# New information literacy horizons:
# Making the case for career information literacy

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**Abstract.** A literature review on the broad theme of information literacy and work was undertaken between January and April 2021 as part of an on-going doctoral study. The purpose of the literature review was to explore extant research on workplace information literacy (WIL) and related areas, including employability information literacy (EIL). The main findings of the analysis are that WIL is an umbrella term for the study of IL in workplace settings, and that EIL research aligns most closely with graduate entry to the labour market. The latter is formulated through three lenses, articulated here as: (1) community and library; (2) higher education; (3) employer. Published work on IL to support lifelong sustainable employability to reflect the notion of 'career', however, is scant. It is proposed that this gap in knowledge should be addressed in future work through consideration of career IL (CIL) as a separate stream of IL research. Here the term 'career' should be understood as a meaning-making device that interweaves work-related experiences into an on-going personal development project.

**Keywords:** *information literacy, work, employability, career, lifelong*

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## 1    Introduction

Several researchers have noted that traditional information literacy (IL) scholarship has focused primarily on the exploration of the meanings and applications of IL within the library and higher education domains [1]. In recent years, however, new horizons have been identified for the advancement of IL scholarship. Of note, IL is explored in workplace contexts [2], and researchers have called attention to the role of IL as part of complex information lives [3, p.2]. A particular area of interest is employability IL (EIL). This applies concepts of IL to the experiences of those who are not yet employed, but preparing to enter the workplace [4, p.79]. EIL researchers also

explore means of enhancing the employability of individuals through targeted IL instruction [5, p.66]. Outputs from EIL research add to the WIL literature through consideration of meanings of 'work' beyond the physical and conceptual boundaries of the workplace, and the building of narratives around unemployment, school-to-work transitions, and employability training within community contexts [6, pp.1-15]. None of this prior research on WIL and EIL, however, deals with the overarching idea of 'career', nor the development and learning needs of individuals across their work lifespan as implied in the term 'career', whether this be in paid employment or other life roles such as studying and caring. Instead the focus of the extant WIL and EIL literature falls exclusively on IL for the purposes of *working* or *preparing to work*.

The primary aim of the literature review work undertaken in preparation of this paper was to explore the extent to which prior IL research has been concerned with the notion of work in its conceptual, temporal, and spatial manifestations. Attention was paid to prominent themes related to work with a view towards mapping points of divergence and agreement in the field, and identifying gaps in knowledge where more research would be valuable.

The main finding from the literature review reported here is that IL in the workplace has received considerably more research attention than IL for employability purposes, and that there are some key links and divergences between these two related areas of scholarship. The former is reserved for IL in organisational settings, whereas the latter is concerned with a defined set of employability attributes in specific circumstances, namely IL for job seeking and entry to work. Missing from this combined body of work are understandings of 'career' as an on-going personal development project, whereby individuals engage in lifelong career development and learning, and take action towards their long-term career development goals. This finding may be considered surprising given that career development necessitates the application of information behaviours and IL competencies for comprehension of personal career preferences and aptitudes, and the world of work at large. There is thus an opportunity to develop the notion of another type of IL related to work, and the contribution of the research presented here is to argue for consideration of career IL (CIL) as a separate area of IL research.

The remainder of this paper will be structured as follows. First, common definitions of 'career', 'work', and 'employability' are reviewed. Then, the methodological strategy for the literature search is outlined. Following this is an account of the findings drawn from the literature on WIL and EIL. Finally, arguments for the inclusion, and development, of CIL as an additional and distinct area of IL scholarship are presented.


