to a specific problem. It is understood as being aware of the available information options and sources and having the skills necessary for evaluating their quality and appropriateness.

**Focus**: The focus is on being able to make informed decisions on which information options and sources are best to use for a particular situation (to solve a problem or answer a question).

**Background:** The tools and techniques used to access that information.

**Margin:** The ways in which the evaluative skills were acquired.

## Description:

The motivation for engaging with information is twofold. The first motivation is to become aware of the options and sources through which information can be obtained. The second motivation relates to the process by which evaluation of those sources can occur in order to determine which is the 'best' or 'most appropriate' for a particular situation. Evaluation of sources and options carries a certain degree of absoluteness. That

is borne out by emphasis on a singular 'best' or 'most appropriate' response. According to one participant, 'there isn't any dispute because I've been effective in using information to get the totally right answer (Interview 5, p.1).

There is no suggestion of there being a social or communal 'best' in which the society determines what should be accessed and how it should be evaluated. Instead there is only an emphasis on there being an absolute 'best' for the problem or issue at hand. To that end, the capabilities that allow for evaluation of information and selection of the 'best' have already been acquired. Unlike category two and, potentially, category three, they don't need to be sourced as they are already part of the internal makeup.

There is an emphasis on information engagement and information use as being part of a process leading to an ideal and final outcome (the 'right' answer). That isn't spoken about in an abstract sense. On the contrary, information engagement is person-centric and revolving around personal needs. That is borne out by responses such as, 'finding information that **you** need to solve questions or problems' (Interview 1, p.1), '**they** are trying to find the most reliable information in the best format' (Interview 2, p.1), '**they** know what all of their options are, not just resources but tools as well' (Interview 4, p.3), '**they've** got access to the widest range of resources and then they can determine which is the best one for their situation and which is the most accurate and reliable' (Interview 2, p.2). To that end, information is used to evaluate other information as well as to achieve a 'best' outcome. That means, within this category, the link between information and

information user is explicit and that information is understood by way of its relationship with a human participant.

## Dimensions of variation:

Information exists in a balance between the old and the new, the internal and the external. Information itself is both external and internal, current and pre-existing. That awareness is pre-existing and internal (belonging to the person) while the information that is acquired is new and external (until the point it becomes internalized and pre-existing for the next round of information engagement). Assessment of that new information occurs by way of pre-existing, internalised information (reason, evaluative skills). In that balance between old, new, internal and external there is also the evaluative element. That is summed up by one respondent who said:

> 'you'd be critical of the information you get and not just accept whatever it is that people tell you at first glance. You'd know to cross check things to make sure that there's agreement about what is supposed to be the truth' (Interview 19, p.3).

Information use is directed towards identifying and accessing resources that will produce the 'best' response to a given situation. That occurs both via awareness of options and evaluation of the resources selected. As the information used is both old and new there is an element of reflection involved in the process. Information that is used to evaluate the quality of a particular resource is pre-existing and selected for the evaluatory task through

reflecting on what is already known about quality and reliability. According to one interviewee:

> 'if you can't evaluate information that you find then you won't know how you should be responding in a situation. If you are effective then you'll choose the right information and you'll know you have because the way you act will be the right way' (Interview 5, p.2).

Perspective is primarily external and directed towards attainment of a 'best answer' and outcome. However, it can be suggested that there is a degree of internalization in which determination of 'the best' is made internally and dependent on both aims and attitudes. The aim is determined internally by the one engaging with information and 'the best' or 'right' answer may be also be an internal judgment rather than something that is presented externally. While evaluation of 'the best' might be done in relation to its impact on an external source or structure, the decision as to whether or not that 'best' has been achieved appears to be internal. Similarly, learning is directed towards a change in awareness of information options and sources. As new information is gathered and assessed there is a change in the existing levels of understanding and awareness. Learning occurs as those changes take place. That learning is then used to make informed decisions regarding which information options to use in order to acquire 'the best' answer to a particular problem.

## Category 2: Technical skills

## Structure of awareness

**Meaning:** Information literacy is understood as having the ability to use information technology tools and programs to access information.

**Focus:** The focus is on possessing the technical skills necessary to use information technology tools so that information can be accessed.

