

INFORMATION LITERACY: A LITERATURE REVIEW

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HOW TO WRITE A LITERATURE REVIEW: AN ACCOUNT OF STRATEGIES USED IN THE LITERATURE REVIEW

1. Strategies employed in the literature review

➤ *Identification of the aims*

This literature review aims to investigate current trends and developments in the field of information literacy, in particular on the subject of current information literacy definition and understanding, the reasons why it is so important nowadays, and its association with lifelong learning.

The topic has been pinned down thanks to an extensive reading done in the area, motivated primarily by personal interest

➤ *Identification of the nature and scope of the review*

This literature review proposes to be a critical overview of the current understanding of information literacy and related issues, with a view to identifying areas of common concern and possible further research.

➤ *Data collection*

- Information sources used to compile the review: dictionaries, bibliographies, online resources: OPACs, databases, search engines. These are some of the most common resources employed in information search.
- Search strategies: the following search strategy has been identified as a result of a critical evaluation of different search strategies suggested in the literature on how to do a literature review. The selection criteria is based on suitability of methods to the nature and purpose of the literature review:
 - by using databases and search engines one constructs an initial mapping of the relevant works done in the area, hence creating an initial bibliography. It is crucial to keep records of citations and texts.
 - Identification of information needs: one should prepare a list of key authors and works to be retrieved. Then, a first evaluation of retrieved literature is carried out, skim reading for relevant works. An identification of further texts to be retrieved is done.
 - A secondary evaluation of the works is done in order to focus and possibly narrow down the number of publications. One then constructs a consistent

bibliography of relevant works, and begins a critical review in order to map out the major points of discussion.

➤ *Guidelines in the choice of literature*

- Identification of relevant material has been done through
 - abstract reading, which enables one to have a relatively good idea of whether the publication may be of interest.
 - identification of recurrent authors and publications on the topic. This has been done by keeping records of most common and frequent references to work and authors in the field in bibliographies (ie. at the end of books and articles). Also, it has proved useful to keep track of citations throughout different publications.
 - cross-referencing: it has proved useful to see whether works cited about a topic are referred to in works on related topics too (ie. works on lifelong learning appear in bibliographies of works on information literacy)
 - establishing the reliability of sources, especially when articles/publications are found on the internet. Hence, before taking into consideration a publication it is crucial to always check who the authors are, see if the institutions they work for are reputable, and see whether their works are cited in other publications in the same or related research areas. Finally, I have relied on the quality of publications listed in bibliographies prepared by academic tutors.
 - selection of types of publications: a variety of publications, from books to journal articles and online articles. The guiding principle is that all publications should be pertinent to the subject.

These strategies particularly suit the nature of this literature review. In fact, it has proved crucial to build up a bibliography of authoritative authors who have published in the field, and to follow guidelines in the management of information retrieved on the internet.

➤ *Methodology*

- General: the review is the result of a critical analysis and synthesis of the main issues investigated in each text. All texts analysed have been compared with a view to identifying the state of knowledge on the subjects and the major areas of interest and concern. This critical overview of sources also provides insights into possible areas of neglect and further development.
- Criteria for selecting texts to be compared are based on the choice of publications, which must be related to the same or similar subject areas, and on the timeframe of publications, which should be relatively recent (since the 90ies). Comparison of texts is carried out following through a set of questions, for instance how texts deal with the subject of information literacy.
- Text analysis: the guiding approach to each text is descriptive, critically analysing strengths and weaknesses of the work. Hence, the purpose is to map out the main points discussed in the text, find out the assumptions it is based upon and see whether it achieves its research purpose.

➤ *Literature review outline*

The review begins by summarizing the most relevant points about the subject/s, which have been identified as a result of the review. Then, following a point-by-point schema, the review describes the major areas of discussion, or trends, in a sequence of paragraphs, where each paragraph is dedicated to one point. These points, or headlines, have been identified on the grounds of personal interest and as a result of texts reading, and form a framework for the review itself.

In the conclusive section, areas of possible further development are identified, which may become the subject of a master dissertation.

2. Review of sources used to compile the account of strategies

There are a number of features which characterise the literature review process. The following features constitute the framework for analysing the works selected for this review:

- *Definition and use of literature review*
- *Data collection strategies*
- *Review methodologies*

- *Definition and use of literature review*

Broadly speaking, writers tend to define literature review by outlining its nature, use and purpose. The university of Toronto web page which provides tips on how to write a literature review suggests this definition: “an account of what has been published on a topic by accredited scholars and researchers”, later adding that “a literature review is a piece of discursive prose, not a list describing or summarizing one piece of literature after another” [University of Toronto]. This brief definition introduces key features and issues of the review, namely its critical nature and the reliability and reputability of sources.

