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SPECULATIONS IN DOCUMENTATION

Information Literacy 2.0: hype or discourse refinement?

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Abstract

Purpose – The purpose of this paper is to introduce the term Information Literacy 2.0 as a subset of information literacy, to describe its development and significance and give an outline of its underlying theoretical assumptions.

Design/methodology/approach – The paper first examines the grounds for the possible re-conceptualizations in the field of information literacy and identifies the current developments in the information universe as the principal drive for perception shifts. Based on a literature review and a descriptive analysis of contrasting features of library user education, information literacy and Information literacy 2.0, the paper highlights the main foci of paradigm shifts.

Findings – The paper found that the new meaning and understanding of the central conceptions in information literacy are shifting the focus of classical information literacy towards Information literacy 2.0. Many of the aspects of current information literacy practices originate from a print-based culture, which is incongruent with the transient and hybrid nature of digital environments. These radically changing environments are causing the appearance of anomalies in the information literacy paradigm, which could effectively be resolved through the introduction of a sub-concept of information literacy.

Practical implications – The article specifies the possibilities for putting theoretical conceptualizations of Information literacy 2.0 into practice by determining the range of shifts in information literacy activities and identifying how new practices differ from the earlier approaches.

Originality/value – The study attempts to advance the research field of information literacy by proposing a new outlook on information literacy through the integration of its underlying theoretical conceptions and practical applications.

Keywords Information, Literacy, Learning, Information facilities

Paper type Conceptual paper

1. Introduction

Information literacy (IL) has entered the discourse of different disciplines and their respective systems of terminologies, while its practical applications feature as an important segment of numerous initiatives, projects and strategies worldwide.

Previous to attaining this current significant position IL went through a long-lasting process of growth in theoretical and applied understanding characterized by numerous terminological and conceptual contradictions (Shapiro and Hughes, 1996; Snively and Cooper, 1997, Pawley, 2003). The analysis of the development of information literacy and the phenomena that have influenced it shows a multifaceted and multidimensional nature of its concept. IL developed in response to the issues that were necessitated by the developments within the information society. Transformations in the field of information sciences known as user orientation and the emergence of new educational



paradigms also contributed to the development of the concept. Notwithstanding such highly diverging path of development, the phenomenon which proved crucial in making necessary the consolidation of the concept of IL and put it on the agenda of different communities was the appearance and spreading of the world wide web that was further followed by the increasing complexity of information environments. Only after the web became universally present and available, the concept of IL started to spread through different communities making it possible to talk about the “Information literacy movement” and the evolution from library instruction or user education towards IL. During this period the number of definitions multiplied and sparked off a lively debate. Nevertheless, a closer look at the overflow of IL definitions revealed a core which is characterized more by convergence than by divergence (Owusu-Ansah, 2003). Now, several years after identifying convergence of the IL concept and after the universal spreading of Web 2.0 application and services, it is time to reexamine the basic questions and consider whether there is a need for the redefinition of discourse, as well as for theoretical and terminological shifts that could more adequately describe the new environment, activities and required competencies.

2. Information literacy: the anatomy of the concept

Information literacy, in its central features, has always been influenced and determined by the current information environment. The concept itself appeared partly as the result of a growing heterogeneity and complexity of information, information resources and information structures. The correlation between IL and information landscapes can be discerned in the development of IL, the beginnings of which are rooted in library user education i.e. bibliographic instruction (the equivalent term used in the USA). Nevertheless, although it originally sprung from user education, IL gradually started to differ from it in the range of its attributes, e.g. principally through the shift of its focus on tools and the methods of using them towards concepts and problems, or from isolated instruction towards teacher-librarian partnerships. In general, the concept of IL is seen as advancing from the practice of teaching tool-based skills toward teaching competencies that are applicable in various diverse environments. However, it is still important to take into consideration that originally there was a strong focus on characteristics of resources and tools and owing to that, there existed a close similarity between IL and user education. With the growth of complexity of various information resources the need for emphasizing evaluation, critical awareness and selection became more evident and thus enabled the rise of IL. Despite these various shifts within the focus of IL, there were no conceptual transformations because the user was still a customer, a passive recipient of information.