**Background:** Residing in the background is the idea that without having the necessary information technology skills you will be 'left behind' or fall 'out-of-date'. A sense of exclusion attends the background.

**Margin:** At the margin, may be those information options which are potentially more effective but don't require information technology skills. If that is the case then achieving the 'best answer', which was to the fore in category 1, might not be as prominent in category 2 and skill acquisition is emphasised more than the results obtained by using those skills.

## Description:

In this category, the motivation is to acquire the skills necessary to use information technology tools in order to access and work with information. There is a very heavy skills focus within the category and information literacy is understood as being the pipeline for skill acquisition. Therefore, to be information literate, a person must be capable of using information technology tools. Interestingly, it is not the information

acquisition that makes for information literacy. Rather it is the ability to use the tools that will allow that information to be gathered. In that regard, information literacy is part of a process whereby skill implementation is the key focus.  As one interviewee said:

> I think if I can help embed those skills into my users then, hey, I know I can do a search on the computer and find out how to contact this government agency what I'll need to know, what steps I'll need to take and that confidence then becomes an automatic reaction (Interview 6, p.2).

That process is purely active unlike categories one, three and four in which there is a reflective component at play. The outcome of adding those skills is typically summed up as 'not being left behind' or prone to social isolation. One interviewee stated that:

> with being effective users if they don't know how to use those basic programs and devices they can get left behind and find it hard to access information and keep in touch. That's really true with the older customers who if they don't know how to use the new technology can be really isolated (Interview.19, p.2–3).

Another said that:

> by knowing how to use new technologies they become more effective information users because there's so much information on line these days. If they can't access

it they can still be effective users but they'll be limited to information that is in a

traditional package (Interview.2, p.2).

That was echoed by another response affirming that:

they're effective users because they'll be able to tap into more current information

and they're not limited to only believing what they find in one source they can

select from a much wider range (Interview 1, p.2).

Similarly, effectiveness was seen as not only the ability to access information but also to

be discerning in the type that was accepted as credible. According to one interviewee,

it's vital that they know who to trust and what information is reliable and sound.

If they can't pick the most reliable they'll be acting on information that may lead

them to a wrong choice or doing something they didn't want to do (Interview 7,

p.4).

There also appears to be an attempt made to accommodate experiences of information

literacy that involve other information access tools. As a result, the category has an

element of the dogmatism found in category one. However, despite the similarities it is

not dominated by the same level of absoluteness. That is particularly evident regarding

the type of information technology deemed suitable for information engagement and

acquisition. One interviewee summed it up as "whatever is trustworthy and gets them the

answers they need is fine with me. It doesn't need to be cutting edge" (Interview 15, p.3). While the category does not account for anything falling outside the information technology sphere there appears to be a potential acceptance of all information technology tools as appropriate resources. The discussion deals only with information technology in general not narrowly focused on only one 'appropriate' type. That is significant as it shows accommodation and acceptance for a wide range of patron experiences, needs and levels of accessibility to information technology. Information literacy is understood as being the ability to use information technology, however, that understanding is not limited to using any one type of technology or valuing one type over another.

## Dimensions of variation:

Whereas in category one information was both internal and external, in category two it is almost exclusively external. While the processing of skills may occur internally the information technology tools themselves are external only. Similarly, while there was an element of information acquisition in category one (and category three) here, in category two, there is only utilisation of information. Also, unlike in category one (and could be argued exists in category three), here there does not appear to be any element of evaluation of sources and resources. Instead there is only a focus on acquiring skills and utilising them to access information. In that regard, there is a closer link to category four where emphasis is on an end result only. In category two that outcome or result can be seen as the ability to access information by way of information technology tools which have been engaged with via skill acquisition.

Information use is directed towards the on-going process of acquiring the skills necessary to use information technology tools then learning how to use them in order to access information. There does not appear to be any end point at which the need for information and the need to use information is complete. There is no mention of a final result or a 'best' outcome. The emphasis is only on the continued process of learning how to use technology in order to access information. One interviewee discussed that ongoing, regenerative cycle of knowledge acquisition as "not losing touch with the rest of the world  because you're unable to use the tools that will allow you to access the most significant and current information and then upskill as needed" (Interview 3, p.5)

In this category, the perspective is somewhat complicated. Technology is external to the both the end users and the participants of this study who are, in turn, external to one another. Subsequently the perspective is always external of the participant. However, it involves elements external to each other.

