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Towards an Everyday Life Information Literacy Mind-set: A Review of Literature

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Abstract

Purpose: Information Literacy (IL) within the everyday life context is regarded as an important condition for civic participation and engagement, informed citizenship, health and well-being. However, compared to the significant amount of IL research within educational and workplace settings, there has been relatively little research in relation to the value of IL within everyday life situations. This paper explores existing empirical research that addresses aspects of IL within the context of everyday life, identifying current gaps in the literature, highlighting key theoretical positions, and mapping trends.

Design/methodology/approach: The review has been conducted in the form of a scoping study that aims to map the key concepts underpinning this research area and the main sources and types of evidence available. It is based on journal literature reporting primary research, published from 2000-2016 and sourced from a range of different databases covering information literacy research.

Findings: Information literacy practices take place within diverse everyday life contexts. The key research directions have been categorised into four broad contextual areas, encompassing leisure and community activities, citizenship and the fulfilment of social roles, public health and critical life situations. These point to the need for developing an information literacy mind-set which is discussed as an adaptive, transferable and on-going activity that transgresses the boundaries of prescribed skills within the specific contexts of work and education.

Originality/value: This research area is still in its infancy and more varied contexts need to be explored to nurture a robust understanding of the use and impact of IL in people's everyday lives. The paper also highlights the implications of the lack of IL and identifies the key players in the advocacy of IL within different everyday life settings.

Keywords: information literacy, everyday life, community, literature review.

1. Introduction

Information literacy (IL) within an everyday life context is connected to searching for, critically evaluating and using information effectively to solve everyday problems. Everyday life information literacy (ELIL) is about being able to address a range of information needs that relate to everyday practices as well as making informed decisions that are of significant value to individuals and communities. IL is regarded as an important condition for civic participation and engagement, informed citizenship, health, well-being and generally, people's quality of life (Leung, 2009).

According to the Alexandria Proclamation on Information Literacy and Lifelong Learning, IL "provides the key to effective access, use and creation of content to support economic development, education, health and human services, and all other aspects of contemporary societies...extends beyond current technologies to encompass learning, critical thinking and interpretative skills across professional boundaries and empowers individuals and communities" (Garner, 2005, p.3). Bruce has proposed that IL is an "overarching literacy of life in the 21st century" (Bruce, 2002).

Despite the clear value of IL within the everyday life context, most empirical research has been conducted within educational and workplace settings. For example, a study by Whitworth (2014) revealed that more than 60% of the IL literature is found within the context of Higher Education libraries. Aharony (2010) explored emerging IL trends during the period of 1999-2009 and concluded that IL has been mainly associated with education, librarianship and with only few studies starting "to shift into workplaces and the business world". An additional setting, that of health and medicine, appeared to a lesser extent, stressing "people's need for information literacy in this specific context" while research within the context of society was found to be limited and its impact was "probably minor" (p. 271).

On the other hand, the everyday life context has been an established area of research within the domain of information seeking behaviour (ISB) since the development of the everyday information seeking behaviour (ELIS) conceptual framework by Savolainen (1995). Although this could be considered as a related field of study, most ISB research does not address the critical positioning and value of IL. Existing IL research with an emphasis on different everyday life settings is, therefore, limited and, overall, lacks a holistic view. Based on that argument, this work aims to present a critical review of existing research with the everyday life IL domain and to develop a research agenda for further empirical explorations in this area.

The literature review addresses a variety of foci that explore demographic differences (e.g. older adults/fourth age/retired people, young people/men, early years/preschool, nursery, aging women), diverse social roles (e.g. parents, retired, citizens) and everyday life situations that create a range of information needs linked to learning, personal development, health and well-being. Its purpose is to function as an initial basis for further more systematic explorations of the literature and to highlight the ELIL domain as one that requires a more explicit focus.

2. Research Objectives

Based on the above rationale, this study takes the form of a scoping review of the literature around the domain of everyday information literacy, aiming to address the following research objectives: 1) to explore existing empirical research focusing on aspects of information literacy within the context of everyday life, identifying current gaps in the literature; 2) to highlight the key theoretical positions and trends in this area, 3) to make further research and policy recommendations on the basis of these findings and 4) to propose a theoretical framework and research agenda for the empirical research exploration of everyday life information literacy.

3. Methodology

Mays, Roberts and Popay (2001) have defined scoping reviews as publications that "aim to map rapidly the key concepts underpinning a research area and the main sources and types of evidence available, and can be undertaken as stand-alone projects in their own right, especially where an area is complex or has not been reviewed comprehensively before" (p.194). Arksey and O'Malley (2005) have discussed a number of steps in conducting a scoping review of the literature, which include: identifying the research questions and the domain that needs to be explored, finding the relevant studies (through electronic databases, reference lists, websites of organizations, conference proceedings), selecting those that are relevant to the question(s), charting the data (i.e. the information on and from the relevant studies), collating, summarizing and reporting the results and, finally, an optional step of consulting stakeholders to get more references and provide insights on what the literature fails to highlight. Therefore, this literature review presents a scoping study which aims to map and

conceptually synthesise existing knowledge on how IL has been explored so far within the everyday life context.

3.1 Procedure for selecting articles

The review was conducted on the basis of journal literature, conference proceedings and PhD theses (excluding book chapters and theoretical papers) reporting primary research published from 2000-2016. The choice of time range for this review is both relevant and essential for capturing everyday life information literacy experiences of the public experienced within a changing Web searching landscape. It was only around the turn of the millennium that IL, both as a domain of research and an object for investigation started to evolve (Bruce, 2016, p.1), an era that also marked the growth and the establishment of commercial Web search engines. Saracevic has described how during the period from 1997 to 2004 signifies the "beginning and the maturity of public web searching". In addition, since 2000 a few larger search engines started dominating the Web searching scene and becoming global (Google was launched in 1999): "In 2003, Search Engine Worldwide listed 3,105 search engines in 211 countries" (Spink & Jansen, 2004, p.xiii). Within the sphere of consumer health information, the Web also started to be established at that time as an important medium for information seeking and advice around health and medical information issues.

The searches were conducted between June - November 2016 and publications were sourced from a range of different databases covering library and IL research including: ScienceDirect, Library and Information Science and Technology Abstracts (LISTA), ERIC, Emerald, ABI/Inform, Library and Information Science Abstracts (LISA), Library Literature and Information Science, Web of Science and Google Scholar.

As focus was placed on exploring the domains of 'information literacy' and 'everyday life', these two concepts were employed as the main search terms. Initially, the search was conducted without restrictions to a particular search field (e.g. abstract, subject terms or title). However, a general search in several cases (e.g. Emerald) resulted to a high number of hits that were related to other parallel areas of interest, such as information seeking and general information related practices without, necessarily, a primary emphasis on 'information literacy'. In addition, in some of the databases, 'information literacy' would not even appear as a term in the abstract of the article; instead, it would feature in the author supplied

keywords or would be briefly mentioned in one or two areas of the document. A follow up phrase search for 'information literacy' and 'everyday life' (combined using the AND Boolean Operator) within the abstract, title and keyword fields of the documents and restricted to journal research literature only, resulted to a narrower and more manageable set of results. In the second round of searching publications were therefore included in the final set of documents and were considered in this literature review as long as they were addressing the following criteria:

- a) They were discussing the everyday life context (e.g. a few publications were excluded because the emphasis was on professional groups, such as health professionals or university students' academic information needs).
- b) They were discussing implications for IL and they addressed areas beyond examining ISB or the mere development of ICT skills. Instead, they were encompassing IL skills such as critical evaluation, sharing and use of information. For example, a publication by Counts and Fisher (2010), which was excluded from the final list, discussed everyday life information literacy, as "fluency of use of such technologies as e-mail, the Web, and the Slam mobile software application to access information" (p. 106).
- c) They reported empirical research findings based on collecting and analysing primary research data. Therefore, articles that purely dealt with methodological issues and conceptual papers were excluded, although prominent theoretical papers and works that contributed conceptually to the themes of the literature review were considered in the final discussion of the results (for example see Nara's (2007) theoretical work on information literacy and everyday life risk information)
- d) They were written in English. Therefore, a few publications retrieved in other languages (e.g. Spanish, German) were excluded.

Most of the articles included in the literature review had a strong element of IL; however, a few additional articles were also selected without specifically acknowledging IL as a focus (e.g. in the title or in the abstract). Although these articles predominantly dealt with other related areas of investigation, such as ISB or the wider information experiences of people within everyday life settings, they were included on the basis of addressing aspects of IL and

its added value to everyday information related practices. IL in these studies was addressed as a higher level objective or as an ideal state of being, informed by effective information-related knowledge and practices. In addition, some of these articles raised issues around the lack of IL and made recommendations that related to its development in order to address everyday life problems. An example is Buchanan's and Tuckerman's (2016) work on the information seeking behaviour of disadvantaged and disengaged adolescents which addresses practical educational interventions and tailored solutions for addressing information poverty and social integration issues.

