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Information literacy: conceptions, context and the formation of a discipline

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Abstract

In this article the authors argue that progress in the development of information literacy (IL) has been hindered by tendencies such as: denying that information literacy is even a subject, paying exclusive attention to forces outside the discipline and forming information literacy silos. The authors start by reflecting on formative developments in information literacy outside North America in the late 1990s-early 2000s, and noting that IL has not evolved from that period as much as one might expect. They identify hindrances to information literacy's formation as a discipline, and relate their discussion to changing notions of disciplinarity. The authors present 'Information Literacy in the lifecourse' as an example focus which could stimulate engagement from researchers and practitioners who are currently situated in different information literacy silos. They conclude that taking a disciplinary and lifecourse approach to information literacy would open up opportunities for working in a collegiate way, both within the information literacy community and with those outside it, and provide a more robust foundation for influencing policy.

Keywords

disciplinarity; information literacy; information society; research

1. Introduction

The occasion of the *Journal of Information Literacy's* (JIL) tenth birthday is a milestone and an opportunity to take stock of how far we have come in nurturing and discovering Information Literacy (IL). We contribute our perspective from personal and academic standpoints, with the underlying question "why has IL not progressed as far as we would have liked and expected?" Our approach takes us through a formative period in the IL story, thereby allowing us to relate our earlier thinking to the events of the times, and connect to current tendencies in the field.

Consequently this paper aims to move forward the debate on IL, in particular its status as a discipline and its place in relation to human development and to cultural and social change. This is a process we started in Webber and Johnston (2000). We contend that the promise of the formative period of IL (1990s/2000s) outlined below in section two has not been delivered and that a disciplinary approach (discussed in section three) is now needed in order to progress. Equally we contend that there is a need to view IL as part of the lifecourse (section four) in order to renew our concept of IL as a major area for human development in the 21st century. We will start by reflecting on our positions as researchers and individuals.

2. Reflecting on IL in a formative time

This section presents our standpoint on what reality is and how one comes to know it (our epistemology), followed by background information relevant to our work, and a sketch of developments taking place in the late 1990s-early 2000s. We identify this as a formative period for IL: a formation that we were part of. It is the background to our discussion of the disciplinary position of those writing and researching IL (in section three of this article) and our reflection on the nature of the information literate person (in section four).

Firstly we reflect on our positionality and trajectory. This is consistent with the reflexivity required of qualitative researchers, and also with other IL writers, for example Elmborg (2012, p.75), who identifies his thinking and practice as being shaped by “twenty years teaching English and composition”.

The way in which we see the world is the lens through which we reflect on what was a formative period for IL, as well as for us. Our views have been particularly influenced by our engagement with phenomenography, and with the educational research and development tradition in which it is embedded. Phenomenography is:

the empirical study of the differing ways in which people experience, perceive, apprehend, understand, conceptualise various phenomena in and aspects of the world around us”; (Marton, 1994, p.4425)

It takes a nondualist approach. This rejects the notion that you have to assert that reality exists outside people, or that, alternatively, it is only created from people’s inner worlds and their interaction with each other. For nondualists, this is an artificial polarity: the world is constituted through people’s relationship with it.

However, people’s experiences of the world are different: “There is only one world, but it is a world that we experience, a world in which we live, a world that is ours” (Marton & Booth, 1997, p.13). This means that the way in which you get to know and learn is by expanding your own, partial (since contextually situated) understanding of the world by experiencing the world in different ways, as it is experienced by others; “by learning about how the world appears to others, we will learn what the world is like, and what the world could be like” (Marton & Booth, 1997, p.13). This also connects with Freire’s approach to uncovering the reality of people’s lives “people together seeking out reality” (Freire, 1996, p.89). This connection is unsurprising, given that both the Freirean and the phenomenographic approaches draw on phenomenology (although their ideas on the context and purpose of learning differ).

What, then, has been our own experience of the world? Bill is Scots-Irish. After graduating with a degree in English and Librarianship, Bill was a professional librarian in both public and academic libraries from the mid-1970s to late 1980s, and an active member of the United Kingdom’s (UK) Library Association for much of that time. This period provided a firm grounding in the professional community perspective. It also fostered interest in various aspects of practice now regarded as IL, in particular the area then referred to as ‘user education’. A move into educational development in the late 1980s re-orientated Bill’s career and led, through a staff and educational development unit (Centre for Academic Practice, later Centre for Academic Practice and Learning Enhancement) at Strathclyde University (SU), to a strong interest in pedagogical research and development, teaching and curriculum enhancement (Johnston, 2010). Bill retired in 2010: he remains academically active as an Honorary Research Fellow in the School of Psychological Sciences and Health at SU, and is also an activist in the Scottish Older People’s movement (Johnston, 2016).

Sheila, a white Englishwoman was, like Bill, the first on either side of her family to go to university. After jobs in a university and a specialist library, Sheila became part of the emergent

information industry in 1980, when she joined the British Library to market the UK's first networked online host, BLAISE (British Library Automated Information Service). From that point onwards using technology to engage with information has been a main focus of her work: initially online hosts, videotex and CD-ROMs, then the web, Web 2.0, social media, virtual worlds, Technology Enhanced Learning (TEL) and video games. Towards the start of her career the focus was on teaching people to search, first bibliographic databases, then business information. At the same time she became immersed in professional activity, in particular with the UK's Institute of Information Scientists, an association which had strong disciplinary roots outside the library field (Webber, 2003).

After making the move to academia (SU's Department of Information Science) in 1992 her interests broadened to engagement with information in ways other than "search", and she started an evolution from marketer, manager and information scientist to researcher and teacher. Engagement with the University of Sheffield's Centre for Inquiry Based Learning in the Arts and Social Sciences, as an Academic Fellow, was particularly influential on her pedagogy (e.g. Webber, 2010). Her understanding of IL has also been deepened through committee-level engagement with the International Federation of Library Associations and Institutions (IFLA) and UNESCO's Global Alliance Partnership for Media and Information Literacy (GAPMIL), and through her doctoral students' work (e.g. Dokphrom, 2013; Salha, 2011; Batool & Webber, 2017).

Bill and Sheila first encountered each other at a trade union meeting at SU, and went on to collaborate, firstly on modules within an Information and Library Studies programme, then on a module for Business School students, and, further, on a range of IL writings, research and seminars.

As well as disciplinary roots in Librarianship and in Information Science, we have strong connections to the field of educational research, specifically the UK/Nordic/Australian field of research out of which have developed concepts such as surface and deep learning (Marton, Hounsell & Entwistle, 1984), constructive alignment (Biggs & Tang, 2011) and Threshold Concepts (Meyer & Land, 2005). You also do not lose your past experience. Both of us identify ourselves as people who have been library/information practitioners, and that experience has shaped what we think and do now. We continue to practice as teachers, researchers and IL advocates.

Our definition of IL encapsulates our perspective and forecasts subsequent development of our thinking:

"Information literacy is the adoption of appropriate information behaviour to obtain, through whatever channel or medium, information well fitted to information needs, together with critical awareness of the importance of wise and ethical use of information in society." (Johnston & Webber, 2003, p.336)

This is distinctive in its explicit connection with the research field of information behaviour (Wilson, 2010), and flagging up the requirement to look at behaviour contextually. What is "appropriate" will depend on the nature of the need, and an important part of IL is being situationally aware (a concept that will be elaborated in section four of this article). The qualification "through whatever channel or medium" signals that information resides in many forms, including people, the environment, and in print and digital media (Buckland, 1991). The remainder of the definition introduces a link to the wider socio-cultural dimension of IL. It characterises IL in terms of social values, practices and the utility of information for wider social purposes, which influence, and are influenced by, prevailing socioeconomic structures and experiences. Becoming information literate thus entails cognitive and social development as well as practical acuity. It also may be practised by individuals, or collaboratively.

This definition was developed as a shorthand to indicate what kind of thing IL was for us: a necessary item for authors who frequently write and talk about their subject. However, consistent with our non-dualist approach, we do not believe it wholly captures IL as a phenomenon, since its reality is contextual (temporally, as well as in terms of site, culture etc.). In section four we will discuss further why we believe that this means that individuals, in order to develop their IL, need to be situationally aware of how their IL needs change over time.

We started our engagement with IL (as opposed to “searching” or “user education”) in the latter part of the 1990s/early 2000s. Since the next two sections of this article build on our earlier work, we will sketch out developments in a time which we would describe as formative for IL, as interest spread outside North America (NA), and took root elsewhere. We developed ideas on IL in interaction with the people and movements of that time, and were also part of that era. Therefore we follow this with a brief summary of the key themes that we started addressing then, which we (and the IL community) are still engaged with, and which we discuss further in this article.

Firstly, we will select some initiatives around this time, focusing on developments outside NA, since we ourselves are situated outside NA, and as a counter to the narrative of IL that privileges a NA timeline e.g. infamously in Information Literacy (n.d.). These snippets give a flavour of what was going on.

Frameworks. In the UK, the seven Pillars of IL model was published (SCONUL Advisory Committee on Information Literacy, 1999); in 2001 the Australian and New Zealand Institute for Information Literacy produced its IL framework (revised in Bundy, 2004) and a year later Mexican standards for IL in HE were produced (Cortés et. al., 2002): the last two strongly influenced by the Association of College and Research Libraries (ACRL) (2000) Standards. Work on the Scottish IL framework began in 2004 (Irving, 2011). IL was one of the “12 classic themes” in a European project which set out to invigorate the European library and information science (LIS) curriculum by identifying what should be taught and how to teach it (Virkus, Boekhorst, Gomez-Hernandez, Skov & Webber, 2005).

Associations. The Australian Library and Information Association’s Information Literacy Special Interest Group was set up in 1997 (Booker, 1998). Nordinfolit was founded in 2001 (Tolonen & Toivonen, 2010), providing an IL focus for librarians in Nordic countries. Federal IL groups developed in Germany from 2002 (vom Orde & Wein, 2009). In 2003 IFLA’s Information Literacy Round Table was upgraded to a Section and the UK’s Information Literacy Group (ILG) was formed in 2004.

