

Information Literacy Programme in the Scientific Institutes of Kolkata: A Survey

Wasim Rahaman & Salil Chandra Khan

Abstract

Information Literacy is the vital process in the modern changing world which is mostly used in education system for students/scholars, who must develop skills early on so they are prepared for post-secondary opportunities. The present paper deals with the concept, need, types of information literacy. Further it explores about the information literacy models, standards/frameworks, popular information literacy programmes and groups, and Information Literacy Programmes held in the Scientific Institutes of Kolkata. A number of research and scientific institutes were selected to fulfill the task. Survey research approach is taken and the data were collected from 10 such institutions by using questionnaire. The findings indicated the role of libraries in information literacy education for students/scholars by arranging orientation programmes, short training programmes, and reference desk. It is suggested that library should organise more such kind of programmes and library professionals should have enough training and should teach more effectively in the courses to promote knowledge and understanding of information literacy among educators and students/scholars.

Keywords: Information literacy, Models, Standards, Programmes, Groups, Scientific institutes.

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1. Introduction

Information literacy is not some entirely new phenomenon. The term “information literacy” first appeared in library literature during the 1970s and it is now sometimes wrongly employed to describe library user education and bibliographic instruction. The ever expanding volume of information available through print and digitised formats has the capacity to both stimulate and overwhelm. The digitisation of information and the development of IT based tools to access, manipulate and deliver information available in electronic formats helped the library and information professionals to perform their task much more accurately, efficiently and effectively.

2. Need for Information Literacy

Today libraries are functioning in hybrid environment. There are so much information now a days, both from traditional channels (e.g. newspapers, television, radio and other print sources) and newer platforms (like blogs, podcasts, wikis and YouTube etc.), and libraries acquire, process, organise, circulate and disseminate these huge information resources they have bought by spending lots of money. Unlike before, information is now available 24/7 and available on-the-go via mobile applications also. However, it has become more challenging than ever for individuals to handle this voluminous amount of information, to connect the dots between different information sources and to be able to discern for himself/herself just which piece of information is reliable and appropriate for his/her needs. Information literacy allows us to cope by giving us the skills and made trained including technological skills to use today's modern library as a gateway to know where to locate the needed information. It makes the end users confident enough to analyse and evaluate information, and to make a decision or to create a product using that information.

2.2 Objectives- This paper is writing by the following objectives keeping in mind-

- To aware, what information literacy is, & its need.
- To recognise the need for information, and to evaluate, organise, interpret, and communicate information in all types of formats;
- To ascertain users' most preferred sources of information.
- Determine users' about information literacy skills in order to provide more appropriate services to them.
- To meet the several skills of information literacy with the several types of need of the users'.
- To find out users' opinions about the significance of information literacy education and training.
- To introduce and aware up-to-date tools and techniques of searching resources.

2.3 Other Types of Literacy- Seven dimensions¹ of information literacy has been identified. These are- Tool Literacy, is the ability to understand and use the practical and conceptual tools; Resource Literacy, is the ability to understand the form, format, location and access methods of information resources; Social-structural Literacy, is the ability to know how information is socially created, organised and processed, and fits into the life of various social groups; Research Literacy, is the ability to understand and use the IT-based tools relevant to the work of today's researcher and scholar; Publishing Literacy, is the ability to format and publish research and ideas electronically, in textual and multimedia forms; Emerging Technology Literacy, is the ability of ongoing adapt to, understand, evaluate and make use of the continually emerging innovations in information technology; and Critical Literacy, is the ability to evaluate critically the intellectual, human and social strengths and weaknesses, potentials and limits, benefits and costs of information technologies.

Apart from these, many information professionals' visualised various types of literacy related to IL². Some popular related literacy are- Media Literacy, Computer Literacy, Technology Literacy, Business Literacy, Health Literacy, Visual Literacy, Library literacy, News literacy, Internet literacy, Digital literacy, Adult literacy etc.

