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Information literacy and literacies of information: a mid-range theory and model

Annemaree Lloyd, Professor, Swedish School of Library and Information Science.
Twitter: @anlloyd

Abstract

Information literacy (IL) research tends to fall into one of two spaces. In the conceptual space the research concern rests with understanding the experience and core elements of the practice and how it emerges. In the practical space the execution and outcome of the practice as markers of successful teaching and learning are the focus. The division between these spaces and the lack of researcher/practitioner convergence create a conundrum that limits our ability to theorise IL, to adequately situate IL in library and information science research, to champion its benefits outside the library and information science field, or to promote to funding bodies the impact of IL. To address this conundrum a theory and foundational model of IL is described which attempts to reconstruct the IL space and its enactments without privileging research or practice.

Keywords

enactment; information literacy; landscape; literacies of information; modalities

1. Introduction: The conundrum of information literacy

The different contexts, different concepts and different truths of IL (Lloyd, 2005) generate a conundrum that affects the way IL is conceptualised, named and articulated. Originally described from a skill-based perspective (Zurkowski, 1974), research into and the practice of IL have over the last 40 years led to its description as a generic skill, a meta-competency, a practice and situated literacy, and, more recently, a meta-literacy. To explicate the elements of IL, researchers have drawn from sociocultural, cognitive, and behavioural perspectives, or have explored variation in experience (Bruce, 1997; Gross & Latham, 2012; Lloyd, 2003, 2006, 2010; Kuhlthau, 1991; Mackey & Jacobson, 2014).

The theory of IL presented in this article is influenced by practice and sociocultural theory (Bateson, 1972; Billett, 2001; Blumer, 1969 Bourdieu, 1977; Gergen, 1994; Goffman, 1983; Merleau-Ponty, 1962; Lave and Wenger, 1991; Prus, 1999; Wenger, 1998) and draws on empirical research by the author over a decade. More recently a practice perspective (Reckwitz, 2002; Schatzki, 2002; Savolainen, 2008; Shove, Pantzar & Watson, 2012) has been taken. A practice perspective emphasises dimensions such as situatedness, relatedness, negotiation, embodiment and collectivity, which make the practice unique to a particular setting. IL is conceptualised as a practice which contributes to our performance in everyday life and which, when explored carefully, references the context that shapes and enables that performance. From this perspective, IL is understood in broader terms, rather than restricted to enactments related solely to text-based mediums (print or digital). The practice is also present in a corporeal and social sense. It does not just connect us to epistemic/instrumental ways of knowing, but also to local, nuanced, contingent and embodied forms (Lloyd, 2010).

In this paper a foundational model accompanies the theory to highlight the key concepts that are central to IL research and to practical explanations of IL. The task of constructing a foundational model responds to the continued need for clarity about the core concepts and

features of IL as a practice present in all contexts. To undertake this task two questions were posed:

- (1) What might a theory and model of IL look like? and
- (2) What elements should be considered in the practise of IL?

The aim of the model is to present the IL landscape, without privileging either research or practice, but rather seeing both as parts of a whole.

2. Information literacy in two spaces: the problem

Before describing the theory and model of IL, the first task of this paper is to consider the challenges created when IL is approached from two different spaces. The landscape of IL research has increasingly become divided into two distinctly different spaces, each associated with specific discourses and each producing a narrative about what IL is and what traditions, features or aspects should be the focus of analysis. While this work is useful, it has had the effect of diffusing a central area of focus – that is, the determination of what are the core elements of the practice, of how the practice of IL happens and of how it is experienced.

In the conceptual space, IL is conceived primarily from a socially oriented perspective, which emphasises the qualitative nature of information experiences in relation to specific contexts. Research that creates this space draws from social, historical and political perspectives embedded in various theories or approaches, such as sociocultural theory, critical theory, phenomenography and discourse analysis (Bruce, 1997; Tuominen, Savolainen & Talja, 2005; Lloyd, 2005, 2006, 2010; Elmborg, 2006; Limberg, Sundin & Talja, 2012; Whitworth, 2014). In this space, the attention of researchers has focused on the emergence and experience of information through social and material practices, creation and interpretation of information and the activities of information seeking and use. Researchers have been driven by broader social, historical, economic or political imperatives that shape IL as a practice inherent within a social site. IL is conceptualised as a social or transformative practice, and often viewed in the context of learning. Scholars working in this space advocate a more sociologically oriented approach to understanding, first, how the practice is shaped by the social site and, second, how it emerges to shape people's ways of knowing and their ability to construct information landscapes (Lloyd, 2006; Limberg, Sundin & Talja, 2012).

The practical space places a strong emphasis on operationalisation and application, and attempts to quantify the practice. Here IL is viewed, instrumentally, operationally and evidentially, as an object and outcome of learning, and is clearly focused towards outcomes related to effectiveness in teaching IL and developing a curriculum that draws on a range of pedagogical theories (Grassian & Kaplowitz, 2001; Secker & Coonan, 2012), or towards developing standards that can be implemented by library educators (ACRL, 2014, now extended to the Framework (ACRL, 2016)). Much attention has been paid to identifying the competencies, attributes or skills and material objects of the setting (such as digital literacy, ICT literacy, media literacy). In this space IL is shaped by teaching, learning or informed policy development within specific settings (such as higher education or schooling).

The divergence of the two spaces described above represents a significant challenge for the advancement of IL because it reduces the ability of researchers or practitioners to theorise research evidence, thus weakening the potential for the analytical convergence required in theory development. This challenge has been recognised by Julien and Williamson (2011) who have critiqued IL research, arguing that, while there is some overlap between IL and information seeking, socially oriented conceptualisations of IL often draw from fashionable frameworks with little focus on the execution of the practice by library practitioners. However, whilst these fashionable frameworks may be new to many information studies researchers, they are drawn, with scholarly consideration, from substantive disciplines and fields of study, such as

sociology, psychology, anthropology and organisational studies, and theories of learning and teaching.

