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Information Literacy among Library Professionals at Workplace: A Preliminary Investigation

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ABSTRACT

The paper reports on a preliminary study undertaken to gain an overview of library professionals with knowledge and skills related to information literacy in workplace. The study is based on the result from close-ended questionnaire distributed in five universities of NCR (National Capital Region), India among librarian, deputy librarian, assistant librarian and library & information assistant. In order to foster information literacy at the workplace its utility has to be promoted, the quality of the provided information has to be ensured and high-quality data has to be easily identified and accessed. Furthermore relevant trainings have to be integrated into the respective curriculum, while personal motivation should be strengthened by adequate psychological incentives.

Keywords: *Information Literacy, IL Competencies, IL Instructions, Self-reported Skills.*

Subject Classification Number: *Z665 718.8*

1. INTRODUCTION

The information literacy, emerging with the advent of information technologies in the early 1970s, has grown, taken shape and strengthened to become recognized as the critical literacy for the 21st Century. Sometimes interpreted as one of a number of literacy, information literacy (IL) is also described as the overarching literacy essential for twenty-first century living. Today, information literacy (IL) is inextricably associated with information practices and critical thinking in the information and communication technology (ICT) environment[1].

Across the world, educators in primary, secondary, tertiary and professional education contexts have been developing strategies and policies for designing learning opportunities that will enable learners to take advantage of the information and communication infrastructures available to them. Learning opportunities that enhance information literacy not only make use of information and communication

infrastructures, but are designed to bring the information practices, that are effective in professional, civic and personal life into curriculum. Such opportunities make it possible for learners of all ages to experience the power of effective information practices. When reflection on learning to be information literate is combined with the experience of information literacy, students are helped to recognize the transferability of the processes involved to everyday life, community and workplace contexts. Reflecting on the concept of information literacy itself allows it to be more easily transferred to novel situations[1].

In the workplace, the effect of information overload, info stress, data smog or info fatigue daily and relentless wave of data can be paralyzing. Establishing data relevancy, resolving information priority levels, and determining source reliability often proves time consuming and overwhelming. Sense making in terms that inform problem solving and decision making in a timely fashion is increasingly difficult for the individual. Finding guidance amidst increasing uncertainty and continuous change requires scrupulous discernment while also remaining open-minded and flexible[2].

The paper reports on a preliminary study undertaken to gain an overview of library professionals with knowledge and skills related to information literacy in workplace. This paper presents the philosophical context and theoretical framework for advancing workplace information practices in 21st Century information and knowledge organizations by capturing the information worker's perception of the information process[2].

1.1. Statement of the Problem

Library professionals often arrive at workplaces not realizing that they will need sound information literacy skills, the ability to filter and evaluate the most appropriate sources nor that are they expected to read and write reports. It is crucial that university students are aware of the academic and professional development responsibilities they need to undertake in order to progress to an expected level. They are also expected to enter their careers with the capability for continuous professional development. Being an information literate individual is of importance in today's information society. Library professionals must be able to deal with information overload, information anxiety and constant changes in format and retrieval techniques. Library professionals need to demonstrate information literacy in addition to possessing technological skills and understandings as academic assessment tasks require them to identify their information needs then access, locate, evaluate and synthesize and analyze information found in electronic or print based sources.

1.2. Scope of the Study

The paper reports on a preliminary study undertaken to gain an overview of concept of information literacy by capturing the information worker's perception of the information process. It is assumed that this perception influences the formation and advancement of Information literacy at the workplace.

The present study is confined to five universities (owned by State Government and Private Management) of NCR namely: (i) Amity University, Noida; (ii) Chaudhary Charan Singh University, Meerut; (iii) Sardar Vallabh Bhai Patel University of Agriculture and Technology, Meerut; (iv) Swami Vivekanand Subharti University, Meerut; and (v) Shobhit University, Meerut.

2. LITERATURE REVIEW

This literature review examines descriptive literature as well as scholarly research findings relevant to the concept of information literacy, particularly this concept within the context of education and work places. The literature, both descriptive and professional, is first examined to set the scene in better understanding information literacy.

The potential importance of information literacy to business is asserted by Mutch (1997)[3] in a paper which outlines how the concept might be employed within the business field. Mutch suggests that an emphasis on knowledge, and the making of meaning, should be employed to strengthen the value of the concept, particularly in relation to the notion of learning organizations.