Learning is directed towards acquiring skills and understandings that will allow information technology to be used. There is a change of awareness from the point at which the technology can't be used to the point where it can be. However, arrival at the point where it can be employed does not suggest that the process is complete and learning or a change in awareness will not happen again many times. As one interviewee said:

a lot of them have some of the rudiments of information searching but they don't

have the other skills to filter out or refine, to really get to the nub of whatever

their search really is (Interview.6, p.1).

In this category, participants talk about information literacy (the acquisition of technical

skills and aptitudes) in relation to their library patrons. Their rationale for viewing

information literacy as only being the ability to use information technology appears

driven by a belief that the social world is dominated by technology and that people need

to possess technical skills in order to function satisfactorily within that social world. One

interviewee said, "if you can't use the tech, you can't be part of the conversation and you

can't be happy in this world if you can't communicate with other people" (Interview 8,

p.4). That attitude has a degree of altruism to it, even if it is a limited view of the

potential scope for information literacy. There doesn't appear to be anything self-serving

in that approach. On the contrary it appears driven by a desire to help people cope with a

world dominated by technology.   That, in turn, provides a link to category three in that

social services are connected to the social world. Although that can be seen less as

navigation of the social world and more as reacting to social structures.

# Category 3: Navigating the social world

## Structure of awareness

**Meaning:** Information literacy is understood as being an integral part of a person's everyday life and a complex of experiences, attitudes and understandings that allow people to navigate the social world.

**Focus:** Developing conceptions that will allow for successful operation in and engagement with a social world dominated by information.

**Background:** It could be suggested that what resides in the background is the sharing of communication in order to assist others to navigate the social world and, potentially, unsuccessful navigation within the social world. With the focus being on that which is successful, the counterpart (that which is unsuccessful) would be expected to also be apparent to some degree.

**Margin:** What may reside in the margins is the question of 'why' the social world operates in the way it does which necessitates engaging with information and navigating it in a particular way. That could be tied in to ethical issues relating to the way in which information is engaged with. With the focus on successful operation within the social world there may be less, or little, emphasis on the ethical implications of successful engagement. Additionally, personal bias (cultural or religious) may also fall into the margins; however, if the bias were deliberate perhaps it would sit in the background.

Description:

In this category, the motivation for engaging with information is generated the desire to operate successfully within the social world. As one interviewee said:

> our life is filled up with information and we need to make decisions on how we understand that information. If we let other people control it for us then how can we say that we're really doing what we want to do? We're just doing what we're told to do and allowed to do. I say that if you're an effective information user you're in control of your own path and not dictated to by other people (Interview 10, p.1).

That notion of 'success' and self-determination is multi-faceted and takes in elements such as being able to navigate the political and economic elements of the social world as well as experiencing individual happiness and contentment. As a result, there are two elements to socialisation. The first is society as a whole, which encompasses the universal social world as well as the smaller communal world. The second deals with the experience of being a person as opposed to being a person attempting to navigate a social world.

There is more to the category than the copying of behaviours and attitudes in order to achieve a particular outcome. While that is a significant component there is also a more dynamic and creative element where the effective use of information is understood to be the key ingredient in achieving independence and personal power. That was affirmed by interview responses such as:

if they're effective information users, they're in charge of their lives. That means they're a lot more proactive as people. Being proactive and in control (Interview 10, p.2).

Navigation of the social world subsequently becomes a creative process wherein the person takes on responsibility for shaping his or her own life and they do so through engagement with information.

In contrast to the other categories, here information literacy is understood as something other than that by which a particular aim can be achieved or skill acquired. Instead it is seen as something entirely necessary for a person's everyday life. Unlike category four it is an on-going concern rather than something enacted on a situation-by-situation basis. It is also the broadest of the categories in that what may constitute achieving its aim (socialisation and functioning within the social world) can encompass the technical, the evaluative and the intellectual. What is required to function successfully within the social world can change depending on situation and context.