The barriers that appear to exist between conceptual and practical approaches to IL challenge the capacity for meaningful dialogue between researchers and practitioners and further limit the possibility of convergence. This in turn, reduces the capacity of theorists and practitioners to either articulate the importance of IL or translate and frame findings in ways that connect with community and workplace benefits (Lloyd, 2003; Julien & Williamson, 2011). These challenges continue to inhibit the creation of a cohesive conceptual framework about the nature, emergence and enactment of IL practice and continue to promote a theory/practice disjuncture. Furthermore, the gap between theory and practice reduces the ability of library practitioners and academic researchers to translate their knowledge of IL and its benefits to the world beyond libraries and academic and school-based education, where IL education is targeted, to areas where both the practice of IL and its benefits are relatively unknown.

Internally, the lack of convergence and the increasing boundedness of each of the two spaces have resulted in a failure to develop a conceptual model of IL that represents the trajectory and complexity of the practice which has currency in both spaces. Such a model might produce a foundational space for advancing what appears to have stalled in both spaces and has caused journal editors to call for a move towards a more sophisticated agenda (Hernon & Schwartz, 2014).

A characteristic of IL research and practice is that it suffers from polysemy, resulting in the inability of researchers and practitioners to adequately describe the core elements that create the practice. Each new view or variation of IL (meta-literacy, trans-literacy, digital literacy, etc.) strives to differentiate itself from other views by using the language of, and often cherry-picking from, the perspective or context adopted. As such, this represents a kind of gatekeeping for IL, something that both spaces have responsibility for.

3. A theory of information literacy: Key concepts

IL is a complex practice and, in a post-truth world, is becoming an increasingly important form of literacy, which, when executed, enables a person to understand the sources and sites of knowledge and ways of knowing that contribute to becoming emplaced. This knowledge, in turn, provides a person with the capacity to think critically about information, which is inherent in the contexts of their IL practice. The practice has, therefore, relational, situational, recursive, material and embodied dimensions, which are drawn upon to make it meaningful.

While the language may change to accommodate the perspective of a researcher or practitioner, in reality the core structure and trajectory of the practice does not. Foundationally, IL is a practice and like all practices is *enacted* in ways that:

- draw from the modalities *of information that reference the knowledge base*;
- recognise ways of knowing that are valued by members of the setting;
- engage in *activities* that form part of the individual and collective performances; and,
- use the *material objects and artefacts* that are *sanctioned* as part of performance.

Consequently, becoming information literate requires the development of a meaningful understanding of how knowledge is constructed, located, situated and valued within a landscape and the range of activities that enable information to be drawn from that knowledge base. This requires competence (relevant skills and knowledge) and an ability to relate to social and material practices (Shove, Pantzar & Watson, 2012).

The ability to recognise the practice of IL and describe its core elements rests on the ability to think about the practice, first in *abstract terms*, and then to consider it in *relational terms* through the linkages made between these elements and to understand its situational enactment.

A theory of IL states that:

*Information literacy is a **practice** that is **enacted** in a social setting. It is composed of a suite of **activities** and **skills** that reference **structured** and **embodied knowledges** and **ways of knowing** relevant to the context. Information literacy is a way of knowing.*

The practice of IL affords opportunities to connect with the information-rich social, textual/instrumental and corporeal modalities that emerge from an information environment, shaping an **information landscape** and its practices.

3.1 Unpacking key concepts

The theory of IL draws from several key concepts. An important central concept which threads through this theory is the representation of information as 'any difference which makes a difference in some later event' (Bateson, 1972; p.323, p.386). Bateson argued for information as a 'bit' or an idea which, when accessed, made a difference, which implies change. The difference is, therefore, a change of some sort to knowledge, including ways of knowing, which may produce positive, negative or neutral effects. Each of the conceptions that make up the theory focuses on information and its relation to the person/people as the central element (Lloyd, 2010, 2012).

To construct a way of being in the world, people draw from *information environments*, described here as sites of stable knowledge (for example, health, education, politics, religion), to create information landscapes (discussed below) which reference the sites of knowledge and ways of knowing that are central to the construction of their intersubjectivity and enable their individual agency. Intersubjectivity refers to the common reference points and knowledge shared by people who are collectively engaged in a common endeavour or practice. For example, the larger project of being a librarian draws from previous experiences, histories, social and material practices of librarianship and ways of working as a librarian that are shared amongst those who engage with this endeavour. Subjectivity refers to an individual's belief drawn from the intersubjective project. The theory of IL presented here views intersubjectivity as the dominant aspect driving thought and action, and leading to personal or subjective views.

3.2 Information landscapes

The concept of an information landscape has been previously introduced in the work of Lloyd (2003, 2006, 2010) and is a principal element of the theory of IL presented here. Landscapes are constituted through social, epistemic/instrumental and physical corporeal information modalities which reflect the stable and established knowledge domains of a social site (information environment).

A health information landscape, for example, draws from the health information environment and is centered on stable sites of knowledge of relevance to the person (for example, chronic illness, diabetes, disease management) and knowledge about how to access this knowledge. The information landscape will have spatio/temporal features locating it within time (for example, in the context of health information) and connecting it to spaces (the physical locations related to health or the intersubjective spaces where people agree upon health, such as discussions, conversations and narratives). Information landscapes are infused with information from a number of sources. People form strong attachments to the space in their particular landscape and its socio-material dimensions and develop an intersubjective understanding of that space, of the practices and processes that maintain it, and of its salient connections to other landscapes within the broader health environment.

