INFORMATION LITERACY TEACHING IN HIGHER EDUCATION: ARE WE READY YET?

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Abstract

Based on the review of literature recognizes the role of information literacy teaching in the educational set up for developing & promoting information literacy skills among students by finding answers to 1) who should teach IL, 2) what should be taught and 3) how. Further discusses the role of librarians & libraries to make collaborative efforts towards teaching information literacy skills among students and describes the program required.

Keywords: Information Literacy Teaching, Role of LIS professionals.

1.   Introduction

The terms: information society, information age, and Information literacy are all now familiar terms. The growing use of information technology is increasing the demand for programs that address information literacy. Information literacy (IL) is a popular term used to describe the concept of teaching people the skills necessary to find out information for them. It is a higher level literacy required to navigating the growing volume and variety of information available today. It is also ascribed as the product of a process of information education - a process whereby the necessary knowledge, attitudes and skills are acquired for functioning in an information society. In a nut shell 'Information Literacy' is an understanding and set of abilities enabling individuals to 'recognise when information is needed and have the capacity to locate, evaluate, and use effectively the needed information [1] '.

Information literacy is being recognized as one of the important facets in teaching and learning because it catalyses individuals to engage in a variety of learning situations and opportunities in optimal ways. With the rapidly changing and expanding information sources available in a networked world, information literacy instruction is needed to provide students with the necessary skills to succeed in this environment. Information literacy education thus may be interpreted as helping people to experience information use differently [2]. Information Literacy Teaching (ILT) has been a significant issue and much has been discussed and published on various facets of it including who should teach it, what should be taught and how it should be taught. An effort is made in this paper to discuss on these three facets based on the published literature in the discipline of Library and Information Science and sketches outlines of the program required.

2.   Who Should Teach IL?

Libraries have a central role to play in the information society because information literacy is the basic skill for life long learning in such a society. And the library mission in the information age is education, particularly where it encourages individuals to become information literate. To achieve this goal the field of Librarianship should fully support the education needs in terms of providing learning resources and integrating IL into formal curriculum design [3]. Librarians whose career focuses on identifying information problems, finding information, analyzing, synthesizing and evaluating the information, and then ensuring that the library's community has access to the information, have a particularly important role in fostering information literacy skills among students. From his experience at New Hampshire Community college,

Miller [4] feels library staff can make help students, - guides for using equipment and materials, the PAC, Netscape, microfiche, and the bookshelves. These, with individualized orientation programs, help students evolve into information consumers able to think about, research, and synthesize materials they need.

Academic libraries are the natural providers of information and advice to the student community and independent learners, from a range of reference and electronic sources the materials they need to pursue learning, for educational, professional or recreational purposes. The results of Morrison's [5] exploratory study using focus group methodology in information literacy research at Concordia University College of Alberta reveal that participants perceived information literacy as valuable, and agreed that the library plays an important role in developing the skill of locating information. Despite the success of individual programs, there remains no widespread acceptance of the academic librarian's role in curriculum planning and course-integrated instruction. Library and university administrators, teaching faculty and librarians should assume a greater leadership role in encouraging librarians to teach library skills, research strategies, and methodologies for life-long learning.

In this whole process collaboration between the library and the various units within the University [6] is required. Librarians should form partnerships with classroom faculty, principals, teachers, community members, public librarians' etc and they are encouraged to teach both subject content and research methodology courses [7]. Amstutz and Whitson [8] based on the findings of a study observe that librarians and faculty can collaborate to improve students' skills in finding information. However the University Library shall take a major responsibility for the development of the information components of the courses and identify the library resources and instruction tools or methods [9].