Another interesting finding which provides evidence for the lack of sufficient research within the area of everyday IL was that not all databases provided a subject term related to 'information literacy in everyday life'. For example, on *LISTA*, most of the subject terms suggested were related to IL education and assessment and IL in the workplace.

Finally, in addition to the publications sourced via the databases, a couple of other publications were added after consultation with other researchers working in this area. These included research publications by Gunton (2011) and Yakel (2004) that were not retrieved during the original database searches and were considered as additional evidence sourced on the basis of Arksey and O'Malley's (2005) optional step in scoping reviews (described above) which refers to consulting stakeholders. The approach did not include references identified via citation searching from within the identified publications, as these were beyond the scope of the present study, although a systematic examination of citations would be a useful approach to follow in a future study.

3.2 Thematic Analysis

The search yielded 151 publications out of which a total of 27 journal articles, conference proceedings and a PhD thesis were accepted in the final set. The list also included three additional articles sourced after consultation with other researchers. The articles were selected on the basis of addressing information literacy issues (e.g. experiences, activities, needs, gaps, barriers enablers) with implications for further research. Most publications were identified within the domain of library and information science but there were also a few studies sourced from other fields, such as public health, educational research, computer science and

the broader field of social science research (this was an expected result considering the multidisciplinary nature of the topic although it is likely that researchers in other fields may use varying terminology to describe information literacy related concepts).

The first stage in the analysis of the selected documents consisted of an initial general thematic categorization of the studies using a broad coding template and focusing on a number of foci that were known by the researchers to be important on the basis of everyday life information literacy investigations: demographics (e.g. older adults, young people/men, women), social roles (e.g. parents, informal careers, citizens) and the social wellbeing of people in different situations (e.g. pregnant women, immigrants, unemployed, job seekers, carers, health related issues).

The second level of analysis involved the meticulous reading of the texts in order to refine the themes and identify subthemes, examining in particular the context within which the individual studies were conducted. During that investigation, it was found that demographic and socio-cultural differences were not necessarily a focus on their own, but were, instead, mentioned within most of the other different foci as important factors when considering community activities, citizenship, social well-being and public health information literacy. Additional sub-concepts were extracted including the convergence of everyday-life information literacy experiences with that of education and work, the interplay between 'formal' and 'informal' information practices/experiences as well as the distinction between 'routine', 'expected' and 'stable' 'critical' and 'unexpected' information literacy experiences.

Table 1 demonstrates the databases used to source the academic publications, the search strings employed, the number of hits, the duplicates and the accepted documents. A variety of research methodologies were used following qualitative, quantitative and mixed research approaches (e.g. interviews, questionnaire surveys, observation, content analyses, tests, memos and field-note taking, online observations).

With regards to the limitations of this study, the review is not by any means exhaustive and further more systematic reviewing of additional papers published within health, public policy, and communication may shed additional light on the basis of how everyday life information literacy is experienced and enabled. In addition, more analytical searches using IL related terminology, as well as a more detailed discussion of information seeking behaviour research to extract additional information literacy dimensions, enablers and implications for its development is necessary.

{ Please include Table 1 around here}

3. Literature Review Findings

IL is a key notion playing an important role in addressing real life concerns (Todd, 1999). However, most of the research has investigated professional groups and in particular the work roles of scientists, engineers, scholars, and health professionals rather than "ordinary people" (Case, 2016). Thus, from an IL research perspective, "knowing the information landscape" (Lloyd, 2006) within everyday life has not been given sufficient attention and this is still an emerging area of research that requires further exploration and understanding.

The review of the existing literature revealed that the everyday life context encompasses information practices and experiences that are situated within a diverse set of contexts. There are a number of different directions in previous studies that have been categorised in this paper into three broad contextual areas/foci of interest presented below. At the heart of IL is the question of what is perceived as knowledge with reference to understanding the specific contexts within which people engage with and make sense of information and the ways in which they put it to use with a positive outcome for their everyday life situated practices.

3.1. Information Literacy for Leisure and Community Activities

Savolainen has been one of the first scholars to introduce a focus on the everyday life context, however from the point of view of exploring the characteristics of information ISB rather than of IL. Savolainen's Everyday Life Information Seeking (ELIS) framework, suggested that a lot of ISB that takes place is aimed at the pursuit of non-work and non-education activities within other areas that are important to daily life, such as consumption, health care, household care and voluntary/leisure activities. Since then, there has been a growing body of ISB research in this area particularly with reference to leisure activities and the value of information for achieving both hedonic (e.g. casual leisure) and utilitarian (serious leisure) information goals. For example, the work by Stebbins (2009) points to the value of leisure as having durable benefits for the individual, including self-development, self-enrichment, self-expression, regeneration or renewal of self, feelings of accomplishment, enhancement of self-

image, social interaction and belongingness, self-gratification, and self-fulfillment. In addition serious leisure activities may be linked to pursuing a career in serious leisure. Stebbins posits that ensuring the quality of leisure activities has important "knowledge and training components" with implications for library and information science (i.e. IL). For successfully pursuing, learning and improving leisure activities, a wide variety of information sources is required. Reading books and articles, examining websites, following adult-education courses, exchanging information via social networks, groups and networks can be some of them (p. 626-7). However, within a fast growing and changing everyday information environment where information is produced and consumed rapidly, the creation of information, can be "thoughtless, and aimless, as seen most obviously in concerns about the repercussions of posted remarks on social media" hastily (Poirier & Robinson, 2014. p. 692). Information seeking and creation may therefore require a slower pace to enable information balance as outlined by the principles of a slow approach to information consumption that requires "careful, mindful and rational choice of sources" (p. 693).

Since the development of Savolainen's ELIS framework numerous studies have been conducted with an emphasis on diverse hobby-related ELIS, focusing on specific hobbyists, such as online museum visitors (Skov, 2013), genealogists and family historians (Fulton & Vondracek, 2009; Yakel, 2004), people who read for pleasure (Ross, 1999), gourmet cooks (Hartel, 2003; 2006; 2010), knitters (Prigoda & McKenzie, 2007), food bloggers (Cox & Blake, 2011), motor sport enthusiasts (Joseph, 2016) and different types of collectors (Case, 2009; 2010; Lee & Trace, 2009). Despite the primary focus of these studies on understanding ISB for leisure pursuits, a number of conclusions are drawn that clearly also address IL aspects. For example, hobby-related ISB in different contexts requires a significant amount of evidence and methodical use of information resources. Yakel (2004), discussed how family history and genealogy researchers "require intensive and extensive use of libraries and archives", as well as IL skills that involve the collection and management of information for present needs but also for sharing this information with others in the future. Similarly, in Hartel's (2006) study of gourmet cooking, people were involved in information management activities that required creating recipe records that were systematically organised "with descriptive text, a ranking system, and pictures". Hartel (2006) characteristically describes cooks as managers "of a substantial document collection". Joseph (2016) emphasized the importance of personal information management and the use of multiple online sources of information. Not only motor sport activities required "complex information behaviour" but

also individuals invested extensive time and resources to carry out their leisure activities safely.

In addition, at first glance, IL within the context of leisure may appear to carry less value when compared to IL experienced within educational and professional settings as leisure activities are typically connected to mainly achieving personal enjoyment and gratification outcomes. However, a closer view of current ELIL research suggests that information related leisure activities are linked with a set of diverse goals and values that have impact on both a personal and a community level. Recent work by Demasson, Partridge & Bruce (2016) within a serious leisure context (including different types of activities such as liberal arts pursuits, collecting, sports and games, entertainment and making and tinkering within the domain of heritage) demonstrates that ELIL has personal educational goals (e.g. acquiring new knowledge and skills), community-based objectives (helping others within the learning community) and also wider societal implications (e.g. developing social, inter-personal, political and intercultural awareness) in addition to self -gratification and personal entertainment.

Similarly, Gunton (2011) used Bruce's definition of IL as "informed learning" (i.e. a way of using information to learn) to investigate how members of the church community experience and engage with information for the pursuit of spiritual wellness and the cultivation of lifelong learning. Informed learning within that context was found to be experienced in a number of different ways: growing faith, developing relationships, managing the church and responding to religious knowledge (3). These experiences demonstrated the value and significance of using information to learn in order to achieve different personal (developing spirituality and moving forward in the faith journey), community, work and educational objectives, as well as fostering community values (i.e. the wellbeing of the church community by means of supporting the ability of members to initiate and foster relationships with one another), managing or administrating the strategic, administrative and financial day-to-day operations of the church and finally progressing religious-based knowledge as well as promoting its wider diffusion to the community (i.e. via evaluating, confirming, correcting information).