A significant element of an information landscape is that an individual engaged in that landscape draws other people (family, friends, colleagues) into it (Lloyd, Bonner & Dawson-Rose, 2014). For example, people with a chronic illness, such as kidney disease, will draw family members and friends into their landscapes by sharing information and creating a narrative about the disease and its progress. In the workplace, novice workers who are learning a competency or skill and encountering the narratives related to the performances of work and working culture of that workplace will develop their information landscapes by drawing from other novices and experts. Inherent within a landscape are practices, which reflect sayings and doings (Schatzki, 2002) and relatings (Kemmis & Grootenboer, 2008).

To buy into and become positioned as an insider within a landscape requires access to information that is valued and relevant to people engaged in joint enterprise within that space. For example, in a health setting the joint enterprise within the space may focus on a patient, but the landscape will also include the patient's ongoing interactions with the medical profession, supporters, family, allied health, and other things within that space. Entering the space and navigating its paths, nodes and edges (Lloyd, 2003) require an ability to understand the discourses and narratives of the landscape (how to adhere to medical advice, with whom to discuss health). They also require an understanding of how that landscape connects to other landscapes in the health environment.

3.3 Modalities of information

The term *information modality* (Lloyd, 2006) describes the broader categories of information that represent the information environment. Information modalities describe the common spaces created and accessed by people (for example, epistemic/instrumental space, social space, and physical space). Each modality acts as a site of knowledge and mediates the enactment of specific activities related to knowledge (Lloyd, Bonner & Dawson-Rose, 2014). It is important to acknowledge that the modalities are not mutually exclusive, but are mutually constituted and, as such, each modality references explicit and tacit information and ways of knowing.

The epistemic/instrumental modality describes sources of information that are objective, factual and reproducible. This modality references the normative aspects (rules, regulations) that are necessary to operate in society and daily life. The modality is encountered and experienced via text (for example, documents or online text). The social modality refers to the nuanced types of information that are formed around the often unwritten norms or conventions of practice and/or social exchange. The corporeal modality references physical information drawn from the body and the embodied performances of practice which are often contingent (happening at the same time) and nuanced. The three modalities do not exist independently of one another but are entwined (Lloyd, 2010). For example, in the health environment, people diagnosed with chronic kidney disease (CKD) must engage with formal medical knowledge, with institutional knowledges (related to hospitals, rules and regulations) and technical knowledges (related to dialysis). They must also engage with social information, learning about tacit or contingent practices associated with their disease and connecting with and learning from the narratives of other people who have CKD and becoming part of the CKD community. The physical modality is accessed through the body, which acts as a collector and site of sensory information. Becoming and then being chronically ill is a physical experience and the body becomes a central feature of the information landscape. These modalities entwine to create an information landscape related to CKD.

3.4 Enactment of literacies of information

The practice of IL references the values, knowledges and ways of knowing (modalities) that are inherent within a social setting. Enacting the practice scaffolds a person's being in the world, through the development of ways of knowing which afford opportunities for alignment and membership of a community, allowing the practice to develop in ways that are valued by the social site and promoting information resilience (Lloyd, 2014). IL does this by enabling access to knowledge about the way an information landscape is shaped, enabled and constrained and to

knowledge of the information activities, competencies and skills required to enact and execute the practice in context. IL connects people to the social, epistemic/instrumental and corporeal dimensions that reference *being in the world*. We practise IL and in that moment of practice, IL becomes a practice.

Enactment has been conceptualised through Weick's studies of organisations. In that context, Weick (1995) suggests that enactment entails a process (something being played out – an activity) and a product (the environment). Weick describes enactment as a two-step process: the first step being the bracketing of the field of experience as the basis for preconceptions (the ways things should be done/understood) and the second the guiding of people's activities or actions by preconceptions (the ways things are done/understood). In relating this process to the practice of IL, it can be argued that the enactment of IL occurs in a specific context and is recognised because it reflects the way people work with information in that specific context and the knowledge they agree upon. According to Weick (1995), the outcome, or product, of enactment is social construction, which is always subject to interpretations. In a similar vein and also within the context of organisational studies, Orlikowski's (2002) idea of knowing in practice draws from Weick's position that enactment is action based and evidenced by 'acting, doing and practicing' (Niemelä, Huotari & Kortelainen, 2012, p.214).

Weick's concept of enactment is relevant to a theory of IL because it highlights the emergence of social (overt and nuanced) and material activities that enable and support access to information modalities (Lloyd, 2006) within a social site. IL is often viewed as something that is attained, and this attainment is often reduced to the targeted development of information skills. When viewed as an enactment that references ways of knowing and manifests through literacies of information (discussed further on), the focus is directed towards understanding social and material activities that help to build a social practice. This allows us to delve deeper into the complex interactions that are foundational to questions about how and why IL, as an information practice, emerges or is viewed in relation to context.

The concept of enactment has been employed by Lloyd (2012) to highlight for researchers the ontological and epistemological conditions that shape the practice and should feature in research into IL practice. Lloyd suggests that, ontologically, enactment is expressed as an understanding of what constitutes information and knowledge, and it emerges epistemologically as ways of knowing and practising.

3.5 Enacting information literacy through literacies of information

Enactment emerges in practice as an expression of and with reference to 'the social' (Schatzki, 2002). When a practice is enacted, it is brought into being. When we enact IL, we are referencing the realities of a social site, such as the knowledges and ways of knowing (activities and skills) that are valued and legitimised. Consequently, the discourse that often surrounds what constitutes IL practice may seem to be different when the practice is described by academic researchers and by practitioners, teachers or librarians, even though the foundational elements are actually the same.