Hence, academic libraries need to successfully assume the responsibility for producing information literate graduates - by making education a priority rather than relegating it to an adjunct activity of reference or other library programs. If academic libraries do not step up to this educational role, other units on campus or commercial enterprises will fill the breach [10]. In the past and even in recent times librarians have been concerned with library orientation, library instruction, and bibliographic instruction. As such it's a great opportunity for LIS professionals to claim teaching students and others viable information and computer skills to cope effectively in the information society. It is high time for LIS professionals in academic libraries to play an active role in achieving information literacy in the students using the library. Because information literacy abilities are the by-products of general reference functions [11]. Reference librarians hence needed to encourage the growth of these abilities by stimulating students' understanding of critical thinking.

3.   What Should be Taught?

As technological changes are occurring rapidly LIS services have undergone major changes in the electronic information environment. In today's society it is essential to be familiar with the ever-increasing range of electronic formats in which information is available. The students frequently need help developing a research topic, identifying keywords, designing a search strategy, and using a variety of databases and basic reference sources to gather information. In addition, many might not have developed skills for evaluating the information they do find. Further, the importance of enabling students to undertake independent research has to be recognized. Attention has also to be paid to the need for acquiring reading skills as a prerequisite for undertaking research. A wide variety of components need to be taught that includes [12]: basic level computer skills, and the existence and location of university services; information competencies which taught the steps in the research process and how to search for, evaluate and cite information; and synthesis of information collected, writing research papers and posting them on the World Wide Web. Searching the World Wide Web should form part of the academic library training

program and that the World Wide Web should be taught as a simple communications device or medium and not as an information source in itself [13].

Berkowitz [14] asserts that for students to thrive in an information environment they need to be taught a comprehensive set of information skills. The Big Six Skills (BSS) approach to information literacy provides such a comprehensive approach to empower students to be successful in an information environment. Brandt [15] favors an approach to managing user technology training that separates the material into three distinct compartments: technology, information technology, and information literacy. Whatever be the mode of delivery of ILT program the major goals of any ILP shall be [16]: to provide intellectual and physical access to materials in all formats; by instruction, to foster competence and stimulate interest in reading, viewing and using information and ideas; and to work with other educators to design learning strategies to meet the needs of individual students. In doing so teachers should concentrate on student centered instructional methods rather than restructuring the instructional program predominantly to the learning of a fixed body of knowledge [17]. Because the findings of Kunkel, Weaver and Cook [18] indicate that the frequency with which students receive assignments requiring library research is the best predictor of a score.

4. How should be Taught?

Success in this century will depend on the ability to participate intellectually in the emerging knowledge based society where resource-based education [19] remains the model for education. The educational institutions hence shall train knowledge workers, competent to search, find, evaluate and utilize research results in the workplace. As such Engelstad [20] recommends that electronic and traditional library services should be available to all registered students including distance learners. This means that students must have Internet access to librarians, lecturers and fellow students. Describing the users perceptions of the physical and psychological components that enhance or detract from students ability to find, appraise and use information and how they feel during the various stages of an information search Brown [21] notes that their ideal information-seeking environment was thought to be within the comfort of their home or the convenience of the library. So, the existing generic user training programs of whatever kind have to be extended to meet student information needs. As such hands-on 'drop-in' sessions [22] have to be given emphasis.

The library skills, which are taught in user education programs, could form a sound foundation for information literacy. Since information literacy extends beyond library skills (which tend to be limited to location skills), user education curricula need to be redeveloped. But it is to be kept in mind that Information literacy [23] does not happen during the course of one session or in isolation but over time with diverse problems to be solved, with the accumulation of knowledge and with repeated practice. Hence, the Information Literacy Program [24] should be a yearlong program that develops writing, speaking and critical thinking skills for first-year students studying for their Under Graduate courses. The skills should be fit into an information skills model linking information literacy to basic library skills and information technology IT skills. The program shall aim at threading the skills of critical thinking, quantitative thinking, communications, and information literacy throughout the curriculum. The program should focus on the intellectual aspects of locating, evaluating and communicating information sources, rather than on the technical aspects of these activities. Thompson [25] however argues for introduction of ILP as an elective course for the Post-Graduates as part of the Research Methodology course. But, Wichita State University, Kansas is in favor of 'Power Research Workshop [26] of specific duration', for researchers on learning how to approach and work through a research problem.