1.4 Scope and Limitation- The present study is about finding the "Information Literacy Programme in the Scientific Institutes of Kolkata". The scope of this study is limited to ten (10) selected scientific institution libraries at Kolkata. The result will contribute in knowing the implementation status of information literacy programmes in those selected libraries. The result might have implications for librarians to better organise their information literacy

programmes and for users to better understand their own skill levels and their need to ask librarians for help. Administrators and faculty members may consider incorporating IL instruction in the regular curriculum.

2. Information Literacy

The concept of information literacy is described by two terms, 'information' and 'literacy'. Information is "an assemblage of data in a comprehensible form recorded on paper or some other medium and capable of communication"³ and "literacy is a fundamental human right and the foundation for lifelong learning"⁴. So, information literacy is that "People who are able and skillful to use information resources in the areas of their work can be regarded as information-literate in the society. They have been learned, how to skillfully use a number of information tools to solve their problems"⁵. Now a day's, information is available through various sources in unfiltered formats which raise questions about its authenticity, validity, and reliability of those information. The uncertain quality and expanding quantity of information pose large challenges for society. Information Literacy have been made for several years, mostly by librarians or professionals related to library science, to overcome these problems. The most commonly cited and used definition of IL is "recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information"⁶. Apart from this there are so many definitions out there, but if we extract those definitions mainly four terms arises repeatedly, these are 'need', 'find', 'evaluate', and 'use'. Information literacy enables learners, to master content and extend their investigations, become more self-directed, and assume greater control over their own learning. An information literate person can able to: 'recognise his needs', 'locate and evaluate the quality', 'store and retrieve', 'make effective, efficient and ethical use of information', and 'apply information to create and communicate knowledge'.

3. Literature Review

There are many studies, reports, books, journals, conferences on information literacy, lists of competencies, and descriptions of information literacy programmes and courses were published that measures student competencies are, ALA (1989)⁷ discussed about definition, technology, and programme for various stages, Assessment, Standards, Performance Indicators, and Outcomes. Jill Coupe (1993)⁸ compared freshmen and upperclassmen at Johns Hopkins University focusing first on evaluating basic library skills and then adding some advanced skills. Christine Bruce (1997)⁹ examines the varying experience of information literacy amongst higher educators. Di Booker (1998)¹⁰ focused on information literacy in the workplace, bringing together papers describing research and educational initiatives in a number of countries. Patricia Iannuzzi (1999)¹¹ considers assessment methodologies such as evaluation of bibliographies, reviews of assignments that underscore the research process, and the use of portfolios or journals. Karen Brodsky (2002)¹² describes a model designed to facilitate integration of information competence into the curriculum of a freshman seminar. Sonia Bodi (2002)¹³ suggests several guiding questions for students to ask during their research. Centre for Information Literacy Research (University of Sheffield)¹⁴ - deals to explore, illuminate and develop the field of information literacy through the conduct and stimulation of research and related activities. Information Literacy Website-UK¹⁵ supports practitioners by providing news, case studies, examples of best practice and freely available tool kits. C.R. Karisiddappa (2004)¹⁶ suggested that it should be included not only in library and information science curriculum but also in all curriculums from school education to higher education. Ameet Doshi (2006)¹⁷ advocated integrating a gaming element into library skills instruction as a way to improve learning and portray libraries in a less boring light. Suresh K. Chauhan, Prem Chand and TAV Murthy (2006)¹⁸ provide awareness programmes to use the e-resources available through consortium up to optimum level. RSR Varalakshmi¹⁹

she suggests three types of models for trainers, under graduates and post graduates and the necessary measures for their application. C.K. Sharma (2000)²⁰ Neena Singh (2005)²¹, Sudhakar Goud (2006)²², Satish Kanamadi and Vishakha Vichare(2006)²³, Mulla and Chandrasekhara (2006)²⁴ have emphasised the need for information literacy in higher education in India.