The second vital factor that reinforced the position of IL on research and practical agendas worldwide is education. A strong correlation between education and IL is well expressed through often cited statements, such as, “information literacy as a catalyst for educational change” (Bruce, 2008) or “information literacy as a prerequisite for lifelong learning”, which are commonly used in the explaining and promoting of the concept. New educational theories like constructivism have provided the arguments for introducing IL into classrooms. According to these new theories, education is not a transfer of information and knowledge but a process that involves creation, reflection and critical awareness. Hence, the ability to meaningfully interact with a wealth of

information is deemed more important than ever. More specifically, this correlation has been proved by numerous investigations and studies confirming that academic success and the effectiveness of learning depends on competencies in accessing, evaluating, synthesizing, communicating and ethically using information (Limberg, 1999; Kuhlthau, 2004; Bruce, 2000). This interrelation became even more evident when the basic building blocks of learning process, i.e. educational resources and technologies, started to change substantially. With the introduction and extensive use of electronic information in classrooms, which is characterized by pluralism, controversy, autonomy, fluidity, replicability and accessibility as opposed to uniqueness, reliability, authenticity and control commonly associated with the traditional paper-based resources, the need for IL competencies necessary for the learning process became more than apparent.

The preceding discussion shows that the changing characteristics of information and information resources resulting from the processes of virtualization and digitalization have affected their application for educational purposes. Still, despite of these radical transformations, the conceptual foundations of IL concerning the user or the dynamics of information processes have remained the same. However, in recent years a new environment introducing completely different, highly user-centered and participatory approaches have emerged. The users have changed their role by becoming information producers, creators and co-creators. Diverse populations of users, new frontiers of information creation, organization, dissemination, services and provision are major challenges identified in this new “World 2.0”, characterized by new technologies and societal developments (Allard, 2009). Users influence the composition and design of systems and services by adding and organizing their own content. New information systems based on Web 2.0 application and services are shaped by user input and systems’ responses are influenced by the search activities of former users. Entirely new types of information resources, new models of the various forms of information seeking behavior as well as new aspects of user expectations have emerged as a result of this change and development. Web 2.0 largely focuses on information-based services which naturally have an impact on IL. The analyzed changes and arguments lead to the following conclusion and question: IL has appeared, spread and developed as a reflection of shifts and changes in information landscapes and education. What will happen with information literacy now that both of these areas have fundamentally changed with the appearance of Web 2.0? Can information literacy remain unchanged?

3. Making the case for Information Literacy 2.0

The evolution of IL has been accompanied by theoretical discussions and various attempts of conceptualizing the field. The correlation between learning and IL has shaped definitions of information literacy, the majority of which focus on determining a set of competencies (ALA, 1989; Bundy, 2004; Doyle, 1992; Eisenberg and Berkowitz, 1990). These definitions of IL highlight the development of skills and attributes which can be mapped towards standards and indicators. On a pragmatic level, this enables the effective integration of IL attributes with learning outcomes specified by the current curricula. Such approach to IL seems natural and necessary enough in the course of the integration of IL into programs and curricula of formal education. Nevertheless, a major downside to these endeavors is a limited perception of IL as a

neutral process which is entirely unaffected by any kind of social, political or historical background. This critical aspect has been emphasized in various discussions that have been recently occasioned by the introduction of a broad framework that determines IL as a socio-technical practice.