Boccardi and Zappa [27] have devised a multi-year curriculum for teaching students information skills. The course objective is that when pupils reach the fifth form they will have acquired skills in studying,

library uses media literacy, and the use of non-library information sources. Another aim is the inculcation of positive attitudes towards books, libraries and bibliographical research. Mosley [28] argues for offering interactive workshops by the library in cooperation with the University, for teaching faculty on the effective design of library related assignments for students that include information seeking and processing skills. The workshops shall provide a mechanism to educate faculty to prepare more effective assignments for utilizing library resources. In turn, better assignments lead to information literate students and improve communications between librarians and teaching faculty.

Sabol [29] conceives a traditional lecture based instruction session, to begin with that can later be evolved into a Web based, library skills tutorial which introduces students to topic development; a variety of types of resources to use, along with strategies for evaluating and using them effectively; and guidelines for citation formats. Wilson [30] prefers training users through the library Internet gateway to provides users an opportunity to create and build their own electronic library. Gritsenko and Dovgiallo argues for the incorporation of Telematics [31] into the educational system and Internet literacy for teachers and students. However, Goesch., and Kaufman notes that 'Information literacy' [32] is not sufficient for today's students who must be able to demonstrate 'information competency', that is, the ability to think in a critical and integrated manner about their information needs and the knowledge of how to find, evaluate the quality, use, and manage what they need. According to them Information competency is best achieved by integrating information skills into coursework and the teaching of these skills by faculty.

5.   Program Required

ILT programs in the West are predicated upon the benefits of an informed public, a healthy economy and the value of information [33]. The programs developed for this culture of information (Anglo American models) cannot be easily applied to the cultures of the developing nations of the world like India where in lack of literacy, lack of political security and lack of economic stability, unfavorable institutional conditions etc, predominate and may come in the way of information literacy programs. However, establishing or maintaining an information literate environment in a multi cultural society like India is a challenge full of constraints. These include: communication and information infrastructures inadequately supported by government and non government agencies and the lack of a unified, formal and national professional infrastructure etc though India has made use latest technologies in all the fields.

Although library practice has changed dramatically over recent years, there is still a general feeling that essentially librarians are still doing what they have always done and only the tools have changed; service to clients remains the core issue. This means LIS professionals are in a position to transform themselves into professionals who can effectively teach information literacy, if they are able to visualize a world of rapid change and instantaneous communication. Unfortunately great deficiencies in the fields of pedagogy and psychology still exist because skills in these fields have not been included in the professional education for librarians. In this regard UGC and INFLIBNET (at least in the Indian conditions) in collaboration with professional associations like ILA, IASLIC, SIS, IATLIS etc that are concerned about the profession's role in IL should come together in setting a "Skill Learning Center" at the national level. The aim is to augment and support the profession with expertise, material and content required for acquisition of such skills.

To librarians the connection between Librarianship and IL has long been obvious. As such without forgetting Latham's [34] warning 'don't wait for it to happen', the professional associations must evolve a framework taking the concerned into confidence, to create a section of information literate population among LIS professionals that should posses expertise, competence and understanding of technological issues. This framework should enable the profession to translate its objective of becoming Information

Literacy teachers into a reality. The working environment is changing in radical ways. Rapid changes in technology and the demands of the markets result in the need for LIS professionals to continuously upgrade their skills. This calls for intensive training programs on a continuous basis. Focus should be on enabling the work force to broadly select the skills to refine, and improve. Class room, on the job assignment, conferences, seminars, talent definition, aligning job description with corporate missions could be adopted. Libraries and LIS schools have been in the process. But the process is very slow.