4. Methodology

According to the objectives of this paper, survey method of research have been applied here, and the data collected by two ways i.e., by direct interview and by online questionnaire. Here some IL models and standards are given to understand how IL programmes can be organised in the libraries. Here some ILP groups are also followed to check out their IL activities. Then 10 scientific institutes from various places in Kolkata are chosen for survey. Both qualitative and quantitative methods for collecting the data and deductive and inductive processes were used to analyse the data.

5. Information Literacy Models

There are so many well known and accepted models throughout the world. Some of them are-

1. Big 6 Information Literacy Model by Mike Eisenberg & Bob Berkowitz²⁵ is one that is primarily aimed and implemented at kindergarten through higher education students. This model is intended to foster the acquisition of research, problem-solving, and metacognitive skills through the cooperation of both school library media specialists and classroom teachers.

2. SCONUL (Society of College, National and University Libraries) 7 Pillars Model of Information Literacy²⁶ used to promote excellence in library services in higher education and national libraries across the United Kingdom and Ireland. Since then, the model has been adopted by librarians and teachers around the world as a means of helping them to deliver information skills to their learners.

3. The Implementing Model of Empowering 8 for Information Literacy²⁷ this one was developed for the Asia and the Pacific region. It was a by-product of Colombo (Sri Lanka, 2004) and Patiala (India, 2005) workshop. It is a problem-solving approach for resource based learning model. It includes then following 8 stages:

6. Information Literacy Standards

There are so many well known and accepted standards throughout the world. Some of them are-

1. International Federation of Library Associations and Institutions (IFLA) Information Literacy Standards²⁸ deals with various core areas of IL were developed for students, educators and parents. Several instructional design principles were applied in the courseware development process to ensure learning outcomes are achieved.

2. United Nations Educational Scientific and Cultural Organisation (UNESCO) Information Literacy Framework²⁹ states that UNESCO's Information for All Programme (IFAP) recognises the considerable effort being invested by many international organizations in "measuring the information society".

3. Information Literacy Standards for Student Learning by American Association of School Librarians (AASL)³⁰

4. Information Literacy Competency Standards for Higher Education by ACRL³¹ is the most popular and tested standard around the world. It includes the expected outcomes under each performance indicator, which are developed with the purpose of providing guidance in the development, assessment methods, instruments and strategies for measuring students' learning outcomes.

7. Popular Information Literacy Programmes

Some popular information literacy programmes in national level conducted by various organisations/libraries by which we can get a clear view of the current trends of information literacy programmes like- Sarva Shiksha Abhiyan (SSA), District Primary Education Programme (DPEP), National Literacy Mission, WBS WAN (The project West Bengal State Wide Area Network) by Govt. of India. Information Literacy Programme in Colleges by The Hindu (e-newspaper). Information Literacy Programme in Central Library by IIT, Madras. Need based service to the profession and work for the advancement of LIS by The Society for the Advancement of Library and Information Science (SALIS). International Information Literacy Workshop in India by Panjabi University Patiala, with the support of UNESCO. Computer based Functional Literacy (CFBL) by Tata Group of India. Orientation programmes for library and information science professionals by NISCAIR and NASSDOC. Regular orientation programme/refresher courses for the school librarians by NCERT and SCERT. Information Literacy Programs through Faculty-Librarian Collaboration: Meeting the Challenges of an Emerging Knowledge Society by IIM, Kolkata etc.

8. Popular Information Literacy Groups

Here are some popular IL groups, interested and actively involved in various IL activities internationally. They deal with the problems and developments of ILP. Some examples are- ACRL Institute of Information Literacy, Canadian Library Association - Information Literacy Interest Group, National Forum On Information Literacy, European Network on Information Literacy, SCONUL Working Group on Information Literacy, CAUL Working Group on Information Literacy, Chartered Institute of Library and Information Professionals (CILIP), International Association of University Libraries (IATUL), International Federation of Library Associations and Institutions (IFLA), Linked In Group etc.