The enactment of IL practice occurs socially, corporeally and materially, with all three entwined modalities patterned and shaped ontologically and enacted through the epistemological lens of context. Social and corporeal modalities reference vernacular or local literacies, which constitute important and often invisible forms of information work, connecting with and creating tacit, contingent or embodied forms of knowledge. Material practices and their enactment through technologies or documents (for example, digital literacy, media, and visual literacy) are often the most visible to researchers and educators and the most often discussed in the library and information science literature.

To represent social, corporeal and material enactments more accurately, the term *literacies of information* is adopted in this paper to emphasise how the enactment of IL is rooted in the deep

contextual conceptions of how people *in situ* connect with information, knowledge and ways of knowing. 'Literacies of information' is used in preference to the term 'information literacies' (Limberg, Sundin & Talja, 2012) used by these authors, to highlight the variation and emphasis that can occur when researching IL according to different theoretical traditions.

The juxtaposition of these words is not merely a semantic exercise, but is intended to emphasise the core role of *information* in contemporary literacy practices such as digital, visual and media literacy and thus foreground how the elements of IL emerge as the core focus for researchers and for practitioners in the library and information science field. Advocating the use of the phrase 'literacies of information' highlights that the practice of IL is enacted and shaped or reshaped according to the doings or sayings of a site (Lloyd, 2010; Street, 1984; Schatzki, 2002). This allows us, in the first instance, to be open to acknowledging the different views participants hold about what constitutes information, knowledge and ways of knowing. Consequently, emergence and enactment become anchored ontologically within the domain of the knowledge claims about truth (such as what knowledge is valid and what counts and contributes to reason), and epistemologically in language games (such as how/what knowledge and ways of knowing are sanctioned) (Wittgenstein, 1958).

By this account, IL is positioned as being primary and foundational, along with reading and writing practices, rather than being adjunct to them. Becoming information literate is realised through its enactment, which references the cultural-discursive and social-political arrangements of the site (Kemmis & Grootenboer, 2008). The material-economic arrangements (Kemmis & Grootenboer, 2008) are represented through the suite of literacies of information (digital, visual, technological), which have either a contextual emphasis (health literacy, financial literacy) or a material emphasis (digital literacy, technological literacy, critical literacy).

Literacies of information represent the visible elements of IL (the enactments) and the information competences and skills associated with these. The term describes the enactment of IL through material practices and activities that reflect the intersubjective doings of practice and modalities of information within a particular site. In line with the privileging of specific information modalities (e.g. epistemic modality over social), what literacies of information are privileged in use will also reflect the traditions inherent in the social site. Feldman and Orlikowski, writing about technology practices, noted that 'technology is not valuable, meaningful or consequential by itself; it only becomes so when people actually engage with it in practice' (2011, p.1246). The enactment of literacies of information may, therefore, depend on the acceptance of some material practices over others, which is also reflected in the privileging of some information skills over others.

4. A model of information literacy

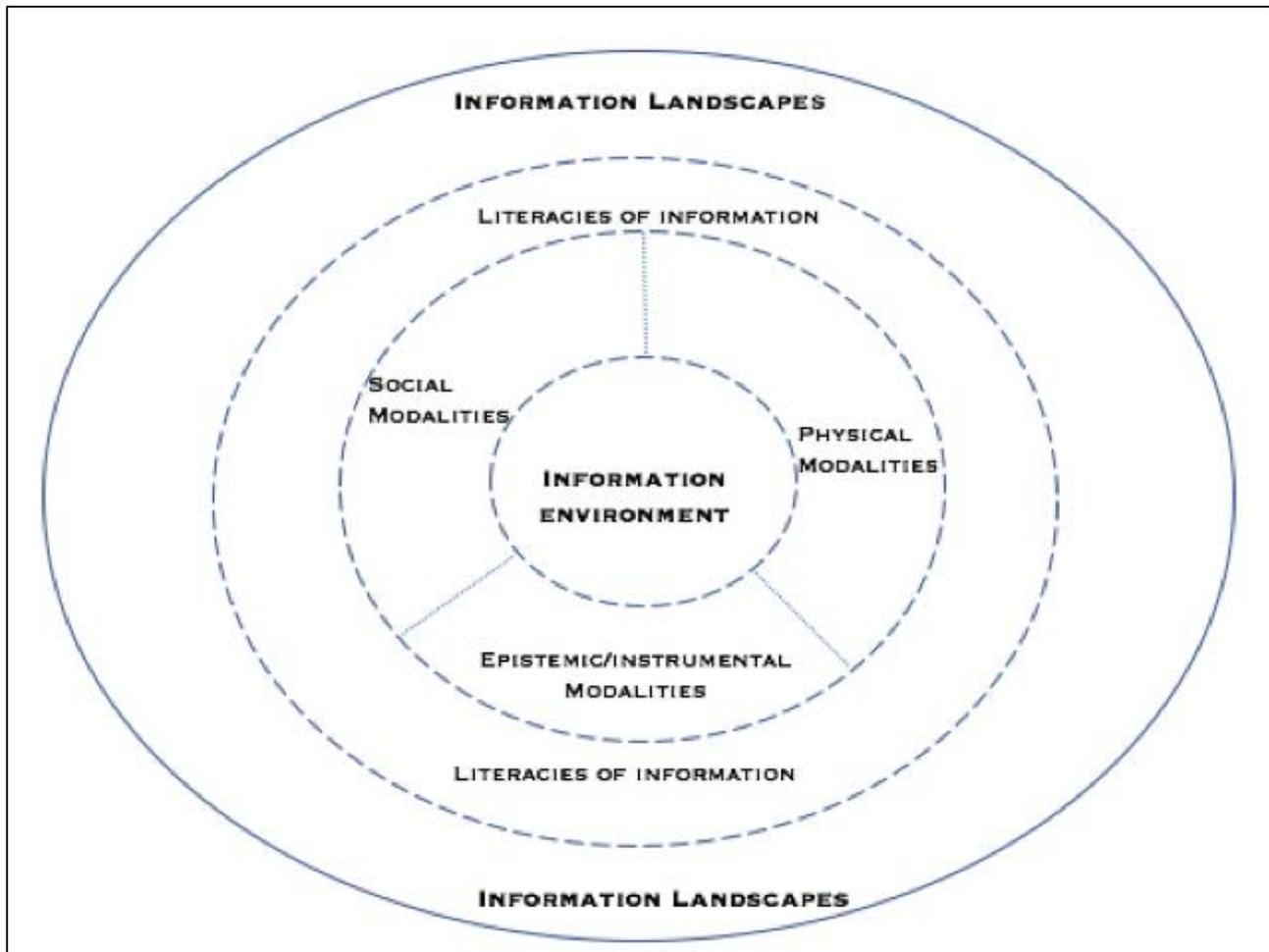
From this account of IL, a foundational model is presented (Figure 1) to give form to the abstract theory. The model is a refinement of previous theorising and is derived from empirical study of a wide range of groups in everyday settings. Drawing from research into IL in a range of contexts over the last 14 years (Lloyd 2006, 2009, 2012, 2014; Lloyd, Bonner and Dawson-Rose, 2014; Lloyd & Wilkinson, 2016), a number of statements can be made:

- IL practice is shaped by the social site.
- The practice of IL emerges through the social, physical and epistemic/instrumental modalities that shape the landscape of the social site.
- IL is enacted through literacies of information which reference the context.
- Becoming information literate is a process of transition and iteration as people move between novice–expert–novice positions.

The model is informed by the view that the primary purpose of IL is to develop a way of knowing about the sources of information that comprise an information landscape and about the

activities, competencies and skills that comprise an information landscape, and to draw meaning from the sources through engagement and experience with information. The enactment of IL is relational, embodied, material, consequential, recursive. The model presented here has been pared down to emphasise three elements central to an information practice: site, modalities and enactment. The elements of this model can be built upon to encompass the features of specific sites through which the practice of IL emerges.

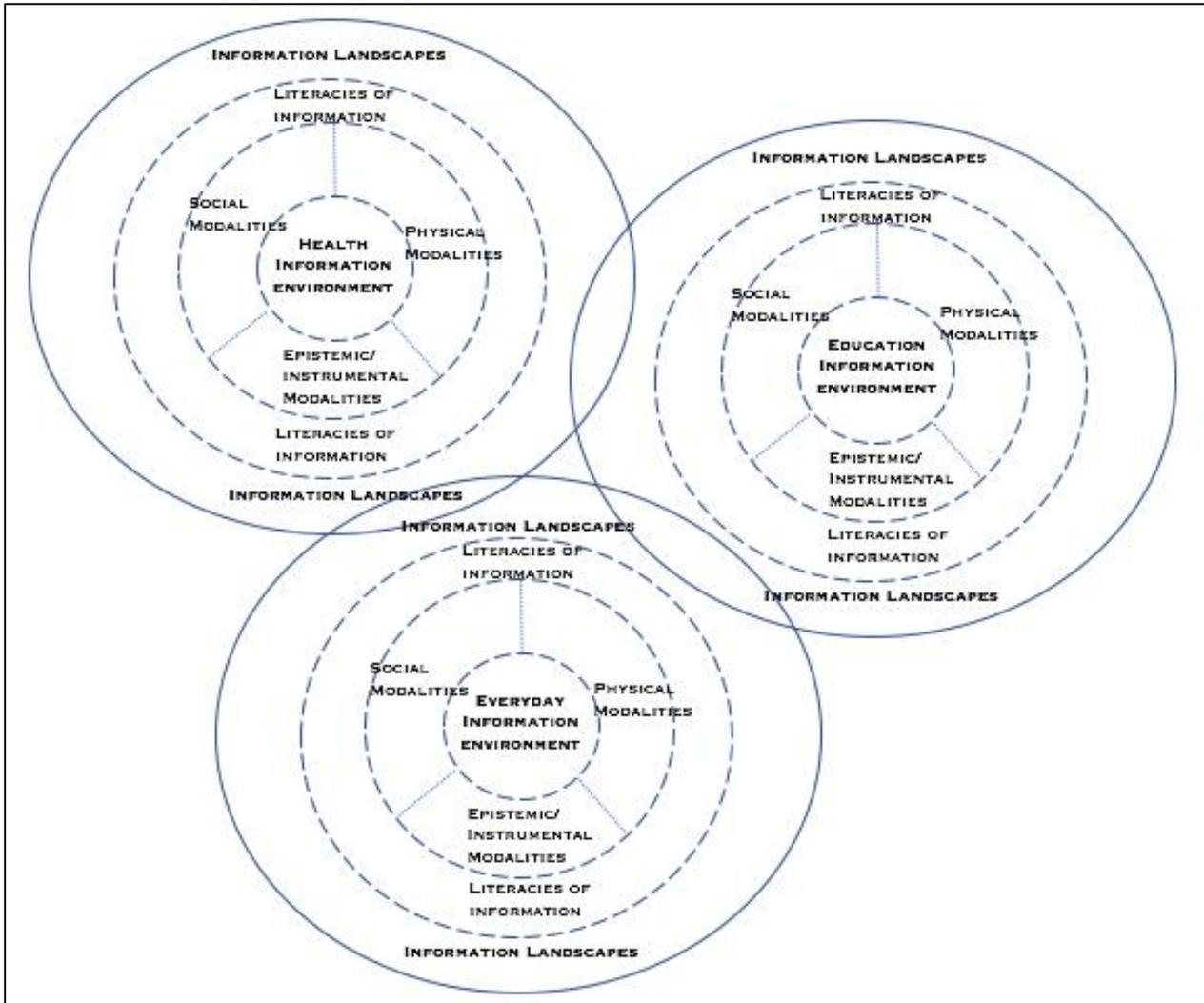
Figure 1. Conceptualisation of an information literacy landscape



This foundational model of IL conceptualises IL as being shaped by the modalities of information (social, physical and epistemic/instrumental) which represent the ways of knowing about the collective forms of knowledge which shape the larger information environment as a social site (Lloyd, 2006). Drawing from these modalities allows people to enact their information literacies and shape their information landscapes which, in turn, act to reference the social site (Lloyd, 2005). These modalities are entwined and the enactment of IL is predicated on the agreed-upon shared meanings about a project or collective endeavour and on the types of activity and action involved, thus supporting the reason why IL is enacted in a way that is meaningful for the setting.