Conferences. The first Spanish-speaking IL conference took place in Mexico in 1998 (Lau, 2007), and in 1999 the first Nordinfolit *Creating Knowledge* conference took place, focusing on IL and higher education (Malmö Högskola & BIVIL, 1999). In 2000 the series of Australian national IL conferences (which had started in 1992) transitioned into the International Lifelong Learning conferences (Appleton, Macpherson, & Orr, 2000). 2001 saw the first of the French IL conference series, *Les Rencontres FORMIST* (Chevillotte & Colnot, 2010) and in 2005 the first (UK) *Librarians’ Information Literacy Annual Conference* (LILAC) conference was held.

Internationalisation. UNESCO set IL more firmly on the international stage with the first expert conference in 2003, which resulted in the Prague declaration on IL “towards an information society” and a research agenda for IL in health, education, economic development and policy contexts (Thompson, 2003). Similarly, whilst earlier overviews of IL (e.g. Spitzer, Eisenberg & Lowe, 1998) had focused on a mainly NA view of IL, perspectives from other regions emerged more strongly in this period. Bruce & Candy (2000) edited a collection which documented “important, contemporary, information literacy initiatives” (pp.xiii) in Europe, Southeast Asia, South Africa, New Zealand and Canada, including both research and practice. Basili’s work

(2003) contains a series of chapters giving a “first insight into the state of the art of Information Literacy in the European Union”, which is also illuminated by Virkus’ (2003) substantial literature review.

Research. Significant qualitative research, and critical debate, emerged during this period and Bruce & Candy (2000, p.xiii) note that most contributions to their volume were “underpinned by the constructivist, relational and critical ways of thinking about learning which are dear to us, and which we believe provide the richest insights into the phenomenon of information literacy in its many guises and contexts”.

The chapters’ foci include Australian indigenous communities, socio-economic status and IL in South Africa, and an argument for taking a critical-realist approach to IL. Phenomenography emerged as an important research approach, with Bruce’s (1997) research monograph (one of the few non-NA publications to be listed in Rader, 2002) and Limberg’s (1999) study of Swedish learners giving “a better understanding of what is complicated and why this is so, as from the users’ perspective”. Findings from the large scale INFOLIT project in South Africa (1995-2000) were published, and there was increased awareness of the inappropriateness of depending on Anglo-American models of IL (e.g. de Jager & Nassimbeni, 2002).

Thus the debate on IL in this period was being informed by increasing numbers of practitioners and researchers with different perspectives and contexts (for example from different cultures, with different philosophical or political views, taking different theoretical perspectives). It was an exciting time, and potentially a time when IL could gain awareness because of national and international agencies’ keenness on the “Information Society”.

We contend that, although (as will be argued in section three) IL has developed, it is not as vigorous as might have been expected from these beginnings. ACRL Student Learning and Information Literacy Committee (2017), for example, indicates the progress, but also the problems. It is evident from this ‘white paper’ that the importance of cultural awareness, contextualization of IL, reflexivity etc. still have to be explained (rather than taken for granted in a mature field) and that the value of IL is still little understood by policy makers.

In our critical analysis (Webber & Johnston, 2003, p.263) of the UK’s position as regards IL in the early 2000s (looking at political, economic, social and technological developments) we identified that it was still “a potentially rich landscape, but one full of contradictions and conflicts”. For example, the rhetoric of the then Prime Minister, Tony Blair, of citizens thriving in an information society was not matched by economic or social policy.

Additionally, the IL literature and discourse was still primarily focused on IL as a skillset; transferable and measurable. In the UK, this was consistent with an instrumentalist government focus on the economically relevant, e.g. preparing students for the ‘knowledge economy’ defined in terms of neoliberal economic thinking and obsession with growth and competitiveness in the global market. This was reflected in key documents such as the *Dearing Report* (The National Committee of Inquiry into Higher Education, 1997) with its focus on key skills and employability. There was also an increasingly dominant, and equally instrumentalist, focus on the digital: understood in neoliberal thinking and state economic policy as a ‘technological revolution’.

The growth in interest in IL unfortunately thus, in the UK, coincided with a trend in UK Higher Education (HE) that moved toward efficiency and accountability, and away from critical reflection (Barnett, 1997; see also e.g. Gibb, Haskins, Hannon & Robertson, 2012). The library sector reflected the trends, responding to pressures by focusing on performance measurement (e.g. Abbott, 1994; Poll, de Boekhorst, & Hiraldo, 1996) in the “broader environmental context of change and competition” (Town & Stein, 2015, reflecting on 20 years of the Northumbria

performance measurement conference). The emphasis, in library practice, on IL as a skill-set for study and employability is understandable in this context, and the approach moved from practice into being enshrined in professional statements. Many of the frameworks (e.g. ACRL, 2000) are captured in nested lists or tables, organising methods beloved by standards- and outcome-focused education. One still today observes attempts to wrestle more nuanced concepts into this format: for example Oakleaf's (2014) reduction of the complex business of moving from a Threshold Concept into learning in the classroom into 10 practical steps

Against this background, our first focus when starting our IL journey was on reviewing the landscape of IL in HE, and taking action to design an alternative curricular approach. Whilst working on this we transitioned from a vocational conception of IL (IL as "useful", and the province of library and information professionals) towards the 'disciplinary' perspective that we discuss in section three of this paper: a fuller and more complex account of IL, relevant to a variety of contexts and influences.

In Webber & Johnston (2000) and Johnston & Webber (1999) we set out our perspective on IL based on the definitions and practices available at that time. We challenged the emphasis on 'skill-list' approaches and advocated taking an approach grounded in the different behaviour and experiences of people in context. In those papers we also addressed the nature of pedagogy for IL and described our experiences of curriculum development aimed at extending undergraduate student learning beyond information skill sets, to the first credit-bearing IL module in the UK. This module was open to any student in the Strathclyde Business School, and based in social constructivist and relational accounts of teaching and learning. Our approach aimed to enable students to conceptualise IL within their own lifeworlds, more specifically requiring them to reflect on what IL and learning meant to them in relation to their past and near future studies, and their future careers. This encouraged them to reflect on IL as something more than a set of academic skills, tied to a specific academic task.

In Johnston & Webber (2003) we reflected further on the place of IL in the curriculum and proposed a model of the Information Literate University (elaborated in Webber & Johnston, 2006). This model envisages a whole-institution approach to IL, not just curriculum reform. Through our PEST analysis of the UK (Webber & Johnston, 2003) and an investigation of the IL of social action groups (Webber & Johnston, 2002) we took this further to conclude that there was need for information literate government. This work extended our thinking and research to encompass the nature of IL's presence in the UK state and this perspective gave tangible evidence of the appropriateness taking such a direction.

In addition Webber & Johnston (2000) addressed the relationship between IL and Information Science, in order to provide a more theoretically sophisticated sense of disciplinarity to IL research and education. We articulated a discussion of IL as a "non-vocational" discipline in its own right (Webber & Johnston, 2000, p.395), and argued that this approach would be essential to the progress of IL. This argument was developed in Johnston & Webber (2006), where we articulate IL as a soft applied discipline (this is discussed further in the next section of this paper).

Finally Webber & Johnston (2000) included an extended modelling of the 'information literate person in a changing world' thereby forming a conceptual bridge between the narrow focus on IL skills, education, professional interests etc. and the wider framing of IL in society. We noted that (2000, p.387) "one can put forward a case for every citizen studying information literacy".

Having positioned ourselves as participant-observers in a formative period of IL, we will develop our argument in two critical areas of IL that we have continued to address, and which are still both important and contested: that of the information literate citizen, and the discipline of IL.

3. The case for IL as a discipline

3.1 Introduction

Our adherence to the notion of IL as a discipline, entailing disciplinary ways of thinking about IL topics and issues, arises from our earlier account of our positionality. Our way of apprehending reality from a phenomenographic perspective, and engagement with educational development, leads to a sense that IL is not simply a set of discrete aspects of professional practice, such as searching or user education. It is, rather, that we view IL as an ongoing academic endeavor of research, in dynamic interaction with practice. To do justice to the complexity of IL we treat it as an emerging discipline, and it is with this horizon in mind that we set out our observations and reflections in the form of a case for IL as a discipline, which we, and others, are in the process of delineating.

We have positioned IL as a discipline since 1999 (Johnston & Webber, 1999). In particular, we put forward an extended argument in Johnston and Webber (2006), using Becher and Trowler's (2001) indicators of a discipline. We noted: the existence of professional associations, journals and graduate (research) students; the emergence of an international community with a distinctive terminology; evidence of people identifying with the discipline; a growing knowledge base. The main lack in relation to the indicators was that there was not yet a department of IL.

Further, we categorised IL as a soft applied discipline. These disciplines are characterised (Becher and Trowler, 2001) as drawing on clusters of ideas from other domains. In soft applied disciplines there is disagreement about what are the most important research questions, but they commonly aim to enhance personal and social life, through research, which is influenced by a desire for tangible outcomes. This is in contrast to hard pure disciplines (physics, for example), which display different characteristics in terms of approaches to research, epistemological development and related pedagogical approach.

This section will present evidence that IL has continued to grow in the areas mentioned above, and then reflect on what might be hindering IL's development as a discipline, and why this issue matters. We will also address the current discourse on disciplinarity and interdisciplinarity.

3.2 Indicators of an emerging discipline

We argue that there is evidence of growth in IL since 2006. Firstly, there is growth of the literature. In their bibliometric study reviewing 100 years of publication in LIS, Larivière, Sugimoto & Cronin (2012) identify "literacy" as a growth word (judged on its occurrence in LIS journal article titles, looked at as a percentage of all LIS titles). The authors explicitly associate this with IL, and note that the growth starts a few years after Zurkowski's (1974) seminal paper. Other growth words include information, behavior/behaviour and use/r (Larivière, Sugimoto & Cronin, 2012, p.1004). This corresponds to the LIS field's shifting focus away from libraries and their functions, and towards the user in a networked world and his/her information behaviour.

Pinto, Escalona-Fernandez & Pulgarin (2013) take 1974 as the starting point for their bibliometric analysis of the use of the terms IL, information competence and information skills, in social science and health science journals. Their study demonstrates exponential growth in the volume of articles published on the topic. Similarly, in their analysis of the annual listing of IL literature in *Reference Services Review*, Sproles, Detmering & Johnson (2013) note (between 2001 and 2010) both an increase in the number of articles deemed eligible for inclusion, and the percentage of them which are peer-reviewed. Taken together, and even allowing for the differences in methodology, these studies indicate that IL is increasing the literature base, becoming more scholarly and taking a more prominent position within the overall LIS field.