This broad denomination was suggested quite recently in the writings of Scandinavian authors (Tuominen *et al.*, 2005; Sundin, 2008), although the crucial points and arguments for determining IL as a socio-technical practice were put forward in earlier writings which presented a radical alternative to defining IL merely as a set of generic skills common to all disciplines and learning environments (Grafstein, 2002; Norgaard, 2004; Holschuh Simmons, 2005). Other critics have focused on the incompatibility of IL standards in relation to the social constructionist framework according to which learning does not occur between one person and a body of knowledge but among people and within communities (Norgaard, 2004, Harris, 2008). Another set of similar critical observations describes the idea and methodology pertaining to standards such as the ACRL as highly skill-oriented. The use of a set of standards as a framework significantly reduces a complex structure of competencies and knowledge to limited and isolated units (Webber and Johnston, 2000). These contrary viewpoints concerning standards which were articulated almost one decade ago are still echoed today, even going to such extremes as to claim that such insistence on standards inevitably leads to over-systematization and the predominance of a certain form of generic rubric and a de-contextualized form of administrative paperwork which entirely disconnects IL from pedagogical theories (Jacobs, 2008).

As opposed to defining IL as a set of isolated skills, authors have recognized that understanding, meaning and context must be central to efforts concerning IL (Bawden, 2001), that information and knowledge are socially produced and distributed, and that they can therefore be effectively accessed primarily through social relationships (Lloyd, 2006) that have to play a part in conceptualizing IL. This social dimension was identified earlier in Shapiro and Hughes (1996) who emphasized the social, economic and cultural dimensions of IL. Other authors have applied the same logic by claiming that literacies are related to historically and contextually defined social values and technologies, and that it is therefore necessary to include the various contexts of information knowledge production in the discussions on IL (Marcum, 2002, Kapitzke, 2003). This short review shows that the predominant tendency towards defining IL as a set of skills without relating it to particular disciplinary, technological, historical, economical contexts – such as can be found in the widely cited and translated standards of ACRL – has been severely criticized since the first attempts at defining IL. This critical mass of literature has finally led to identifying IL as a socio-technical practice which makes crucially important the social, ideological and physical contexts and environments in which information and technical artifacts are used (Tuominen *et al.*, 2005). Therefore, IL has its root in the activities of particular groups and communities; it evolves in disciplinary and other contexts and is practiced by communities using their corresponding technologies.

We can discern similar ideas in the analysis of Sundin (2008) who sought to provide an empirical dimension to the new and emerging theoretical framework and thus conducted a study through which he identified four main approaches to IL education and from this subsequently derived as many approaches to IL as well. He termed these approaches the source approach, behavioral approach, process approach and the

communication approach. The source approach to IL focuses on information sources and bibliographical tools. This approach corresponds to what has often been described as system orientation which takes the information system and not the user as its point of departure. While the main teaching interests in the behavioural approach are still bibliographical tools and information sources, this approach provides a generalized structure for information seeking which users can apply in various situations, practices and contexts. In the process approach the different aspects of information seeking are presented from the perspective of the user, focusing on how users experience information seeking and create meaning. This approach corresponds to user-oriented research and is based on the constructivist view of information seeking. Finally, the communication approach emphasizes the social and communicative aspects of information processes which are context-sensitive. Hence, information seeking practices of various kinds are understood within the context in which they are carried out. The communication approach stresses the relation between cognitive authority and source evaluation as well as the significance of social navigation. The focus of this approach largely consists of an awareness of the importance of understanding the socio-cultural conditions for the production, mediation and consumption of information. Sundin's research and his construction of an empirical framework have resulted in the drawing of an outline of the developmental stages of IL the beginnings of which are closely related to user education with a marked resource orientation. Currently IL is entering the communication phase which has emerged from new multimodal and socially mediated information landscapes. At the same time, the features of the communication phase are compatible with the theoretical framework of interpreting IL as a socio-technical practice which takes into consideration new complex systems of social relationships, new socio-technical configurations and organizations that constitute today's reality. The emergence of new kinds of landscapes makes necessary new kinds of competencies. Moreover, such fundamental transformations are causing the appearance of anomalies in the current IL paradigm which could effectively be resolved through the introduction of a sub concept of IL: Information Literacy 2.0.