## Dimensions of variation:

Information can be textual, symbolic, tacit or overt in nature. As an interviewee stated, those elements, 'become the generic fundamentals that a person can use in their life and it sets them up to be independent and successful in their own world at whatever level' (Interview 6, p.2).

To that end, information use can be both internal and external in that certain information is used for the betterment of the individual while other information is passed outward to an external audience. The purpose is not only to inform or to build a stockpile of knowledge. It is also to cope with the demands of an information rich world. As expressed by one participant,

> our life is filled up with information and we need to make decisions on how we understand that information. If we let other people control it for us, then how can we say that we're really doing what we want to do? We're just doing what we're told to do and allowed to do. I say that if you're an effective information user you're in control of your own path and not dictated to by other people (Interview 10, p.1).

Subsequently, information use is directed towards self-determination and expression of free will.

The perspective in this category is, as with category one, on both the internal and external world. As the person determines how to navigate their own social world the perspective turns both inward (internal) to deal with their own experience and outward (external) to understand how the social world operates and to see themselves as a part of that larger whole. Similarly, when the social element entails them assisting other members of the social world it can be suggested the perspective is external to the person. While there may be a personal benefit to assisting others, emphasis is far less on the self than on the other.

Learning occurs when awareness (of the internal or external audience) is developed. As the aim in this category is to learn how to more successfully navigate the social world the awareness that is developed is of strategies that will enable that to happen as well as increased awareness of existing social structures, conventions, rules and regulations.

## Category 4: Gaining the desired result

### Structure of awareness

**Meaning:** In this category information literacy is understood to be the means by which a desired result can be achieved. The result may be external to the individual or personal in nature.

**Focus:** The focus is on achieving a desired result or state of being (e.g. informed, educated, aware).

**Background:** Residing in the background is the way in which the result is achieved or the process through which the individual must pass in order to achieve that result.

**Margin:** Ethical considerations may reside in the margin. If focus is on achieving a desired result it could be that ethical concerns are not given primacy and may even be ignored.

### Description:

In this category, the motivating factor for engaging with information is the attainment of a pre-determined goal or result. Put succinctly by one interviewee, 'the whole point of the process is to get to the answer you wanted' (Interview.15, p.3). That result may be external to the individual and involve other individuals, a social group or some other element of the person's social world. An example can be found in the passing of information to other members of the community. In that regard the goal is to provide others with information and to assist in their learning and development.

There is a degree of altruism that is not apparent in the other categories where the individual is the central and only focus. However, there is not the same degree of absoluteness. While there may be a predetermined goal there is no emphasis on providing the 'right' information or using information in a way deemed to be 'right'. The focus is purely on attaining the goal and shades of grey can exist regarding how that goal is achieved. According to one interviewee:

> it has more to do with the results that I'm looking for and getting them so that I make the best use of the resources and the skills I've got at my disposal (Interview 2, p.1).

Similarly, there is no mention of a restriction on the elements used to achieve the goal and they may or may not incorporate technology. The only concern is attaining the end goal or result.

## Dimensions of variation:

It can be suggested that, within this category, information is right or wrong as it pertains to achieving a desired end result and what is considered informative is only that which allows the end result to be achieved. Information literacy is only considered to have been engaged with if that chosen result has been obtained. As one interviewee said:

> being effective is getting the answer they want. You could be effective if you got the most horrible, biased information but it gave you the answer you wanted (Interview.15. p.2).

That view was echoed by another who said that:

> you've got the result you were aiming for. If you don't then you're not being effective. You might have the process in place but without the result you can't be truly effective (Interview 17, p.3).

In that regard, 'effective' can be read as successfully experiencing information literacy which is seen as being part of a process engaged with in order to attain a certain result. The process and, therefore, the experience of information literacy, is only effective if the result is obtained. The outcome is acquiring the thing that is needed. It may be that what is required is information to assist in a social situation, help with education or improve the person's overall state of happiness or wellbeing. Regardless of the context what is

important is that a desired outcome is achieved. In that regard, information literacy is seen as being purposeful and not existing without some goal to be attained.