Another type of leisure-based activity, as manifested in the work by Sundin (2011), that of writing an article for *Wikipedia* was also found to be an activity woven into other areas of life. The idea of blending the everyday leisure environment with the context of work and

education as well as what may be considered as 'formal' and 'informal' information literacy activities is evident in that study. Everyday life activities such as cooking or work-related activities (e.g. writing an email or the minutes of a meeting) went hand in hand with Wikipedia editing. In addition, for Wikipedia editors, to edit was not just a hobby, but also a part of their identity, following Stebbins' (2009) conceptualisation of leisure as having durable valuable benefits for the individual. Moreover, IL practice was not just about finding good quality information but also a way of creating trust and a social practice. Reference finders and editors did not work alone; instead they participated in a practice which included people, books and other actors. Furthermore, there was both emphasis on easy access and source hierarchy based on trustworthy information by scholarly criteria within the Wikipedia editors' IL landscape, despite these principles contradicting each other. For example, those who worked in academia knew how to find support for claims through references. Wikipedia's credibility was gained through established media, including popular science, encyclopaedias, and scholarly literature, even if "new" tools, such as Google, were used for finding them. These blurring boundaries between 'formal' and 'informal' IL practices suggests a convergent IL space. It is an interesting juxtaposition if we consider how Wikipedia is perceived as a non-authoritative source within the academia. Clearly, though there are established IL practices and values within the Wikipedia context.

An additional example of a leisure activity that has been studied in all three contexts - everyday life, academic and work – that similarly challenges the boundaries between formal and informal information literacy practices – has been that of music (Kostagiolas et al., 2015; Laplante & Downie, 2011, Tepper & Hargittai, 2009). Music information seeking for the purposes of entertainment is not solely linked with pleasure oriented reasons but also with work-related and education-based pursuits. Sharing music information with others, employing easy to use, intuitive search systems and favouring interpersonal information sources such as colleagues and friends are characteristics of behaviour shared within the different settings of leisure, education and work (Kostagiolas et al., 2015).

Thus research within the area of leisure activities demonstrates that information literacy practices within that context carry significant implications on the basis of achieving a diversity of personal, educational and work-related goals beyond gratification and entertainment. They are also shaped by community goals and values and demonstrate wider societal implications. People follow a combination of 'formal' and 'informal' information seeking, evaluation and use strategies and tactics that are equally significant for attaining

these goals and blend the contexts of work, education and leisure. However, it is still not clear how people can be supported and further empowered to develop information literacy practices that can promote and sustain the durable and valuable benefits of their leisure and community activities within everyday life.

3.2. Information Literacy for citizenship and the fulfillment of social roles

Beyond leisure related activities and hobbyists groups it is also important to consider the value of ELIL in everyday life related activities that center around citizenship needs and wider social roles. Research studies under this general framework explore people's everyday life information needs, their patterns of online information seeking behaviour and the importance of information for learning, informed decision-making, self-development and well-being (including the well-being of others, such as close family members and relatives).

Within this theme we may consider groups of people who share similar socio-demographic roles that generate common ELIL needs (e.g. parents, young people, older adults). Different communities may also have different needs depending on geography (e.g. city, country, urban, rural). For example, Talbot (1998) found that, in rural communities, information services are provided locally, voluntarily and informally rather than formally as in urban areas (e.g. in the form of 'public sector' information services). However, communities include people with different cultures, ages, languages and physical needs. Social class and status may have an impact on the development of ELIL, as those in lower socio-economic groups make less use of information that would help them participate in democratic activities (i.e. pointing to the significance of addressing issues of digital divide and information poverty).

Previous research in this area has focused on parents' and specifically mothers' information seeking behavior with an emphasis on approaches to information and with a view to addressing family information needs. Walker's (2009) research on parents of young children, for example, addressed a number of questions around "how and why do parents seek information, how do they assess it, and how do they use it?" (p. 54). Walker describes how parents found themselves and their families "under greater socio-political scrutiny" when it came to raising and protecting their children and demonstrated the crucial role trusted friends and family members played in sourcing information. Although for parents the internet was a key information source and their "first port of call", they encountered difficulties in terms of

assessing the reliability of the websites they consulted. Parents used a variety of techniques to make decisions about information and the concept of information evaluation was a key concern for them. A number of areas around parents' experience, their development of tacit knowledge as well as a number of affective aspects (e.g. feelings of pressure and anxiety about the problems they encounter) were highlighted as areas for further investigation. For instance, parents' information related decisions may be often based on a "gut feeling" in their interpretation of information and on their personal values, beliefs and own trust in the information sources they use. Other people can be catalysts of positive information and communication experiences, especially among lower socio-economic groups. Creating a sense of community and providing effective advice and support mechanisms are crucial for addressing effectively information needs and supporting ELIL practices of parents.

Other research in this area has centred on senior citizens and how they deal with issues of Internet access and use, discussing 'digital divide' barriers, usually defined as an Internet access gap (e.g. Wicks, 2004; Morris, Goodman & Brading, 2007). "Internet-related technology use, skills and literacy" have also been described as a 'second-level digital divide' (Friemel, 2014). Despite the emphasis on the value of information and its influence on older adults' everyday life well-being (e.g. for ensuring access to citizenship, health and financial information), however, empirical research on aspects of fostering the development of ELIL in this domain is scarce. One study that explored older adults' issues around financial stability points to the need for support around the development of ELIL (O'Connor, 2013). Examining older investors' information gathering, analysis and decision-making processes in particular, the study found that information accuracy around investment information is a significant issue for older adults within the digital era as availability of information does not guarantee information quality. Financial success was clearly important to older adults for sustaining personal well-being but not all people had developed IL skills to enable them to achieve it. The research also found demographic differences between female and male participants in terms of Internet use and variations in information use intensity across the sample (i.e. intensive, moderate and low information use), calling for a need for library professionals to design programmes that will help close the gap between male and female investors' ISB and address low Internet adoption.

Another research study conducted with an emphasis on internet use and the influence on education on older citizens in Slovenia (Juznic et al., 2006) concluded that the higher was the level of education, the more active was older adults' engagement with and motivation to use

computers and the Internet. In addition, education influenced their perceptions of the value of the Internet and how eager they were to learn. Again, there were age demographic differences with younger participants using the Internet more (explained on the basis that younger participants were more exposed to the Internet as part of their everyday work routine). The research emphasised the role of public libraries in offering support to senior citizens, although this was mainly restricted within the domain of offering access to the Internet and encouraging Internet use rather than the development of information literacy. Information literacy was defined as "connected to functional literacy and it involves the ability to read and use different types of information essential for everyday life"; however, the research mainly addressed attitudes towards Internet use rather than information literacy (p. 332-333).

Staying within the recurrent theme of age demographic differences other research examined everyday life information needs and ways of addressing them among young people. For example, Agosto and Hughes-Hassell's (2005; 2006a; 2006b) research, found that young people's (between 14-17 years old) information needs centred on personal development (e.g. around their social, emotional, physical and creative issues). Interpersonal sources such as family and friends were preferred as well as online information against print sources. However, in that study there was not a clear understanding of how young people could be empowered to develop ELIL independently for everyday life decisions and personal development goals. Other research highlights similar issues addressing the lack of support around ELIL issues facing young people (between 11-18 years old) who have been found to lack "training or practice in thinking about how information could be used in relation to dealing with a situation", a finding that is significant because considering how information is going to be used means enabling young people to evaluate information (Smith & Hepworth, 2012, p 170). Although that study was conducted with a primary focus on the school environment and what takes place within the classroom, it was found that the research process for completing assignments was "often a task that takes place out of school without support" (p. 171).

Research by Meyers, Fisher and Marcoux (2009), addressing the everyday information worlds of Millennials or Generation Y (between the ages of 9 and 13) explored how youth service professionals could effectively mediate to enable information literacy of young people by means of suggesting principles upon which focused youth services can be based. One of the most important conclusions of that study relates to the convergence or cross-over of everyday life and school contexts that needs to be encouraged and fostered in

order guide the development of information literacy programmes aimed at youth (p. 336). For instance, young people were found to rely on peer and adult interpersonal sources as 'recommenders' for making decisions around information: "Tweens reported rejecting formal information channels and institutions in favor of interpersonal sources for everyday-life information. Information behavior often transcended the boundaries of traditional help systems" (p. 331). In addition, "beyond notions of "least effort," tweens expressed that they calculated social costs and benefits of sharing information and information needs. Social roles were important factors in assessing trust (p. 331). The researchers concluded on a guiding framework most of which consisted of a number of principles for information seeking (p. 332) addressing trust, social and affective dimensions. One of them, however, mentioned information literacy directly as "developed and honed in informal social settings as well as in tandem with formal scholastic venues" (p. 335), highlighting the dichotomy between formal education settings (and the IL models that have been developed focusing within that context) and the worlds of everyday-life. Tweens, in that study were found to explore a number of information sources that may not be considered as formally linked to education, interpersonal and media, and these were "valuable and "effective" "structured forays into the realm of informal information literacy" (p. 335). In addition, by mixing formal and informal sources, young people were "learning valuable lessons about trust and authority" (p. 335). Finally, the study concluded on the importance of focusing not merely on formal information settings but also on informal, everyday life information literacy experiences: "informal social settings provide key opportunities for information exchange, particularly about everyday-life situations.—Just as formal models of information literacy appear strained in their application to everyday-life problems, formal spaces often fail to provide the proper context for information-sharing". The study found that tweens have a rich repertoire of strategies for sharing information within their everyday life settings and few of them included formal channels, such as libraries and help systems (p. 336).