Authors agree that the purpose of a literature review is to provide a perspective on what has been done in the field, and on the ideas which have been established regarding the subject. Getting familiar with what has been written, and with the major issues discussed is crucial to

- build up a methodological framework for one’s own research work, by familiarizing with the data-collection techniques and key concepts recurrent in the field [Hart, 27]
- acquire a necessary vocabulary.
- identify areas of concern and of possible development.
- identify a research problem and define a research question [Applied Research, 10]

In his extensive study, Chris Hart adds that the literature review is also necessary to “place the topic in a historical perspective, identify key landmark studies selecting what they consider to be the key sources and authors, establish a context for [one’s]

own studies, and distinguish what has been done in order to identify a space for [one's] own work" [Hart, 29].

Authors agree that the literature review should be used to construct a map of the major points of concern and discussion by critically assessing the works examined. The Universities of Toronto and of Wisconsin-Madison web pages in particular underline the critical nature of literature review, which should proceed "through summary, classification, and comparison of prior research studies [...]", and through an analysis of the strengths and weaknesses of the works examined [The writing centre, University of Wisconsin-Madison]

➤ *Data collection strategies*

Not all literature on how to conduct a literature review refer to the issue of data collection. The Universities of Toronto and Wisconsin-Madison web pages, for instance, primarily focus on the guidelines which should constitute the framework to conduct a review. However, other, perhaps more thorough, studies also discuss search strategies to collect materials.

- The relationship between data collection and literature review scopes

It is generally agreed that literature search strategies, as well as the kind of information sources and of materials used, largely depend upon the nature, aims and outcomes of the review. Hart explains that having a clear mind about the scope of the topic helps to identify search parameters, such as a time frame for the materials to be searched, as well as to pin down the subjects which might be relevant and the search vocabulary [Hart, 32]. However, getting a clear idea about the nature and scope of the research is itself a result of critical reading. Hence, before beginning to collect material it is important to familiarise with the topic in order to focus it. Authors agree that this can be done by consulting dictionaries, encyclopaedias and thesaurus, which help to define a terminology, and by preparing a list of sources to be consulted. While doing the latter it is crucial to be realistic about what sources can be accessed and materials retrieved [Bell, 24-25, and Applied Research, 13].

It is important to bear in mind that defining a research scope is a work in progress. In fact, the topic becomes more and more focused as one gets on with the search and text-reading process.

- Data collection process and strategies

There are many ways to collect materials. Broadly speaking, the process which should guide the researcher follows through a number of steps from an initial collection of background information and an initial mapping of the topic to a construction of a bibliography, passing through a detailed search of sources. The sources to build up a bibliography are dictionaries, thesaurus, OPACs and bibliographies, moving on to databases, abstracts and primary materials, such as books, journals, dissertations and research papers. Search strategies to be used include the use of boolean operators, thesaurus and best terms. It is crucial to keep accurate reference of all works consulted, by choosing a citation system and following it consistently.

Authors unanimously advise selecting the most relevant works in the field. However, not many texts explain how to do so. Although Hart's study is perhaps too specific, targeting primarily very detailed literature reviews, it gives useful advice about techniques used to locate relevant items, such as citation indexes, the result of which should not be taken to mean that "the most cited work is [...] necessarily the most important", abstract reading and cross-reference [Hart, 33]. Finally, the issue of authoritative materials and authors is touched upon by the University of Northumbria, which warns against "the questionable authority of some of the materials" found on the internet.

➤ *Review methodologies*

- Methodological framework

When doing a literature review it is important to have a guiding framework in order to read and analyse works. Having the nature and scopes of the review clear is crucial in order to build up such a framework. The University of Toronto offers this practical list of questions to check whether the review is on the right track: "what is the specific thesis/question that my literature helps to define? what type of literature review am I conducting? what is the scope of my literature review? Have I critically analysed the literature? Do I follow a set of concepts and questions, comparing items to each other in the ways they deal with them? Instead of just listing and summarizing items, do I assess them, discussing strengths and weaknesses?".

Having a set of concepts to follow when reading texts helps to analyse and synthesize the main points discussed in the texts. These activities are crucial in order to construct a review which is critical towards its subject.

- Text review strategies

When reviewing a text, it is important to pin down what parts may be of interest, for instance by reading the index to the chapters. The University of Madison-Wisconsin offers a practical guide to a critical reading of a text, which includes such points as “What are the author's most important points? How do these relate to one another? What types of evidence or information does the author present to support his or her points? Is this evidence convincing, controversial, factual, one-sided, etc.? Where does the author do a good job of conveying factual material as well as personal perspective? Which parts of the work (particular arguments, descriptions, chapters, etc.) are most effective and which parts are least effective? Why?”. However, the website doesn't really help one to achieve such critical judgment, since it aims primarily to provide practical tips about the principles underlying literature review. Hart's study investigates several techniques employed to critically evaluate texts, such as the analysis of the author's use of analogies, homologies and subject definition. His suggestion is to find out what lays at the heart of the work itself, its assumptions or core concepts, which should then be analysed and synthesized. When doing a literature review it is crucial to hold a philosophical approach which questions the assumptions made by the author/s, since they are just an interpretation of the state of affairs

The general attitude is that every part of a text can and should be critically analysed, and not taken to be the truth about the subject.

Finally, one has to compare ideas and works of different authors in order to build up the literature review. With this view, it is important to set up criteria of comparison between texts. Whatever these criteria are, they should be made clear in the review [Hart, 31, and The writing centre. University of Wisconsin-Madison].