Information use is, therefore, directly connected to the process by which the desired result is obtained. Learning, a change in awareness, comes about when the desired result has been obtained. As information literacy is part of a process that has an end point (achieving of a desired result) it will be through learning that the end point is realised. The change in awareness will indicate the point at which the process ends. Subsequently, the perspective is internal. That is due to the change in awareness only becoming apparent through personal reflection. Learning is part of the process in which the end result is obtained and there is awareness that no further attempt need be made to achieve it. When the goal has been achieved, there is closure to the information literacy process. Rather than forming a stockpile of data to be used at a later stage, which could be said to occur in the other categories (certainly in category one and two but also could be argued for in category three), here information is of use only if it allows the ultimate aim to be accomplished.

That reflects the viewpoint of one participant who said:

> there's got to be a point to finding information Otherwise, it's just like hoarding things but never using them. You've got to put information to use for the purpose you gathered it before you can be really effective (Interview 17, p.3).

Indeed, if anything about information literacy is clear in this category, it is that its value

is implicitly tied to its ability to achieve an end goal or, in the words of one interviewee,

'it has most to do with getting the results I'm looking for, that's the main thing

(Interview.2, p.1).

A summary of the four categories is provided in Table 1:

Table 1. A summary of the four categories which comprise the Outcome Space.

| | Category 1 Evaluative and intellectual | Category 2 Technical skills | Category 3 Navigating the social world | Category 4 Gaining the desired result |
|---|---|---|---|---|
| Meaning | Being aware of information options and being able to evaluate the quality (validity, reliability) of those options | Being able to use information technology tools and programs in order to access information. | An integral part of a person's day-to-day life and a skill necessary for them to navigate their way through their social world. | The means by which a desired result can be attained. The result may be external to the individual or personal in nature. |
| Focus | Making informed decisions about information | Having technical skills necessary to use info tech tools | Successfully navigate and operate in the social world | Achieving a desired result |
| Background | Access to information technology tools | Information bias – overload of information | Relationships, cultural identity | Future use of information once the result has been attained |
| Margin | How information skills acquired | Information available in other forms (non-tech) | Biases and ethical concerns regarding information use | The process required to attain the result, ethical considerations |

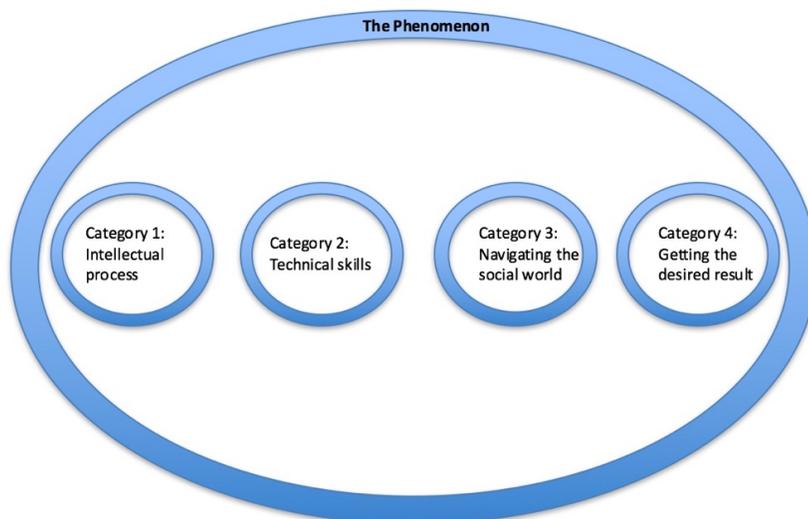| Dimensions | of | variation | | |
|---|---|---|---|---|
| Information | Provides an absolute answer. Evolving as new sources and problems emerge. Individual | Technical – accessible only via technology and through technology. Evolving as technology develops. Individual | Part of an on-going process as new social situations emerge. Individual and social | Situational. Dependent on the result to be obtained. Individual |
| Information use | Locating information and evaluating the quality of sources | Accessing and employing information technology tools | Navigating the social world | Information used to attain a desired result |
| Perspective | Internal and external | Internal | Internal and external | Internal |
| Learning | Learning occurs and awareness changes as new information is obtained and old information confirmed or replaced | Learning occurs as new skills are acquired and new understandings of how to use technology to acquire information or use information technology systems | Learning is on-going. It is both personal and communal; belonging both to the individual and to other members of the community. | Learning is part of the process in which the end result is obtained and there is awareness that no further attempt need be made to achieve it. |

## The Outcome Space

The 'outcome space' is the final result or outcome of the phenomenographic study. It consists of the categories of description, each showing a distinctive aspect of the phenomenon in question (how it is experienced by the interview cohort), while also

revealing a logical and ordered representation of the relationships that exist between the categories themselves.