The problematic dichotomy between the formal education context and the everyday life has been also emphasised in other research. Comstock (2012) calls for an epistemological shift in the ways in which information literacy is conceptualised, quoting Dewey's theory of continuity versus dualism: "Dualisms emerge when...behaviors in one setting are artificially distinguished from behaviors in another setting, or when certain forms of intelligence are held to be better than other forms, often because of different social groups or classes that employ each type. Continuity, on the other hand, is maintained when progressively complex

understandings emerge (through the "reorganization of experience") as learners experiment and engage within a community of learners" (Dewey, 1916/2004). Via her own doctoral research on teens' information literacy experiences, Comstock found that school librarians' understanding/practices around information literacy were restrictive, mainly focusing on issues of legitimacy rather than effectiveness. IL was situated within the parameters of a "small world" environment, where "everyday happenings occur with some degree of predictability" - within a shared conceptual and physical space that shapes norms around information that was considered legitimate within school authority set boundaries. (Chatman, 1996, p. 3). The study concluded that the term 'information literate', needs to be more "inclusive, flexible and adaptable" to accommodate "lived information behaviors" within the "social, physical, and information environment" (p.174).

In a study conducted by Head and Eisenberg (2009) that consisted of a survey of 2,318 college students across the U.S. the need to develop IL competencies was not found to be widespread among students. The research study concluded to an interesting set of findings when exploring information seeking practices for both course-related assignments and everyday life research. The latter was defined as "the ongoing information-seeking strategies for solving problems that may arise in daily life (e.g., health and wellness, finance and commerce, news, politics, travel, and/or policy)" (p. 5). The researchers found that whether it was for course related or everyday life research students followed stable and expected approaches to information searching that were routed to habitual practices without leveraging the variety of information sources available to them in the digital age. The students' behaviour demonstrated no interest to develop IL practices, such as learning, developing and expanding upon already established information gathering strategies. Despite their different everyday or course related information needs they used and the variety of information sources they were exposed to, they employed a small set of common information sources—which were convenient and familiar to them, Google, Wikipedia, and friends. According to the authors, the students favoured "a risk-averse and predictable information -seeking strategy...learned by rote and reliant on using a small set of resources nearly each and every time" (p. 32). This is a particular interesting finding not only for education but also if one considers that everyday life information needs of students are centred around important issues for their everyday wellbeing (health and wellness), citizenship rights and obligations (finance and commerce, politics, policies) and recreation with significant implications.

In a small-scale study on e-democracy, Balog and Siber (2014) found that the majority of students studying law chose not to actively participate in e-democracy activities and engage with e-government content, despite the fact that they were trained as future legal professionals. Instead, they spent most of their time online for "informal communication, leisure and entertainment activities, such as social networking, e-mailing, watching films, and transferring photos to a computer" (p. 668). On the basis of these passive attitudes of the students towards e-government the researchers proposed the need for additional guidance, instruction and "stronger emphasis in the curriculum on e-democracy issues" clearly assigning the responsibility of an important ELIL issue – the self-engagement of students in democratic processes online - to the teachers and instructors of the courses who would need to dedicate more space to these issues in the curriculum. However, considering that it is unlikely that the majority of the academic staff have been exposed to this aspect as part of their own education this raises issues about the continuing professional development available in relation to their own engagement with e-democracy issues and what may be considered as an accepted practice. This is especially significant in view of contemporary phenomena such as the lack of "civic online reasoning" that has been defined as "the ability to judge the credibility of information that floods young people's smartphones, tablets, and computers" (The Stanford History Education Group, 2016), and the public susceptibility to "filter Pariser's (2012) work on personalization tools. bubbles", as conceptualised in Personalisation used on online social media separates public viewpoints and exposure to information in limited opposing ways, creating online spaces that bring together like-minded individuals who co-exist and communicate in similar online information silos (or 'eco chambers' with similarly minded individuals, whose opinions are reinforced by communication with each other).

In a more recent study of international students' ELIS, Sin (2015) explored students' use of information sources, similarly acknowledging that IL encompasses not only academic information seeking, but also students' work and personal life with the frequent use of social networking sites (Kim, Sin & Yoo-Lee, 2014). Research has also raised awareness of how international students may experience more pressing daily life information needs and challenges around work and career, legal, financial, housing, and health information (Sin et al., 2011). Sin (2015) identified a need for ELIL training for international students in relation to legal and financial information and found that search and evaluation skills as well as individual problem solving styles and affective factors require more attention and support by

IL professionals who should be involved in cultivating students' life skills. Ding and Ma (2013), in an earlier study of 141 undergraduate and graduate students from Wuhan University in China have similarly reported that information literacy education should incorporate comprehensive web searching competencies that address knowledge and techniques related to both academic and daily-life search tasks.

The concept of "transformational literacy" (Stevens & Ito, 2011; Berger et al., 2014; Karvalics, 2014) has therefore emerged in recent research as a key direction in relation to equipping students with ELIL skills that will prepare them for dealing with the challenges of everyday life transitional experiences beyond the realm of academia. Within this context, emphasis is given to information literacy for preparing life-long learning and informed citizens who can contribute towards a strong community and the overall well-being of society.

Therefore, all the above studies raise an important issue that relates to the use of the home environment as an information use environment to address everyday life situations. Comparing the home with the work environment, earlier work by Rieh (2004) demonstrates how people at home engage in diverse kinds of goals for information seeking on different levels (long-term goals, leading search goals, current search goals, interactive intentions). These information interactions require a series of IL activities, described as "interactive intentions" including locating, finding, reading, viewing, comparing, verifying, evaluating, recording (e.g. saving, downloading, writing), disseminating, using (e.g. editing, calling) and sharing information with others. Unlike previous studies that place more emphasis on the value of information in work and education related information settings, Rieh (2004) raises the issue of people lacking IL support in the home information environment. Emphasising "the domestication of the Internet", a concept developed by Cummings and Kraut's (2002) addressing the Internet environment as embedded in everyday life that study also shows that the Internet in the home environment is the primary, most accessible (and often the only) information source. In workplace or school environments people can obtain information from colleagues or information experts in libraries; in home environments however, people have no one to whom questions can be directed. In Rieh's study (2004) peoples considered themselves to be active seekers who had first to develop search strategies and eventually make judgments about information and described search episodes as interactive dialogues between themselves and the Internet. They were keenly aware of their search skills and constantly evaluated their own skill levels. While most appeared to be confident about their search skills, some expressed anxiety and frustration over the search process, e.g. coming up with appropriate search terms. They wanted to become more knowledgeable about Internet searching and they preferred interpersonal information communication to develop this knowledge, discussing their search results with family members before making decisions to act upon any information.

A second conclusion that relates to ELIL for citizenship and the fulfillment of social roles is that it is a social learning experience and praxis that needs to be studied holistically. Information literacy within everyday life is a social construct that is shaped, enabled or constrained by interactions and shared experiences that take place not only within the boundaries of particular groups of people sharing specific socio-demographic characteristics. People are members of multiple social groups with diverse needs and expectations and also interact beyond specified group boundaries. In that sense ELIL could not be solely studied as a collective aspect of a single group but rather as a global cross-group construct. We may also extend this concept further by exploring how specific groups of people (e.g. older people, preschool children) can "enhance their knowledge and contribute to the development of information society by intergenerational exchange of experiences, skills and competences". This concept provides a strong conceptual foothold for examining IL as a constantly shifting and less bounded phenomenon that is shaped by cross-group experiences and cross-contextual interactions (of work, education and everyday life) as well as individual life cycle changes that impact on these interactions (as discussed later on in this paper in section 3.5).

3.4 Information Literacy for Public Health

Within the area of public health research, which relates to information needs of the general public overall, the term 'health literacy' has been often used to define "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions". Health literacy (HL) encompasses the broader context of health and it stresses the analytical processes that should be followed to ensure the quality of information and its use for activities related to health (Nutbeam, 2008). Zarcadoolas, Pleasant and Greer (2005) similarly define HL as a "wide range of skills, and competencies that people develop to seek out, comprehend, evaluate and use health information and concepts to make informed choices, reduce health risks and increase quality of life" [4, p. 196]. Eriksson-Backa et al (2012, p. 84) suggest that health information literacy (HIL) (a related term that puts forward a combination of health literacy and information

literacy) moves away from a skills-based approach and places emphasis on the social perspective that examines the environment where IL develops and "people's own perspectives of IL. They also assert that although this has been the focus of previous empirical research within workplace environments (Bruce, 1999; Lloyd, 2006), HIL within an everyday life context has not been sufficiently or systematically studied although recent research increasingly highlights the importance of everyday life context and the involvement of the family in supporting a healthy lifestyle (Känsäkoski & Huotari, 2016). The presence of HIL is essential for making health decisions and it is considered an important prerequisite for promoting and maintaining an individual's health. Despite this in most of the research that has been conducted so far the HIL levels are set to a basic level and there is not a clear indication of the steps that would have to be followed to ensure that all members of society have equal means to develop them.