## 2 Discerning 'career' from notions of 'work' and 'employability'

While the terms 'work', 'employability', and 'career' often appear in IL publications, these are rarely defined, and interpretations of the terms for different purposes are rarely made explicit. Occasionally, the terms are used interchangeably. This may imply that they are common denominators of the same phenomenon. Their

meanings can thus only be inferred on the basis of the wider thematic focus of publications and their use alongside better established IL discourses. In fields other than IL, however, there are agreed, generalist definitions which indicate that there are substantial differences in the etymology of 'work', 'employability', and 'career'. These differences, in turn, have implications for the ways in which the terms may be approached as subjects of study across different disciplines. It is thus important here to consider their distinctiveness, both in the wider literature and that related to IL as reviewed for this paper:

- *Work* is current and temporal, and refers to the fulfilment of prescribed tasks by employees in an organisation [7, p.7]. Work is therefore a term that is reserved for phenomena observed in workplace settings bounded by organisations.
- *Employability* is commonly framed as a set of qualities and competencies that are required to gain employment and remain in employment, whilst also meeting the changing needs of employers [8, p.199]. Employability skills are verified using external frames of reference. They shift continuously to accommodate changes in the labour market.
- A *career* can be understood primarily as the sequence of an individual's employment-related experiences ordered through time and space [9, p.67]. Furthermore, a career is an on-going personal development project, whereby individuals engage in lifelong career development and learning, and take action towards their long-term career development goals [10, pp.22-25].

The literature review findings to be reported here indicate that the operationalisation of WIL and EIL in the IL literature are mostly consistent with these definitions. WIL deals explicitly with experiences of IL within the workplace, and EIL is governed by external frames of reference that determine the meanings and measurable parameters of 'employability' across a range of settings. It will become evident, however, that 'career', as articulated above, has not been a significant part of IL scholarship thus far. There are two main arguments for its inclusion alongside WIL and EIL. These are to encompass the notions of (1) empowerment through meaning-making and (2) emerging gaps in the IL literature.

## 3      Methodology

The literature search and review reported in this paper was conducted between January and April 2021 as a preface to a larger empirical study (as part of an on-going doctoral study). The broad purpose of the work undertaken was to explore the extent to which prior IL research has been concerned with the notion of 'work' in its conceptual, temporal, and spatial manifestations, and to establish points for interdisciplinary inquiry into the broad theme of IL and work. In particular, the intention was to ascertain the extent to which IL research has incorporated discussions of employability and careers beyond paid employment settings, and the extent to which career development and learning terminology has entered IL discourse. Due to

the interdisciplinary nature of the larger research study to which this literature review contributes, the focus of the literature search was research outputs from the domains of Library and Information Science and Career Studies.

A targeted literature search was performed on a university library catalogue that provides single sign-on access to multiple academic databases such as Web of Science, Taylor & Francis, ABI/INFORM, and Emerald (using the ExLibris Primo library discovery service). This allowed for thorough coverage of relevant sources to be achieved. Variations and combinations of twelve keywords were deployed, and results then filtered for relevance. The search terms were: *career, decision making, education, employability, everyday life, information behaviour, information literacy, information, learning, lifelong learning, library* and *workplace.*

For the purpose of retrieving WIL, EIL, and CIL literature, the Boolean search command AND was used to form combinations of search strings using the terms 'workplace', 'employability', 'career', and 'information literacy'. For 'workplace' the search was set to discover any terms containing the phrase 'work', so that phrases such as 'working', 'workplace', and 'worker' would also be identified. For 'employability' and 'career', the searches were made verbatim. Search terms such as 'education' and 'everyday life' were included in searches because it was observed that some literature deals with employability IL in the context of education and everyday life, rather than the workplace per se. Search terms such as 'information' and 'learning' were included in search strings to capture possible content of relevance to IL in cases where the term 'information literacy' is not deployed.

The time range specified for all searches was 2000-2021. "Workplace experiences of information literacy" by Christine Bruce, published in 1999 [7] was also included. This was on the basis of the strong influence of this work on the field.