The literature base may be expanding at an even faster rate than the bibliometric studies suggest. The journals *Communications in Information Literacy* (CIL) and *JIL* celebrated their

10th birthdays in 2016 and 2017 respectively, with their regular output including peer reviewed articles. *Web of Science* has only indexed *CIL* since 2015 and at time of writing did not index *JIL*.

Annual national IL conferences have continued (2017 saw the 45th LOEX (2017) conference), with the addition of the annual European Conference on Information Literacy (ECIL). In his commentary on the (173) abstracts for the 2014 ECIL, Johnston (2014) noted the variety of research methods (both quantitative, qualitative and mixed methods) being used and the varied lenses (e.g. indigenous, socio-cultural, post-colonial). A study by Virkus (cited in Roy, Kurbanoglu, Mizrachi & Špiranec, 2017) identified that 48% of IL research publications in 2013 resulted from ECIL papers.

Graduate research students are continuing to focus on IL. A search of *Proquest Dissertations & Theses* for doctoral theses published between 2000 and 2016 which have “Information literacy” in the title (and which are about IL) yields 125 items. This database is by no means comprehensive, but it can be used as an indicator of modest growth (with between 2 and 4 dissertations per annum 2000-2005, and between 8 and 13 per annum 2010-2016). It also reveals the variety of doctoral research methods. These include experimental and quasi-experimental studies, action research, case study, phenomenology, phenomenography, evaluation study, ethnography, and Delphi study. Theoretical frameworks such as critical theory and the technology acceptance model are also employed. This is consistent with a soft applied discipline, drawing on methods from various other disciplines, both hard and soft, with research outcomes that are often expressed as validated test instruments, frameworks, or practical recommendations for specific change e.g. course redesign. In essence IL, as represented by these indicators, has taken off into sustained growth as a distinct object of study and research.

The content and tenor of scholarly debate is significant for any claim of IL emerging as a discipline and this can be outlined by reference to the kind of views represented in the academic and professional intellectual space. IL has been interpreted from different perspectives. For example, Limberg, Sundin & Talja (2012) characterise IL as a field of research, rather than a discipline, proposing that the term *information literacies* better captures its varied nature when seen through different theoretical lenses. Lloyd (2010) frames IL as a critical information practice, drawing on Practice Theory to strengthen IL’s theoretical grounding. Budd and Lloyd (2014, p.1) have, further, debated how theoretical frameworks might “form an even richer and more robust underpinning for the work of information literacy”.

These could be seen as ways of illuminating the complexity of an emergent field, or alternatively as revealing fractures within it. We would tend to the former view: these are scholars exploring the field from different perspectives, and in some cases explicitly comparing the different perspectives. This is different from demanding there be one right way of defining IL and that your way is the right one. However, for there to be progress, it is important that there are ongoing conversations around these perspectives, so that the discipline develops and matures.

3.3 The discourse about disciplinarity

The approach to categorising disciplines described by Becher & Trowler (2001), together with Whitley’s (2000) study of the organisation and interrelationship of disciplines, are still used when exploring disciplinary differences. As will be argued in the next section, denying the existence of IL as (at least) a subject field has problematic consequences. However, it is important to recognise the debate around disciplinarity.

Trowler, Saunders & Bamber (2014) provide both a successor and a critique of Becher & Trowler (2001). The authors adopt a social practice perspective to disciplinarity (see e.g. Trowler, 2014, pp.9-10) and discipline is defined as:

Reservoirs of knowledge resources shaping regularized behavioural practices, sets of discourses, ways of thinking, procedures, emotional responses and motivations.

These provide structured dispositions for disciplinary practitioners who reshape them in different practice clusters into localized repertoires. While alternative recurrent practices may in competition within a single discipline, there is common background knowledge about key figures, conflicts and achievements. Disciplines take organizational form, have internal hierarchies and bestow power differentially, conferring advantage and disadvantage (Trowler, 2014, p.9)

The first sentence indicates both the knowledge base of the discipline and the way the community interacts and responds to it, and each other. The second acknowledges that disciplinary developments are contextual, for example responding to local culture and priorities. The third recognises the competitive academic environment, and also competing practices, but stresses that there has to be a shared disciplinary world providing a background and foundation.

The final sentence points to the organisational form of disciplines. Traditionally this would manifest as a department within an academic institution. However, this phrase accommodates alternative organisational forms, perhaps more suited to the more complex organisms that 21st century universities have become. More protean formalisations, for example in international or regional institutes, could be an appropriate response. It opens up the possibility of creating an “organisational form” for IL which might encompass both academic and practitioner contributions to the discipline.

We contend that IL can be positioned using Trowler’s (2014) definition of a discipline. It is in tune with the research approach taken by many in the field, emphasising context, complexity, social interplay and power relationships. However, at the moment the differences, localised repertoires and conflicts are as much in evidence as are the regularized practices or structured dispositions.

Whitley (2000) identified seven types of disciplinary field, from the least to most integrated. At one end is the “fragmented autocracy”, with a plurality of influences (e.g. from other disciplines, from employers) driving research goals and methods, reliance on standards (e.g. of research quality) from outside the discipline, and therefore a lack of integration within the discipline. Whilst there is an upside to this (a lack of one dominating elite, for example) such a discipline is under threat of dissolution. At the moment, IL would seem to lie at this fragmented end of the spectrum.

In this context it is worth noting that, to maintain a discipline, there is a need for “jargon”. This is stressed by Whitley (2000) and also, for example by Davies & Devlin (2010, p.22), who note that “methodologies, procedures and concepts” cannot be taught without a discipline-specific vocabulary. Whitley (2000, p.241) identifies how developing a specialised vocabulary is necessary for survival as a discipline. If choice of vocabulary is determined by whether people outside the discipline can understand it, it

encourages diffuse contributions which are open to varied interpretations and so difficult to compare and contrast systematically across research groups and historical periods [making it] improbable that research in fragmented adhocracies will become highly coordinated or systematically interrelated.

This shared language can foster the “sets of discourses, ways of thinking, procedures, emotional responses and motivations” in Trowler’s (2014, p.9) definition. We contrast this with a common anxiety about creating an IL jargon.

It is also worth considering the nature of interdisciplinarity, as the work of IL, the LIS discipline and librarians’ practice is often referred to as interdisciplinary (e.g. Brunetti, Hofer & Townsend,

2014). Davies and Devlin (2010, pp.11-12) explore the notion of interdisciplinarity, adopting the definition

“the emergence of insight and understanding of a problem domain through the integration or derivation of different concepts, methods and epistemologies from different disciplines in a novel way”

Key aspects here are *integration* and *novelty*. Davies & Devlin (2010) identify a spectrum of approaches to interdisciplinarity, many of which do not truly involve integration. Integration implies genuine engagement with each other’s knowledge base and epistemology. In order to get this engagement, one’s discipline has to be recognised as having these things. Truly interdisciplinary partnerships emerge in the IL field (Limberg, 2017, describes one such, and one involving Bill will be described later in the article). However, engagements between IL librarians and faculty in other disciplines is often cross disciplinary at best: engaging with someone in another discipline to help them understand the information-related aspect of their own discipline and not requiring them to understand the complexity of one’s own.

3.4 Hindrances to IL’s formation as a discipline

3.4.1 Introduction

In this section we identify tendencies and conceptual issues that are inhibiting the development of IL as a discipline. It should be noted that often discussions of hindrances to IL focus on others (e.g. faculty, administration, government) or on the failure of librarians to upskill. In this section we are, rather, examining tendencies amongst those who see themselves as already engaged with IL: people who are in a position to do something about these hindrances, if they want to.

3.4.2 Denying IL is even a subject

One block to cohesive development of IL is the argument that IL cannot be a discipline, or even a subject, because it is not meaningful when detached from its context. This tendency appears to arise because a core activity of librarians employed in the educational sector is teaching IL to learners in other disciplines. This tendency may be a reaction to very generic IL sessions, frameworks and tutorials, and signal difficulty in understanding IL outside a practice context. However, as Trowler (2014, p.13) notes “knowledge structures are not the same as curriculum structures”.

We feel that it is not logical to dismiss IL as a subject. The same might be said of many social science disciplines: marketing has to have an object, management has to involve a set of people or resources, economics only makes sense when looked at in relation to actual economies. This has not prevented people researching and developing influential and useful models and theories in these disciplines. Moreover, in our previous section we have outlined how people are researching IL, writing about IL, and gaining PhDs about IL.

Similarly, other subjects are taught to learners outside the discipline. Mathematics within engineering and mathematics within marketing courses has differences in terms of what is taught and how it supports the discipline of marketing or engineering. Indeed, the threshold concepts (troublesome and transformative concepts; Meyer & Land, 2005) might be different for the two sets of learners, but this does not stop mathematics being a discipline.

One must distinguish between the discipline and the varied curricular forms the discipline takes to meet the needs of different groups of learners (e.g. in IL as expressed in documents such as Secker & Coonan, 2011). Both are important.

3.4.3 Paucity of theory

Seeing IL as undertheorised is a valid criticism of IL at this point. For example, whilst Sproles, Detmering & Johnson (2013) identify the increasing percentage of IL articles which are peer reviewed, they categorise only 28.2% of articles 2001-2010 as reporting on empirical research, and a further 12.6% as being theoretical contributions. However, this is not abnormal, since IL is young as a field of study, and there is still room to hope that theory will be developed further from the growing base of empirical and conceptual work (and indeed Lloyd tackles this in this same issue of *JIL*). There is already a good deal of empirical research upon which to build.

3.4.4 Silos

There are silos within the IL community: within countries, within occupational groups, or delineated by theoretical stance (e.g. “philosopher librarians” vs. “practical librarians” (Bombaro, 2016); but also Critical Information Literacy (CIL) vs anything not explicitly “critical”). We will take CIL as an example. It has effectively developed as a sub-discipline of IL, quickly established revered figures, a specific focus, and theoretical stance and positioning: a liberal arts sub-discipline, drawing on critical theory and critical pedagogy and ideas from rhetoric and composition. The object of study is not always explicitly stated, but is clear: teaching IL in higher education in NA (e.g. in Tewell, 2015).