Bruce (1999)[4] conducted the study on workplace experience of information literacy and defined idea of information literacy as the ability to recognize information needs and identify, evaluate and use information effectively, has been of growing concern in the education sectors for a number of years; whilst in the workplace, employers and managers have perhaps attended more to the need for computer and information technology skill. The study summarizes the outcomes of an investigation into the experience of information literacy amongst various types of professionals; and explores the possible differences and interrelations between individual and organizational information literacy suggested by these outcomes. Seven different ways of experiencing information literacy were identified. These experiences are closely related to important workplace processes such as environmental scanning, information management, corporate memory, and research and development; confirming that information literacy should be considered a significant part of the character of learning organizations as well as being a key characteristic of the organization's employees. Implications of individual and organizational information literacy for beginning and continuing professional education are explored.

The Western Association of Schools and Colleges in its Handbook of Accreditation (2001)[5] note that "baccalaureate programs engage students in an integrated course of study of sufficient breadth and depth to prepare them for work, citizenship, and a fulfilling life. These programs also ensure the development of core learning abilities and competencies including, but not limited to, college-level written and oral communication; college level quantitative skills; information literacy; and the habit of critical analysis of data and argument."

In a highly complementary fashion, Australian researcher Lloyd (2004, 2005)[6,7] has offered a rich conception of the workplace environment which characterizes the collection and interactive nature of "working smarter" in contemporary information and knowledge organizations. In amplifying Bruce's theories, Lloyd's research generated findings suggest that informed learning involves collaborative, socio-cultural practices within a context specific environment.

Clyde (2005)[8] reports on a descriptive study undertaken to gain an overview of library and Information workplace needs (as of early 2002) for library professionals with knowledge and skills related to user education and information literacy instruction. A description and discussion of a small-scale research project that used content analysis techniques to study job advertisements posted to the international LIBJOBS listserv over a period of three months. A little over half of the advertisements required at least some experience of and/or skills in user education or instruction of some kind.

According to McLester and McIntire (2006)[9], we are facing a "perfect storm of challenges arising from disconnect between education and workforce values". The key to addressing these challenges begins with defining exactly what those workforce values are. This purpose of this study is to address these challenges by identifying what corporations perceive to be the "workforce values" for information and computing technology. The study does not attempt to address unique IT skills needed by different industries or individual organizations. Instead, it establishes a dialogue on fundamental computing and information technology literacy for today's workplace.

Okiki and Mabawonku (2013)[10] examined the information literacy skills on in federal universities in Nigeria. The study adopted the descriptive survey research design. Multistage sampling technique was used to select one thousand one hundred and fifty-seven (1,057) academic staff members from federal universities in the six geo-political zones of Nigeria.

3. OBJECTIVES OF THE STUDY

The objective of this study is to investigate library professionals' beliefs and associated behavior towards the concept of information literacy. The research explored:

(i) Library professionals' self reported skills in accessing and using information;
(ii) Library professionals' Self-reported skills in understanding sources of information;
(iii) To know the Practical implications of information literacy;
(iv) Rankings of individual information literacy competencies;

4. RESEARCH METHODOLOGY

To meet the objectives of the study a close-ended structured questionnaire method is used to collect the data. The structured questionnaire is designed keeping in view of the stated objectives comprising of various types of questions, keeping in view of the aspects like total population of library professionals in the university library, Self-reported skills in accessing information, Self-reported skills in understanding sources of information. In order to get adequate population size, 5 universities are included in this study. A total of 50 self-administered questionnaires were distributed among Librarian, Deputy Librarian, Assistant Librarian and Library & Information Assistant by adopting stratified random sampling (procedure which first categorizes a population into subgroups and then randomly selects from each subgroup until a desired number is reached). 40 valid samples were collected and analyzed. The response rate is 80%.

A pilot study was conducted to streamline the user questionnaire in all of the study universities. The collected data from questionnaires is analyzed with suitable statistical methods (descriptive statistics). The five universities included in this study are: -

NAME OF THE UNIVERSITY	WEBSITE
Amity University, Noida, Uttar Pradesh, India	http://www.amity.edu
Chaudhary Charan Singh University, Meerut, UP, India	http://www.ccsuniversity.ac.in
Sardar Vallabh Bhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh, India	http://www.svbpmeerut.ac.in
Swami Vivekanand Subharti University, Meerut, UP, India	http://www.subharti.org
Shobhit University, Meerut, Uttar Pradesh, India	http://www.shobhituniversity.ac.in

5. ANALYSIS, INTERPRETATION AND PRESENTATION OF DATA

5.1. Demographics of Respondents

By job role, 8(20%) respondents were librarian, 2(5%) were deputy librarian, 12(30%) were assistant librarian and 18(45%) were library & information assistant. (See table 1).