One aspect that has been emphasized in research that addresses everyday HIL issues is the important role of different socio-cultural conditions, demographics and social roles as well as their interplay. For example, Buchanan and Tuckerman (2016) have reported on a number of studies that highlight the role of Internet health information for young people and the difficulties those with low health literacy levels, in particular, encounter is locating and understanding basic health information for decision-making as well as the lack of visibility of health information and tailored provision for this age demographic.

Another particular domain that appears to be more frequently researched has been that of health information literacy among senior citizens. Suri et al. (2014) in a systematic review of health information literacy of senior citizens from around the world from 2004 to 2014 found that senior citizens are a diverse group and that age, gender, health status, education, socioeconomic status differences are important variables in studies within this domain. However, they also concluded that the literature is "very fragmented", "with very few studies published on different aspects (e.g. health information seeking, cognition of health information, ehealth) of HIL" (p. 134). In addition, the research samples were small to confidently draw reliable conclusions or generalise the findings and many of the studies were not theoretically grounded. More interestingly, it was found that although social support played an important role on health outcomes mainly because of older adults' diminishing cognitive abilities, not sufficient research addressed its effect on positive health outcomes. Furthermore, the main

social support mechanism for senior citizens was their caregivers, whose own health literacy has not been the subject of sufficient research (p. 134).

Yates et al. (2012) have similarly observed that HIL is a "core ingredient that can assist people to take responsibility for managing and improving their own health" yet limited research has been carried out to investigate everyday community life health related experiences (p. 460). Although there is a widespread appreciation of the value of ELIL, research has been preoccupied with education contexts and more recently with workplace environments. This has created a significant gap in terms of understanding how ELIL is experienced (p. 461). In their own phenomenographic research, Yates et al. (2012) explored HIL of older Australian citizens in everyday life making a number of interesting conclusions around the diversity of information sources used (e.g. print, multimedia, test results, meeting, other people including family, friends, medical practitioners and their own physical experiences such as symptoms and reactions to treatments). Medical practitioners were highly trusted and primary sources of information but also friends and support groups played an important role in helping people obtains viewpoints and direct experiences form other patients in similar circumstances. Information presented in a textual form was considered helpful for gaining a general background insight, whereas online information was found to be is readily accessible but overwhelming because of its sheer quantity and it was required to be checked for reliability and accuracy against other sources of information, which in some cases involved peoples' own embodied knowledge as developed by personal experiences (p. 471-472). The researchers made a number of public health policy recommendations centred on ways for engaging with diverse age groups, with different levels of education and social settings. Among other conclusions for HIL development, emphasis was given on how health messages are presented and communicated to address diverse health needs and, also, on how information is used in critical points for individuals for the development of knowledge, decision-making and positive health action/choices. More research and funding support is however, required to understand and further improve HIL as it is "not a homogenous set of skills; rather it reflects a person's experience of using information, an experience that is likely to vary across cultural and contextual boundaries, across time, and across a lifetime" (p. 474).

In another research study of elderly people conducted by Eriksson-Backa (2014), those with lower levels of education or poor health were found to be more vulnerable regarding

obtaining and using health information. For these groups of people information had to be presented in a way that is understandable and that can accessed easily. One of the most interesting findings of this study was that education plays a significant role in understanding health-related information, seeking and using it but the available patient related information is already aimed at people with a fairly high level of education who also appear to be more confident in their IL ability, suggesting, in that way, the presence of a health information related digital divide phenomenon. Those who were not active and confident information seekers encountered barriers to obtaining information. The presence of eHealth literacy, which addresses how knowledgeable and comfortable people are at finding, evaluating and applying electronic health information to health problems, and how they perceive their skills in that context (Norman & Skinner, 2006) was a necessary condition for addressing health The Internet is an important source of health information across different demographics and as public access to health information increases so is the need for health information literacy. A recent Pew Internet survey, for example, that examined the interest of U.S. citizens on science and health topics concluded to a set of interesting findings that relate to the health information behaviour of the general public. A total of 37% of online adults consider "health and medicine" among the topics they find most interesting when searching for online information with women, especially expressing interest in health and medical topics. Older adults (ages 50 to 64) are more interested in health and medicine than younger people (Pew Research Centre Internet, Science and Tech, 2015). The Pew Internet Survey has published a number of reports on Americans' online health habits highlighting the increasing access to health information on the Internet via mobile devices and at home, by both patients and caregivers. A number of reports in this area discuss findings on complex medical management environment for caregivers, the use of self-diagnosis with one in three US adults going online to find information in order to diagnose a condition and about half consulting medical professionals about that information (California Healthcare Foundation, 2013).

Medical/health librarians offer a wide variety of information services and resources to assist consumers find current and quality information. However, these are addressed at people who are actively engaged with technology, are eHealth literate, educated and in affluent socioeconomic conditions. These conclusions have been corroborated in a number of studies that focus on different age demographics. Research in Finland with a different demographic groups of participants, young men at the Finish Defence Forces, found a number of socio-

economic differences among the sample. Participants with upper secondary educations and whose families had a higher socio-economic position had developed better health literacy. In addition confidence in one's ability to find and evaluate health information meant improved health behaviour, including regular exercise, healthy eating habits and good overall physical fitness (Hirvonen, 2015).

In order to address the need for focusing attention on the context of everyday life health information literacy Niemelä et al. (2012), proposed the concept of EHIL (everyday life health information literacy) "for studying laypersons' general and non-professional abilities related to health information". They designed a screening tool aiming to detecting average levels of HIL in everyday life and help individuals become more informed about their EHIL profile so that additional support could be provided to vulnerable groups. The sample included groups of Upper Secondary school students in Finland and results revealed a set of interesting differences on the basis of gender demographics with female students in particular searching more and for different health topics. However, additional empirical research would be required to design a comprehensive EHIL screening tool considering different segments of the wider population and how a tool like that could be practically employed in patientsdoctors consultations. A follow up study by Enwald et al. (2016) based on EHIL of young men and adults (both women and men) with increased risk for metabolic syndrome further corroborates the impact of demographic variables on EHIL. Men were found to value health information but at the same time had more difficulty than women in knowing whom to believe on health issues. Young men were rather confident in their IL skills but they lacked motivation to proactively seek health information.

There is clear evidence that medical professionals would need to extend their roles and "become catalysts or enablers" that support and encourage people to develop EHIL practices (Kostagiolas et al., 2013). As the population is aging it is also important for public libraries, who have the responsibility to focus on enabling the IL of all citizens, to develop initiatives that would help vulnerable groups such as senior citizens to survive within the 'information society'. However, when addressing EHIL beyond specific demographic groups, it is also important to consider both direct and indirect information needs, those that derive directly from patients and those that relate to patients' informal carers. An informal carer is broadly defined as a family member or a friend who cares for someone else.

Alzougool, Chang and Gray (2013) describe the role of an informal carer as a "challenging one" as "vast amounts of information" are necessary for addressing its complex demands. In addition, informal carers may not be fully aware of their information needs (e.g. Kendall, Thompson & Couldridge, 2004), especially as they rely a lot on personal experience and knowledge (Buri & Dawson, 2000). Alzougool, Chand and Gray (2007) identified four categories related to information carers' needs: a) the Recognised-Demanded information needs - the ones they acknowledged and actively sought information for b) the Unrecognised-Demanded needs - those that were not yet known but could realised as they searched for information or via Internet browsing, c) the Recognised-Undemanded needs - those that were recognised but it was difficult to address because of the abundance of available resources, or because they were not attended to due to fear or anxiety (i.e. information avoidance) and d) the Unrecognised-Undemanded needs that were not consciously known and therefore not actively sought (2007). These categories suggest points for ELIL interventions (e.g. more support from medical practitioners and other knowledgeable bodies). Informal carers are often self-dependent but they may not be in a position to find the required information, either because of lack of information overload, information avoidance or lack of health literacy.

In addition, medical practitioners often provide the basic knowledge an informal carer needs but the Internet plays a key part in the fulfilment of this role because "the richness of information needs is not always addressed by medical professionals" and therefore more emphasis is placed on the individual (Kostagiolas et al., 2013). In a study of parents (as informal carers for their children) Kostagiolas et al. (2013) found that informed participation was required on the basis of both the parent and the paediatrician via their mutual and synergistic roles in health shared decision-making which required the development of information literacy in both parties. The role of health information professionals as information literacy instigators and educators for both parents and paediatricians was highlighted in that study by means of offering information literacy prescriptions and other information decision aids.