The following section outlines the relationships that exist between the four categories. Those relationships can be seen as 'lines of connection' and present themselves in two ways, either clearly defined and indicative of a shared outlook or less influential and more secondary in nature.

To begin understanding the existing relationships, both primary and secondary, the four categories can first be seen contained within the phenomenon from which they emerged (Figure 1). Each is unique and represents a distinctive way in which the participants of this study experienced the phenomenon in question. As Figure 1 shows there is no hierarchical relationship in evidence. As a result, each category is represented as sharing a similar position or prominence within the phenomenon in question.

# The categories



The Phenomenon

Category 1: Intellectual process

Category 2: Technical skills

Category 3: Navigating the social world

Category 4: Getting the desired result

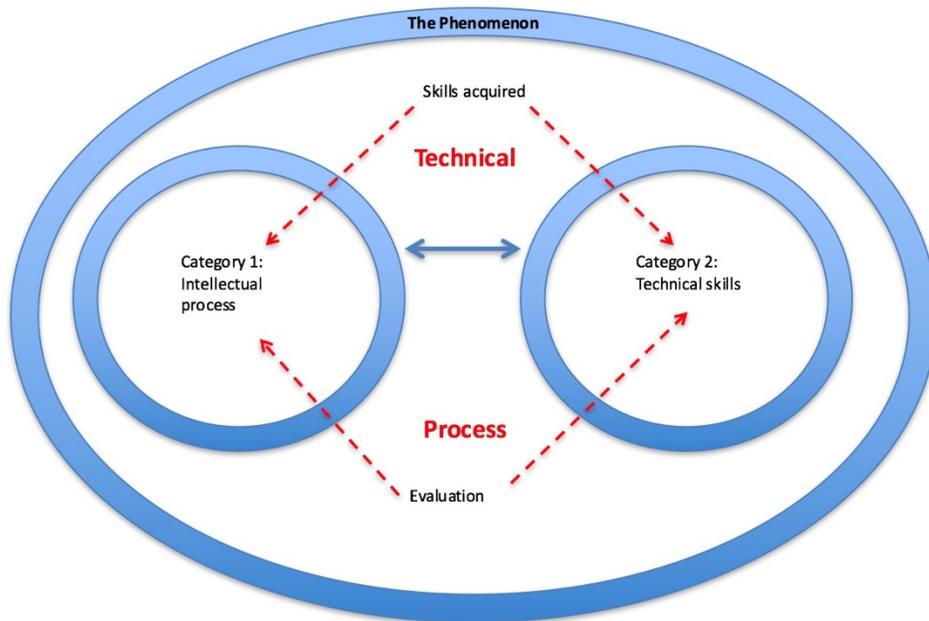**Figure 1**: The categories of description

The categories can next be seen in relation to one another, with those that have an overt connection grouped together. In Figure 2, the relationship that exists between categories one and two is presented showing the relationship that exists between them which illustrates why they are seen as being connected more closely to one another than they are to the remaining categories.

Figure 2 shows the relationship that exists between categories one and two and illustrates lines of connection between them. The first line is their connection as 'technical' abilities – the ability to evaluate the quality of resources and the ability to use information tools. The second is their connection as elements within a process. Information is gathered, evaluated for its relevance and used to achieve an outcome as well as being evaluated in order to evaluate further information. Skills are acquired so that information resources can be used in order to achieve an outcome or to assist in the evaluation of information. While connected to an outcome they do not denote an end result. Instead they are part of a process followed in order to arrive at a particular outcome.