The term IL 2.0 emerged from the blogosphere related to this debate and is used in different ways by different authors. By reading posts referring to IL 2.0, one could easily get the impression that IL 2.0 is entirely about using Web 2.0 services in information literacy training and activities i.e. as a medium of information delivery and a method of education. A more comprehensive approach to IL 2.0 was suggested by Tuominen (2007) or Hapke (2007) whose views on IL 2.0 suggest renewed central conceptions of IL, new focus in relation to program development and content and a brand new philosophy of information literacy in general. The transformations in training methods and various forms of the delivery of services merely constitute a subordinate determinant of these re-conceptualizations.

There are plenty of arguments supporting the introduction of a new version of IL. At the same time there are as many reasons to question the introduction of this term and reject it as hype, since currently there are many phenomena which are labeled as having 2.0 extension for marketing purposes. Still, in the case of IL 2.0 the arguments are related to the conceptual foundations of the term. Much in the same way as the arrival of Web 1.0 and the implementation of e-learning platforms has had a considerable influence on IL, so the appearance of Web 2.0 and the use of services and

applications like media-sharing services, blogs or wikis in formal and informal learning situations have a similar effect on IL, inevitably changing its foci and increasing its importance. If information landscapes are changing and so is learning, and if IL is in correlation with learning and information environments, it is then necessary to restructure, update and extend our views on information literacy and express these changes through the 2.0 extension. (Figure 1)

Merely accepting “Information literacy 2.0” as a term is insufficient for articulating it as a strictly defined and uniform category with clear demarcation lines that will set it apart from former approaches to IL. Nevertheless, due to the unique features of Web 2.0 and the information environment it has created, which in some of its features is incompatible with earlier information structures, IL 2.0 can be determined as an updated subset of IL.

Such a re-conceptualized notion of IL 2.0 would reflect new social relationships and socio-technical configurations and take into account the social, ideological and physical contexts and environments in which information and technical artifacts are used. The idea that information and the researchers involved in its creation and use are not separate entities and that the development of IL requires interaction between people and people’s involvement with texts produced by others (Harris, 2008) belongs to interpretations related to the participative IL 2.0 philosophy.

A further significant aspect of IL 2.0 refers to its compatibility with the “Library 2.0” (L2.0) concept. Within the L 2.0 concept, IL 2.0 is not only one of the pillars for realizing the L2.0, but also a mean to overcome many of its critical aspects. Conducted reviews of the literature that deal with the idea of the L2.0 show that this concept is different from the library service we know today and that it operates according to the expectations of today’s users (Curran *et al.*, 2007, p. 288). Therefore, one of the main

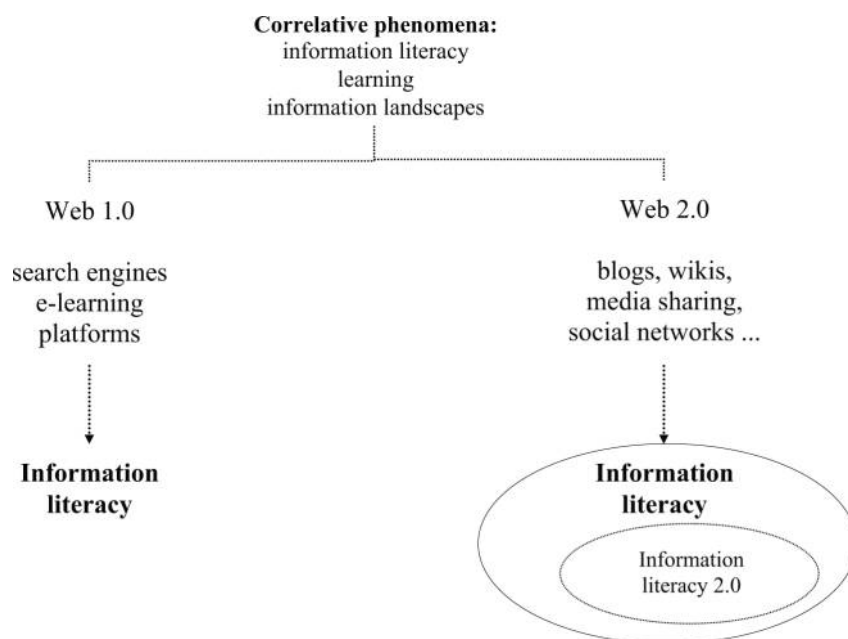


Figure 1.
Correlative phenomena
influencing the
development of
Information Literacy 2.0