People interact with multiple knowledges in their daily lives, played out through the engagement with physical and digital spaces. This means that people have multiple information landscapes in their lives. The model presented in Figure 2 highlights the reality that people are in many information landscapes (for example health, education, work, everyday, sport, religion, cooking).

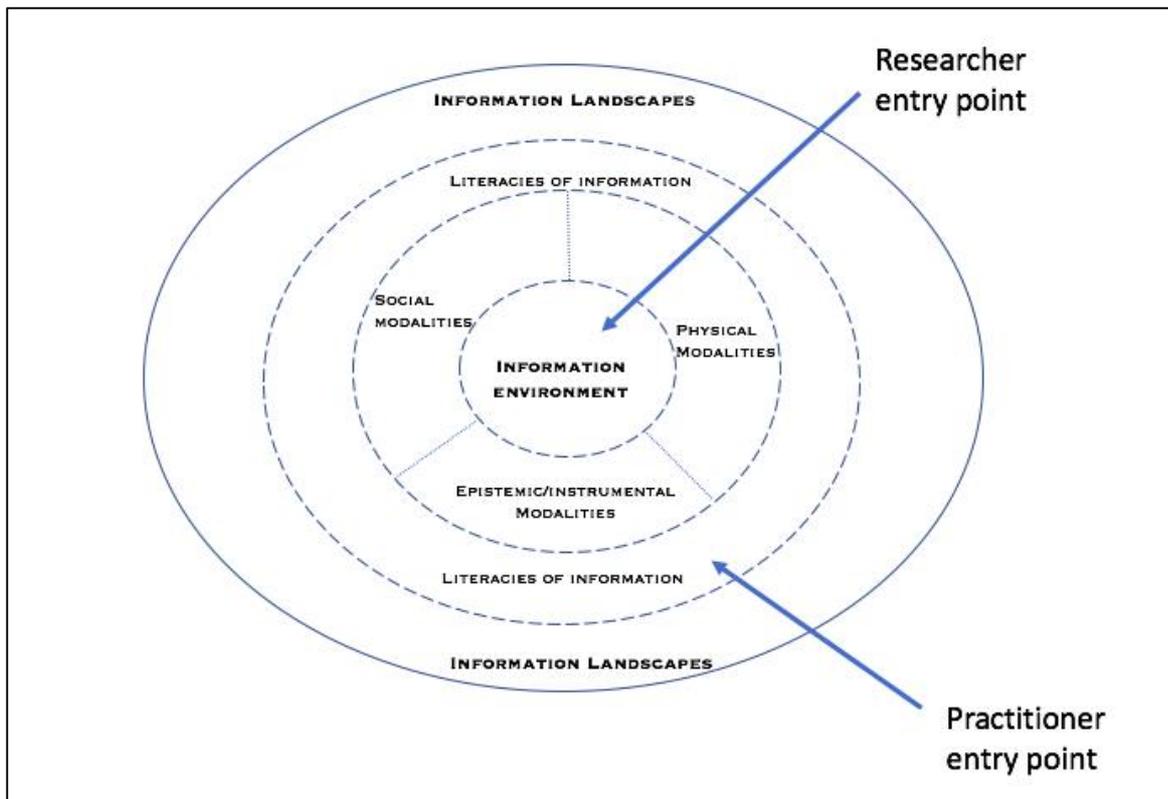
Figure 2. Intersection of landscapes of information literacy



4.1 Entering the model from different angles

Researchers of IL who explore the information seeking and use elements of IL or who approach this subject with a sociological or dialogical interest may enter the model with a focus on understanding how the social structures of the site shape the discourses and narratives of the site. Questions relating to a researcher's entry into the model are about how and why IL emerges and the relationships that explain the dynamics of the site in relation to the shaping of practices.

Figure 3. Entry points to information literacy landscapes



Researchers may enter the model through *why* questions that are often embedded in investigations of information practice that are more sociologically and dialogically focused (Talja & McKenzie, 2007). In describing a social ontology, Schatzki (2002, p.3) states that ‘the social is a field of embodied, materially interwoven practices centrally organized around shared practical understandings’. The philosophical entrant, therefore, aims to describe and problematise the traditions inherent in the structuring of a practice.

Practitioners, on the other hand, may enter an IL landscape by focusing on the literacies of information at an empirical level and describing the elements of the practice (the activities and skills) that represent enactment of the sayings and doings of a site. From this entry point, information literacies and activities will be emphasised, along with epistemic modalities of information that reflect the normative conditions of IL instruction.

5. Reconnecting information literacy spaces

The mid-range theory and model presented here represent and conceptualise the information landscape to be constituted through the enactment of IL, literacies of information and information related activities. The theory acknowledges people as content creators, mappers of sources, users, and mediators of information in relation to the specific projects of their context (becoming a member, learning, performing work). It describes how IL is shaped according to context and how people enter and engage with complex information landscapes and larger information environments, developing ways of knowing what information and information sources are important and how to access and use them in ways that are accepted and sanctioned by others in the setting. The emphasis of this mid-range theory is on the fact that it is observable and allows for an aggregation of findings.