9. Scientific Institutes of Kolkata

The 10 scientific institutes of Kolkata chosen for this paper are- Bose Institute (www.boseinst.ernet.in), Central Glass and Ceramic Research Institute (www.cgcri.res.in), Indian Association for the Cultivation of Science (www.iacs.res.in), Indian Centre for Space Physics (csp.res.in/ICSP-WEB), Indian Institute of Chemical Biology (www.iicb.res.in), Institute for Radio Physics and Electronics (www.irpel.org), Indian Statistical Institute (www.isical.ac.in), Saha Institute of Nuclear Physics (www.saha.ac.in), S. N. Bose National Centre for Basic Science (newweb.bose.res.in), Variable Energy for Cyclotron Centre (www.vecc.gov.in).

10. Data Presentation

After collected the data, provided by the library professionals from the institute libraries, on the basis of the questionnaire it is shown that-

Table 1: Collected Data from the Institution

<i>Questions</i>	<i>Institutes</i>
<i>Provide Degree Course</i>	Doctorate (10), Master (BI, IACS, IRPE, ISI, SINP), Bachelor (IRPE, ISI), Certificate (ISI), Post B.Sc. (IRPE), Post Doctorate (BI, ISI)
<i>ILP</i>	All institutes provide an information literacy programme (10).

<i>Provided ILP Method</i>	By request of individual instructors (10), A required information literacy (IACS, ICSP, ISI, SINP, SNBNCBS), An educational technology course (CGCRI, ICSP, IICB, SINP, SNBNCBS, VECC).
<i>Followed Literacy Standard</i>	IFLA standard (BI), Other demonstration programme (10)
<i>Provide Specific Literacy Skills</i>	Internet searching facility (10), Use of electronic databases (10), Identification and evaluation of sources (BI, CGCRI, IACS, IICB, ISI, SINP, SNBNCBS, VECC), Provide links to online tutorials or supporting materials (BI, IACS, ICSP, IRPE, ISI, VECC).
<i>Frequency</i>	Programmes are organised when needed (10).
<i>Communicate Skills</i>	Users are very efficient while communicating to the staff(s) (10).
<i>Programme Benefit</i>	Both users and staff(s) admitted that they got benefit from such kind of programmes.
<i>Programme Barrier</i>	Lack of time of the users (10), Lack of user's interest (10).
<i>Solution to the Barrier</i>	Various services are initiated like- e-mail, DDS, phone call etc., to paid attention of the users who are unable to attain these programmes.
<i>User feedback</i>	Yes (10).

* The numbers in the '()' shown how many institutes provide this service.

11. Data Analysis

- In the course providing section, the above 10 institutes are providing some professional courses. 100% of the selected institutes (10) providing 'Doctorate' degree. 50% of the institutes (5) are providing 'Master' degree also. 20% of the institutes (2) provide 'Bachelor' and 10% are providing 'Certificate' degree. 3% of the institute are providing other courses like 'Post B. Sc.', 'Post Doctorate'.
- 100% of the institutes are providing an IL Programme.
- 100% of the institutes provide IL Programmes through 'by request of individual instructors'. 60% of the institutes (6) are providing 'a required IL Programme'. 60% of the institutes (6) provide 'an educational technology course'. 10% of the institutes provide other methods of IL Programme.
- It is seen that only one institute followed IL Standard guided by IFLA, due to a member of IFLA.
- 100% (10) of institutions provide internet searching facility and electronic database searching. 80% institutions (8) provide skills of identification and evaluation of sources. 60% of institutions (6) provide links to online tutorials or supporting materials. 10% of institutions provide skills of formulation of search strategies.
- 100% of the institutions do not have any such frequency of organising the programmes.
- 100% of the institutions state that their users are very efficient to communicate with the staffs about their requirements.
- 100% of the institutions states that their users got benefit from these programmes.