aims of the L2.0 is to encourage feedback and participation from the community. Still, it is important to stress that, just like the idea of IL 2.0 does not replace existing IL practices, similarly, the idea of L2.0 is not about rejecting the Library 1.0 or replacing existing functionalities, but rather about adding new ones (Serante, 2009, p. 240). On the other hand, conceptual shifts have resulted from the fact that the Library 2.0 can be perceived as a matrix of dialogues, instead of a collection of monologues like the Library 1.0 (Maness, 2006). Rather than creating systems and services for patrons, librarians will enable users to create them for themselves. Herein lays the major shift for libraries, which opens not just access to their catalogues and collections but access to their control. Library 2.0 demands libraries focus less on secured inventory systems and more on collaborative discovery systems. A profession steeped in decades of a culture of control and predictability will need to continue moving toward embracing facilitation and ambiguity, accepting the risk of service misuse. Some of these risks may be minimized through IL 2.0 which is focused on analysis of information generation, recognition of different context and the creation of conceptual maps of new information landscapes.

Another important aspect of defining and conceptualizing IL concentrates on positioning it within the landscape of "21st century literacies". Attempts of different authors to define a set of literacies for the digital age resulted in pointing to digital literacy as a generic phenomenon that subsumes all other literacies (Martin, 2006; Pilerot, 2006; Bawden, 2008). The term digital literacy was introduced and defined by Gilster as ability to understand and use information from a variety of digital resources. With the emergence of Web 2.0, Information literacy seems to overlap or even merge with digital literacy due to its focus of information emerging in digital environments. Bawden (2008) emphasizes this connection by defining digital literacy as a general and adaptable concept that outlasts specific systems like search engines or databases and a concept that can be applied to folksonomies or social media as well. Despite the evident trend of merging separate types of literacies, as a result of prevailing digital information, IL and its 2.0 counterpart have some additional facets that distinguish them from digital literacy. As opposed to digital literacy, the rationale of IL 2.0 lies not so much in the digital, but in the continuum of information artifacts, be they oral, digital, printed, collective in nature. Furthermore, as has been observed by Martin (2006), different literacies are operating in a context important to different interest groups. Information literacy forms already a part of the professional culture, identity and activities of several groups and stakeholders (teachers, librarians, workplace...). Therefore IL 2.0 would build on existing structures and professional practices, albeit it would change its focus and gain new facets as a result of the transformations caused by the Web 2.0.

Through the correspondence with the idea of the Library 2.0 and the incorporation of socio-technical and communicative aspects IL 2.0 is entirely compatible with the recent theoretical frameworks, but it yet has to become fully articulated within practical transformations in IL programs and activities which differ considerably from former approaches.

4. Information Literacy 2.0: determining the shifts

As presented by Figure 1, IL 2.0 is defined as one of the subsets of IL. As it has been shown by the discussion above, paradigm shifts are the reflection of recent developments

related to information landscapes and approaches to learning. But in what way can we expect this paradigm shift to be reflected in real life, in IL programs and education and what are the possibilities of putting theoretical conceptualizations of IL 2.0 into practice?