In January and February 2021, 106 journal articles, book chapters, and conference proceedings were retrieved. These were reviewed in March and April 2021. Of these, 92 were classed primarily as focused on WIL, 11 on EIL, and 3 on CIL. Following retrieval, duplicate items and items that were no longer available to view were removed, and the bibliometric properties of items (e.g. citation counts) were reviewed. Then, a set of inclusion criteria were applied in order to select highly relevant sources for the literature review. These were: (1) peer-reviewed, (2) incorporated relevant keywords and themes throughout (3) recent (defined as post-2000). A total of 54 IL items and 16 career development items were selected for inclusion in the literature review and are reported in this paper. The content of the retrieved items was manually coded by discipline and theme to develop the analysis presented below.

## 4        Information literacy and work

### 4.1        Workplace information literacy (WIL)

The body of WIL publications has grown substantially over the last two decades. It has more than doubled in the seven years between 2014 (when 41 papers on the topic were identified [11, p.1] and 2021 (when the literature search was

undertaken for the study reported here).

Since 2000, two main schools of thought can be identified in the WIL literature. That published between 2000 and 2008 establishes the initial boundaries of the subject. From 2008 onwards, socio-cultural WIL research is evident (Table 1). The latter expands the discussion beyond previously defined parameters through the deployment of a new research paradigm.

Table 1. Historical development of the WIL literature

| Thematic focus | Main characteristics | Sources |
|---|---|---|
| *Initial boundaries of the subject (2000-2008)* | • Advocates value of IL in the workplace<br>• Sets the parameters for information literate workers and organisations | [11], [12], [13], [14] |
| *Socio-cultural WIL research (2008-on-going)* | • Challenges the more dominant, formal, and fixed traits of IL scholarship<br>• Explores WIL practices of occupational groups, e.g. web site designers, academic librarians, engineers, legal practitioners, firefighters, frontline NHS staff<br>• Maps IL properties of different types of workplaces, e.g. SMEs and bilingual workplaces | [16], [17], [18]<br><br>[19], [20], [21], [22], [23], [24], [25] |

The main preoccupation of early WIL research is the positioning of IL as a key competency for information-intensive work environments [12, p.8]. Linkages between IL and organisational competitiveness are apparent in case studies that include calls for organisations to develop information literate workforces [13, p.137]. Here, two levels of analysis are applied: (1) information competencies and information behaviours of information literate workforces; (2) characteristics of information literate organisations. Both levels of analysis are approached with reference to organisational strategy, whereby the outputs, measurable benefits, and return on investment of IL are of primary interest to employers and IL partners alike [14]. Two further questions are posed in relation to the strategic value of WIL: "What does the information literate worker look like?" and "What should WIL instruction look like?". The proposed answers to these questions largely depend on whether it is believed that information literate workers should be *employed* on the basis of IL skills obtained within formal education and community contexts, or *developed* on an on-going basis within the workplace [15].

These questions become more complex in cases when it is shown that IL skills obtained in formal education are not readily transferable to workplace tasks [16, p.14]. Accordingly, the study of WIL post-2008 can be segmented in two main categories.. In the first, IL is explored as an employability skill and is labelled EIL. In the second IL is reimagined for workplace environments and now underpins the research agenda of modern WIL research. The most important development from the earlier to later period is the realisation that the dominant conceptual and methodological paradigms underpinning the study of IL in library and higher

education settings cannot be readily applied to WIL. Even in early empirical investigations into WIL, it was found that problems encountered in the workplace are less clearly defined, not so predictable, and more complex than those commonly recorded in educational settings [17, p. 367]. Since the informational requirements implicated in employees' daily tasks are different from those commonly attached to traditional university assignments, the generalisability of existing IL frameworks and modes of instruction beyond the realm of educational settings cannot be assumed [18]. As illustration, Lloyd [19, p.279] writes that "Information literacy is trapped between a rock and a hard place". Here the "rock" is the epitome of the more dominant, formal, and fixed traits of IL scholarship, and the "hard place" is the attempt to reconceptualise IL at work as more than a set of generic IL skills.

Interest in manifestations of WIL remains as strong as ever. However, problems persist around the translation and reinvention of IL for work, and multiple aspects of WIL remain underexplored. Early WIL research is valuable because it identified IL as an important facet of the 21st century workplace. Modern WIL research seeks to establish the contextual parameters of IL in workplace settings by mapping the lived experience of individuals employed in different sectors, organisations, roles, and locations [17], [20], [21], [22], [23], [24], [25], [26].