INFORMATION LITERACY: A LITERATURE REVIEW

➤ Main points

- Information exists when raw data acquire a meaning for the recipient
- The keys to turn data into information are personal motivation, interest and need
- Information becomes knowledge when it is rationally organised and used to solve specific problems
- Since information can become knowledge, and knowledge is considered to be power nowadays, it is crucial to be able to handle information

- The most common definition of Information Literacy is that it “is a set of abilities requiring individuals to ‘recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information’”
- Information Literacy is becoming more and more important in order to handle the information overload in today’s society
- Fast changes in society, the globalisation of information and new technologies require new skills, which are part of Information Literacy
- Information Literacy is crucial in order to deal with issues in information quality, validity and reliability
- Information Literacy is becoming more and more important at work, in order for workplaces to acquire workers who can meet new requirements in a fast-changing world and for workers to handle information and have better career opportunities
- Information Literacy greatly helps to reduce the social divide between those who possess adequate skills to cope with changes and those who don’t
- Information technology skills, information skills, library skills and study skills are all part of Information Literacy, which comprehensively has a broader dimension than each set of skills

- A comprehensive definition of Lifelong Learning is: “all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and employment-related perspective”
- Lifelong Learning is becoming necessary in order to cope with changes in a knowledge-based society
- Lifelong Learning plays a crucial role in promoting active citizenship and social integration
- Lifelong Learning fosters employability
- Lifelong Learning is learner’s centred and focuses on personal fulfilment
- In order to be effective and useful, Lifelong Learning must be an organised process, rationally structured, carefully evaluated and certified
- Thanks to such features as its interdisciplinary nature, the fact that it is common to all disciplines and is useful to all learners Information Literacy is unanimously considered as a necessary support to Lifelong Learning.

➤ **Foreword**

This review is a result both of a personal interest in the subject and of an extensive reading.

The headlines identified in the review form a framework which has been used in order to carry out the review.

The points listed beforehand have been identified as a result of the review itself, and summarise crucial features of Information Literacy and Lifelong Learning as currently understood.

All quotations are in English.

1. What is Information?

➤ *Definition of Information:*

Although not all literature on information literacy concerns itself with the definition and meaning of information, such notion is clearly at the heart to the question. Therefore, it requires a brief overview of the current understanding of the subject. Having said that, as a matter of fact it is hardly possible to agree on one single definition for such a complex idea as that of information. The literature on the subject generally prefers to define information in relation to a number of resulting issues. Richard S. Wurman starts from the definition provided in the Oxford English Dictionary, which goes back to the Latin *informare*, to give shape to matter. Hence, “the act of forming; forming, giving shape; shaping the mind, teach, transmit, educate”. After the second world war the term information came to mean anything that passed through mechanic or electric channels: “It came to mean something which is communicated, regardless of whether it meant anything for the recipient. Such a vague definition gave way to an indiscriminate use of the term” [Wurman, 24].

Wurman claims that the recurrent and indiscriminate use of the word has caused a loss of its original meaning, since any idea of “form, shape” is gone. “a good deal of what is defined as information today is merely a mass of data or worse” [Wurman, 24].

Kevin J. McGarry interestingly summarises the sample of definitions of information that he selects in his work “*The Changing Context of Information*” (1993). He comes up with a number of attributes of information that partly reinforce Wurman’s argument that information is often confused with mere data: “information can be:

- regarded as a near synonym of fact;

- a reinforcement of what is already known;
- the freedom of choice in selecting a message;
- the raw material from which knowledge is derived;
- that which is exchanged with the outer world, not just passively received;
- defined in terms of its effects on the recipient;
- something that reduces uncertainty in a particular situation” [McGarry, 4]

The dichotomy which results from this list is at the heart of literature discussions on the subject of information: is information a synonym of raw data or facts, or is it associated with meaningful and active learning?

➤ *Information and knowledge*

Literature agrees that there must be a distinction between data and information, and that information leads to knowledge. The concept of information then becomes intertwined with the notion of learning process and active elaboration of data, while the anxiety caused by our inability to handle the information overload in our society is associated with passive reception of data. As Wurman has cleverly remarked, it is crucial to focus on people and the process underlying their reception of data, rather than on the amount of data and the technology [Wurman, 27]. Data may become information if they are perceived as such, if they are given shape and meaning: whatever doesn't have a meaning for us is not information. Pat Dixon has summarised the learning, or cognitive, process which turns data into information, and information into knowledge as a process which involves selection, elaboration and organisation of data, and that builds on prior knowledge: learning means “taking in new information, relating it to previous knowledge, transferring it into personal understanding” [Dixon, 7]. Information becomes knowledge when we are able to put it in relation to other information and to our background knowledge. In this respect, literature may take a philosophical approach to the subject, or deal with it in a pragmatic way. The former approach is McGarry's, who defines knowledge as a “theoretical and more generalized” notion than information, and information as “potential knowledge”, while the latter is summarised in Dixon's straightforward statement that “raw data generated by activities or transactions, recorded then brought together and organized becomes information, gathered and synthesised into rational argument, pointed at

specific problems, becomes knowledge” [Dixon, 6]. In the latter case, the concepts which underpin the process from information to knowledge are rational order and problem-solving need. It is generally agreed that knowledge can only result from an organised system of information, and that such information can only exist as a result of personal motivation, interest or needs. Indeed, we select information which are relevant to us according to criteria which vary depending upon the situation: for instance, when crossing a road we notice the speed of coming cars [McGarry, 6].