Table 1: Demographics of Respondents

Designation	Response	Percentage (%)
Librarian	8	20%
Deputy Librarian	2	5%
Assistant Librarian	12	30%
Lib. & Inf. Assistant	18	45%
Total	40	100%

5.2. Self-reported skills in accessing information

Table 2 is concerned with library professionals' self reported skills in accessing and using information. Strong support was found for this and all facets of accessing information including the ability to use the library's catalogue system, online databases, knowing the difference between the reference for a book & a journal article as well as knowledge to use Boolean "and" and "or" to construct information searches are demonstrated in table 2. Out of the respondents, 100% of librarian, deputy librarian and assistant librarian were strongly supported all facets of accessing & using information. Whereas, 61.11% & 50% of library & information assistant were strongly supported the facets knowledge to use online databases & knowledge to find a research journal in the Catalogue. (See table 2).

Table 2: Self-reported skills in accessing information

Self-reported skills in accessing information	Librarian	Deputy Librarian	Assistant Librarian	Lib. & Inf. Assistant
Knowledge to use online databases	8(100%)	2(100%)	12(100%)	11(61.11%)
Knowledge to find a research journal in the Catalogue	8(100%)	2(100%)	12(100%)	9(50%)
Knowledge of the difference between the reference for a book and a journal article	8(100%)	2(100%)	12(100%)	7(38.88%)
Knowledge to use Boolean "and" and "or" to construct information searches	8(100%)	2(100%)	12(100%)	5(27.77%)

5.3. Self-reported skills in understanding sources of information

Similarly to accessing information, the findings in relation to understanding sources of information also provided in support of self-reported skills in table 3. Out of the respondents, 100% of librarian, deputy librarian and assistant librarian acquiring a better understanding of meaning of a scholarly article, know what to look for when deciding whether an article is scholarly, know how to distinguish between fact and opinion in written work, know how to decide if an internet source is academically sound. 50%

& 38.88% of library & information assistant acquiring a better understanding of how to decide if an internet source is academically sound and meaning of a scholarly article respectively. (See table 3).

Table 3: Self-reported skills in understanding sources of information

Self-reported skills in understanding sources of information	Librarian	Deputy Librarian	Assistant Librarian	Lib. & Inf. Assistant
Understand meaning of a "scholarly" article	8(100%)	2(100%)	12(100%)	7(38.88%)
Know what to look for when deciding whether an article is scholarly	8(100%)	2(100%)	12(100%)	4(22.22%)
Know how to distinguish between fact and opinion in written work	8(100%)	2(100%)	12(100%)	3(16.66%)
Know how to decide if an internet source is academically sound	8(100%)	2(100%)	12(100%)	9(50%)

5.4. Learning of information literacy competencies

Table 4 concerned with the mode of learning of information literacy competencies among library professionals. The result shows that, 75% of librarian, 50% of deputy librarian, 50% of assistant librarian and 22.22% of lib. & inf. assistant exposure to information & the research process i.e. learning by doing. (See table 4).

Table 4: Learning of information literacy competencies

Learning of information literacy competencies	Librarian	Deputy Librarian	Assistant Librarian	Lib. & Inf. Assistant
Learn through personal interest	4 (50%)	1 (50%)	5 (41.66%)	3 (16.66%)
Exposure to information and the research process (i.e. learning by doing)	6 (75%)	1 (50%)	6 (50%)	4 (22.22%)
Working with peers	3 (37.50%)	1 (50%)	3 (25%)	2 (11.11%)
Individual motivation and innate ability	2 (25%)	1 (50%)	2 (16.66%)	2 (11.11%)

5.5. Library professional rankings of individual information literacy competencies

The ranking of constituent information literacy competencies by library professional also formed a focus of this research. The ACRL's Information Literacy Standards for Higher Education (Association of College and Research Libraries, 2000) were used to define the twelve broad sets of competencies listed at this point in the survey, and library professional were asked to indicate a ranking of self ability. Among the twelve broad sets of competencies, 77.50% of respondents ranked first to identify information appropriate to a given research topic, 55% of respondents ranked second to able to identify appropriate search tools (e.g. databases, online research tools) to find needed information, 52.5% of respondents ranked third combined to capable of defining a research topic effectively & capable of citing information sources correctly. The result is depicted in table 5. (See table 5).