Current understandings of WIL have been shaped to a great extent with reference to a body of work by a single individual: Annemaree Lloyd. Lloyd has argued that WIL be studied from a constructivist frame of reference [23], [27], [28], [29]. This constructivist, grounded approach to the study of WIL represents a shift away from a focus on IL skills assumed to be generalisable and transferrable over time and space. Instead, WIL is framed as a collective competence upheld by information practices enacted in diverse socio-cultural contexts [19, p.278]. It is understood as a way of knowing, and of effectively navigating the information landscape at work. In the deployment of phenomenographic research approaches, nuanced narratives of workers' information landscapes and social exchanges of information can be assembled and layered to allow for the emergence of understandings of workplace IL. These understandings, in turn, allow IL researchers to circumvent the transference problem of IL and reimagine it as a multifaceted workplace construct.

## 4.2 Employability information literacy (EIL)

WIL has received considerably more research attention than IL for employability purposes. As part of this literature review, 9 papers were initially classified as EIL, and 7 additional papers were later identified as relevant to both WIL and EIL. All sixteen papers were published between 2010 and 2021. Very few of these include explicit reference to EIL *per se*, indicating that EIL lacks a strong research identity. Rather, EIL is used as an umbrella term for any incarnations of work and work-based IL instruction delivered beyond the workplace.

Detailed coding of the EIL papers shows that research on IL for employability purposes has been approached through three main lenses, as summarised in Table 2: 'Community and library', 'Higher Education', and 'Employer'. The strongest unifying theme across all three is the graduate employability agenda. This, however, is interpreted differently depending on the

engagement of authors of these studies with students transitioning from education to work. For example, libraries prepare individuals for generic or subject-specific IL applications through distinct and targeted programmes, whereas higher education EIL instruction is the result of interlinked efforts across university departments, libraries, and services, and is governed by a broader graduate employability strategy. In contrast, employers frame 'employability' in terms of the specific nature of their work and their current skill requirements. EIL research is thus fragmented due to the emergent and negotiated sense of ownership of the term, and the variety of institutional agendas to which it relates.

Table 2. The three lenses of EIL research and associated literature

| Lens | Main tenets | Sources |
|---|---|---|
| *Community and library* | EIL is a set of generic or subject-specific competencies that can facilitate the employability of individuals in general and prepare individuals to commence employment in a specific sector<br><br>Libraries can assist individuals to use social media and ICT for job searching<br><br>Libraries can prepare individuals for employment in business occupations by providing instruction on subject specific skills | [4], [5], [6], [30], [31], [32], [33], [34] |
| *Higher education* | EIL provision is a university-wide responsibility that results from collaborative efforts between university libraries, student support services and career centres, and culminates in the creation of specialised library guides and modules | [35], [36], [37], [38], [39], [40] |
| *Employer* | Employer needs and preferences for IL competencies are inferred on the basis of content analyses of job adverts, and qualitative studies of what information competencies are sought by employers in university graduates | [41], [42] |

EIL research has paved the way for new meanings of IL to emerge. However, IL for employability purposes is limited in its scope since it tends to be simply framed as a set of generic IL skills with only a loose connection to the world of work, and as a bolt-on to existing graduate employability agendas. In addition, in this work 'employment' is commonly confused with 'employability', with the success of EIL initiatives celebrated on the basis of higher education leaver destination statistics [36, p.101]. In short, employment *outcomes* are mistaken proxies for employability. In response to this, there are calls (yet to be addressed) for a more multifaceted approach to the conceptualisation of EIL. This should be broader than a set of core IL skills or desirable attributes listed by employers, and look beyond the securing of employment in the short term [34, pp. 91-93]. It should also extend the EIL agenda beyond graduate employability and adapt IL instruction and materials for adult learners and 'adult literacies', thus reinforcing the lifelong IL perspective [32, p.87].