This tight focus has resulted in thoughtful and insightful publications (e.g. Drabinski, 2014), which make a contribution to the evolution of IL. However, at time of writing, it has mostly been disconnected from other sites of IL discourse (as evidenced by lack of citation or recognition within CIL publications) with just some boundary spanning emerging (e.g. Hicks, 2013; Smith, 2013). We expand on this in the next section.

Given the nature of soft applied disciplinary working, it is unsurprising that disagreements and competing tendencies can be observed. However it is important to introduce a mechanism for ongoing engagement and exchange aimed at building a more coherent sense of the discipline and avoiding unproductive either/or positioning.

3.4.5 Moulding IL - from outside the discipline

This type of external focus manifests itself in the way authors draw on fields outside, rather than inside, information science and librarianship. Drawing on other fields is a characteristic of a soft applied discipline and can enrich it. However, what we mean here is doing this whilst not connecting with the IL research field itself. This leads to fragmentation, with interesting intellectual pathways decontextualised from developments elsewhere. It reinforces the silo effect identified in the previous subsection, as different silos draw on different theories and epistemologies.

To continue with the example of CIL; as is evident e.g. from Tewell (2015), Baer (2013), or McDonough (2014, p.35), this movement draws heavily on critical pedagogy, critical literacy and the field of rhetoric and composition. However, there is a dearth of references to IL research which does not specifically frame itself as CIL, and to practice or pedagogical research outside North American higher education. Whereas the opposition of CIL to “traditional notions” of IL (Tewell, 2015, p.28) is often outlined (usually with reference to the ACRL (2000) IL Standards), CIL is not positioned in relation to scholarly and empirical work on IL from other countries, nor to North American qualitative research in highly relevant fields such as Information Behaviour.

The way in which CIL has evolved may be explained by looking at why it has evolved: as a response to forces in the North American higher education and library systems which constrain how librarians teach IL. O’Connor (2009a; 2009b; 2009c) argues that the rise of IL in NA was stimulated by librarians’ desire to be recognised as actors in educational reform, and to respond to technological change, and thus legitimise the profession. In her argument developing an

abstract concept, IL, was seen as “a necessary step to protect the profession and make it more resilient to competition and external change” (O’Connor 2009c, p274).

If this argument holds, it presents a more instrumentalist picture than, say, the development of IL in Australia, which included engagement of IL researchers, and a strong thread of reflexivity, in its early years. It may also reflect a lack of disciplinary research engagement at LIS programme level: Garcia (2015), reviewing a book on “How 14 librarians came to embrace critical practice” notes that their encounters with critical theory and critical pedagogy occurred outside LIS programmes. In this respect, we have already noted Elmborg’s (2012) statement about his roots in English and composition, and an allegiance to past (non-IL) disciplinary experience is also evident for example in Drabinski (2014).

As well as flagging up actions for those in the IL community to engage more actively with each other’s ideas, this also points up the need for disciplinary grounding within Masters-level LIS courses. Additionally, it is worth noting that our analysis of IL doctoral dissertations in *Proquest Dissertations & Theses* (mentioned in section two of this paper) revealed that most commonly those dissertations which focus on a local context (e.g. those in the USA researching IL in the USA) have been supervised in departments *outside* LIS (often a department associated with education). Whilst these works use a variety of research approaches and yield rich results, an initial examination indicates that a corollary to this may be lack of use of theories and models from *within* LIS. Further investigation would be useful here.

3.4.5 Positioning IL as insufficient

By this we mean assertions and activities based on the notion that IL is an insufficient concept, and needs augmentation. We do not mean fruitful debate about how the field could develop and how it relates to cognate areas. We are, rather, referring to commentators who take some feature or force from the external landscape (e.g. technology), and an impoverished, static notion of IL, to show IL is deficient, and then argue that new concept X (say, digital fluency, e-literacy) would therefore be a better way to progress.

This tendency was discussed at greater length in Nazari and Webber (2012) and connects to our discussion of external forces in the next subsection. This is part of a wider habit of personifying IL and then upbraiding it for not keeping up with the times e.g. O’Connor (2009a, p. 82) “IL should go farther to acknowledge the political nature of knowledge creation even when that knowledge is internally accurate, un-biased and well supported.” This is in contrast to treating IL as a dynamic concept, co-created by the community.

3.4.6 Framing external forces as prime dictators of IL development

We have already identified that we see IL as contextual, therefore it is important to consider both local and global contexts when considering the question of what needs to be researched next. However, what we address in this section is a tendency to set a research agenda solely or primarily in response to perceived external pressures on a site of practice. Whilst this is a valuable *part* of a research agenda for IL, when the focus is solely on this it means that the agenda is reactive, does not necessarily connect with previous research in the field, and is fragmented (as the concentration is on reacting to local/regional forces).

An example of this tendency is the research agenda drawn up by the ACRL IS Research and Scholarship Committee (2003; 2011). They position the proposed agenda and priorities as a reaction to changes in learners’ behaviour and in the environment, notably the “instruction environment” (ACRL IS Research and Scholarship Committee, 2003; p.480), and technological change. The proposed agenda is related to previous research mainly by identifying deficiencies e.g. lack of generalisable evidence, rather than positioning this agenda within the existing research field. Exploration of the meaning of IL is not identified as a research topic, though by 2011 and even in 2003, there was already research (e.g. Bruce, 1997; Boon, Johnston &

Webber, 2007; Lupton, 2008) which demonstrated that this was a meaningful thing to do in a higher education context.

By contrast to ACRL's approach, Partridge, Bruce & Tilley (2008) and Lloyd & Williamson (2008), for example, take pains to position themselves as researchers, and emphasise how they are laying foundations, testing and expanding boundaries of the research field "here we are still working at exploring/ investigating / uncovering the phenomenon" (Partridge, Bruce & Tilley , 2008, p.120). They discuss their proposed agendas in relation to developments within the timeline of IL research, and to research and researchers outside the field. Whilst the ACRL agenda includes a strong focus on testing and measuring, Partridge, Bruce & Tilley (2008) identify that, before you get to measuring, you need to work at uncovering the phenomena you are aiming to measure.

This 'external forces' approach also leads to overemphasis on the way in which technology has been a determining factor in changing a (caricatured) oldtime narrow IL into a (possibly equally caricatured) new participative IL. Complexities of IL, and of human beings in a specific socio-cultural context, are backgrounded in order to explain why technological change has radically changed the meaning of IL. There are many publications employing this trope: one example is the table contrasting "(C)IL before and after Web 2.0" in Špiranec, Zorica & Kos (2016, p.129). Explicitly referring to Zurkowski's (1974) paper, they characterise 1974 IL as existing in a "Data Bank environment". Zurkowski's IL is portrayed as being structured, pre-selected, "rooted in the idea of institutionalised information creation" so that a citizen is "a passive recipient of accepted and authorised information" (p.257). This is compared with Critical Information Literacy (CIL) in a Web 2.0 environment, with Web 2.0 applications enabling acknowledgment of diverse viewpoints and participation in debate, de-institutionalisation of IL etc.

However, this polarisation ignores the historical context. In 1974 most of the information that people dealt with day to day was not filtered and structured in computer data banks. 10 years later Hoover (1984), in a search guide aimed at executives, still has to start with a scenario of how "you, as a busy executive" (p.1) get information from print publications and people, before leaping forward to explain how online services could improve things. At that point it was, rather, manipulation of the *mass media* (newspapers, radio and television) which was critiqued as making citizens into passive and compliant consumers (e.g. Achbar, 1994). Additionally, in 2017, although there is still a rhetoric of Web 2.0 enabling participation, there are also very serious concerns about the way in which "free expression" on social media is managed by commercial interests and governments, through assemblage and manipulation of applications and users (e.g. Langlois, 2013).

Špiranec, Zorica & Kos' (2016) polarisation also ignores some of Zurkowski's key arguments: his paper starts by identifying that information includes "human voice and action" (Zurkowski, 1974, p.1) and "all of the human skills necessary to the functioning of these physical means [of obtaining information], as well as the wide variety of economic structure on which their continued viability depends" (p.2). There is a whole section on "Freedom of expression" which notes that "Individuals require not only the right to speak, but also the right to be heard" (p.25). The paper certainly presents an argument underpinned by a strong belief in capitalism and a free market economy, and in the intellectual property rights of information producers. The advocated universal IL education (as "the top priority") clearly meets the interests of the then-infant Information Industry Association. However, this is still a vision, clearly positioned in a socio-economic framework, for all citizens to help manage their information lives better. From that point of view, it is arguably more democratic than those explanations of CIL which focus solely on learners and teachers in higher education.

3.5 The importance of seeing IL as a discipline

Having identified tendencies hindering the field, we will summarise reasons why it is worthwhile to work collectively towards development of IL as a discipline. These are focused around the argument that in order to have external impact you need to have internal strength.

Firstly, it will enable IL to develop a more robust theoretical base, building on and consolidating what has gone before. A disciplinary approach will encourage epistemological coherence and integrity. This does not mean an IL epistemological 'party line', but it does mean conversations which surface and debate differences and provide a clearer picture of key epistemological positions within IL.

Chatman (1996, p.193), in her valuable account of how she developed her theory of information poverty, notes that in order to develop theory (in her case, within the discipline of information science) "we must identify problems central to our field". IL is a soft applied discipline, which implies *some* disagreement about what problems need to be addressed next. However, interaction between specialist groups (such as CIL, or research groups in academic institutions in different parts of the world) and more productive, cross-regional discussions between practitioner-researchers and academic researchers would be fruitful. Whilst an International Information Literacies Research Network has existed since 2010 (<https://iilresearch.wordpress.com/home/>) at the moment it is neither very active nor inclusive. A research agenda which had emerged from more sustained and inclusive discussion could be valuable, for example, in arguing for the inclusion of IL research problems in national and international research programmes.

Having a firmer confidence in IL as a discipline would enable more constructive collaborations with other disciplines. The UNESCO (2017) Media and Information Literacy initiative strives to bring together those in the IL and Media Literacy (ML) communities. ML has a definite disciplinary identity: a distinctive and narrower focus in terms of population (i.e. young people), and of object of study (i.e. 'media', which is nowadays taken to include anything online). ML has a history of setting ML in political, economic and social contexts (e.g. the work of the Glasgow Media Group <http://www.glasgowmediagroup.org/>), and more established international collaborations including substantial funded projects. ML researchers also have the advantage of a focused topic, which strikes a nerve emotionally and at a policy level (e.g. children at risk). The topic is recognised at policy level e.g. the European Charter for Media Literacy (EuroMediaLiteracy Consortium, 2009).