Other recent work has reviewed systematically a number of studies in the area of information seeking of mothers' information seeking approaches with a focus on their role as informal carers for their children. Mothers were found to be not only active information seekers but also taking the role of both "health managers" and "primary caregivers for their family members" (Lee, 2016, p. 4). However, most of that literature demonstrated a lack of clear

direction on the basis of supporting mechanisms and interventions for everyday life information literacy in the context of parenthood.

With the number of Internet users searching for health information online increasing the need to ensure public health information literacy and interventions is more significant than ever. A recent survey conducted by the Office of National Statistics (2016) in the U.K. on Internet Access demonstrates that the use of the internet by adults in Great Britain to look for health related information has significantly increased from 18% in 2007 to 49% in 2015 and to 51% in 2016. As this literature review has demonstrated the health information consumer is a diverse and complex information user playing multiple roles as both patient, caregiver and health educator for others. Again, socio-cultural and age demographic dimensions are clearly at play for the development of health information literacy which is viewed as a highly communicative process that involves the interplay of diverse information literacy experiences. Key questions, however, still remain around the role of different information literacy intermediation (formal and informal) and how to make decisions around what is considered to be 'right' information within the context of individual patients' differences, values, situations and preferences. Furthermore, when working together towards commonly shared health goals, a follow up question is 'who accepts responsibility and accountability for health based decisions'? This preliminary review suggests that responsibility is assumed on a crossboundary and shared level. If this is the case, then we may be able to argue that the information literacy grounds of the patient the health professional (as a formal agent) and the informal carer are naturally on different levels but not less significant: they are instead complementary.

3.3. Information Literacy for Critical Life Situations

ELIL practices for critical life situations deal with everyday life information related experiences of people which alter expected, stable and routine daily activities. A change of circumstances to one's everyday normal or expected routine practices may be introduced for a variety of reasons, sometimes expected (e.g. a planned move to a new country) or entirely unexpected (e.g. fleeing to a new country due to war/natural disasters, unemployment). Changes may also be health related (such as in the case of a sudden disease or accident) or due to a new situation that destabilises routine, such as pregnancy, or the arrival of a new baby. This is a critical time when vital situations are faced and significant decisions are made

with sudden and unexpected exposure to new and overwhelming information that requires to be collected, understood and critically evaluated within, sometimes, a relatively limited amount of time and under new circumstances for which little may be known. This is also a time when people encounter a significant transformation in their everyday life that can generate a process of disorganization and an increasing need to make sense of the information surrounding them which can create a number of risks and a sense of conflict, uncertainty and confusion. At the same time, the need for a speedy adaptation and change to new everyday life conditions creates a stronger need for a different set of resources and different engagement ways with information that may involve additional support networks and interpersonal communication with alike individuals.

The work by Nara (2007, p. 942) addresses a number everyday critical life situations that create different types of risks:

Daily life risks can be classified as material risks, human risks, and indemnity liable risks, depending on the type of exposure. They can also be classified by the conditions that give rise to risks, such as risks related to highly advanced science and technology, environmental problems, consumers' lives and products, health and medical problems, and disasters

The natural need to ensure safety and security within everyday life, means that risks and their impact should be identified and in order to mitigate them an important prerequisite lies with understanding their nature and characteristics, preparing techniques and resources and taking action to ameliorate them (p. 945). There are two ways of obtaining risk information: through past experiences and through a provider of risk information. The latter is more objective so that the individual can understand and countermeasure the risks. However, information communicated by risk information providers is mostly at a scientific level that the general literate public may not necessarily understand (p. 947) or can follow a "fear-inciting" style around possible physical danger that may not be effective for taking countermeasures to address the risk (p. 948).

Pregnancy and childbirth is an example of a critical life situation where IL can play a significant role in both physical and psychological wellbeing. Papen (2013), in a study of pregnant women's information practices, found that social networks, including those online, played a significant role in the way in which women evaluated the different sources of

knowledge they were exposed to particularly as the advice they received from different sources was at times contradictory. The participants in this study frequently drew on information sources recommended by others and did not only rely on the information that were given by their midwives and doctors. The ante-natal carers' advice was not always adequate to address their information needs because of difficulties and barriers encountered at the moment of consultation, such as the lack of time midwives had to answer their questions. The authors put forward the idea that IL and particularly emphasised the aspect of critical evaluation that carries a lot of significance in the everyday lives of pregnant women. More importantly, evaluation is not perceived as an individual skill but as a social practice situated within specific contexts. At the heart of IL is the question of what counts as knowledge in specific social situations beyond people's abilities to search for and understand information (therefore IL is a collective practice). We should therefore focus our attention on the contexts within which such information is put to use, i.e. how information may have an impact on people's thinking and their actions and how it makes them engage with specific situations in different ways. Another study which focused on pregnant women by twins (McKenzie, 2003) explored a number of information seeking dimensions including active searching and scanning, non-directed monitoring and searching by proxy (searching through the means of another agent, gatekeeper or intermediary).

Focusing on IL practices of newcomers to a new information environment, Lloyd et al. (2013) investigated how refugees, during their settlement period, engage with a new "complex, multimodal information landscape". They introduced IL as a tool that enables newcomers to battle social exclusion as an information problem as refugees experience social exclusion as a result of finding required information overwhelming and contradicting without required skills to handle the situation (Kennan at al., 2011). Being information literate in such situations is of value since it empowers individuals to familiarise themselves with their new information environment effectively so they will know how to navigate such environment to access required information for the purpose of problem solving.

Being information literate in other unpredicted life situations is equally critical. For example, during a natural disaster timely access to accurate and credible information can save lives and reduce the pressure experienced in such situations, which may overall have a positive impact on the well being of individuals and communities. Yates and Partridge (2014), in a phenomenographic study, explored how people in 2011 Brisbane flood, used information to learn during that temporal but unexpected and stressful situation. Their study revealed that

people may experience IL in a variety of ways: 1) witnessing environmental change; 2) building an information network; 3) helping to inform others; 4) learning about a natural disaster; 5) drawing on past experience; 6) understanding significance.

In other cases, critical life situations may involve experiences of people who are marginalized, disadvantaged or socially excluded because they are found to be jobless, homeless, disabled or socially vulnerable (e.g. battered women). In these situations, IL may become an essential tool for bridging the gap between the everyday experiences of these marginalised groups and the everyday life of what we perceive as ordinary citizenship. Westbrook & Gonzalez (2011), for example, have explored the complex information gaps and barriers of people who have experienced Intimate Partner Violence (IPV) and the role of information in achieving safety. Privacy and confidentiality are essential in the provision of information services and public libraries can play a crucial roles in supporting this vulnerable group, especially as these changes can change from temporal to more permanent with time.

Buchanan and Tuckerman's (2016) study presented a number of significant ELIL considerations linked to another group, that of adolescents who experience socio-economic barriers. In their own empirical study, they combined theories of information poverty and social capital using (similarly to Comstock's study discussed earlier in this article). Chatman's (1996) conceptualisation of 'small world' boundaries to examine the information behaviour and information needs of NEET adolescents (those not in education, employment or training), aged 16-19 who are considered to be in disadvantaged and disengaged circumstances and the views of their support workers within the context of social integration and the views of their support workers. In relation to information needs, employment information (e.g. vacancies & apprenticeships), financial information (e.g. understanding individual and family benefits), and information around managing their day-to-day finances were the main information needs. Online activities of NEET youth appeared to be similar to their general population peers but they spent more time online. At the same time, however, they experienced lack of online skills or access to IT on a daily basis, lack of confidence and motivation and a passive approach to information seeking. One of the most interesting findings of this study with clear implications for ELIL was the presence of "significant literacy issues (encompassing reading, computer, and information)...struggling with online searches, setting up accounts and completing forms, and processing information, and showing reluctance to take part in activities involving reading". The young people in this study preferred interpersonal rather than online information sources. In addition, most support workers acted as information intermediaries, gatekeepers and evaluators who would not direct young people to find information independently but instead guide them and recommended information sources (mainly from public and third sector partnership agencies and noted their preference for face-to-face information sources over online sources (p. 539). "In relation, there was no evidence of proactive transitions to independent information seeking from either party, nor of basic literacy issues being explicitly addressed (although arguably falling outwith the direct remit (and primary skills) of support workers)" (p. 543). Again, this raises a paradox when one considers the significance of developing ELIL for social integration and wellbeing raised in other research. It also poses the question of where responsibility may lie when it comes to the development of ELIL of marginalised or socially deprived groups.

4. Discussion and Conclusions: Implications for Research and Practice

This literature review suggests that ELIL is an emerging research area that requires a unique focus and further empirical investigations on the basis of a number of emerging themes that have implications for people's personal growth, community engagement, citizenship, health, wellbeing, and quality of life. ELIL is framed by different elements in the contexts of the lives of individuals, their diverse roles, their socio-cultural and personal characteristics and their community experiences. It is experienced within a variety of different situations as people engage in information seeking, evaluation, management, sharing and use of information in different ways, often mixing a variety of sources and methods to address barriers encountered around finding informed solutions to everyday life problems. Table 2 summarises the key findings within ELIL research studies within the four key themes identified in this literature review: leisure and community activities, citizenship and fulfilment of social roles, public health and critical life situations, highliting key IL implications, IL practices and IL support needs.

