Sense-making: Information Literacy for Lifelong Learning and Knowledge Management

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ABSTRACT

The paper emphasises the sense-making approach to the concept and practice of information literacy (IL). After discussing the meaning and purpose of IL, passing references are made to the IL standards, models, and rubrics. The information search process is emphasised in this paper. Nature and types of knowledge and learning have also been discussed. Expectations from INFLIBNET, vision of the National Knowledge Commission (NKC), and the UNESCO's Education for All, and Information for All Programmes have also been put into the context of IL. Finally, the paper suggests that IL programmes must be based upon the complexity and diversity of information communities, and cultural hegemony and intellectual imperialism should not be allowed to prevail.

Keywords: Information literacy, lifelong learning, knowledge management, Empowering-8 model, digital inclusion, IFAP.

1. INTRODUCTION

Various approaches to IL have been adopted since 1974 when Zurkowsky used the term for the first time. The spectrum of IL is rich in rhetoric but poor in practice in diverse contexts in the developing countries. In the Western idiom, IL has been defined as stake holder's ability to ascertain his information needs, and then to access, evaluate and use that information for problem-solving and decision-making efficiently and effectively. But this definition provides a very limited view of IL. Libraries, web, and educational institutions are not the only sites for information, knowledge and learning. Information comes from graphic records, physical structures, and social-cultural contexts as well. Hence, the concept, process and practice of IL must be perceived holistically in view of the diversity and complexity of formal and informal settings at home and work. Exploration, analysis and sense-making of information ecology and socio-cultural diversity are essential components of the information literacy process. With the ascent of digitisation, databases, and networks, information has become fluid and transcendental. Moreover, information today is available in variety of formats. Hence, perception of IL must be based upon media, computer and network literacies as well. Engagement, empowerment, enrichment, and embodiment are the essential attributes of the info-literate stakeholders.

Different people may have different viewpoints of IL, but it is a hard fact that only info-literates can stay ahead, in this era of discontinuous change and fierce competition by developing and using IL skills to support lifelong learning and knowledge management. This learning must include: learning to know, to do, learning to work together, and learning to be better than the best. Similar views have been put forward by the UNESCO report entitled Learning: The Treasure Within. This paper deals with the hidden contours of IL to sensitise the stakeholders to think out of the box and look beyond blogging

and chatting. The perception that 'one size fits all' can't be valid in the case of IL. It is true that IL is a tool for lifelong learning and knowledge management, but all human beings are not equally intelligent. Hence, one must learn to take cognizance of individual information gaps and learning disabilities. Moreover, the cultural context of learners also plays a pivotal role in this regard. Dorner and Gorman[1] and Hofstede[2] have dealt with the cultural contextuality at length in their writings. The core cultural assumptions provide lasting bond strength to the norms, values, and visible behaviour on the one hand, and thinking, learning, working, and communication styles on the other. The core assumptions of cultures do not change easily. Therefore, proper care must be given to the cultural context before designing, delivering, and evaluation the IL programmes. Socio-economic inequalities, self-concept of stakeholders, gender status, attitude towards information gap, and core assumptions of given cultures are critical components to be considered with regard to IL.

2. PURPOSE OF INFORMATION LITERACY

The basic purpose of IL is to develop sense-making ability among the stakeholders. Once the information seeker becomes aware of the information gap and its critical consequences, he would try to define his information need. Task, time, interest, and information are some of the other parameters that influence end-user's information behaviour. The end-result of the whole exercise is independent learning and critical thinking. An information literate person will be a competent person to develop focus, find right answers, and build personal perspective. He would be able to convert knowledge into information and information into knowledge on continuing basis. IL facilitates sense-making and reduction of vast quantities of information into fundamental patterns into a given context. That is also the heart of the matter in knowledge management. Sustainable knowledge, in fact, is the end result of data analysis and information processing in a given context. In other words, there is symbiosis between knowledge and information. Information eliminates uncertainty and knowledge leads to confidence. Therefore, it is true that less is more and more is less. Valid knowledge, though less, is always better than overwhelming amount of unprocessed data and information. IL ensures confidence and sense-making among confused and uncertain information-seekers. But the conflicting information always increases the existing uncertainty among the stakeholders. Information overload and ICT instability further lead to info-stress and techno-stress among the information-

seekers. IL provides elbow support during these stressful moments. Kuhlthau[3] has done good work on IL as a process of seeking meaning. People interested in developing bottom-up information storage and retrieval systems must read this book.