How does ML view IL? From Livingstone, van Couvering & Thumin (2008), a chapter, first-authored by a leading ML scholar, which compares IL and ML, there emerges a view of IL as quantitative, instrumental, and focused on questions of search and access. More recently, a European Union-funded series of country reports on MIL focuses almost exclusively on ML (evident e.g. in the UK report; McDougall, Livingstone, Sefton-Green, & Fraser, 2013). Whilst this partly reflects the general academic tendency to ignore anything that is not your own discipline, it also is indicative of the diffuse nature of IL currently and its lack of disciplinary focus.

Interacting with those from other disciplines (in a truly interdisciplinary fashion) and also presenting a robust case to the outside world (for example, to policy makers) is easier if there is more evident disciplinary substance. It is also problematic if, as is the case currently, people in the IL community are too reticent and accommodating even to use the name of the discipline, worrying that it needs to be translated into *someone else's* jargon. Names do matter. If what we are advocating could be called *anything*, then (people might well rightly conclude) perhaps it isn't a thing at all.

We will finally mention an argument from Parker's (2002) discussion of disciplinarity. She notes a managerialist tendency in UK HE to focus on *subject* rather than discipline: a subject which is reduced to a set of outcomes-focused skills, understandings and competencies. This is not an argument against curricula: it is one against seeing something purely as a subject for assessment. She argues that all members of the community (including people learning the discipline) need to be engaged in reflective engagement with the discipline, debating what constitutes knowledge in the discipline, what paradigms exist etc. Many authors in the IL field now assert that IL must move away from a skill-list approach: this move may be better enabled if there is a disciplinary base to work from.

Thus, in this section, we have argued that there is evidence of an emergent discipline. Secondly, that there are hindrances to its development, which require actions and debate across national/sectoral/geographical boundaries if the hindrances are to be addressed. Thirdly, we argue that this kind of disciplinary development is needed as a foundation for further progress, something of interest to both "practical" and "philosopher" librarians (Bombaro, 2016) as well as researchers.

Having outlined our case for paying serious attention to the development of the discipline, we will give an example of the type of research focus that this discipline can address.

4. IL in the lifecourse

4.1 Introduction

We now look at IL through a different lens (that of the lifecourse), in order to articulate our view that IL is experienced throughout the whole of life and encompasses individual/collective experiences; of socialisation, education, work and many other familiar facets of life. We propose this view as a complement to researchers' and practitioners' focus on a particular lifestage or specific site of practice (e.g. work practice). These latter insights are important and valuable, but each human being moves through life temporally, with their information experiences and needs (and thus their IL) changing through time. This lifecourse focus can be one way of countering fragmentation in the IL field.

Anderson and Johnston (2016, p.13) illustrate the lifecourse perspective, describing IL as a: social phenomenon experienced in the lives of: citizens, teachers, learners, librarians, educational developers, digital technologists and those in a variety of other roles, for example in the workplace or as hobbyists.

This theoretical orientation suggests that IL can be observed in the life trajectories of people as they age and as they interact with their families, their peers, the education system, employment career stages and engagement as citizens. Thus the interdependencies between individuals and others are key focal points in any account of the information literate person to the extent that they expose the nature of the information content and activity entailed in the socio-psychological interactions within and between persons.

Integral to our lifecourse perspective is the necessity of combining insights from different disciplines, which engage with human development and culture. We contend that IL offers an essential contribution to insights from subjects like psychology. The mutual engagement with concepts and theories from both disciplines (the true interdisciplinarity referred to in section 3.3), offers a more powerful response than either might achieve separately. This requires a confident discipline of IL engaging with other disciplines to deepen understanding of common areas like the lifecourse and the experience of information and knowledge in society.

For example Bill Johnston and Anthony Anderson developed their interdisciplinary (IL, educational development and psychology) work over a period of years. Initially they

collaborated on small-scale activities such as academic staff development workshops on topics such as memory and cognition in relation to student learning and pedagogical practice. Over time and through much discussion they explored each other's disciplinary backgrounds and established mutual insights and ideas about IL. This relationship took form in research and publications (Anderson, Johnston & McDonald, 2012; 2013; Johnston, Anderson & McDonald, 2012; Anderson & Johnston, 2016). This is qualitatively different to more limited and narrowly focused instrumental collaborations around IL e.g. joint working on an assessment rubric. They now work together in a collegiate mode as academics sharing their disciplinary perspectives and ways of thinking, to provide new insights into IL.

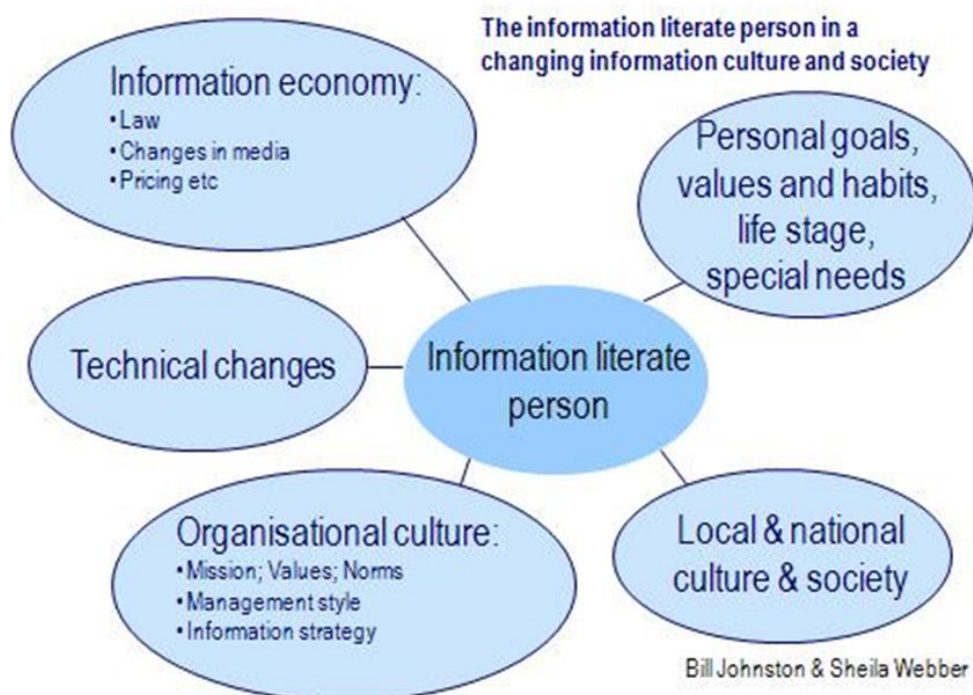
This kind of interdisciplinary study can illuminate the diverse ways individual lives and the experiences of common contexts such as society, or more specifically social communities, relate to social change, and how IL can be entailed in change at both the institutional and personal levels of society. IL can be approached by taking up the challenge of identifying and analysing specific contexts using models of, for example, learning trajectories and career paths, to provide theoretical framing and choice of research methods for a given research design. Thus the IL dimension of the direction of an individual's pathway through education and into employment can be traced and explored. IL is conceived as growing organically throughout life and, being necessarily malleable, subject to the effects of teaching and other interventions. These interventions combine formal and informal pedagogical and educational approaches together with the widened social horizons that accompany mature experience.

4.2 The Lifecourse perspective and IL in a changing society

The main elements of our lifecourse perspective are illustrated in Figure 1, below (introduced in Webber and Johnston, 2000). Humans and their development are portrayed in our model by the shorthand notion of the 'information literate person' positioned in relation to five powerful personal, social, economic, organisational and cultural vectors. Every individual has their own personal and contextual relationship with information, usually involving other people and groups, which changes throughout the stages of life in response to the prevailing economic, social and educational conditions. These relationships can be observed in a variety of patterns within and across the five areas of our model.

Much IL research and practice has focused narrowly on particular instances of relationships, for example features of educational or workplace contexts; key transitions in life such as from school to college to employment; significant areas such as health; and the exercise of citizenship rights. Historically the focus of attention has been on education, with a growing interest in the workplace, and a powerful, arguably distorting, attention to technological developments.

Figure 1: The information literate person in a changing information culture and society



The importance of ‘agency’, in the sense of *self-awareness* and *self-direction* should not be overlooked. Our concept of the information literate person is not an academic abstraction, but is grounded in the view that people can and should take control of their own trajectories in life, including the development and understanding of IL. Ambition, choice-making and planning are important signifiers of agency and therefore present opportunities for specific studies of IL and the design of interventions to assist change.

However it is equally important to recognise that the extent of a person or community’s agency is context dependent and can be both supported and constrained by the circumstances of a given situation. How might IL fare in times of austerity, or under restrictions on information activity imposed by the state? Answers may depend on people developing a sense of *situational awareness* so that their Information Behaviour is appropriate to a given context at a particular stage in life, and is sensitive to the conditions of political economy, social stratification and technological infrastructure of the time. Developing such awareness is a lifelong learning project entailing concept formation, a disposition to learn, specific knowledge, epistemological sophistication, reflection on experience and collaboration with others.

Using this theoretical orientation it is also possible to consider collective experiences of IL. This approach emphasises that the notion of an information literate person is *not* an “empty vessel” conception, it is rather about the nature and development of personhood in culture and society. From that point of view, although it refers to the (singular) person, the person’s context may mean that developing their IL and answering needs involves interaction and collaboration with other people. Factors will include local cultural practice and norms, and whether organisational environments (e.g. work, educational) encourage individual competition or teamwork. The information environment is also determined by the interaction between the elements in the diagram.

We have summarised our account of the diagram elsewhere (Webber & Johnston, 2013) so in this paper we concentrate on unpacking two particularly significant elements represented in the

diagram 'bubbles'. Firstly '*technical changes*' and secondly '*local and national culture and society*'.

The '*technological change*' bubble on our diagram is perhaps the most prominent dimension of popular discussion at this time, given the emphasis on the internet and digital technologies as key drivers of the world's technological infrastructure, communications and economic change. The political and business discourse of competitive knowledge economy is underpinned by assumptions about the economic potential of technological change, when linked to investment in the markets for relevant products, services and human expertise, to function as an economic 'growth engine'.