Finally, literature emphasises the social dimension of the information learning process. Information is conveyed by means of language, which has in itself a clear social dimension. In order to acquire new information we need to exchange other information and ask questions, thus putting ourselves in relation to other people. This implies getting over the fear of getting informed, which is often associated with showing that we do not know, and with our dismay before the enormous amount of data available in our society. However, since information and its management means knowledge, and knowledge means power, as literature points out, it is becoming more and more important to be able to deal with information.

2. Information Literacy

➤ *Definition of Information Literacy*

As with information, it is hardly possible to agree on a single definition of Information Literacy (IL). Indeed, reading through the conspicuous amount of literature on the subject, the notion of IL is strictly intertwined with a number of other related issues, which greatly complicates the matter. However, authors seem to agree that a most common definition, which is generally taken as a starting point for any discussion, is that provided in the Final Report by the American Library Association (ALA) Presidential Committee on Information Literacy (1989). The definition refers to the Information Literate person, who must “be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information”. The Association of College and Research Libraries (ACRL, 2000) extended this definition to IL itself: “IL is a set of abilities requiring individuals to ‘recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information’”.

Literature wavers between definitions of IL and of information literate person, only at times providing both at the same time and making a distinction between the two. These definitions often refer primarily to the actual process of acquiring information, and only occasionally bring about a reflection on broader aspects associated with information. Good examples of the latter approach are Barbara Humes’s reflection on the definition of information literate person, which touches upon the issue of information management: “Being information literate requires knowing how to clearly define a subject or area of investigation; select the appropriate terminology that expresses the concept or subject under investigation; formulate a search strategy that takes into consideration different sources of information and the variable ways that information is organized; analyse the data collected for value, relevancy, quality, and suitability; and subsequently *turn information into knowledge* (ALA, 1989). This involves a deeper understanding of how and where to find information, the ability to judge whether that information is meaningful, and ultimately, how best that information can be incorporated to address the problem or issue at hand.” Sheila Webber and Bill Johnston also expand upon the subject of IL by highlighting the ethical and social dimension of information. In their opinion, IL is “the adoption of appropriate information behaviour to identify, through whatever channel or medium, information well fitted to information needs, leading to wise and ethical use of

information in society.”. Christina Doyle’s definition of an IL person emphasises the aspect of active elaboration of data and critical use of information, thus underlining the learner’s centrality in the process [quoted in Webber and Johnston]. Although she agrees on the usefulness and convenience of the term “IL”, Virkus prefers “information-related competencies”, which is a cognitive term in her view, and should be understood in the context of a constructive learning process. Such competencies, she says, “may be viewed as context- and content-dependent competencies which are integral elements in a constructive learning environment and are closely related with the characteristics of constructive learners (prior knowledge, metacognition, motivation, and the complex variable 'learning style'). However, the term 'information literacy' might be a useful research construct or umbrella term covering information-related competencies and also as a strategic concept or goal - a political, economic and educational one.”

➤ *Why is Information Literacy so important today?*

There are many reasons why IL is deemed necessary in today’s world. Every research done into the role and relevance of IL for the individuals and for the society begins by underlining the extraordinary amount of information which circulates worldwide on a daily basis. As the ACRL clearly puts it, “[...] individuals are faced with diverse, abundant information choices – in their academic studies, in the workplace, and in their personal life”. The information overload is the main cause of what Wurman has called “information anxiety”, which results from individuals’ frustration in facing information without understanding it: “the information anxiety is a result of the gap between what we understand and what we feel we have to understand” [Wurman, 17]. Taking into account that people are confronted with information of any kind every day, at work, at home or on any social event, it becomes important to deal with the issue of information handling. Most importantly, handling information is necessary for individuals to cope with constant and fast-paced changes happening in the world around them. In the report of the UK National Committee of Enquiry into Higher Education [1997] it is said that technological, political, economic forces are driving the world towards a global integration, which means that new skills are needed to handle information worldwide transmitted. Summarising the trends in current studies, Barbara Humes has remarked that traditional competencies and literacies simply are not sufficient to assist us with fast-