As Iyer [35] rightly observed e learning as the future of education, LIS schools (P G Departments) in response to the challenge can run (specialized courses) P G Diploma in IL to impart the basic skills. It offers a unique opportunity to the students to deploy their skills in IL setting. It is beyond the scope of LIS schools to impart training in specific IL skills, as different situation requires different skills and these are responsible for imparting education to develop manpower required to serve in different settings. There is no second opinion for the statement that IL should be integrated in the curricula itself. But this cannot be done overnight. Integration of IL into the curricula means students attend and receive credit for IL sessions. It also means collaboration between faculty, LIS professionals and administration. Nyamboga [36] observes that"…in spite of the training opportunities in the Universities of India … passing on proper training or skills to library users is not given wide coverage."

Further, Maheswarappa and Tadasad reports that libraries of the colleges undertaking UG education are poorly equipped with ICT facilities and lack IL programs [37] and have often been seen as traditional repositories of textbooks and tended to fall behind in the application of electronic information environment [38]. Tadasad [39] finds that college libraries do not undertake user education programs. Under the circumstances whether faculty perceives LIS professionals as their partners in fostering student learning and is they willing to engage in joint cross disciplinary exercises? The present under graduate education and much of the post graduate education is classroom based and lecture oriented. A library for an under graduate and even for a post graduate student is a place where he can get few books issued, returned related to the syllabus. Their main aim is to pass the examination. We cannot blame the students as well. The present system requires this. Unless this examination oriented class room based higher education is revamped totally the present situation cannot improve. The concepts IL, ILT will vanish away with time and within few years few more new terms will be originated and the profession will deliberate on those new terms.

If something is to be significantly achieved libraries must go beyond their traditional boundaries and should extend user education programs by moving outside the library walls. Liaison teams [40] have to be established between librarians, faculty, and students of the parent institution. This team shall actively identify and meet the information needs. The teaching fraternity shall devise strategies to enable independent student information search and analysis like giving assignments that require the use of library and different types of information sources. Teaching fraternity of all subjects must blend their traditional fact-based approach with an emphasis on learner-based inquiry and the scientific inquiry process with an emphasis on project based learning.

It is not known whether we have the required workforce capable of teaching IL, framing syllabi in such a way to promote IL through the curricula and the infrastructure required. In this regard, a national level research has to be conducted to assess whether teaching fraternity possess the competencies required for ILT positions, as the findings of such a study will result in a much clearer understanding of the skills and experiences the fraternity wanting to progress to such positions. Still more important is the question of convincing the authorities - BOS of respective subjects, Academic councils, Syndicate, the vice-chancellors, Chancellors and of course the bureaucrats holding vital positions in higher education and the Government. Because these people play a significant role by creating opportunities for collaboration and staff development among faculty, librarians, and other professionals who initiate information literacy programs, lead in planning and budgeting for those programs, and provide ongoing resources to sustain them.

The review of literature reveals that an information literacy curriculum cannot stand-alone. It is just like teaching/learning swimming. One cannot teach or learn swimming without a live water source – river, well, swimming pool. On the ground instructions, directions and guidelines can be given regarding how to swim, how to move one's body, one's legs' one's hands, and the head. One will learn swimming only when he is in deep waters under the supervision of an expert. In the same way, IL cannot be taught in isolation. Rather it must be integrated into the academic curriculum. LIS professionals, therefore, need to actively forge teaching relationships with academic faculty. They need to work together to integrate information literacy into the teaching and learning processes. Information literacy needs to be across the curriculum rather than a component of a single course. For information literacy skills to be viewed as being vital to the academic curriculum, LIS professionals must take an active role in educating faculty about its value. To this end, LIS professionals need to have a voice in the curriculum development. LIS professionals and other teaching fraternity need to work together as equal partners, rather than the library being seen as a service to academic faculty.