- It is seen that 100% of the institutes said that users do not have so much time for such kind of programmes. Lack of users' interest is another barrier of organising these types of programmes.
- 100% institutions claimed that users' who have no time for these kinds of programmes or to attain the library, an e-mail is sent to fulfil his needs.
- Except this many other services are provide like DDS etc.
- Feedback is also provided by the user after the programme is over.

13. Findings

The above data shown that, these institutions organise various IL programmes, but they neither follow any hard and fast rule or any literacy models/standards/frameworks for providing these programmes nor any fixed time to provide these programmes. They organise these programmes according to users demand. They also organise the programmes when a new product is acquire or a new service is launched. The institutions organise the programmes when new students are admitted to the institute for their course purpose. Various demonstration programmes are arranged as a method of IL programme except by request of individual instructors or a required IL Programme or an educational technology course.

14. Conclusion

One of the major problems is to make people aware of the consequences that are associated with information illiteracy. Librarians also need proper training to play the role of information consultants. Many libraries/associations/societies are regularly organising refresher courses now-a-days, for the librarians to make them acquainted with the new improved skills. In developing countries like India, the scenario of providing IL programmes is different. It is quite tough to provide ILP through following some standards, where people do not paid attention to the library or library professionals. Again, the above said libraries are specific goal oriented libraries. Users' of these libraries are also specific. Maximum users' of these libraries are doing their research works. That means they are somewhat knowledgeable person. So, the question arises on how to serve literacy programmes to them, who are already literate. The answer should be 'Yes' because, it is not necessary for a literate persons to well aware about all resources of his own subject knowledge or area of interest. Information literacy programmes are a process or a way of keeping aware of the users about their needed information/resources.

Acknowledgement

We would like to thank to Librarian/Library-in-Charge of BI, CGCRI, IACS, ICSP, IICB, IRPE, ISI, SINP, SBNCBS and VECC respectively for helping me and to give their incessant advice to finish the work successfully.

References

1. Shapiro, J. J. & Hughes, S. K. (1996) Information literacy as a liberal art. Washington: Educom Review. Retrieved from: <http://www.educause.edu/pub/er/review/reviewarticles/31231.html>. (Searched on: 26/02/2015)
2. American library association. (1989) Presidential committee on information literacy: Final report. Chicago: American Library Association. Retrieved from: <http://www.ala.org/acrl/publications/whitepapers/presidential>. (Searched on: 27/02/2015)
3. Prytherch, Raymond J. (1990) Harrod's Librarian's Glossary and Reference Book 7th ed. England: Aldershots.