In addition the effects and consequences of technological change are significant features of popular culture and political discourse, and can be discerned in information related accounts of major areas of society such as:

- state regulation of information systems and commodities e.g. surveillance,
- Freedom of Information systems and their related controversies;
- inter-state interference e.g. cyber espionage and propaganda, such as claims of Russian interference in the 2016 US elections;
- media and political activity e.g. claims that social media exhibits certain negative tendencies such as fake news.

These issues are the subject of justified public concern and as such attract considerable media attention, displaying at times an element of 'moral panic'. They are areas where an IL perspective would be very valuable. However, currently, this tends to manifest mainly in the form of short explanations of how IL can help, or guides to avoid the problems (e.g. IFLA's (2017) checklist to avoid fake news). We contend that our model provides a plausible framework to contain and engage interlocking studies, and to offer a bridge to relevant work in the social sciences and the area of Media and Information Literacy (MIL) (UNESCO, 2017) in particular.

The information landscape has, to an extent, been dominated by the nature and response to technological change in the means of producing, consuming and channeling information. A more holistic perspective is therefore essential to constructing a balanced, nuanced and interrelated account of IL in society, which avoids the pitfalls of uni-dimensional analysis. Our approach combines human development (the information literate person) and social change (changing information culture and society) to offer a vision of IL in culture and society.

Unpacking the '*local and national culture and society*' bubble, the nation is seen as a collective social identity defined by the borders of the geographical location of the peoples concerned. This can include the historical development of the nation. The related notion of the state can be described as a structure of political power, administration and governance. The combined construct of the nation state offers an extension of the "culture/society" dimension of the diagram, which focuses attention on key political and sociological features of culture and society.

Nation states can be described and differentiated using constructs such as democracy, theocracy etc. and related to constituent groups defined by social class, gender, age, ethnicity, religious beliefs, political affiliation etc. Equally relevant are state managers, both politicians and civil servants, given their management roles in the operations of the state, including the flows of power and channels of information associated with decision-making, and their symbolic and operational roles as representatives of the nation. National media organisations, such as the BBC, might also be included as highly relevant to IL in relation to the nation state e.g. in terms of public service journalism and information provision, with local, national and international impact.

Further elaboration and analysis of the nation state and IL can be carried out in terms of: international relationships and diplomatic arrangements between states; international organisations such as UNESCO; long-term population phenomena such as immigration and the resultant diasporas; crisis situations such as forced migrations and asylum seeking and deeply rooted national issues about the position of indigenous peoples.

This territory can be mapped in terms of the IL of the various actors and their degree of IL consciousness and expertise, combined with analysis of the interactions with state policy, economic circumstances, technological change, social movements, culture etc. Consequently the notion of the information literate person can be illuminated in relation to these various elements of society. All of these constructs (nation state etc.) can be pursued as detailed topics of IL research and practice. The concept of the information literate person can be utilised as a common focus for a variety of topic-based studies within the information culture and society, for example, information and voting behaviour; organisation and access to state information resources etc. Insights from Information Science and other disciplines can also be introduced to the analysis.

Epistemological development is a significant aspect of personal development of IL. A simple dualistic approach, which restricts the scope of epistemological development, is insufficient to deal with the complexity of IL in the 21st century. If you believe that information is either simply accurate or inaccurate, and conduct your information seeking accordingly, you are much less likely to look for more complex, ambiguous and challenging information (as research such as Limberg, 1999, has shown). The skill set approach, by contrast, tends to avoid or eliminate the personal nature of IL, giving the strong impression that the complex interplay between personal values and needs, cultural and social context and norms of organisations in which the individual is embedded is at best marginal and at worst irrelevant. Our 'information literate person' is more likely to progress beyond dualism towards a much more evaluative and creative relationship with information, knowledge and media.

In this section we have attempted to outline a substantial topic area for IL research development and possible collaborations across different disciplines. The notion of the *lifecourse* can be further elaborated and used to cluster a variety of specific studies thereby exposing a much greater place for IL. A lifecourse approach is a natural outgrowth of our position as qualitative researchers, motivated to discover the place of information and IL in people's lives, whether they are students, workers, consumers or citizens. Our view is that there is great scope to apply the lifecourse perspective to IL, which, if taken up, could serve to advance the state of IL in the 21st century.

5. Conclusion: As we might think

In our discussion, we have provided a counterweight to a conversation that often focuses on the work of instructional librarians. Whilst this instructional work is extremely valuable, and should be given much greater support by academics and university leaders to be fully integrated in the curriculum, it is only one part of the IL jigsaw. Students have a life-time of information engagements after graduation. Equally, far too many people around the world have limited participation even in secondary education (e.g. Batool & Webber, 2017) so their position needs to be encompassed. Consequently an international and human rights perspective on IL is an essential part of the jigsaw.

We began by suggesting that the promise of the formative years of IL has not been delivered and we have argued that in order to advance beyond that formative stage it is essential to have international horizons and a holistic choice of topics and research questions. However it is also necessary to have clear and powerful strategic tools in order to turn good intentions into better IL. We have identified two approaches, which we believe can make a qualitative difference in

the next phase of IL's development. The first of those tools is *disciplinarity* and the second is a *lifecourse perspective*.

A disciplinary way of thinking about IL is appropriate to the territory and pays valuable dividends, which we have summarized in section 3.5. The concept of IL as a discipline provides an epistemological coherence and integrity to the substantial body of accumulated knowledge and a touchstone for progress.

The other side of the disciplinarity coin is obviously a consideration of what aspects of reality IL might relate to, and how relationships might be defined. Our response has been twofold: firstly to focus IL in relation to human development, the concept of the *Information Literate Person* being our shorthand for this perspective; and secondly a focus on IL as a feature of sociocultural research and development, the *changing information culture* within which human development takes place and is experienced. This perspective is graphically illustrated in Figure 1 above. In essence we argue that IL is a key facet of human development in society, political economy and active citizenship.

Taken together disciplinarity and the lifecourse perspective offer a substantial and flexible set of intellectual tools for IL researchers, educators and practitioners. We suggest two headline agenda items for the field:

- Firstly it is essential for IL specialists to both develop their own disciplinarity, stepping out of the various silos to work together, and also to adopt a collegiate way of working with scholars from other disciplines. We already have a wide variety of research approaches and methodologies in IL to draw upon and this is exemplified in the series of ECIL conferences. Such a collegiate way of working would offer a sound basis for developing Media and Information Literacy, for example, where it is noticeable that the ML experts have already achieved a clear sense of disciplinary identity.
- Secondly we should exploit the pioneering work of UNESCO and IFLA in placing IL firmly on the international agenda as an issue of human rights, education and lifelong learning. It is vital that international organisations which characterise IL as a human right are supported, when many nation states around the world persist in suppressing free speech and constraining education and access to knowledge. Internationalism in IL is vital and should be built upon in the 21st century. This will entail a much stronger sense of national purpose for IL and offer the possibility of challenging public policy to go beyond the current emphasis on the digital and also, hopefully, renewing the sense of information as a vital public good, which has been somewhat lost in the fight for the survival of libraries in many parts of the world.

What lies ahead for IL in the future? As we said in 2000, "that is up to us".

References

Abbott, C. (1994). *Performance measurement in library and information services*. London: Aslib.

Achbar, M. (Ed.) (1994). *Manufacturing consent: Noam Chomsky and the media*. Montreal: Black Rose Books.

ACRL IS Research and Scholarship Committee. (2003). Research agenda for library instruction and information literacy. *Library & Information Science Research*, 25(4), 479-487.

[https://doi.org/10.1016/S0740-8188\(03\)00056-2](https://doi.org/10.1016/S0740-8188(03)00056-2)

ACRL IS Research and Scholarship Committee. (2011). *Research agenda for library instruction and information literacy*. (Rev. ed.) Available at: <http://acrl.ala.org/IS/instruction-tools-resources-2/professional-development/research-agenda-for-library-instruction-and-information-literacy/>

ACRL Student Learning and Information Literacy Committee. (2017). *Global perspectives on Information Literacy: Fostering a dialogue for international understanding*. Available at: http://www.ala.org/acrl/files/publications/whitepapers/GlobalPerspectives_InfoLit.pdf

Anderson, A. & Johnston, B. (2016). *From Information Literacy to social epistemology: Insights from psychology*. Kidlington: Chandos Publishing.

Anderson, A., Johnston, B. and McDonald, A. (2012). Patterns of learning in a sample of adult returners to higher education. *Journal of Further and Higher Education*, 38(4), 536-552. <https://doi.org/10.1080/0309877X.2012.726971>

Anderson, A., Johnston, B. and McDonald, A. (2013). Information literacy in adult returners to Higher Education: student experiences in a university pre-entry course in a UK university. *Library and Information Research*, 37(114). Available at: <http://www.lirjournal.org.uk/lir/ojs/index.php/lir/issue/view/65>

Appleton, K, Macpherson, C & Orr, D. (Eds.) (2000). *Lifelong Learning Conference: selected papers from the inaugural international Lifelong Learning Conference, Yeppoon, Queensland, Australia, 17-19 July 2000*. Rockhampton: Central Queensland University Press. Available at: <http://hdl.cqu.edu.au/10018/3809>.

Association of College and Research Libraries. (2000). *Information Literacy competency standards for higher education*. Available at: <http://www.ala.org/acrl/standards/informationliteracycompetency>

Baer, A. (2013). Critical Information Literacy in the college classroom: Exploring scholarly knowledge production through the digital humanities. In L. Gregory & S. Higgins. (Eds.), *Information Literacy and social justice: Radical professional praxis*. (pp.99-119). Los Angeles, CA: Library Juice Press.

Barnett, R. (1997). *Higher Education: A critical business*. Buckingham: The Society for Research into Higher Education & Open University Press.

Basili, C. (Ed.) (2003). *Information literacy in Europe: A first insight into the state of the art of information literacy in the European Union*. Rome: Consiglio Nazionale delle Ricerche.

Batool, S. H. & Webber, S. (2017). Conceptions of school libraries and the role of school librarians: findings from case studies of primary schools in Lahore. *Information Research*, 22(1), CoLIS paper 1606. Available at <http://InformationR.net/ir/22-1/colis/colis1606.html>

Becher, T. & Trowler, P. R. (2001). *Academic tribes and territories: Intellectual enquiry and the culture of disciplines*. (2nd ed.) Milton Keynes: Society for Research into Higher Education & Open University Press.