{ Please include Table 2 around here}

Although there is a body of research in this area, the implications of lacking IL skills within the everyday life environment have not been sufficiently researched in the same way as the implications of lacking IL for achieving educational objectives or work-related functions. It is further unclear how people can be supported and empowered to develop effective

information literacy practices within the different realms of everyday life, where they often encounter situations to which they may place priority over education and work-related problems. For example, ELIL for hobby-related activities is not simply linked to hedonic experiences and entertainment, but also connected to life priority areas that address aspirations, values and expressions of self, identity, knowledge and power. The presence of ELIL when encountering health related issues, is essential for making health decisions and addressing health problems as active and confident information seekers encounter fewer barriers to obtaining good health outcomes. With reference to the diverse social roles and responsibilities that people assume within everyday life, IL carries significant implications for their own well-being and quality of life as well as that of others. First-time pregnant women, for example, spend a considerable amount of time engaging with information in order to rediscover their information landscape that relates to their new life during pregnancy and caring for a young baby. People found in vulnerable everyday situations (e.g. the unemployed, senior citizens) as well as other disadvantaged segments of the population (e.g. people with physical and mental disabilities, abused individuals, the homeless, migrants) require ELIL to effectively address important everyday life situations that will help them maintain physical and mental wellbeing. Within these everyday life experiences, it is clear that experiences with information are less structured or formal and that community engagement and interpersonal information sources play a key role in supporting primary, cognitive and affective everyday life needs. In addition, with the increasing ubiquitous nature of online communication, information searching and sharing opportunities create new IL avenues for citizens as more people are enabled to share their personal information environments through digital media and online social communication networks.

However, at the same time, it is clear that not all citizens have equal opportunities to develop ELIL. For example, although digital competence is linked to the confident, critical and creative use of information and communication technologies to achieve goals related to work, employability, learning, leisure, inclusion and/or participation in society (European Commission Information Society Unit, 2014), it is not equally acquired by all citizens, to ensure their active socio-economic participation in society and the economy. There are a number of groups that are still affected by lack of ELIL and these are the most vulnerable and disadvantaged groups in society: those in social housing, those on lower wages, or unemployed, those with disabilities and older people (Cabinet Office, 2014). It is not difficult to identify most of these groups of people in this literature review. People who seek

employment and older people for example, have everyday life information competence needs that cannot be addressed from within the formal support mechanisms of education and work to which they are not exposed to anymore. Equally, they have ELIL needs that they may not be aware of due to experienced digital divides that are created by their lack of technological skills or limited access to the Internet.

This raises an important question around responsibility for supporting ELIL, particularly among deprived minorities who lack the required socio-economic means to develop it as well as and people who are found in critical life situations. As this literature review has demonstrated, public services interventions aiming to help people successfully meet everyday life needs and goals place little emphasis on empowering the independent development of information literacy (such as in the case of young people and older adults). Is ELIL therefore self-sustained and developed organically by society and communities of people in general? Additional research could examine ways in which formal mechanisms could be enabled around supporting the development of IL to address everyday life situations and concerns. Advocating the development of IL should not be limited to specific settings only (e.g. academic or work) but it should encompass citizens' experiences in a holistic manner. This is particularly important if we consider the phenomenon of converging information literacy related practices that are evident in ELIL experiences that relate to education, work, leisure, community, and citizenship activities. Collaboration of a number of different public services stakeholders (public libraries, health information services, social work services) is essential and these can play a core mediatory role in empowering the community to develop an active information literacy mind-set in addition to tailored services and effective information interventions that address people's everyday life information needs and goals.

From this review of the literature which emphasizes contextual differences but at the same time the changing nature of IL practices, we conclude that ELIL may be approached from two different levels that can be perceived as embarking points for further research.

At the first level, is 'contextual information literacy', where the individual is equipped to deal with a specific information environment that is governed by set expectations of competence and accepted principles around IL practices set by that context (very similar to the small information world described in Chatman's (1996)) work. Using as an example the situational context of academic study, a student is expected to complete an assignment on a specified subject area, using particular standards and approaches to information seeking, evaluation and

use that are perceived as meaningful and acceptable within the specific requirements of that educational context. However, developing IL within that prescribed setting helps little in terms of applying IL in other situations, such as those encountered within everyday life. To deal with a different information situation, the student requires another level of understanding of information literacy that enables them to apply their IL learning in that different setting. In addition, IL is enabled via multimodal ways of learning, an interplay between formal and informal contexts of learning that may often 'break the rules' or overturn expectations of what is considered as mutually agreed information practices or 'correct' ways of knowing. This is evident in the way in which students, for instance, may not demonstrate interest to develop IL practices as taught within educational settings but instead prefer familiar information seeking approaches developed within their everyday life environments, transgressing acceptable IL educational lines (e.g. using habitually Google, Wikipedia and easily accessible Internet resources).

Thus the second and more profound level of IL is the 'information literacy mind-set' (Fig 1). It encompasses a critical approach that empowers individuals to constantly adjust themselves confidently and proactively to new and different information environments. Individuals with an IL mind-set recognise the change of context and its new structure; they understand themselves as embedded within the changing context and as influential agents in changing it. The IL mind-set not only acknowledges that IL is knowing information practices, activities and skills of a social site (Lloyd et al., 2013) but it is also about one's ability to adjust effectively and efficiently to new information settings. It is an on-going activity of knowledge construction, knowledge deconstruction and knowledge extension but within converging contexts that are influential upon each other. In that sense information literacy cannot be viewed as a stage that can be accomplished, an information literacy state that has an end point. The need for ELIL does not end; it is an ongoing process throughout a person's life.

{ Please include Figure 1 around here}

Information literacy within all contexts is about having an IL mind-set. An IL mind-set could be broadly defined as a set of transferable skills, i.e. understanding information needs and searching, evaluating, sharing, using information, but more importantly, from an ELIL

viewpoint, we are interested in how given IL skills transgress static principles and formal expectations and evolve within specific contexts. In that sense the distinction between the settings of education, work and everyday life may be no longer perceived as meaningful. As these spheres converge and exert influences upon each other they become a common ground where IL is experienced holistically. The IL mind-set is adaptive to continuous change; it means sharing, communication, collaboration and evaluation and critical engagement with information: a deconstructive but enriching process within constant changing frameworks of meaning and learning.

An information literacy mind-set is continuing learning. Individuals with an IL mind-set are empowered to be more self-reliant, informed and exploratory; to be confident and independent information users in an ever changing and unpredictable information environment. If IL is initially about being able to understand how information use in context is constructed and structured within a socio-cultural environment, IL mind-set is about developing a set of IL heuristics that are applicable to other contexts and relevant to the knowledge base and the individual's experiences as well as how they relate to their surrounding environment in view of how it is changing. The IL mind-set will enable them to learn, discover and use information to solve problems and address specific situations effectively no matter how unfamiliar those situations may be. As a result, we suggest that IL should be considered more as an on-going developmental process. Having an IL mind-set is predominately about having a holistic understanding of any potential information environment an individual might get involved in and an understanding that IL is an organic concept.

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Database	Search string		Hits/accepted
SCIENCE DIRECT	Title-Abstract-Keyword ("information literacy") AND Title-Abstract-Keyword ("everyday life").		Hits: 4
	• ` `		Accepted: 2
Citation Information	Context	Method	Sample
Yates, 2015	Critical Life Situations	Semi-structured interviews	Australian citizens (47 to 64 years)
Sin, 2015	Citizenship & Social Roles	Questionnaire survey	University international students
Database	Search string		Hits/accepted
LISTA	"information literacy" AND "e	veryday life" (all search fields)	Hits: 22
Via EBSCOhost	Limiters - Publication Date: 2000-2016 Search modes - Boolean/Phrase		Duplicates: 2
Citation Information	Context	Method	Accepted: 10 Sample
Eriksson-Backa et al.,		Method	
2012	Public Health	Questionnaire survey	Finn citizens (65–79 years)
Walker, 2009	Citizenship & Social Roles	Semi-structured interviews	U.K. Parents
Smith & Hepworth, 2012	Citizenship & Social Roles	Phenomenography/ semi-structured interviews & drawings	Young people (11-18 years)
Hirvonen et al., 2015	Public Health	Questionnaire Survey	Young men (most 17-18 years)
Meyers, Fisher & Marcoux, 2009	Citizenship & Social Roles	Interviews, focus groups	34 Preteens (9-13 years)
Yates et al. 2012	Public Health	Phenomenography/ Interviews	20 participants between (57-81 years in Australia
Sundin, 2011	Leisure and Community Activities	Interviews, online observations, web documents and discussions, e-mail questions	11 Wikipedia editors
Skov, 2013	Leisure and Community Activities	Web questionnaire, interviews	24 online museum visitors
Papen, 2013	Critical Life Situations	Interviews, analysis of pregnancy books and websites practices	26 Pregnant women
O'Connor, 2013	Citizenship & Social Roles	Survey & Semi-structured interviews	44 US retired or near-retirement investors
Head & Eisenberg, 2009	Citizenship & Social Roles	Questionnaire survey	2318 US College students
Database	Search string	(source survey	Hits/accepted
LIBRARY LITERATURE & INFORMATION SCIENCE Via EBSCOhost	"information literacy" AND "everyday life" (all search fields) Limiters - Publication Date: 2000-2016 Search modes - Boolean/Phrase		Hits: 10 Duplicates: 6 Accepted: 0
ERIC Via EBSCOhost	"information literacy" AND "everyday life" (all search fields) Limiters - Publication Date: 2000-2016 Search modes - Boolean/Phrase		Hits: 7 Duplicates: 2 Accepted: 1