Web 2.0 is currently changing what it means to be an information literate person or community. The first aspect of this change is undoubtedly related to the issues of the blurring of authority which result from what Tuominen (2007) calls the erosion of information context (see Figure 2). The erosion did not begin with Web 2.0 but had started considerably earlier and became evident with the first web document without an identifiable author or indication of origin. Generally, this erosion comes naturally with the advancement towards electronic environments. In the era of print culture the information context was based on textual permanence, unity and identifiable authorship, and was therefore stable. The appearance of Web 1.0 has already undermined that stability by the very nature of digital information which may be easily modified, copied and duplicated. Web 2.0 with its collaborative model of knowledge production and mash-up philosophy finally brought an end to the stability of information context by creating flat and fluid information spaces. All this brings us to the conclusion that IL should have its focus on the critical understanding of the social origins of information and their importance in different practices. Every evaluation of information and information resources or decision-making related to information should incorporate a wider critical perspective on any social, political and economic ideology acting as the background behind that information and take into account the values and perspectives that are always present in the context of the generation of information and knowledge. The analysis and identification of the context of generation of information, the recognition of information contexts, the determining of authority, authenticity and accuracy of encountered information are the principal features of efforts related to Information literacy 2.0.

Information literacy 2.0 further presupposes the reduction of the contents related to the typical assumptions of information retrieval such as extensive introductions to Boolean operators or the peculiar features of controlled vocabularies. A thorough re-conceptualization makes necessary the shift of focus which will make centrally important the creation of conceptual maps outlining new information landscapes and accentuate the identification and interpretation of the (i)rationalities within layered and overlapping information spaces. The layers of information artifacts belonging to different information eras – oral, print and digital – are intertwined and mutable, and in addition to that are used simultaneously. The user should be made aware of these coexisting worlds and offered conceptual insights about them in order to be able to learn to deal with them and use them simultaneously.

Another prominent feature of new IL 2.0 is related to efforts of supplementing former organizational aspects which used to be predominantly system-oriented (the explanation of the principles of organization of information in predefined information systems, e.g. libraries, databases) with those that would be significantly more

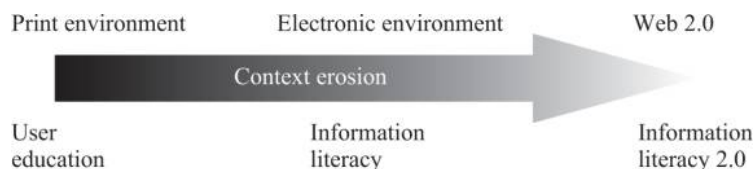


Figure 2.
Erosion of information
contexts as a driver
towards IL 2.0

user-centered (the process of assigning ad hoc user-created objective or subjective tags to personal and collective repositories of links, pictures, videos and texts).

Adhering to the principles of “Information literacy 2.0 philosophy” similarly includes the offering of IL programs that would meet the demands of the real world and abandoning the one-size-fits-all approach that frequently characterizes the existing programs, since exclusivity and uniformity stand in direct contrast to the central precepts of Web 2.0. Generally, IL programs are so structured as to acknowledge the existence of different and often conflicting versions of reality. At the same time they are also based on the premise that after a linear interpretation and evaluation made possible by IL training one is able to arrive at the unified truth. Epistemologically, it is considered that each phenomenon stems from a single “correct” assumption. As opposed to such a positivistic presumption, IL, owing to its current environment, can no longer be conceived of as a black-and-white or strictly rules-driven process. Taking as an example the current information-solving or decision-making processes, is it possible to a priori determine the best information and resources to use or the strategy to apply for solving the problem? Are formal communication channels always better than the informal ones? Undoubtedly not, and IL programs should therefore move ahead by abandoning the limited present approach according to which there is only one right answer or path to this answer and instead offer insight into the variety of complex layers our current information universe consists of. Correspondingly, among competencies used to describe information literacy negotiation should be included as one. Negotiation in this context can be defined as the ability to navigate across diverse communities taking into consideration multiple perspectives and their respective alternatives. Abandoning the linear approach to IL very much corresponds with the IL model devised earlier by Foster (Markless and Streatfield, 2007). His non-linear or non-sequential model takes advantage of technological developments that allow individuals to make choices and navigate between options. The framework is designed for students to construct their own problem-solving approaches to finding and using information. The impact of context on learning should lead students to make different choices depending on the nature of the task they are addressing. The basic assumption of this model is to encourage students to stop seeing research/assignments as a process of collecting information and instead to see in terms of forming their own perspectives and creating new insights, which is in the core of IL 2.0 as well.