4. United Nations educational, social and cultural organisation. (2015) Retrieved from <http://www.unesco.org/new/en/education/themes/education-building-blocks/literacy>. (Searched on: 28/02/2015)
5. Zurkowski, Paul G. (1974) *The Information Service Environment: Relationships and priorities*. USA: National Commission on Libraries and Information Science.
6. American Library Association. (1998) *A Progress Report on Information Literacy: An Update on the American Library Association residential Committee on Information Literacy: Final Report*. Chicago: American Library Association. Retrieved from: <http://www.ala.org/acrl/standards/informationliteracycompetency>. (Searched on: 02/03/2015)
7. American Library Association. (1998) *A Progress Report on Information Literacy: An Update on the American Library Association residential Committee on Information Literacy: Final Report*. Chicago: American Library Association. Retrieved from: <http://www.ala.org/acrl/standards/informationliteracycompetency>.
8. Coupe, Jill. (1993) Undergraduate library skills: Two surveys at John Hopkins University. *Research Strategies*. 11(3): 188-201.
9. Bruce, Christine. (1997) *The Seven Faces of Information Literacy*. Adelaide: AUSLIB Press.
10. Booker, Di (Ed). (1998) *Information Literacy: the Professional Issue*. In Di Booker (Ed.), *National Australian Information Literacy. Proceedings of the 3rd Conference of the University of South Australia Library* (pp. 35-44). Adelaide, Australia.
11. Iannuzzi, P. (1999) We are teaching, but are they learning: accountability, productivity, and assessment. *Journal of Academic Librarianship*. 25(4): 304-305.
12. Brodsky, Karen. (2002) *Information Competence in the Freshman Seminar*. USA: Academic Exchange.
13. Bodi, Sonia. (2002) How do we bridge the gap between what we teach and what they do? Some thoughts on the place of questions in the process of research. *Journal of Academic Librarianship*. 28(5): 109-114.
14. University of Sheffield. (2007) *Information Literacy Research*. Retrieved from: <http://www.shef.ac.uk/is/cilr>. (Searched on: 05/03/2015)
15. Information literacy. (n.d.). Retrieved from: <http://www.informationliteracy.org.uk/about-the-website>. (Searched on: 05/03/2015)
16. Karisiddappa, C. R. (2004) Literacy concepts in the LIS: Information literacy and capability building. In *International workshop on Democratization of Information: Focus on Libraries*.
17. Doshi, Ameet. (2006) *How gaming could improve information literacy*. Washington D.C.: Computers in Libraries.
18. Chauhan, Suresh K., Prem Chand, and Murthy, TAV. (2006) Information literacy for Indian academicians: INFLIBNET initiatives. *Journal of Library and Information Science*. 31(7): 45-52.
19. Varalakshmi, R.S.R. (2007) Information literacy models: An Indian perspective. *Journal of Library and Information Science*. 32: 41-60.
20. Sharma, C.K. (2000) User's orientation and contribution of information technology. *Library Progress*. 20(2): 71-75.
21. Singh, N. (2005) Revamping Agriculture library and Information services in India: retrospect and prospect. *Annals of library and information studies*. 52(1): 31-36.
22. Goud, Sudhakar. (2006) *Information literacy is the new goal*. Hyderabad: Business Line.

23. Kanamadi, Satish and Vichare, Visakha. (2006) Information literacy programmes for social scientists: A tool for harvesting e-resources. *SRELS Journal of Information Management*. 43(33): 283-293.
24. Mulla, K. R. and Chaudrashekha, M. (2006) Internet users: Mysore University campus. *SERLS Journal of Information Management*. 43(3): 243-263.
25. What is the big6? (n.d.). Retrieved from: http://www.hcpss.org/f/academics/media/factsheet_big6.pdf. (Searched on: 07/03/2015)
26. The SCONUL seven pillars of information literacy. (2001) SCONUL working group on information literacy. Retrieved from: <http://www.sconul.ac.uk/sites/default/files/documents/coremodel.pdf>. (Searched on: 07/03/2015)
27. Boeriswati, E. (2012) The Implementing Model of Empowering Eight for Information Literacy. *US-China Education Review A*. 7(4): 49-61. Retrieved from: <http://files.eric.ed.gov/fulltext/ED535495.pdf>. (Searched on: 08/03/2015)
28. International Federation of Library Associations and Institutions. (2006) Guidelines on information literacy for lifelong learning. Retrieved from: <http://www.ifla.org/files/assets/information-literacy/publications/ifla-guidelines-en.pdf>. (Searched on: 08/03/2015)
29. United Nations educational, social and cultural organisation. (2008) Towards information literacy indicators. Retrieved from: http://www.uis.unesco.org/Library/Documents/wp08_InfoLit_en.pdf. (Searched on: 08/03/2015)
30. American Association of School Librarians. (2007) Standards for the 21st-Century Learner. Retrieved from: http://www.ala.org/aasl/sites/ala.org.aasl/files/content/guidelinesandstandards/learningstandards/AASL_LearningStandards.pdf. (Searched on: 09/03/2015)
31. American Library Association. (1998) A Progress Report on Information Literacy: An Update on the American Library Association residential Committee on Information Literacy: Final Report. American Library Association, Chicago. Retrieved from: <http://www.ala.org/acrl/standards/informationliteracycompetency>. (Searched on: 09/03/2015)