Table 5: Library professional rankings of individual information literacy competencies

Library professional rankings of individual information literacy competencies	Librarian	Deputy Librarian	Assistant Librarian	Lib. & Inf. Assistant	Average
Capable of defining a research topic effectively	7 (87.50%)	1 (50%)	9 (75%)	4 (22.22%)	21 (52.50%)
Identify information appropriate to a given research topic	8 (100%)	2 (100%)	11 (91.66%)	10 (55.55%)	31 (77.50%)
Understand how information is communicated in primary discipline they are studying	7 (87.50%)	1 (50%)	5 (41.66%)	3 (16.66%)	16 (40%)
Understand the differences between scholarly and popular information sources	6 (75%)	1 (50%)	6 (50%)	2 (11.11%)	15 (37.50%)
Able to distinguish between primary and secondary sources of information	4 (50%)	2 (100%)	8 (66.66%)	3 (16.66%)	17 (42.50%)
Able to identify appropriate search tools (e.g. databases, online research tools) to find needed information	6 (75%)	2 (100%)	9 (75%)	5 (27.77%)	22 (55.00%)
Capable of formulating effective search strategies when looking for needed information within online research tools	3 (37.50%)	1 (50%)	2 (16.66%)	1 (5.55%)	7 (17.50%)
Understand how to critically evaluate library information sources found	5 (62.50%)	1 (50%)	3 (25%)	2 (11.11%)	11 (27.50%)
Understand how to critically evaluate information found on the free web	4 (50%)	1 (50%)	3 (25%)	1 (5.55%)	9 (22.50%)
Able to effectively synthesize information gathered from different sources	3 (37.50%)	1 (50%)	2 (16.66%)	0	6 (15%)
Understand issues relating to academic integrity	6 (75%)	1 (50%)	8 (66.66%)	0	15 (37.50%)
Capable of citing information sources correctly	7 (87.50%)	2 (100%)	9 (75%)	3 (16.66%)	21 (52.50%)

5.6. Practical implications of information literacy

In order to foster information literacy at the workplace its utility has to be promoted, the quality of the provided information (e.g. by the information services or the library) has to be ensured and high-quality data has to be easily identified and accessed. Furthermore relevant trainings have to be integrated into the respective curriculum, while personal motivation should be strengthened by adequate psychological incentives. Concepts to integrate the concept into the business culture and organization have to be designed and implemented. Subsequently, strategies for advancing the

information process need to rely on different levels. 100% of the respondents supported professional trainings, adapted to user needs, integrated into institutions, universities and business organizations. The result is depicted in table 6. (See table 6).

Table 6: Practical implications of information literacy

Practical implications of information literacy	Librarian	Deputy Librarian	Assistant Librarian	Lib. & Inf. Assistant
Professional trainings, adapted to user needs, integrated into institutions, universities and business organizations	8 (100%)	2 (100%)	12 (100%)	18 (100%)
Promotion of Information Literacy e.g. in form of adequate incentives, in order to increase the awareness of the necessity of this competence	6 (75%)	1 (50%)	7 (58.33%)	4 (22.22%)
Simple, usable and homogeneous information landscapes providing high-quality information.	4 (50%)	1 (50%)	6 (50%)	2 (11.11%)
Integration of Information Literacy into organizational- processes, e.g. in form of an Information Literacy certificate.	7 (87.50%)	1 (50%)	9 (75%)	4 (22.22%)

5.7. Reflective Evidence-Based Practice

In a workplace learning environment, knowledge emerges through “meaningful” encounters that activate prior understanding within individuals and among groups. To animate learning, information encounters must be adequately situated and purposefully guided. The process for cultivating workplace information literacy has the potential to sustain and grow knowledge flow when it is embedded into organizational work practices. The essence of this process whereby information instigates learning depends on cultivating experiential relationships with topics and surfacing relational thinking about ideas. Such a “constellation of skills, practices and processes” serves to connect information sources in the workplace with the transferable learning practices required to access them, thereby facilitating the conversion from individual to collective capacity for practices and competencies.