changing information: “Change requires us to know more and learn more about the world around us. [...] The increasing quantity of information from all sources and the pressure to remain in a constant state of conscious learning means that we must be dexterous in the use of information, too”. IL is also when we come to the question of the quality, the validity and the reliability of information. To be able to evaluate and assess information has become a necessity in a world where information is more and more often conveyed in new formats. In particular, information transmitted through the internet poses large questions about reliability and authenticity. All literature on IL agrees that individuals need to be appropriately equipped in order to handle and develop a critical attitude particularly towards such kind of information. In this respect, Vicki Hancock underlines the great social value that IL will have if rightly implemented. The benefits for citizens would be tremendous, since it would enable them to become more responsive towards an ever-changing environment, and to manage and make practical use of information in any situation: “information literacy enables citizens to recognize deception and disinformation, so that they may make a truly informed decision. These citizens appreciate the value and power of information. They believe in the need for information to address problems and questions in their own lives, in their communities, and in society. They understand that *information is not necessarily knowledge until it has been analysed, questioned, and integrated into their existing body of knowledge and experiences*”. Similarly, IL has a powerful impact on traditional education sectors and on students, for whom it becomes a means to acquire critical thinking, learning independence and at one’s own pace, control of resources, and efficiency in using information sources. Most importantly, as Hancock rightly underlines IL implementation in schools and HE institutions would enable students to gain fundamental transferable skills, which could be spent anytime and anywhere throughout their lives: “Regardless of where and how information literacy skills are acquired, they are applicable in any school, play, or work situation”

All literature agrees that IL implementation means empowerment for society. Indeed, the benefits would be remarkable for individuals, for workplaces and broadly speaking for the global economy. For workplaces the need for information literate workers, who can handle fast-changing information, and who possess problem-solving skills, will increase consistently. As Plotnick puts it, “the change from an economy based on labor and capital to one based on information requires information literate workers who will know how to interpret information. The work force will be

more diverse and the economy will increasingly be more global. The use of temporary workers will increase. These changes will require that workers possess information literacy skills". Hancock emphasises that lack of information skills "currently costs business billions of dollars annually in low productivity, accidents, absenteeism, and poor product quality".

Moreover, there are important implications for workers as well. IL would help workers to handle changes at work less traumatically and to their own advantage: "For the individual worker, the workplace has become a place of cataclysmic change and untold opportunity. Adapting to a rapidly changing work environment will mean multiple career and job changes" [Hancock]. IL would also enable workers to have better chances of career enhancement. Finally, IL could contribute to their more active participation at work: "rather than report to a hierarchical management structure, workers of the future will be required to actively participate in the management of the company and contribute to its success" [Plotnick]

Literature also underlines important implications for society. In particular, IL should be made accessible to all, especially weaker and poorer classes, in order to avoid the risk of social disparity. In this respect, Humes cites Breivik and Gee's urgent reminder "that commercialisation of information, control of information resources and new information technology could widen the gap between the haves and the have nots. This impending disparity can be headed off if access to information technology is provided and if competency with the information it provides is taught early in life." Literature has called this the threat of digital divide, which is "the gap between those who can access and use information and communication technologies (ICT) effectively, and those who cannot" [EU commission, 2001].

➤ *Issues in Information Literacy*

The extensive literature on IL focuses on a range of issues which are associated with IL implementation. Recurrent concerns are about the definition of IL against other literacies and skills, such as information skills (IS) or information and technology skills (ITS), and IL relation with them. Then, other recurrent themes are IL and teaching and learning methods, approaches to IL, who should be responsible for IL teaching, what skills should be taught and where.

There is a general consensus over the necessity to draw a distinction between IL and ITS. Literature agrees that IL has broader scopes than ITS, and that ITS is a means to

the achievement of IL. Doyle argues that ITS is one of the many skills which constitute IL: “The process of information literacy requires not only the learning of a constellation of skills, but also a new way of thinking in order to derive meaning from learning. [...] Information literacy in telecommunications is achieved when learners know when to use online resources, know how to access information competently, know how to evaluate information as to accuracy and pertinence for each need, and know how to use this information to communicate effectively” [Doyle, b]. An outstanding contribution to the debate over IL and IS has been produced by the Society of College, National and University Libraries (SCONUL, 1999) in its paper on information skills in higher education. The SCONUL paper reiterates that IS and ITS are essential parts of IL, which is “more directly related to the aims and processes of higher education as a ‘knowledge creation’ activity.” ITS, which include “basic skills (use of keyboard, mouse, printer, file/disk management), standard software (word processing, spreadsheets, databases, etc.), and network applications (electronic mail, Internet, web browsers)” enable individuals to access information resources, and thus are vital tools to IL. However, SCONUL warns against the dangerous myth which equates IL to ITS, “for it assumes that information is only that which is storable and manipulable in a computer” (Taylor, 1986, quoted in SCONUL). According to SCONUL, IS include a range of skills, which are identified with seven abilities: “they include library skills, IT skills, study skills and are all part of IL, taking a student from a basic level of competency to critical awareness of information as an intellectual resource”.