A further issue in the drawing of a distinction between IL and IL 2.0 is related to the widening of information landscapes that are included through IL programs. This process started within the field of user education/bibliographic instruction and library instruction programs. In the early stages these programs focused on teaching users how to make the most effective use of the library, the library system or resources available within the library. The list of potential objects of instruction was then quite uniform. Apart from the resources and systems that were accessible within the library (OPACs, card catalogs, the library premises, classification schemes, reference books, etc.), the list gradually started to include information structures that were not exclusively accessible within library institutions and did not strictly belong to the domain of libraries (web, e-mail, academic databases). This broadening marked the movement towards IL which widened its focus by breaking out of the library walls and attempting to include as much places which make up our information universe as possible. Nevertheless, these programs were still characterized by the idea of “ideal”,

"appropriate" and "legitimate" places that were to be preferred in the selection of information. These places were considered to be necessary for the development of the proper search strategy due to their highly organized structures and the endorsement of the application of information retrieval tools and procedures. IL 2.0 here again calls for the broadening of the concept through the inclusion of information spaces that have been brought about Web 2.0, such as the Wikipedia, blogs, social bookmarking services etc. However informal and not clearly defined they might be, these places may well enough be used for research and educational purposes (Figure 3).

As presented by Figure 3, there is a gradual widening of focus from stable and structured spaces towards the inclusion of those that are mutable and unstructured, but there is no sharp dividing line drawn between the spaces included in IL and IL 2.0 programs.

Owing to the underlying philosophy of user-participation, Web 2.0 *per se* is a catalyst for the proliferation of learning communities. These new sites of learning are characterized by intense activities of knowledge acquisition, information use and sharing, refuting the theory of information as an object to be found, located and used by the individual. IL should assume the features of these new information and learning sites. Harris (2008) illustrates such lines of activities by suggesting that IL should raise the awareness and develop abilities of identification and diagnosing of the sites of knowledge valued by specific communities and the ability to discern similarities and differences between the information needs and possible sources of resolution for different types of communities.

It is therefore important to emphasize that the context of Web 2.0 and the problems that it has generated bestows new and unique functions on libraries. The only way for educational institutions to control or influence information behavior of students in these new realms is indirectly through IL programs. However, these programs have to change in content by moving away from their orientation to formally and institutionally integrated tools such as library catalogues, academic databases or Boolean operators towards the integration of tagging issues, the issues of reliability, authenticity and privacy, including various other questions related to learning communities.

Finally, IL 2.0 is defined through instructional methods. This means that in order to be able to provide information literacy training, librarians and teachers have to use Web 2.0 services and applications, not as isolated tools, but within their IL programs and sessions. This in turn is closely related to the necessity for creating IL programs that will meet the demands of the real world, programs that will address a real audience. Several studies have shown that Web 2.0 services are becoming an important part of many aspects of users' lives (UCL and JISC, 2008; Rowlands *et al.*, 2008, SPIRE Project, 2007). By ignoring these services, information literacy experts will not share the same place with students, teachers and clients, and their efforts will be significantly

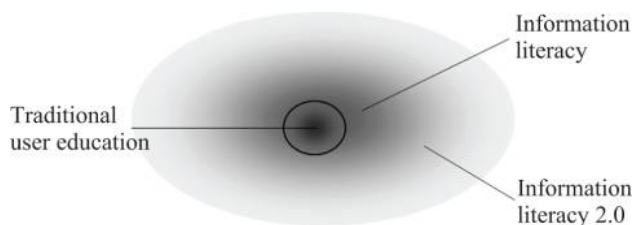


Figure 3.
Widening of information
landscapes included in IL
2.0 programs

limited in range. Nevertheless, bearing in mind the dramatic impact of Web 2.0 on central conceptions of IL, it would be limiting to equate Information literacy 2.0 with the use of new technology in information literacy training. Hence Information literacy 2.0 should include the range of shifts summarized in Table I.