Table 7: Reflective Evidence-Based Practice

Reflective Evidence-Based Practice	Librarian	Deputy Librarian	Assistant Librarian	Lib. & Inf. Assistant
Evaluate Evidence	8(100%)	2(100%)	12(100%)	9(50%)
Apply Findings	8(100%)	2(100%)	5(41.66)	7(38.88%)
Assess Outcomes	8(100%)	2(100%)	3(25%)	3(16.66%)
Reflect on Position	8(100%)	2(100%)	6(50%)	2(11.11%)
Ask a Question	8(100%)	2(100%)	8(66.66%)	3(16.66%)
Acquire Evidence	8(100%)	2(100%)	11(91.66%)	6(33.33%)

These proficiencies include asking good questions, selecting authoritative sources, evaluating multiple perspectives, organizing emerging insights, and communicating them to inform, educate, and influence the intended outcomes of national information literacy agendas worldwide[11]. 100% of librarian & deputy librarian were proficient in Evaluate Evidence, Apply Findings, Assess Outcomes, Reflect on Position, Ask a Question and Acquire Evidence. (See table 7).

6. CONCLUSION

The current study contributes to information literacy research & practice by both synthesizing & corroborating some of earlier study of a similar nature and establishes that many library professionals or information workers' attitude & practice regarding information literacy instruction have remained relatively constant over time. The study builds on what is already known by library professionals and what they practices in the domain of information literacy instruction & by providing insights on how perceptions & rankings of different types of information literacy competencies among library professionals are evolving & changing in an increasing web-based information universe[12].

The study focused on a snapshot of library professionals' self reported skills in information literacy, and their development of generic skills over the time spent at the workplace would provide invaluable information pertaining to the organization success in mapping & embedding attributes. It supports the integration of generic skills into academic courses and setting assessment tasks to address information literacy and academic integrity.

7. REFERENCES

1. Bruce, C. S., 2004, Information literacy as a catalyst for educational change. In Danaher, P A (Ed.) Lifelong learning: Whose responsibility and what is your contribution, *the 3rd International Lifelong Learning Conference*, Yeppoon, Queensland, 13-16 June 2004.
2. Somerville, M. M., Howard, Z., Mirijamdotter, A., 2009, Workplace information literacy: cultivation strategies for working smarter in 21st century libraries. In Pushing the Edge: Explore, Engage, Extend- *Proceedings of the 14th Association of College & Research Libraries National Conference*, Seattle, Washington, 12-15 March 2009, 119-126.
3. McLester, S., McIntire, T., 2006, The workforce readiness crisis. *Technology & Learning*, **27**(4), 22-29.
4. American Library Association, Association of College and Research libraries. 2005(a). "Characteristics of programs of information literacy that illustrate best practices: a guideline. Chicago: ALA". Web 01.03.2016.

   www.acrl.org/ala/acrl/acrlstandards/characteristics.html
5. American Library Association, Association of College and Research libraries. 2005(b). "Guidelines for instruction programs in academic libraries. Chicago: ALA". Web 01.01.2016.

   www.acrl.org/ala/acrl/acrlstandards/guidelinesinstruction.html
6. Bruce, C. S., 1999, Workplace experiences of information literacy. *International Journal of Information Management*, **19**, 33-47.
7. Clyde, L. A., 2005, Librarians and breaking barriers to information literacy: Implications for continuing professional development and workplace learning. *Library Review*, **54**(7), 425-434.

8. Lloyd, A., 2004, Working information: conceptualizing information literacy in the workplace. In Lifelong learning: whose responsibility and what is your contribution? *Refereed papers from the 3rd International Lifelong Learning Conference*, Yeppoon, Queensland, Australia, 218-224. Rockhampton, Queensland, Australia: Central Queensland University Press, 2004.
9. Lloyd, A., 2005, Information literacy: different contexts, different concepts, different truths. *Journal of Librarianship and Information Science,* **37**(2), 82-88.
10. Okiki, O. C., Mabawonku, I. M., 2013, Information literacy skills of academic staff in Nigerian Federal Universities. *International Journal of Library Science*, **8**(2), 62-77.
11. Mutch, A., 1997, Information literacy: an exploration. *International Journal of Information Management*, **17**(5), 377-386.
12. Bury, S., 2011, Faculty attitudes, perceptions and experiences of information literacy: a study across multiple disciplines at York University, Canada. *Journal of information literacy*, **5**(1), 45-64.