In relation to other skills, there is a consensus over the fact that IL requires a critical attitude towards information, as well as an awareness of how information is produced in the modern world. A definition which is often quoted is that of Darch et al.: “Information literacy requires an awareness of the way in which information systems work, of the dynamic link between a particular information need and the sources and channels required to satisfy that need (Darch et al. 1997, quoted in Humes and Virkus).” Sirje Virkus, who has produced an interesting overview of the history and development of the concept of IL in Europe – although lamentably enough Italy has been totally ignored -, outlines the issues in the debate over the term. She describes several researchers’ position, among which Boekhorst’s, from the Netherlands, who argues that trends in IL definition can be summarised as follows: “*The ICT concept*: Information literacy refers to the competence to use ICT to retrieve and disseminate

information. *The information (re)sources concept*: information literacy refers to the competence to find and use information independently or with the aid of intermediaries. *The information process concept*: information literacy refers to the process of recognizing information need, retrieving, evaluating, using and disseminating of information to acquire or extend knowledge. This concept includes both the ICT and the information (re)sources concept and persons are considered as information systems that retrieve, evaluate, process and disseminate information to make decisions to survive, for self-actualisation and development [...]” [Virkus, 2003, italics mine]. Virkus lists a number of definitions given to IL over the past twenty years to emphasise the confusion over the term, among which “‘infoliteracy’, ‘informacy’, ‘information empowerment’ ‘information competence’, ‘information competency’, ‘information competencies’, ‘information literacy skills’, ‘information literacy and skills’, ‘skills of information literacy’, ‘information literacy competence’[...].” As this list shows, there has been, and still is, a confusion over the terms of literacy, competency and skills. Very often the term literacy is used to mean competency, and competency is often taken to be a synonym of skills. Indeed, the debate can go back to the definition of information and of literacy themselves, as Virkus points out that, according to the definition of literacy provided by the International Adult Literacy Survey (IALS), “at least one of every four adults fails to reach minimum literacy levels for coping with everyday life and work in advanced societies”.

As for current concerns with IL and education, they include questions on who should teach IL, how and where, what subjects and skills should be taught and the role of Higher Education (HE). ACRL believes that HE plays a vital role in fostering IL and Lifelong Learning (LL): “developing lifelong learners is central to the mission of HE institutions. By ensuring that individuals have the intellectual abilities of reasoning and critical thinking, and by helping them construct a framework for learning how to learn, colleges and universities provide the foundation for continued growth throughout their careers, as well as in their roles as informed citizens and members of communities” [ACRL, 4]. There is a consensus over the fact that HE should foster a student-centred learning environment, assist students in developing problem-solving skills and critical thinking. Most importantly, in order to effectively implement IL in HE it should be integrated across curriculum, and a greater collaboration between academic, library and administrative staff members is desirable. It appears that

libraries, and particularly academic libraries, play an important role in IL learning, but it is important that they act in collaboration with academic staff: “Academic library programs are preparing faculty to facilitate their students' mastery of information literacy skills so that the faculty can in turn provide information literacy learning experiences for the students enrolled in their classes” [Plotnick]. As a subject of study IL may include a variety of topics, over which there is no unanimous consensus. Webber and Johnson reckon that IL should include: “models of information literacy; models of information behaviour; characteristics and types of information sources; search formulation and strategy, and information retrieval; information economy & society [...]; critical thinking, including critical thinking in relation to information sources and services”. Finally, there are a variety of teaching methods and approaches, like formal IL courses, online courses, and course-related instructions. Although literature may point to a wide range of teaching instructions, it is agreed that such instructions should be student-centred and should focus on problem-solving skills.

3. Information Literacy and Lifelong Learning

➤ Definition of Lifelong Learning

There have been many different definitions of Lifelong Learning. The terminology itself which describes the concept has varied over the past twenty years, ranging from “permanent education” to “continuing education, recurrent education, lifelong education” and, finally, LL [see W. Kenneth Richmond in the foreword to Husen, xi]. Clear-cut definitions of LL come from a range of European papers, which are themselves a result of an increasing interest in the subject over the last ten years, and of a common concern to establish a European policy regarding the implementation of LL. In the “Memorandum on Lifelong Learning [EU Commission, November 2000], it is said that within the European Employment Strategy LL is taken to signify “all purposeful learning activity, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence” [Memorandum, 3]. The EU Commission’s Communication on Making a European Area of Lifelong Learning a Reality [21 November 2001], which followed the Memorandum, meant to underline aspects of LL which are not so strictly related to employability scopes. In fact, its definition of LL includes “all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective” [Communication, 9]. Here the emphasis is on social and civil aspects of LL, such as “personal fulfilment, active citizenship, social inclusion” [Communication, 9].

The terminology employed to describe the subject is often linked to organisational aspects of learning throughout life. Very often LL is seen as a random learning, like “we-live-and-learn” [Husen, xi], as opposed to a structured and intentional learning. Hence, Knapper and Cropley prefer to use “Lifelong Education”, a term which has clear connection with educational practices. They believe that Lifelong Education “can be thought of as a set of organisational and procedural guidelines for educational practice aimed at fostering learning throughout life” [Knapper and Cropley, 20]. Learning here doesn’t mean exclusively spontaneous learning like in everyday life, but deliberate learning: “it is intentional [...] it has a definite, specific goal [...] this goal is the reason why the learning is undertaken, the learner intends to retain what has been learned for a considerable period of time” [Tough quoted Knapper and Cropley, 20].

Even a brief overview like this clearly shows that a definition of LL, or Lifelong Education, immediately brings about issues concerning principles underpinning LL, and ways of implementation.