The recognition of the need to incorporate lifelong learning perspectives into EIL scholarship is relatively recent. This dates from 2012, for example in the work of Crawford and Irving as detailed above [32]. Here, a distinction needs to be made between the conventional classroom learning paradigm of EIL [5, p.61] and

alternatives that have the capacity to effect lifelong employability learning that is critical, transformative, and reflective [34, p.90]. To that end, Crawford and Irving [4] suggest that partnerships with skills development agencies can lead to the development of EIL into a Continuing Professional Development (CPD) skill. Furthermore, De Vos and colleagues have advocated the addition of 'career' to advance research on employability. This should acknowledge employability as a lifelong pursuit, taking advantage of understandings of the term 'career' as a concept that is relevant throughout the lifespan [43, pp.128-131].

## 5 New horizons for information literacy and work: Career information literacy (CIL)

### 5.1 Career information literacy (CIL)

Only three papers accessed for this review explicitly link the terms 'career' and 'information literacy'. These are: Hollister (2005)[44]; Zalaquett & Osborn, (2011)[45]; and Arur & Sharma (*in press*)[46]. The notion of 'career', as well as the wider career development terminology underpinning the term, have not yet been incorporated into deliberations of the role of IL in lifelong work and employability.

The first research to bring the two terms 'career' and 'information literacy' together is Hollister's 2005 study of university librarians working with a university career service to integrate IL into the curricula for various subjects [44]. Through modified curricula, students learnt how to conduct thorough job searches for opportunities relevant to the subject they were studying at university. While the students were reminded that lifelong learning is crucial to their career development, lifelong learning was not an integral part of their IL instruction, and the learning tasks reported in the study closely resemble subject-specific EIL instruction.

The next study to unite career and IL [45] employs the phrase 'career information literacy'. This is a report of an IL education programme for career counselling students. The programme consisted of four components: self-assessment, career searches, career information, and job preparation. These were assessed through the performance of practical career counselling tasks structured around the usage of sample client scenarios. The assignments were designed so that students progressed through stages of information needs identification and information seeking, and then produced solutions to the problems presented in the client scenarios. Rather than being presented with subject-specific career information, the students were asked to contend with career challenges reminiscent of those encountered in the real world (which often suffer from being vague, messy and/or ambiguous), and to use information flexibly to reach a decision. This is an important development because previously career choice had commonly been assumed as congruent with university subject selection in the IL literature (and elsewhere). A limitation of this programme is that it was targeted at career counselling students only, reflecting the view of career practitioners as gatekeepers to career information. Some scholars would object to this restricted provision since it gives power and responsibility to a set of professional

intermediaries, leaving little room for personal agency and self-knowledge development of the wider population [47, p.52]. Nevertheless, this is the first instance of IL education that encompasses the notion of *career choice*.

The third study for this literature review that can be classified under the heading of CIL is by Arur and Sharma, currently in press [46]. Here, the collaborative and social justice dimensions of the term 'career information literacy' are explored, with particular reference made to socially situated career information exchanges between Indian students and various actors in their career information landscapes. It is suggested here that career educators should not be viewed as cognitive authorities that provide career information to students and establish normative CIL paradigms. Rather, career educators and students should instead examine tensions between different channels of information provision and engage in critical dialogues around unequal career opportunity structures.

Collectively, these three studies lay the foundations for the incorporation of CIL alongside existing WIL and EIL work. However, lacking here are notions of lifelong career learning and career development planning as central areas of study. This suggests that CIL in its current form deals with employability rather than *career*. This issue is explored in greater detail below.

## 5.2    Empowerment through meaning-making

Career construction theory (the dominant theoretical approach in career development) holds that 'career' is a meaning-making device. A 'career' derives meaning *from*, and imposes meaning *on*, employment-related experiences [48, p.148]. This meaning-making pertains both to constructing one's identity and constructing one's career, and reflects preferred ways of living and working. Thus, 'career' is a lifelong self-constructed narrative where meaning and direction are sought with reference to one's own values, preferences, and aptitudes, and to the unique characteristics of the immediate environment [49, pp.241-244]. The main function of an individual's career is to continuously inform and support the progression of working life in the long term through the identification of appropriate courses of action at any given point in time [50, p.309].