Biggs, J. & Tang, C. (2011). *Teaching for quality learning at university*. (4th ed.) Buckingham: Open University Press.

Bombaro, C. (2016). The framework is elitist. *Reference Services Review*, 44(4), 552-563. <http://dx.doi.org/10.1108/RSR-08-2016-0052>

- Booker, D. (Ed.) (1998). *Information Literacy: The professional issue: Proceedings of the third national information literacy conference*. Adelaide: University of South Australia Library.
- Boon, S., Johnston, B. & Webber, S. (2007). A phenomenographic study of English faculty's conceptions of information literacy. *Journal of Documentation*, 63(2), 204-228. <http://dx.doi.org/10.1108/00220410710737187>
- Bruce, C. (1997). *The seven faces of Information Literacy*. Adelaide: AUSLIB Press.
- Bruce, C. & Candy, P. (2000). *Information Literacy around the world: Advances in programs and research*. Wagga Wagga: Centre for Information Studies, Charles Sturt University.
- Brunetti, K., Hofer, A. R. & Townsend, L. (2014). Interdisciplinarity and information literacy instruction: A threshold concepts approach. In C. O'Mahoney, A. Buchanan, M. O'Rourke, & B. Higgs (Eds.), *Threshold concepts: From personal practice to communities of practice, Proceedings of the National Academy's Sixth Annual Conference and the Fourth Biennial Threshold Concepts Conference*. (pp.89-93). Cork, Ireland: NAIRTL. Available at: http://www.nairtl.ie/documents/EPub_2012Proceedings.pdf#page=99
- Buckland, M. (1991). Information as thing. *Journal of the American Society for Information Science*, 42(5), 351-360. [http://dx.doi.org/10.1002/\(SICI\)1097-4571\(199106\)42:5<351::AID-ASI5>3.0.CO;2-3](http://dx.doi.org/10.1002/(SICI)1097-4571(199106)42:5<351::AID-ASI5>3.0.CO;2-3)
- Budd, J.M. & Lloyd, A. (2014). Theoretical foundations for information literacy: A plan for action. *Proceedings of ASIST*, 51 (1), 1-5. <http://dx.doi.org/10.1002/meet.2014.14505101001>
- Bundy, A. (Ed.) (2004). *Australian and New Zealand Information Literacy framework: Principles, standards and practice*. (2nd ed.) Adelaide: Australian and New Zealand Institute for Information Literacy.
- Chatman, E. (1996). The impoverished life-world of outsiders. *Journal of the American Society for Information Science*, 47(3), 193-206. [http://dx.doi.org/10.1002/\(SICI\)1097-4571\(199603\)47:3<193::AID-ASI3>3.0.CO;2-T](http://dx.doi.org/10.1002/(SICI)1097-4571(199603)47:3<193::AID-ASI3>3.0.CO;2-T)
- Chevillotte, S. & Colnot, A. (2010). *French speaking countries: Belgium, France, Quebec, Switzerland Information Literacy state-of-the art report*. Available at: <http://www.ifla.org/files/assets/information-literacy/publications/il-report/france-2007.pdf>
- Cortés, J., González, D. Lau, J., Moya, A. L., Quijano, A. Rovalo, L. & Souto, S. (2002). Normas sobre alfabetización informativa en educación superior: Declaratoria. In *UACJ, Tercer Encuentro sobre Desarrollo de Habilidades Informativas*. Available at: <http://www.uv.mx/veracruz/usbi/files/2012/09/DeclaratoriaTercerDHI.pdf>
- Davies, M. & Devlin, M. (2010). Chapter 1 Interdisciplinary higher education. In M. Davies, M. Devlin & M. Tight (Eds.), *Interdisciplinary Higher Education: Perspectives and Practicalities* (pp.3-28). Bingley: Emerald. [http://dx.doi.org/10.1108/S1479-3628\(2010\)0000005004](http://dx.doi.org/10.1108/S1479-3628(2010)0000005004)
- Dokphrom, P. (2013). Information Literacy of undergraduate students in Thailand: A case of the Faculty of Arts, Silpakorn University, Thailand. In M. Hepworth & G. Walton. (Eds.), *Developing people's information capabilities fostering information literacy in educational, workplace and community contexts* (pp.111-126). Bingley: Emerald.
- Drabinski, E. (2014). Toward a kairos of library instruction. *The Journal of Academic Librarianship*, 40(5), 480-485. <http://dx.doi.org/10.1016/j.acalib.2014.06.002>

Elmborg, J. (2012). Critical Information Literacy: Definitions and challenges. In C. W. Wilkinson and C. Bruch. (Eds.), *Transforming information literacy programs: Intersecting frontiers of self, library culture, and campus community* (pp.75-95). Chicago, IL: Association of College & Research Libraries.

EuroMediaLiteracy Consortium. (2009). The European charter for media literacy. Available at <http://www.euromedialiteracy.eu/>

Freire, P. (1996). *Pedagogy of the oppressed*. London: Penguin.

Garcia, K. (2015). Book reviews: Critical journeys: How 14 librarians came to embrace critical practice, ed. Robert Schroeder. Sacramento, CA: Library Juice Press, 2014. *portal: Libraries and the Academy*, 15(3), 551-552. <https://doi.org/10.1353/pla.2015.0037>

Gibb, A., Haskins, G., Hannon, P. & Robertson, I. (2012). *Leading the entrepreneurial university: Meeting the entrepreneurial development needs of higher education institutions*. Available at: <http://eureka.sbs.ox.ac.uk/id/eprint/4861>

Hicks, A. (2013). Cultural shifts: Putting critical information literacy into practice. *Communications in Information Literacy*, 7(1), 50-65.

Hoover, R. E. (1984). *Executive's guide to online information services*. White Plains, NY: Knowledge Industry Publications.

Information Literacy. (n.d.). In *Wikipedia*. Available at: https://en.wikipedia.org/wiki/Information_literacy

International Federation of Library Associations and Institutions. (2017). *How to spot fake news*. Available at: <https://www.ifla.org/publications/node/11174>

Irving, C. (2011). National Information Literacy Framework (Scotland): Pioneering work to influence policy making or tinkering at the edges? *Library Trends*, 60(2), 419-438. <http://dx.doi.org/10.1353/lib.2011.0036>

de Jager, K. & Nassimbeni, M. (2002). Institutionalizing information literacy in tertiary education: Lessons learned from South African Programs. *Library Trends*, 51(2), 167-184.

Johnston, B. (2010). *The first year at university: Teaching students in transition*. Maidenhead: McGraw Hill Education.

Johnston, B. (2014) Commentary on the abstracts. In S. Špiranec, S. Kurbanoglu, R. Catts, E. Grassian, D. Mizrachi & M.B. Zorica (Eds.), *The second European conference on Information Literacy (ECIL): Dubrovnik, Croatia, 20-23 October 2014*. (pp.1-3). Zagreb, Croatia: University of Zagreb.

Johnston, B. (2016). Ageing and information: The Scottish older people's movement. *Library and Information Research*, 40(123), 4-13. Available at: <https://www.lirjournal.org.uk/lir/ojs/index.php/lir/article/view/742>

Johnston, B., Anderson, T. & McDonald, A. (2012). Improving pre-entry access to university: Towards a model of transformational alignment. *Adult Learner: The Irish Journal of Adult and Community Education*, 82-96. Available at: <http://www.aontas.com/pubsandlinks/theadultlearner.html>

- Johnston, B. & Webber, S. (1999). Information literacy as an academic discipline: An action research approach to developing a credit bearing class for business undergraduates. In M. Klasson, B. Loughridge & S. Loof. (Eds.), *New fields for research in the 21st century: Proceedings of the 3rd British Nordic Conference on Library and Information Studies: 12-14 April 1999: Boras, Sweden*. (pp.183-197). Boras: The Swedish School of Library and Information Studies, University College of Boras.
- Johnston, B. & Webber, S. (2003). Information literacy in higher education: a review and case study. *Studies in higher education*, 28(3), 335-352. <http://dx.doi.org/10.1080/03075070309295>
- Johnston, B. & Webber, S. (2006). As we may think: Information Literacy as a discipline for the information age. *Research Strategies*, 20(3), 108-121. <http://dx.doi.org/10.1016/j.resstr.2006.06.005>
- Langlois, G. (2013). Participatory culture and the new governance of communication: the paradox of participatory media. *Television & New Media*, 14(2), 91-105. <http://dx.doi.org/10.1177/1527476411433519>
- Larivière, V., Sugimoto, C. and Cronin, B. (2012). A bibliometric chronicling of Library and Information Science's first hundred years. *Journal of the American Society for Information Science and Technology*, 63(5), 997-1016. <https://doi.org/10.1002/asi.22645>
- Lau, J. (2007). *Information literacy: an international state-of-the art report*. Available at: https://www.bvekenis.nl/Bibliotheek/08-0672_UNESCO_IL_state_of_the_art_report_-_Draft070803.doc
- Limberg, L. (1999). Experiencing information seeking and learning: a study of the interaction between two phenomena. *Information Research*, 5(1). Available at: <http://informationr.net/ir/5-1/paper68.html>
- Limberg, L. (2017). Synthesizing or diversifying library and information science: Sketching past achievements, current happenings and future prospects, with an interest in including or excluding approaches: Keynote address at the CoLIS 9 conference, Uppsala, June 27, 2016. *Information Research*, 22(1), CoLIS paper 1600. Available at: <http://InformationR.net/ir/22-1/colis/colis1600.html>
- Limberg, L., Sundin, S. & Talja, S. (2012). Three theoretical perspectives on information literacy. *HUMAN IT*, 11(2), 93-130.
- Livingstone, S. van Couvering, E. & Thumin, N. (2008). Converging traditions of research on media and information literacies: disciplinary, critical, and methodological issues. In J. Coiro, M. Knobel, C. Lankshear & D. Leu. (Eds.), *Handbook of research on new literacies* (pp.103-132). New York, NY: Routledge.
- Lloyd, A. (2010). Framing information literacy as information practice: Site ontology and practice theory. *Journal of Documentation*, 66(2), 245-258. <http://dx.doi.org/10.1108/00220411011023643>
- Lloyd, A. & Williamson, K. (2008) Towards an understanding of information literacy in context: implications for research. *Journal of Librarianship and Information Science*, 40(1), 3-12.
- LOEX. (2017). Past and future conferences. Available at: <http://www.loexconference.org/past-future.html>