3. STANDARDS, MODELS AND RUBRICS

Twenty-nine indicators under nine standards within three categories of IL, independent learning, and social responsibility have been prepared by the American Association of School Librarians, and the Association for Educational Communications and Technology. These are available as Chapter 2 of the book entitled Information Power: Building Partnership for learning. Eisenberg, Lowe and Spitzer[4] have given very useful information on various standards, models and rubrics of IL. But because of the constraints of space and time, it is not possible to discuss these in this paper. The most important thing is to avoid intellectual imperialism. IL must be seen in the context of a given culture. No single definition of IL will ever be acceptable to all the stakeholders.

It is indeed incumbent upon the information seekers to take a holistic view of the affective, cognitive and physical dimensions of information search process. At affective level, the information seeker experiences feelings of uncertainty, enthusiasm, frustration, confusion, disappointment, clarity, confidence, and satisfaction depending upon the success or failure of the information search process. At cognitive level, thoughts can be vague or focused leading to increase or decrease of interest. At action level, task will start with definition of information need and end with review of the outcome of the search process. This search experience will serve as feedback for the next round of learning.

4. LEVELS OF MEDIATION

Uniqueness in the context of information search process means new information, and redundancy means what is already known to the stakeholder. Information search process definitely influences the behaviour of the information seeker in terms of his feelings, thoughts, and physical actions. Library and information professionals (LIPs) must take cognizance of these behavioural changes and intervene at appropriate stage. Kuhlthau[3] describes five levels of intervention with regard to reference and instruction services. The five levels of mediation in case of reference service are that of organiser, locator, identifier, adviser, and counsellor. The five levels of education in context of instructional services are that of organiser, lecturer, instructor, tutor, and counsellor. Leaving

aside the explanation of these five levels of intervention in two different contexts, the message is that LIPs must be able to identify the appropriate level of intervention to facilitate the information seeker. According to Kuhlthau, intervention outside the appropriate zone can be intrusive and overwhelming, and on both sides can be inefficient and unnecessary for the stakeholders.

5. EMPOWERING-8 MODEL

There are many models of IL, but the Empowering-8 Model has been developed at an IFLA-ALP sponsored Information Literacy Workshop hosted by National Institute of Library and Information Sciences (NILIS), University of Colombo in 2004 specifically for the stakeholders in the Asia-Pacific Region. Reference has specifically been made to this model because it has not been reported and discussed comprehensively in the professional literature. Prof. Russell Bowden, in his keynote address published in the Proceedings of the Information Skills for Learning: Part II "Empowering-8" International Workshop Sponsored by IFLA-ALP, UNESCO-IFAP[5] in 2005 has beautifully described the eight steps of this model in the following words:

(i) Identify—subject, audience, keywords and plan strategy;

(ii) Explore—resources required, information available;

(iii) Select—relevant information; stages of work, appropriate citations;

(iv) Organise—information earlier selected, between fact, fiction and opinion;

(v) Create—information in your own words, revise and edit and create bibliography;

(vi) Present—share information with appropriate audience; display in appropriate format;

(vii) Assess—feedback; self-assessment and assessment with teacher;

(viii) Apply—review feedback and apply to next learning activity.

An information literate person must learn to know, to do, to be and to work together. He should be able to make sense, ensure quality, learn independently, think critically, and use information ethically and strategically.

6. LIFELONG LEARNING

In view of fierce competition and discontinuous change, one has to look beyond formal education and information management. Lifelong learning is the only way to stay ahead of change and competition. Most important thing today is to be a face in the crowd. Only lifelong learning can facilitate this. Learning is a lifelong process for knowing, understanding, being, working together, decision-making, and problem-solving. IL is a critical link between knowledge management and lifelong learning. Hence, it is incumbent upon the learning organisations to promote learning at all levels. Senge[6] has beautifully explained the categories of adaptive learning and generative learning. He has emphasised upon the role of systems thinking, personal mastery, mental models, shared vision, and team learning in the context of learning organisations. IL can go a long way to facilitate both types of learning among individuals and organisations. Learning must start from the centre, with learner's interacting with local sources and then expanding his access to information sources across the globe. Collaboration, leadership, and synergy with the techniques of technology (ICT) are critical for learning to learn, unlearn, and re-learn for staying ahead of time and competition.

7. NATURE OF KNOWLEDGE

The nature of knowledge is highly complex. It is a fluid mix of experience, values, beliefs, expert insight, and contextualised information. Beyond formal degrees, knowledge management is the main challenge. That is true not only for the corporate sector, but for the public domain also. Aristotle's three-fold classification of disciplines as theoretical, productive, and practical is echoed in the three categories of knowledge today. These three categories are explicit knowledge (recorded information), tacit knowledge, and embedded knowledge. Managing the tacit knowledge (TK) is the most difficult thing to do as TK resides in the minds of people. It is really critical to capture the TK for the progress of society. Generally knowledge workers are not ready to share their TK for fear of idea thieves or lack of motivation. But if we fail to capture TK, it gets lost with stakeholders departure, resignation, retirement or death.