➤ *Lifelong Learning: principles and implementation*

There is a large consensus over the reasons why LL is becoming more and more important today, although the principles underpinning the concept may vary in literature. Again, concerns about the importance of LL seems to come primarily from European papers. Here the focus is on: the role of LL in coping with changes in a knowledge-based society; its part in the promotion of active citizenship and of social integration – hence its social aspects; its importance to foster employability; its benefits on personal fulfilment.

The Memorandum still remains a crucial document in the European strategy for the implementation of LL, despite criticism to some of the points outlined in the paper. The Memorandum emphasises how relevant LL is in order to meet the challenge of a knowledge-based society. In particular, the document urges Europe to take action in the implementation of LL if it wants to strengthen its competitiveness and improve the “employability and adaptability of the workforce” [Memorandum, 5]. Moreover, LL is the key to face the challenge brought about by a multicultural society: “more than ever before, individuals want to plan their own lives, are expected to contribute actively to society, and must learn to live positively with cultural, ethnic and linguistic diversity. Education, in its broadest sense, is the key to learning and understanding how to meet these challenges” [Memorandum, 5]. Then, the Memorandum sees promoting active citizenship and employability as two crucial aims for LL. Active citizenship has to do with citizens taking part in the social and economic life, and having to opportunity and the capacity to have their say. In the document this dimension is tightly linked to employability: “For much of most people’s lives, having paid work underpins independence, self-respect and well-being, and is therefore a key to people’s overall quality of life. Employability – the capacity to secure and keep employment – is not only a core dimension of active citizenship, but it is equally a decisive condition for reaching full employment and for improving European competitiveness and prosperity in the ‘new economy’” [Memorandum, 5]. The Memorandum draws attention, albeit little and perhaps inadequate, to LL as a means to foster social integration. It briefly underlines the centrality of people, of

social cooperation and of education when it says that LL is “the best way to combat social exclusion – and this means that teaching and learning must place individuals and their needs at the centre of attention” [Memorandum, 6]. LL also plays a crucial role in helping society cope with such broad changes as those brought about by digital technology and globalisation. It also represents a way to deal with the gap which is forming between competent and skilled workforce and those who cannot keep up with new requirements. All these changes are leading to a “knowledge society, whose economic basis is the creation and exchange of immaterial goods and services. In this kind of social world, up-to-date information, knowledge and skills are at a premium” [Memorandum, 7]. Finally, the Memorandum singles out crucial aims for fostering LL, namely: equal opportunities for access to quality learning throughout life; change and improvements in the education system; “to achieve higher overall levels of education and qualification in all sectors” and “to encourage and equip people to participate more actively once more in all spheres of modern public life” [Memorandum, 4-5].

The key principles underpinning LL and the reasons to implement it provided in the Memorandum are largely shared by literature. However, there has been a criticism of the economic-driven nature of the document. The EU Communication on Making a European Area of Lifelong Learning a Reality [2001] places emphasis on the social dimension of LL and its role in preventing inequalities and in “fostering a democratic and socially integrated European community” [Communication, 3]. It also stresses the role of LL in personal fulfilment and active citizenship. It certainly underlines the importance of employability, but keenly points out that LL is “about much more than economics, [since it] promotes the goals and ambitions of European countries to become more inclusive, tolerant and democratic. And it promises a Europe in which citizens have the opportunity and ability to realise their ambitions and to participate in building a better society” [Communication, 6-7].

The communication identifies the key points for the implementation of LL in the centrality of the learner, equality of opportunity, and importance of high quality and relevance [Communication, 9]. Key elements to be taken into consideration are: the impact of LL on the education system – hence how the latter can cope and adjust to LL; the teaching of LL skills, like literacy, numeracy, ICT and other basic skills; the needs of employers, particularly in terms of training; “the implications of the

knowledge-based society for the needs of learners and labour markets” – hence a careful study of what skills are needed [Communication, 12].

Finally, despite its criticism, the Communication largely recuperates the key messages of the Memorandum, which advocates centrality of people, who are Europe’s asset, accessibility and affordability of learning, better quality of education and for all, cooperation between EU member states, integration of education systems and centrality of the individuals: learning must become individual-based, taking into account people’s needs.

As for the implementation of LL, there is a consensus opinion that an effective policy can only be achieved if EU member states actively cooperate, if common standards are agreed and met, and if the role of education providers and facilitators is clearly established. As for the last point, literature agrees that LL is made of formal (taking place in institutions and certified), informal (happening in everyday life, hence unintentional and not certified), and non-formal learning (often provided at workplaces or by organisations and not formally certified) [Memorandum, 8]. Knapper and Cropley see that LL, or rather Lifelong Education (LE), differs profoundly from traditional learning, although it is not necessarily in contrast with it. In fact, LE “lasts the whole life, leads to the systematic acquisition, renewal and upgrading of knowledge, skills and attitudes [...], is dependent on people’s increasing ability and motivation to engage in self-directed learning activities and acknowledges the contribution of all available educational influences, including formal, non-formal and informal”. Hence, the authors advocate that traditional institutions actively cooperate with other learning settings in order to contribute to foster LL [Knapper and Cropley, 31].