In addition, they deal with the acquisition and development of awareness and skills respectively. In category one awareness is developed regarding the existence and accessibility of potential information sources while the ability to evaluate the quality of those sources is also honed. In category two skills are acquired to enable the use of

information technology tools and programs in order to access information. There is an interconnectedness between the two categories. As information resources are found there may be the need to access them via information technology tools. As the tools are used they are open to the same evaluatory process used to assess the quality of the information resources that have been selected. That relationship is outlined in Figure 2 where skills acquired and evaluation flows evenly between the two categories.



# Relationship 1

The Phenomenon

Skills acquired

**Technical**

Category 1:
Intellectual
process

Category 2:
Technical skills

**Process**

Evaluation

**Figure 2**: Relationship set 1: connections existing between categories one and two

Categories one and two aren't explicitly related to solving a problem or gaining an outcome. They deal with components such as awareness and evaluation. Category one is connected to acquiring the best possible answer. As a result, it is connected to attaining a

result. However, in being understood as awareness and evaluation it can be seen as an on-going concern. There is no suggestion that awareness and evaluation are limited to specific situations. While there is a link to an outcome – the solving of that problem or question – the process of awareness appears to be part of an enduring process in which the person becomes aware of their information options and evaluates the best one to deal with a particular problem or question they are faced with.
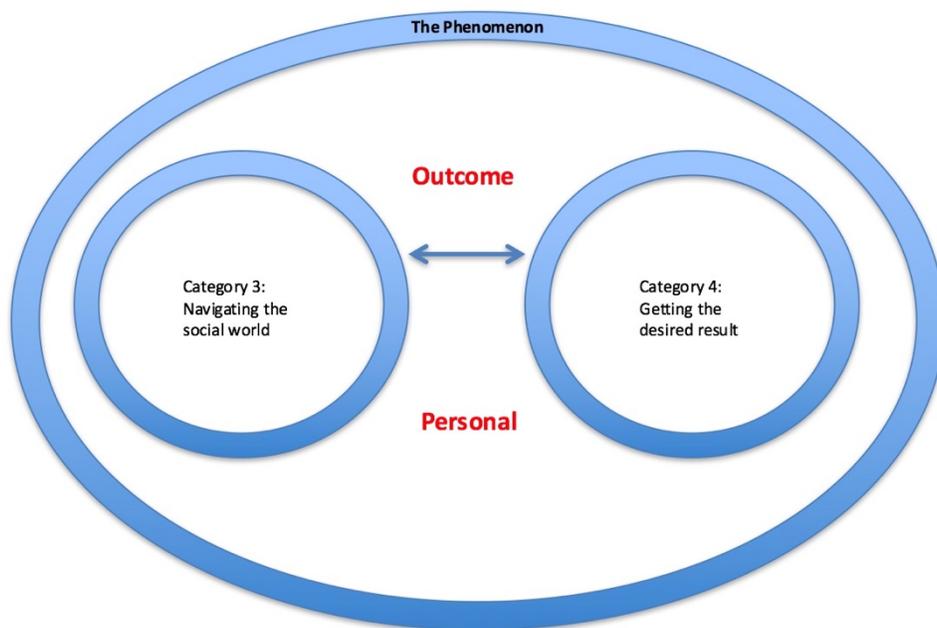
Categories 3 and 4

Categories three and four also share two close bonds as is illustrated in Figure 3. The first bond is that they primarily relate to an outcome – 'socialisation' and 'the desired result' are the outcome of the information experience. While they have a connection to the other categories the relationship they have to one another is stronger and more overt. Similarly, they share a greater link to a personal element of the information experience.

Socialisation allows the person to operate within and navigate their social world. Getting the desired result but has potentially broader reach but equally relates to the person attaining an outcome that is beneficial for them personally. Unlike categories one and two, there is not the same connection to a process or a technical procedure. While they may impact on categories three and four (something that is made apparent in Figure 4) they are not so intrinsically connected to them. It also involves more than information acquisition or skill development. Instead, the influences in that category are as diverse as the political and social. The concern is for living within a world dominated by information and finding a way in which to navigate social constructs and institutions. The

focus is squarely on the personal and the social. Category four deals with the attainment of a result that is commensurate with the person's desires. While the result may be external to the person, the evaluation of having attained a suitable result is both internal and personal. That describes a holistic view of information literacy, even if we might say that it is a limited one.