An important part of the meaning-making in the context of 'career' is that it creates space for personal reflection and choice [51, p.5]. In addition, 'career' calls for the application of a different set of skills than those found in 'employability'. Employability skills are either generic skills for job searching, or sector-specific skills deemed important by employers [52, pp.41-42]. In contrast, career management skills are those needed to navigate complex transitions from a position of self-creation and self-reinvention [53, p.2]. The former are often defined from external frames of reference, while the latter also incorporate an internal frame of reference. The distinctive feature of 'career' relative to 'work' and 'employability' is therefore that it is a vehicle for personal agency, growth, reflective learning, and empowerment over the lifespan, communicating a sense of forward progress and volition that is not inherent in work-related experiences *per se*.

### 5.3    Emerging gaps in the IL literature

Taking heed of its deployment in the realm of career development, there is the opportunity for consideration of the notion of 'career' in IL research to make a contribution to the extant knowledge on 'work' and 'employability'. This is particularly relevant to two information-intensive activities: career development learning, and career decision-making. Career development learning is a self-directed mode of career education. It corresponds to an individual's career construction and meaning-making (as elaborated above) and uses constructs from career development theory to build a knowledge-based frame that individuals use for self-understanding [54, p.9]. Career decision-making refers to the processes through which individuals make choices related to training, work, and education at key points across their lifespan [55, p.44].

These two activities are underexplored in the IL literature, and consequently little is known about the importance of IL to their operationalisation. Due to the information-intensive nature of career development learning, and career decision-making, however, it is not unreasonable to propose that they would benefit from IL inquiry. Indeed, it is already known that the assimilation of career information has an impact on the construction of individuals' career identities, and that informational support for career decision-making leads to improved career outcomes [56, p.436], [57, pp.24-25]. Left to be established is the role of information in career development learning and career decision-making in practice.

The practical manifestation of IL in both of these constructs calls for interdisciplinary inquiry between the career development field and IL. This is the subject of the larger doctoral study to which the literature review outlined in this paper contributes. This on-going research includes an exploration of young people's CIL for the purposes of career decision-making. Taking into account the contextual and meaning-making aspects of CIL, it will address the following research questions:

RQ1. How do young people utilise career information for the purpose of making career decisions about the varied training, education, and work experience opportunities available to them?

RQ2. Which career information literacy skills can be developed in young people for optimal career development learning and career decision-making?

## 6    Conclusion

Through the analysis of relevant literature, it has been possible to distinguish between the related terms of 'work', 'employability', and 'career', and their corresponding conceptualisations within IL scholarship. In particular, it has been demonstrated that WIL is concerned with the collective lived experiences of IL in workplace settings and the strategic properties of IL, and that EIL research is focused on a set of generic or subject-specific competencies to help individuals become employable in given settings. There has been some initial work in the area of CIL, but this is limited due to its close alignment to EIL instruction for graduate employability.

Each of these three areas varies in the extent to which the focus falls on immediate IL priorities, as opposed to IL as a lifelong competence. In addition, IL is framed differently in each and discussed in respect of levels of engagement (from the individual to the collective). Crucially, conceptualisations of 'career' as an on-going personal development project related to lifelong learning do not feature in extant work. It is thus proposed that CIL is an area ripe for further research, and may merit incorporation as an additional and separate strand of IL scholarship. It is anticipated that this mode of IL should prepare individuals to engage in meaning-making relative to their preferences and aptitudes, and to construct personal career narratives through self-directed career development learning. It should support them to learn more about themselves and the world of work on an on-going basis, and should align career development learning with notions of career choice and personal agency. Further research in this area will determine whether or not CIL has the power to achieve this.

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