Hence, in the first instance within the context of LIS education the skills, attributes and tools required for information literacy that are noted as being desirable need to be incorporated into LIS curricula. The curricula should aim at gaining an understanding of IL and the roles, skills and competencies needed, implications for LIS profession, and routes available to develop IL skills. The curricula should be the result of cumulative discussion with IL practitioners worldwide, educationists, representatives from different environments, subject experts, analysis of case studies, market testing and literary warrant by the competitive authority. Once this experiment yields fruitful results the same approach can be extended to the other faculties. Further, as both UG and PG students lack formal library instruction, "Information Sources and Searching" has to be incorporated as a component in the syllabi to be handled by the LIS professionals.

Till this happens the University libraries shall continue to extend the existing user education programs with individualized orientation of whatever kind. They have to include the components like, identifying keywords, designing a search strategy, using a variety of databases and basic reference sources (print as well as electronic) to gather information, basic level computer skills, WWW, and various components of technical writing. This program should be a continuous one and take the form of a workshop of a specific duration at different levels – teachers, research scholars, P G students with an emphasis on hands on assignments. The e-learning pedagogical tools such as e-mails, mailing lists, newsgroups, bulletin boards, etc could be made use of.

7.   Conclusion

Today formal education is viewed as preparation for a lifetime of learning. Therefore, the educational program needs to focus on developing in students the skills they will use as lifelong learners. One of the ways these skills are taught is to model them in the formal educational program. Unless students develop IL skills, they are unable to work effectively in the active learning environment that faculty are trying to create. A high level of information literacy is a requirement if desired lifelong learning society is to be achieved. The emergence of the information society and the availability of information tools and networks will demand that information literacy be taught as an indispensable skill for all users to enable them to have the capability of selecting, acquiring, evaluating and analyzing the information that they need. Information literacy programs should be an integral part of human resources development efforts to enable the country to be competitive at home and abroad and to move smoothly into the information age of the 21st century.

University libraries should see fostering information literacy as a primary goal through orientation and general and subject specific guidance on information searching. Information literacy skills must become part of the education of all people, at all levels of the educational system and that librarians and library

educators are the best people to provide these skills. Hence LIS professionals have to take up this new challenge before the educators turn elsewhere for help. Librarians, along with teachers, are the ones who can start and guide students on their journey to information literacy. The information literacy program necessitates change in the instructional mission of the library. Rather than providing traditional library orientations and tours, often taught out-of-context of an assignment, the library has to go beyond library skills and emphasize on information-seeking behavior of the student community. Library instruction has to be focused on aiding students to become independent researchers and thereby encouraging lifelong learning. Although libraries and librarians are qualified to support and teach information literacy skills, information literacy is not just a library issue. Because it enables students to be lifelong learners and critical thinkers, it is a fundamental principal of higher education. No one—neither teaching faculty, nor librarians, nor student services staff—can adequately address the development of information skills in isolation. Only a collaboration can achieve this.

8.   References

1.   Humes, Barbara. "Understanding Information Literacy". http://www.libraryinstruction.com/infolit.html (Accessed on 21.11.2005)

2.   Bruce, C S. "The relational approach: a new model for information literacy". New Review of Information and Library Research. 3 (1997), pp.1-22.

3.   Kafai, Y and Bates, M J. Internet Web searching in the elementary classroom: building a foundation for information literacy. School Library Media Quarterly. 25:2 (Spring 97), pp.103-111.

4.   Miller, P. "The hurried student: NHCTC library finds many ways to 'help' their busy users". Community and Junior College Libraries. 8: 2 (1999), pp.63-69.

5.   Morrison, H. "Information literacy skills: an exploratory focus group study of student perceptions". Research Strategies. 15:1 (Winter 97), pp.4-17.

6.   Sabol, L. "The value of student evaluation of a Web site". Research Strategies. 16:1 (1998), pp79-84.

7.   Winner, MC. Librarians as partners in the classroom: an increasing imperative. Reference Services Review. 26 (1) 1998, pp 25-30.

8.   Amstutz, D and Whitson, D. "University faculty and information literacy: who teaches the students?". Research Strategies. 15:1 (Winter 97), pp 18-25.