## Relationship 2



**The Phenomenon**

**Outcome**

Category 3:
Navigating the
social world

Category 4:
Getting the
desired result

**Personal**

**Figure 3**: Relationship set 2: connections existing between categories one and two

## All categories – the overall picture

Finally, when looking at all of the categories combined once again, but with their lines of connection included, it becomes clear that despite their uniqueness and the differences that exist, they are interconnected. That interconnectedness, existing across the

relationship space, is illustrated in Figure 4 where the mutuality of exchange is clearly apparent.

Categories one and two can be seen as engaging with information external to the person. Category one deals with developing awareness of information options and evaluating information sources. Category two deals with developing technical ability to use information technology tools as the means by which information can be accessed. Category three is different in that it is person-centric and experiential elements of information engagement as well as dealing with information experience on both a personal and communal level. The final category also deals with the attainment of a result and information literacy is seen as the way in which that end result can be gained. Unlike category three, with which is shares a strong bond, or even category one, it isn't part of an on-going lifelong process. Instead it is situational in that it is engaged with when a problem arises and a solution needs to be acquired.

There is an organic feel to the expression of the categories. Two deal with identifying, evaluating and accessing information sources, one deals with the experiential, interpersonal expression of information experience and one deals with the result attained through engaging with information literacy. Looked at in total it provides a well-rounded and holistic view of information literacy engagement.

# Relationship space
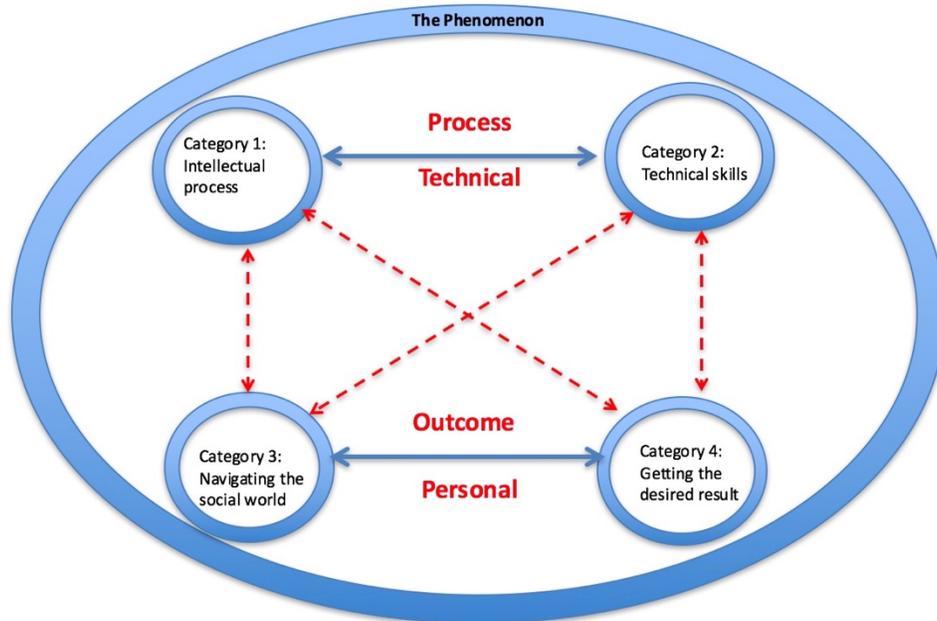


**Figure 4**: Relationship space: connections existing between all categories

## Conclusion

This paper has presented a unique and complex picture of the ways in which public librarians constitute information literacy. That information has, until now, been mostly overlooked in favour of studies that either advocated for the value of information literacy within the public library or outlined existing information literacy programs within that context. That is despite public librarians being identified as the key deliverers of information literacy education and programs (Godwin and Parker, 2012; O'Bierne, 2010). The way they engage with the concept is integral to the way in which they deliver those programs. However, outside of the pilot study (Demasson, Partridge and Bruce,

2010) that informs this paper (conducted by the same research team), no other research exists which addresses the question of how public librarians constitute information literacy. In filling that gap this research has uncovered findings that will assist in supporting information literacy development in public libraries, local and international, and help to 'empower people of all walks of life to achiever their personal, social, occupational and educational goals' (UNESCO, 2005: page 1).

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