The chapters on nature of knowledge, intellectual capital, and communities of practice by Al-Hawamdeh[7] are worth reading for improving one's conceptual access to the nature of knowledge and learning. Basically, knowledge is cumulative, multi-dimensional, and dynamic. According to Nonaka and Takeuchi[8], externalisation, internalisation, combination, and socialisation are the basic modes for knowledge management. Therefore, the dynamic symbiosis of IL, lifelong learning, and knowledge management is an essential condition for the learning individuals and organisations.

8. DIGITAL INCLUSION

The National Knowledge Commission envisioned knowledge society in India can be ensured only by providing massive low cost instant access to quality information. This society must be based upon the philosophy of digital inclusion to bridge the widening digital divide in India. Information seekers must be trained in the use of ICT to enable them to convert information into knowledge and vive versa. Only critical thinkers and independent learners can make sense of information to create new knowledge and then use it strategically for innovation, decision-making and problem solving. "Simply speaking, the value of information lies in its use for decision-making and problem-solving. To implement the philosophy behind information commons, it is essential that the stakeholders are info-literate. They must be aware of the fact that information is a source of instant power and it can make or mar future of anyone depending upon its quality, availability or non-availability. It facilitates decision-making and eliminates uncertainty. The quality of our decisions depends upon the quality of information available to us. In other words, IL is a tool for lifelong learning and self-actualisation."[9] The politics of profit by the commercial domain and the vested interests must be contained by promoting the concept and practice of open-source software, hybrid libraries, institutional repositories, lifelong learning and knowledge management at all levels.

The success of hybrid libraries is dependent upon holistic approach to IL. The affective, cognitive, and physical dimensions of end-users' information seeking behaviour must be taken into consideration while designing our information storage and retrieval systems. These systems must be based upon user feedback to facilitate the effective use of knowledge and information. The Government of India must be impressed upon to take the recommendations of the NKC to their logical conclusion by implementing them in a phased manner. INFLIBNET leadership should take lead in promoting the concept and practice of IL throughout India. It must also extend its resources and services to academic and sectoral grassroots to support lifelong learning and knowledge management.

9. BOTTOM LINE

We must adopt a holistic approach to IL. It should start with the learner at the centre stage interacting with local sites of information and then extending his reach to the sources of information available across the globe. IL must include media literacy, computer literacy and network literacy.

Sense-making should be the heart of the matter. The info-literate persons must be able to attach meaning to their thoughts and actions. IL standards, models and rubrics must be culture specific. Learners and mediators should also be careful about the zones of intervention. Internal and external factors affecting learning and IL programmes must be taken into consideration before passing on value judgments and initiating innovations.

TK management and its strategic and ethical use must be facilitated by the concept and practice of IL. In the formal settings, IL programmes should become essential components to facilitate lifelong learning and putting knowledge to work. But IL must be used to contain the twin perils of "digital exclusion" and "digital determinism" to bridge the "info-divide"[11]. UNESCO is celebrating the United Nations Literacy Decade (2003-12) as well as promoting the Education for All Programme (EFAP) and the Information for All Programme (IFAP). Independent learners and critical thinkers are the expected outcomes of information literacy. But the success of IFAP is dependent upon the success of EFAP, because there can be no information for all without education for all. In fact, the bottom line is that IL programmes must be based upon the complexity and diversities of learning communities; and cultural hegemony and intellectual imperialism must not be allowed to prevail in these programmes. IL must serve as backbone of self-actualisation and learning.

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Dr Jagtar Singh is presently working as a Professor in the Department of Library and Information Science, Punjabi University, Patiala. He had his professional qualifications from Panjab University, Chandigarh. During 1992-93, he was awarded the prestigious **Commonwealth Academic Staff Fellowship** by the Commonwealth Scholarship Commission, UK to work on 'Electronic Publishing' with Professor A.J. Meadows at Loughborough University, UK. He is recipient of the **Ken Haycock Leadership Development Award 2004** by the International Association for School Librarianship (IASL). He is also the Regional Director-Asia of the International Association for School Librarianship (IASL) and Standing Committee Member of the Information Technology Section of the International Federation of Library Associations and Institutions (IFLA). He has published about 100 articles and research papers in national and international professional journals, conferences and seminars. He has been associated with the Dublin Core Metadata Initiative (DCMI) to prepare the Punjabi Language Version of Dublin Core, and has also translated the IFLA/UNESCO Guidelines for Development of Public Library Service in Punjabi Language. He has also served as Convener of the Committee constituted by the Government of Punjab to prepare the 'Revised Draft Punjab Public Libraries Bill' for enactment of Public Library Law in Punjab.