- Lupton, M. (2008). *Information Literacy and learning*. (Doctoral dissertation). Available at: http://eprints.qut.edu.au/16665/1/Mandy_Lupton_Thesis.pdf
- McDonough, B. A. (2014). *Critical Information Literacy in practice: An interpretive synthesis*. (Doctoral dissertation). Available at: <https://libres.uncg.edu/ir/wcu/f/McDonough2014.pdf>
- McDougall, J., Livingstone, S., Sefton-Green, J. & Fraser, P. (2013) *Media and Information Literacy Policies in the United Kingdom*. Paris: ANR TRANSLIT. Available at: http://ppemi.ens-cachan.fr/data/media/colloque140528/rapports/UNITED-KINGDOM_2014.pdf
- Malmö Högskola & BIVIL. (1999). Creating knowledge. Available at: <http://web.bit.mah.se/konferens/index.htm>
- Marton, F. (1994). Phenomenography. In T. Husén and T. N. Postlethwaite. (Eds.), *The international encyclopedia of education*. (2nd ed.) (pp.4424-4429) Oxford: Pergamon Press.
- Marton, F. & Booth, S. (1997). *Learning and awareness*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Marton, F., Hounsell, D. & Entwistle, N. (1984). *The experience of learning*. Edinburgh: Scottish Academic Press.
- Meyer, J. & Land, R. (2005). Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning. *Higher Education*, 49(3), 373–388. <http://dx.doi.org/10.1007/s10734-004-6779-5>
- The National Committee of Inquiry into Higher Education. (1997). *Higher Education in the learning society: Main Report*. London: Her Majesty's Stationery Office. Available at: <http://www.educationengland.org.uk/documents/dearing1997/dearing1997.html>
- Nazari, M. & Webber, S. (2012). Loss of faith in the origins of information literacy in e-environments: Proposal of a holistic approach. *Journal of Librarianship and Information Science*, 44(2), 97-107. <https://doi.org/10.1177/0961000611436095>
- Oakleaf, M. (2014). A roadmap for assessing student learning using the new Framework for Information Literacy for Higher Education. *Journal of Academic Librarianship*, 40(5), 510–514. <http://dx.doi.org/10.1016/j.acalib.2014.08.001>
- O'Connor, L. (2009a). Information Literacy as professional legitimation: A critical analysis. *Journal of Education for Library and Information Science*, 50(2), 79-89. Available at: <http://www.jstor.org/stable/40732566>
- O'Connor, L. (2009b). Information literacy as professional legitimation: The quest for a new jurisdiction. *Library Review*, 58(7), 493-508. <http://dx.doi.org/10.1108/00242530910978190>
- O'Connor, L. (2009c). Information literacy as professional legitimation: The quest for professional jurisdiction. *Library Review*, 58(4), 272-289. <http://dx.doi.org/10.1108/00242530910952828>
- vom Orde, H. & Wein, F. (2009). Information literacy: an international state-of-the art report: Germany. IFLA. Available at: <http://www.ifla.org/files/assets/information-literacy/publications/il-report/germany-2009.pdf>

- Parker, J. (2002). A new disciplinarity: Communities of knowledge, learning and practice. *Teaching in Higher Education*, 7(4), 373-386. <http://dx.doi.org/10.1080/135625102760553883>
- Partridge, H., Bruce, C. & Tilley, C. (2008). Community information literacy: developing an Australian research agenda. *Libri*, 58(2), 110-122. <https://doi.org/10.1515/libr.2008.013>
- Pinto, M., Escalona-Fernandez, M.I. & Pulgarin, A. (2013). Information Literacy in social sciences and health sciences: a bibliometric study (1974-2011). *Scientometrics*, 95, 1071-1094. <https://doi.org/10.1007/s11192-012-0899-y>
- Poll, R., de Boekhorst, P. & Hiraldo, R. A. (1996). *Measuring quality: International guidelines for performance measurement in academic libraries*. Munich: K.G. Saur.
- Rader, H. (2002). Information literacy 1973-2002: A selected literature review. *Library Trends*, 51(2), 242-259.
- Roy, L., Kurbanoğlu, K., Mizrachi, D. & Špiranec, S. (2017). The European Conference on Information Literacy: An international research-practice nexus. *College & Research Libraries News*, 78, 131-134.
- Salha, S. (2011). *The variations and the changes in the school librarians' perspectives of information literacy*. (Doctoral dissertation). Available at <http://etheses.whiterose.ac.uk/1538/>
- Secker, J. and Coonan, E. (2011). *A new curriculum for Information Literacy: Curriculum and supporting documents*. Available at http://ccfil.pbworks.com/f/ANCIL_final.pdf
- Smith, L. (2013). Towards a model of critical information literacy instruction for the development of political agency. *Journal of Information Literacy*, 7(2), 15-32. <http://dx.doi.org/10.11645/7.2.1809>
- Špiranec, S., Zorica, M. B. & Kos, D. (2016). Information Literacy in participatory environments: the turn towards a critical literacy perspective. *Journal of Documentation*, 72(2), 247-264. <http://dx.doi.org/10.1108/JD-06-2015-0072>
- Spitzer, K., Eisenberg, M. & Lowe, C. (1998). *Information Literacy: essential skills for the information age*. Syracuse, NY: Information Resources Publications.
- Sproles, C., Detmering, R. & Johnson, A.M. (2013). Trends in the literature on library instruction and information literacy 2001-2010. *References services Review*, 41(3), 395-412. <http://dx.doi.org/10.1108/RSR-03-2013-0014>
- SCONUL Advisory Committee on Information Literacy. (1999). *Briefing paper: Information skills in Higher Education*. Available at: https://www.sconul.ac.uk/sites/default/files/documents/Seven_pillars2.pdf
- Tewell, E. (2015). A decade of critical information literacy: A review of the literature. *Communications in Information Literacy*, 9(1), 24-43.
- Thompson, S. (2003). *Information literacy meeting of experts: Prague, the Czech Republic: September 20–23, 2003: Report of a meeting*. Washington, DC: United States Commission on Libraries and Information Science. Available at: http://www.unesco.org/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/themes/info_lit_meeting_prague_2003.pdf

- Tolonen, E. & Toivonen, L. (2010). *Nordic countries: Finland, Denmark, Norway and Sweden: Information Literacy State-of-the Art Report*. Available at: <http://www.ifla.org/files/assets/information-literacy/publications/il-report/nordic-countries-2006.pdf>
- Town, J.S. & Stein, J. (2015). Ten Northumbria Conferences: the contribution to library management. *Library Management*, 36(3). <http://dx.doi.org/10.1108/LM-11-2014-0135>
- Trowler, P. (2014). Disciplines and interdisciplinarity: conceptual groundwork. In P. Trowler, M. Saunders & V. Bamber. (Eds.), *Tribes and territories in the 21st Century: Rethinking the significance of disciplines in Higher Education*. (pp.5-29). London: Routledge.
- Trowler, P., Saunders, M. & Bamber, V. (Eds.) (2014). *Tribes and territories in the 21st Century: Rethinking the significance of disciplines in Higher Education*. London: Routledge.
- UNESCO. (2017). Media and Information Literacy. Available at: <http://www.unesco.org/new/en/communication-and-information/media-development/media-literacy/mil-as-composite-concept/>
- Virkus, S. (2003). Information literacy in Europe: a literature review. *Information Research*, 8(4), paper no. 159 Available at <http://informationr.net/ir/8-4/paper159.html>
- Virkus, S., Boekhorst, A. K., Gomez-Hernandez J.A., Skov, A. & Webber, S. (2005). Information literacy and learning. In L. Kajberg & L. Lørring. (Eds.), *European curriculum: Reflections on Library and Information Science education*. (pp.65-83). Copenhagen, Denmark: The Royal School of Library and Information Science. Available at: <http://dspace-unipr.cilea.it/bitstream/1889/1704/1/EUCLID%20European%20LIS%20curriculum.pdf>
- Webber, S. (2003). Information Science in 2003: A critique. *Journal of Information Science*, 29(4), 311-330. <https://doi.org/10.1177/01655515030294007>
- Webber, S. (2010). Investigating modes of student inquiry in Second Life as part of a blended approach. *International Journal of Virtual and Personal Learning Environments*, 1(3), 55-70. <https://doi.org/10.4018/jvple.2010070104>
- Webber, S & Johnston, B. (2000). Conceptions of information literacy: new perspectives and implications. *Journal of Information Science*, 26(6), 381-397. <https://doi.org/10.1177/016555150002600602>
- Webber, S. & Johnston, B. (2002). Information literacy: the social action agenda. In D. Booker, (Ed.). *Information Literacy: The social action agenda: Proceedings of the 5th National Information Literacy Conference*. (pp.68-80). Adelaide: University of South Australia Library. 68-80.
- Webber, S. & Johnston, B. (2003). Information literacy in the United Kingdom: A critical review. In: C. Basili. (Ed.), *Information literacy in Europe: A first insight into the state of the art of information literacy in the European Union* (pp.258-283). Rome: Consiglio Nazionale delle Ricerche.
- Webber, S. & Johnston, B. (2006). Working towards the information literate university. In G. Walton & A. Pope. (Eds.), *Information literacy: Recognising the need. Staffordshire University, Stoke-on-Trent: 17 May 2006*. (pp.47-58). Oxford: Chandos.
- Webber, S. & Johnston, B. (2013). Transforming IL for HE in the 21st century: a Lifelong Learning approach. In M. Hepworth & G. Walton. (Eds.), *Developing people's information*

capabilities fostering information literacy in educational, workplace and community contexts (pp.15-30). Bingley: Emerald.

Whitley, R. (2000). *The intellectual and social organisation of the sciences*. (2nd ed.) Oxford: Oxford University Press.

Wilson, T. (2010). Fifty years of information behaviour research. *Bulletin of the Association for Information Science and Technology*, 36(3), 27-34.

<https://doi.org/10.1002/bult.2010.1720360308>

Zurkowski, P. (1974). *The information services environment: Relationships and priorities*. Washington, DC: National Commission on Libraries and Information Science.