Finally, a crucial issue in the implementation of LL is how to put it into practice. Although this review does not intend to deal with such a lengthy and controversial question, it is important to point out that there is a general consensus over the fact that implementing LL requires a careful planning of how to manage human resources, how to deal with teaching strategies and with evaluation and certification. Indeed, issues may be extended to “where and when instruction is to be offered, how resources are to be allocated, what content would be necessary, on what basis would certificates or credentials be issued, what teaching and learning methods would be appropriate, how would learners be financially supported, and what new or altered

support services would be needed” [Kulich, 1982, quoted in Knapper and Cropley, 68].

➤ *Information Literacy and Lifelong Learning*

The consensus opinion is that IL is a vital tool to the implementation of LL. Thanks to such features as its interdisciplinary nature, the fact that it is common to all disciplines and is useful to all learners IL is unanimously considered as a necessary support to LL.

Some authors see information handling skills as a prerequisite for LL. Hence, a lifelong learner is someone who has a sound “knowledge about how to obtain information from outside sources such as libraries” [Knapper and Cropley, 44]. IL is the key to become independent and efficient lifelong learner, “who can access, evaluate, and effectively use information to address the needs or questions which confront them” [Breivik]. The ACRL states that “IL forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education” [ACRL, 3]. The fact that IL can be used across a variety of disciplines and subjects is generally acknowledged as one of its main features. IL is also seen as a useful tool for all learners “Information literacy [...] is a potential tool of empowerment for all learners, reached through a *“resource-based”* learning approach” [Hancock].

Interestingly enough, Breivik has pointed out that if it is true that IL is necessary to LL it is also true that IL would lack its own context if the importance of LL is not fully comprehended: “[...] information literacy is a solution without a problem or audience if people do not understand their need of lifelong learning. The challenges facing our communities and our nations can only be met by people committed to lifelong learning and who are savvy information consumers” [Breivik].

➤ *Information Literacy and Lifelong Learning in Italy*

The literature examined in this review talks about IL and LL on general terms. Hence, it discusses the concepts and possible strategies of implementation. However, if one wants to see how such principles have been put into practice in Europe, they have to look at what has been done in every single country. If one wanted to investigate the Italian case, they would see that the literature published on IL and LL in Italy is fairly limited. The experiences done in IL and LL implementation may have been quite a

few, but have not been recorded or reviewed comprehensively. Even in Virkus's review of IL in Europe Italy is totally left out, which might be due to either the author's lamentable lack of consideration or to Italy's lack of participation in the European effort to put IL and LL into practice – or maybe both.

In Italy there has been an increasing interest in IL and LL recently, which is shown by several papers produced by national institutions, such as the ISFOL or by the Ministry for Education. Such literature refers to the European policy for the implementation of LL, and of IL, and endeavours to apply such policy in Italy. The “Rapporto italiano sul memorandum europeo” agrees with the principles which inform the memorandum, although it sees that such principles must be adapted to the national requirements. For instance, it states that in Italy it is important to coordinate the implementation of LL both at a national and at a regional level, and that work organisations and workplaces must make a better effort to acknowledge the value of investment in human resources and in lifelong learning [Rapporto sul memorandum, 9-10]. Traditional education sectors should liaise with work places, in order for LL to be effectively promoted in all learning environments.

The “Politiche regionali per lo sviluppo della formazione permanente: primo rapporto nazionale” [ISFOL, Luglio 2003] reiterates what is said in the “Rapporto sul memorandum”, also adding that regions play a crucial role in the implementation of LL. It says that broadly speaking regions share three objectives, each of which is given different relevance according to regional policies: to develop a LL system, to provide individual learning paths to facilitate LL demand, and to implement learning opportunities [Politiche regionali, 17]. Interestingly enough, despite the emphasis given to employability in the “Rapporto sul memorandum”, workers seem to perceive LL not only as a means to acquire work-related skills. A recent survey shows that workers believe that education should last throughout life, and that it should foster personal growth, rather than just provide work-related abilities [Politiche regionali, 166].

As for IL, in Italy the literature largely refers to concepts established and experiences done abroad, especially in the UK or in the United States. A quick overview shows that in Italy initiatives to teach and implement IL have been taken by schools and universities individually. In the former case, it appears that teachers have collaborated with school libraries to teach IS. In this case, libraries can become centres for education resources [see “Alcuni modelli di insegnamento delle information skills”].

In the latter case, some universities have taken the initiative to teach IS as part of courses or as a course on its own.

There does not seem to be a comprehensive review of the experiences carried out to teach or implement IL in Italy. If such a review was carried out, however, it could produce interesting and important results, since they could provide valuable data for a more coherent and coordinated implementation policy both at a national and at a regional level. Points to be investigated might be where IL and IS are taught in Italy – perhaps focusing on some instances-, who teaches them – whether they are school/academic teachers or librarians-, and how they are taught. Such an investigation could become an interesting subject for a master dissertation, together with an evaluation of learners’ understanding and needs in terms of IL and its implementation.

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