Citation Information	Context	Method	Sample
Comstock, 2012	Citizenship & Social Roles	Dual-site ethnographic case study	Junior year high school students and librarians
Database	Search string		Hits/accepted
EMERALD	[Anywhere: "information literacy"] AND [Anywhere: "everyday life" (Articles/Chapters). Refined by Within the abstract; by type 'research papers' & 'case studies' "conceptual papers & general reviews" Refined search [Publication Title: "information literacy"] AND [Abstract: "everyday life"]		Hits: 29 Hits: 13 Accepted: 2
Citation Information	Context	Method	Sample
Lloyd et al., 2013	Critical Life Situations	Interviews, focus groups	10 Refugees in Australia 5 Service providers
Juznic et al., 2006	Citizenship & Social Roles	Questionnaire survey	109 Senior citizens in Slovenia (51-84 years, 90 per cent women)
Database	Search String		Hits/accepted
ABI/INFORM Via ProQuest	Abstract ("information literacy") AND Abstract ("everyday life") Limiters - Publication Date: 2000-2016 Search modes - Boolean/Phrase		Hits: 6 Duplicates: 1 Accepted: 2
Citation Information	Context	Method	Sample
Rieh, 2004	Citizenship & Social Roles	Semi-structured interviews, field note-taking	12 Residents of general public of Northern California
Känsäkoski & Huotari, 2016	Public Health	Semi-structured interviews, questionnaire, care path instructions and memos	30 Health professionals; 3 Children and their mothers
Database	Search String		Hits/accepted
WEB OF SCIENCE	TOPIC: ("information literacy") <i>AND</i> TOPIC: (everyday life) [excluded books, book chapters and reviews] Timespan: 2000-2016. Indexes: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC.		Hits: 32 Duplicates:8 Accepted:8
Citation Information	Context	Method	Sample
Demasson, Partridge & Bruce, 2016	Leisure and Community Activities	Phenomenology - Interviews	22 serious leisure participants operating within the area of heritage
Enwald et al., 2016	Public Health	Survey: self-assessment-based screening tool	571 young healthy men and adults (both men and women) with an increased risk for metabolic syndrome
Balog & Siber, 2014	Citizenship & Social Roles	Survey questionnaire	171 law students (1st and 4 th year)
Buchanan & Tuckerman,	Citizenship & Social Roles	Observation, semi-structured interviews & focus group	Observation of 36 NEET adolescents (16-20 years)

2016			Interviews with 15 NEET adolescents Focus Group with 4 NEET adolescents Interviews with 6 support workers
Yates & Partridge, 2014	Critical Life Situations	Semi-structured interviews	7 adult residents of Brisbane
Ding & Fa, 2013	Citizenship & Social Roles	Controllable experiment (task-based online test)	141 undergraduate and graduate students from Wuhan University, China
Wyatt et al., 2005	Public Health	Interviews	32 women and 15 men (South East of England)
Database	Search String		Hits/accepted
GOOGLE SCHOLAR	"information literacy" "everyday life" –education Refined by "information literacy" "everyday life" –education -student -students -school -college - colleges -university -universities		Hits 576 Hits 48 Duplicates: 1 Accepted: 2
Citation Information	Context	Method	Sample
Westbrook & Gonzalez, 2011	Critical Life Situations	Content analysis	150 individuals survivors of IPV
Eriksson-Backa, 2014	Public Health	Questionnaires	281 Finns (65-79 years)
	SOURCED VI	A CONSULTATIONS WITH OTHER IL RESEARCHERS	
Citation Information	Context	Method	Sample
Gunton, 2011	Leisure and Community Activities	Phenomenology - Interviews	4 members of the Uniting Church in Australia
Yakel, 2004	Leisure and Community Activities	Semi-structured interviews	29 genealogists and family historians
	Ta	able 1. Literature searches conducted on databases	
			700

Table 1. Literature searches conducted on databases

ELIL themes	IL implications	IL practices	IL support
Leisure and Community Activities	IL is driven by diverse goals and values with implications for personal, community and wider societal goals. IL is experienced within the converging contexts of everyday life, education and work and within blurring boundaries of formal and informal information experiences and practices.	IL requires a significant amount of evidence, methodical use of information and extensive time and resources. IL practices are shaped by community goals and values.	It is unclear how people can be supported and further empowered to develop information literacy practices that can promote and sustain the durable and valuable benefits of leisure and community activities.
Citizenship and the fulfillment of social roles	IL is driven by specific social roles that carry significance and responsibility. Different socio-demographic and contextual characteristics determine the development of IL. IL is linked to wellbeing, learning, informed decision-making and self-development. However, IL is a constantly shifting and less bounded phenomenon, shaped by cross-group experiences and cross-contextual interactions (of work, education and everyday life). Individual life cycle changes have impact on these interactions. The contexts of education and everyday life information literacy practices converge.	Interpersonal sources such as family and friends be catalysts of positive information and communication experiences, especially among lower socio-economic groups. Online information is preferred but information quality and accuracy is an important issue. IL is shaped within informal social settings and the home environment. Creating a sense of community and providing effective advice and support mechanisms are crucial for IL.	It is unclear how people could be empowered to develop IL independently for everyday life decisions and personal development goals. Convergence or cross-over of everyday life and education contexts needs to be encouraged and fostered in order guide the development of information literacy particularly aimed at young people.
Public Health	IL is shaped by different socio-cultural conditions and demographics. People who are actively engaged with technology, are information literate, educated and in affluent socio-	A diverse variety of information sources used. Medical practitioners are highly trusted but also friends and support groups play an important role for positive health outcomes. Social	It is unclear who assumes responsibility for enabling IL of all citizens. There is a lack of clear direction on the basis of supporting mechanisms and interventions

	economic conditions has better health outcomes. IL as is not a homogenous set of skills. It reflects a person's experience of using information, an experience that is likely to vary across cultural and contextual boundaries, across time, and across a lifetime.	support influences health outcomes. The Internet is an important source of health information across different demographics and as public access to health information increases so is the need for health information literacy.	for patients and their informal carers.
Critical Life Situations	IL is linked to ensuring safety and security within everyday life and empowers individuals to familiarise themselves with their new information environments. IL may become an essential tool for bridging the gap between the everyday experiences of marginalised groups and the everyday life of what we perceive as ordinary	Formal information communication mechanisms are not adequate and different sources can be contradictory. Interpersonal information sources are preferred and timely access to accurate and credible information is essential.	It is unclear where responsibility lies when it comes to the development of IL of marginalised or socially deprived groups. There is need to develop independent and active IL practices.
	citizenship.		

Table 2. Everyday life information literacy key findings

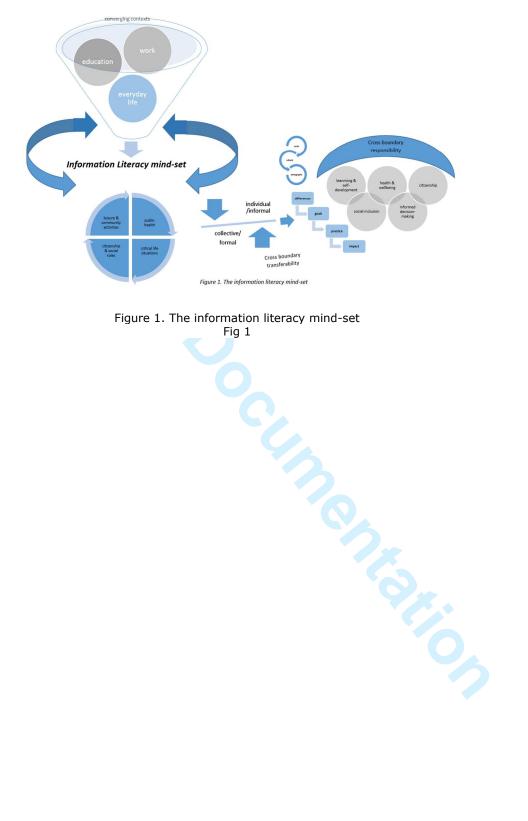


Figure 1. The information literacy mind-set