An important aspect of the theory and model is that it does not privilege a specific discourse or agenda, but attempts to reflect the main elements of IL that are foundational to all environments. Reconnecting the IL spaces requires a reconciliation of both spaces and acknowledgement that each space only reflects a partial narrative of this complex information practice. Using the theory and model described here as a base, scholars and practitioners can introduce their context-specific discourses and narratives about IL.

When practitioners advocate for meta-literacy/competency, skills-based approaches, they need to recognise the functional elements of IL that emerge and reference the sayings, doings and relatings of the social site which has shaped the practice (Schatzki, 2002; Kemmis & Grootenboer, 2008). IL is situated, relational, embodied, negotiated and recursive, and these characteristics are played out in the narratives of the setting that shape the performance and recognition of the practice.

The enactment of IL – that is, the performance of information skills and activities – therefore reflects the

- Semantic spaces – where the sayings about IL are shaped by the cultural discursive practices of a setting,
- Doing spaces – where the performances of IL are shaped by the material/economic dimensions of a specific site, and
- Relatings – where the practice of IL is recognised as legitimate (Lloyd, 2012 after Kemmis & Grootenboer, 2008).

To become information literate and to know the information landscape and its paths, nodes and edges, requires understanding of how the normative and non-normative modalities of information are legitimised within a setting. If students are to be taught and workers prepared to become information literate, they are required to develop intuition, which results from being socialised into the practices of their setting, and they must be taught how to ‘competently use concepts, tools, and rules of the practice’ (Sandberg & Tsoukas, 2016, p.193). Consequently, an important skill that needs to be taught when training IL educators and practitioners is the ability to develop training and curricula that will enable their clients and students to develop

- Meaning – what knowledges are legitimised within a setting; what performances are legitimised?
- Competencies – the skills and know-how that are operationalised in the practice; and
- Materiality – the range of technologies and artefacts through which the practice emerges and is enacted (Shove, Pantzar & Watson, 2012).

6. Conclusion

In presenting this theory and model, a set of ideas have been introduced to explain IL as a practice that is shaped by the social site, promoting certain knowledges and enactments. The model does not highlight specific features, activities, competencies, behaviour, or skills, arguing that these aspects are context-dependent. Instead, it focuses on the abstract features of the practice, regardless of context, which are foundational to understanding its enactment, no matter what position or emphasis is adopted. The model privileges neither scholarly nor practitioner spaces, but views them as part of the same landscape of IL.

This model represents a holistic way of understanding IL as practice, but, in doing so, also reflects the practices of researchers and practitioners who enter the IL research field through different paths. The persistence of their two separate approaches has, henceforth, led to disjuncture and divergence of foci. Unless those who engage in IL research can move towards more holistic understanding of the field, it will remain trapped in an agenda of disjuncture and divergence that fails to evolve. The theory and model are intended as a step towards releasing IL research from such a fate.

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References

Association of College & Research Libraries (ACRL). (2014). Information Literacy Competency Standards for Higher Education. Available at: <http://www.ala.org/acrl/standards/informationliteracycompetency> [Accessed: January 2017].

Association of College & Research Libraries (ACRL). (2016). Framework for Information Literacy for Higher Education. Available at: <http://www.ala.org/acrl/standards/ilframework> [Accessed: January 2017].

Bateson, G. (1972). *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution, and epistemology*. Chicago: University of Chicago Press.

Billett, S. (2001). *Learning in the workplace: Strategies for effective practice*. Crows Nest, NSW: Allen & Unwin.

Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Englewood Cliffs, N.J.: Prentice Hall.

Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge: Cambridge University Press.

Bruce, C. (1997). *The seven faces of information literacy*. Adelaide: Auslib Press.

Elmborg, J. (2006). Critical information literacy: Implications for instructional practice. *The Journal of Academic Librarianship*, 32(2), 192-199. Available at: <https://doi.org/10.1016/j.acalib.2005.12.004>

Feldman, M. S., & Orlikowski, W. J. (2011). Theorizing practice and practicing theory. *Organization science*, 22(5), 1240-1253. Available at: <https://doi.org/10.1287/orsc.1100.0612>

Gergen, K. (1994). *Realities and relationships: Soundings in social construction*. Cambridge, MA: Harvard University Press.

Goffman, E. (1983). The interaction order. *American Sociological Review*, 48, 1-17. Available at: <https://doi.org/10.2307/2095141>

Grassian, E. S., & Kaplowitz, J. R. (2001). *Information literacy instruction*. New York, NY: Neal-Schuman.

Gross, M. & Latham, D. (2012). What's skill got to do with it?: Information literacy skills and self-views of ability among first-year college students. *Journal of the American Society for Information Science and Technology*, 63(3), 574-583. Available at: <https://doi.org/10.1002/asi.21681>

Hernon, P. & Schwartz, C. (2014). Information literacy: Time to move beyond more of the same? *Library & Information Science Research*, 36(3-4), 133-134. Available at: <https://doi.org/10.1016/j.lisr.2014.11.001>

Julien, H. & Williamson, K. (2011). Discourse and practice in information literacy and information seeking: Gaps and opportunities. *Information Research*, 16(1) paper 458. Available at: <http://InformationR.net/ir/16-1/paper458.html>

Kemmis, S. & Grootenboer, P. (2008). Situating praxis in practice. In S. Kemmis & T. Smith (Eds.) *Enabling praxis: Challenges for education*. (pp.37-62). Rotterdam: Sense.