A final question in conceptualizing IL 2.0 refers to its role in already emerging and future information environments. One often mentioned term used to describe this new environment is Web 3.0, which at this moment can be defined as a complex conglomerate of user-generated content, 3D visualization, natural language search, data mining, machine learning, recommendation agents and the semantic web. What will happen with IL in the Web 3.0? Will we soon talk about IL 3.0 as well? As stated at the beginning of this paper, IL has always been influenced and determined by the actual information environment and it changes with new environments. Whether new facets will need to be added to existing IL practices, in order to solve some problems that might evolve in the Web 3.0, and will these shifts legitimize the advent of an “Information Literacy 3.0” still remains to be seen.

5. Conclusion

Although the conceptual core of information literacy, with its emphasis on acquiring abilities that enable one to ethically seek, use and create information, has remained quite stable since the term was first introduced, theoretical foundations of IL as well as ideas related to its practical applications and processes have constantly been subject to revision and reexamination.

Contrastive categories	User education	Information literacy	Information Literacy 2.0
Accents in teaching	Teaching mechanics	Teaching concepts and strategies	Interpretations, negotiations
Content	Access and retrieval (library- and resource-based approach)	Access and retrieval (Boolean operators, truncation, controlled vocabularies etc.) + evaluation	Recognizing information contexts, addressing authority, reliability and accuracy issues
Characteristics of programs	Exclusivity of solutions (“single correct solutions”)	Exclusivity of solutions and preferable information paths	Non-exclusive solutions, multiple information paths
Perception of information systems	Systems-level: objective	Systems-level: objective	Personal level: subjective
Perception of information spaces	Structured library world	Structured information landscapes	Information spaces of unorganized structures
Perception of users	Educating library users	Education information users	Educating information users + creators
Methodologies	One-time sessions, isolated instruction, direct teaching, rarely integrated	Add-ons or integrated, e-learning and hybrid teaching and learning environments	Add-ons or integrated, e-learning and hybrid environments, Web 2.0 services

Table I.
Contrasting features of library user education, information literacy and Information Literacy 2.0

Unfortunately, many of the facets of current IL practices are still reflecting a strong dependence on a print-based culture which is incongruent with the transient and hybrid nature of digital environments. Moreover, the recent fundamental changes related to the participative, multimodal, flat and ever-changing features of Web 2.0 services are currently reshaping central conceptions of IL such as knowledge, authority, retrieval, evaluation and user. Such momentous changes are subverting the current discourse of IL and make necessary further re-conceptualizations of existing perceptions prevailing in the field.

A thorough analysis of particular shifts shows that anomalies and discrepancies may be efficiently resolved through the introduction of Information literacy 2.0 as an extension and subset of current views on IL. Nevertheless, taking into consideration that the conceptual core and purpose of IL are still valid, classical information literacy does not stand in sharp contrast to its 2.0 version. Therefore, without disrupting the conceptual continuity within the field, these new developments propose significant extensions that would reflect the spread of the Web 2.0.

Finally, concerning the issues related to Information literacy 2.0 the theoretical and definitional disputes and controversies surrounding IL are gradually losing their relevance. IL 2.0 is fully compatible with the recently introduced theoretical frameworks due to its incorporation of the socio-technical and communicative dimensions since it adequately reflects new social relationships and socio-technical configurations. Consequently, IL 2.0 and the fundamental conceptions of IL as a socio-technical practice complement each other – while the socio-technical perspective provides information literacy 2.0 with a theoretical groundwork, Information literacy 2.0 offers the empirical field to implement renewed conceptions of a recasted theoretical framework.

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