Kuhlthau, C. (1991). Inside the search process: Information seeking from the user's perspective. *Journal of the American Society for Information Science*, 42(5), 361-171. Available at: [https://doi.org/10.1002/\(SICI\)1097-4571\(199106\)42:5%3C361::AID-ASI6%3E3.0.CO;2-#](https://doi.org/10.1002/(SICI)1097-4571(199106)42:5%3C361::AID-ASI6%3E3.0.CO;2-#)

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Limberg, L., Sundin, O., & Talja, S. (2012). Three theoretical perspectives on information literacy. *Human IT: Journal for Information Technology Studies as a Human Science*, 11(2), 93–130.

Lloyd, A. (2003). Information literacy: the meta-competency of the knowledge economy? An exploratory paper. *Journal of Librarianship and Information Science*, 35(2), 87-92. Available at: <https://doi.org/10.1177/0961000603352003>

Lloyd, A. (2005). Information literacy: different contexts, different concepts, different truths? *Journal of Librarianship and information Science*, 37(2), 82-88. Available at: <https://doi.org/10.1177/0961000605055355>

Lloyd, A. (2006). Information literacy landscapes: an emerging picture. *Journal of Documentation*, 62(5), 570-583. Available at: <https://doi.org/10.1108/00220410610688723>

Lloyd, A. (2009). Informing practice: information experiences of ambulance officers in training and on-road practice. *Journal of Documentation*, 65(3), 396-419. Available at: <https://doi.org/10.1108/00220410910952401>

Lloyd, A. (2010). *Information literacy landscapes: Information literacy in education, workplace and everyday contexts*. Oxford: Chandos.

Lloyd, A. (2012). Information literacy as a socially enacted practice: Sensitising themes for an emerging perspective of people-in-practice. *Journal of Documentation*, 68(6), 772-783. Available at: <https://doi.org/10.1108/00220411211277037>

Lloyd, A. (2014). Building information resilience: how do resettling refugees connect with health information in regional landscapes: implications for health literacy. *Australian Academic & Research Libraries*, 45(1), 48-66. Available at: <https://doi.org/10.1080/00048623.2014.884916>

Lloyd, A. (2015). Stranger in a strange land: enabling information resilience in resettlement landscapes. *Journal of Documentation*, 71(5), 1029-1042. Available at: <https://doi.org/10.1108/JD-04-2014-0065>

Lloyd, A., & Wilkinson, J. (2016). Knowing and learning in everyday spaces (KALiEds): Mapping the information landscape of refugee youth learning in everyday spaces. *Journal of Information Science*, 42(3), 300-312. Available at: <https://doi.org/10.1177/0165551515621845>

- Lloyd, A., Bonner, A., & Dawson-Rose, C. (2014). The health information practices of people living with chronic health conditions: Implications for health literacy. *Journal of Librarianship and Information Science*, 46(3), 207-216. Available at <https://doi.org/10.1177/0961000613486825>
- Mackey, T. P., & Jacobson, T. E. (2014). *Metaliteracy: Reinventing information literacy to empower learners*. Chicago: American Library Association.
- Merleau-Ponty, M (1962). *Phenomenology of Perception*. London: Routledge & Kegan Paul.
- Niemelä, R., Huotari, M. L., & Kortelainen, T. (2012). Enactment and use of information and the media among older adults. *Library & Information Science Research*, 34(3), 212-219. Available at <https://doi.org/10.1016/j.lisr.2011.12.002>
- Orlikowski, W. J. (2002). Knowing in practice: Enacting a collective capability in distributed organizing. *Organization Science*, 13(3), 249-273. Available at <https://doi.org/10.1287/orsc.13.3.249.2776>
- Prus, R. (1999). *Beyond the power mystique; Power as intersubjective accomplishment*. Albany: SUNY Press.
- Reckwitz, A. (2002). Toward a theory of social practices: A development in culturalist theorizing. *European Journal of Social Theory*, 5(2), 243-263. Available at <https://doi.org/10.1177/13684310222225432>
- Sandberg, J. & Tsoukas, H. (2016) Practice theory: What it is, its philosophical base, and what it offers to organizational studies. In M. Raza, H. Willmott & M. Greenwood (Eds.), *The Routledge companion to philosophy in organization studies*. (pp.184-198). Abingdon: Routledge.
- Savolainen, R. (2008). *Everyday information practices: A social phenomenological perspective*. Lanham, Md: Scarecrow Press.
- Schatzki, T. R. (2002). *The site of the social: A philosophical account of the constitution of social life and change*. University Park, Pa: Penn State University Press.
- Secker, J., & Coonan, E. (Eds.), (2012). *Rethinking information literacy: A practical framework for supporting learning*. London: Facet.
- Shove, E., Pantzar, M., & Watson, M. (2012). *The dynamics of social practice: Everyday life and how it changes*. London: Sage.
- Street, B. (1984). *Literacy in theory and practice*. Cambridge: Cambridge University Press.
- Talja, S., & McKenzie, P. J. (2007). Editors' introduction: Special issue on discursive approaches to information seeking in context 1. *The Library Quarterly*, 77(2), 97-108. Available at <https://doi.org/10.1086/517839>
- Tuominen, K., Savolainen, R., & Talja, S. (2005). Information literacy as a sociotechnical practice 1. *The Library Quarterly*, 75(3), 329-345. Available at <https://doi.org/10.1086/497311>
- Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks, CA: Sage.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge: Cambridge University Press.

Whitworth, A. (2014). *Radical information literacy: Reclaiming the political heart of the IL movement*. Oxford: Chandos.

Wittgenstein, L. (1958). *Philosophical investigations* (G.E.M. Anscombe, Trans.). New York: Macmillan.

Zurkowski, P. (1974). *The information service environment: Relations and priorities* (Related Paper No 5). Washington, D.C.: National Commission on Libraries and Information Science.