9.   Beer, J D. "Equipping children with life long skills". Cape Librarian. 37:1 (Jan 1993), pp 16-17.

10.   Stoffle, C J. "Literacy 101 for the digital age". American Libraries. 29:11 (Dec 1998), pp 46-48.

11.   Sullivan, Laura A and Campbell, Nancy F. "Strengthening the foundation for information literacy in an academic library". Reference Librarian. 33 (1991), pp 183-189.

12.   Blakeslee, S. "Librarian in a strange land: teaching a freshman orientation course". Reference Services Review. 26:2 (1998), p.p 73-78.

13.   McCarthy, P. "Teaching effective use of the World Wide Web". Colorado Libraries. 25:1 (Spring 1999), pp 19-21.

14.   Berkowitz, R E. "Education for the 21st century: the Big Six Skills approach to information literacy". Ohio Media Spectrum. 49:2 (Summer 1997), pp.30-34.

15.   Brandt, D S. "Compartmentalizing computer training". Computers in Libraries. 18:1 (Jan 1998), pp 41-44.

16. Eaton, G and McCarthy, O. "The art of the possible: integrating information skills and literature into the curriculum". Emergency Librarian. 23:1 (Sep-Oct 95), p.24-28, 30.

17. Henri, J and Dillon, K. "Learning to learn: reflections upon enquiry, information literacy and critical thinking". Australian Library Journal. 41: 2 (May 92), pp 103-17.

18. Kunkel, L R., Weaver, S M and Cook, K N. "What do they know?: an assessment of undergraduate library skills". Journal of Academic Librarianship. 22:6 (Nov 96), pp 430-434.

19. Breivik, P S. "Take II - information literacy: revolution in education". Reference Services Review. 27:3 (1999), pp 271-275.

20. Engelstad, K. "Forskningsbaserte og fleksible laeringsmiljoer. Research-based and flexible learning environments". Synopsis. 30:3 (Jun 1999), pp 119-121

21. Brown, C M. "Information literacy of physical science graduate students in the information age" College and Research Libraries. 60: 5 (Sep 1999), pp.426-438

22. Giannini, G. "'Drop-in' sessions: information literacy responding to student needs". Australian Academic and Research Libraries. 30:3 (Sep 1999), pp 212-218.

23. Kimball, J W. "Remember when you were information illiterate?" College-and-Research-Libraries-News. 60: 7 (Jul/Aug 1999), pp 556-557.

24. Higgins, C and Face, M J C. "Integrating information literacy skills into the university colloquium: innovation at Southern Oregon University". Reference Services Review. 26:3-4 (1998), pp 17-32.

25. Thompson, J E. "Work in progress: development of Research Information Skills course for master's students". Mousaion. 16:1 (1998), pp 125-129.

26. Brown, J D. "Power research - who needs it?". Research Strategies. 15:4 (1997), pp 239-260.

27. Boccardi, D and Zappa, R. "Percorsi di ricerca e autonomia dello studente. Research strategies and student independence". Biblioteche Oggi. 13:10 (Dec 95), pp 54-62.

28. Mosley, P A. "Creating a library assignment workshop for university faculty". Journal of Academic-Librarianship. 24:1 (Jan 1998), pp 33-41.

29. Op cit Sabol

30. Wilson, M C. "To dissect a frog or design an elephant: teaching digital information literacy through the library gateway". Inspel. 32:3 (1998), pp 189-195.

31. Gritsenko, V and Dovgiallo, A. "Preparing our societies for the multimedia environment: Ukrainian experience and the need for international co-operation in digital literacy". International Information and Library Review. 29:3-4 (Sep-Dec 1997), pp 431-445.

32. Goetsch, L A and Kaufman, P T. "Readin', writin', arithmetic, and information competency: adding a basic skills component to a university's curriculum". Campus Wide Information Systems. 15:5 (1998), pp 158-163.

33. Rudasill, L. "The distance between us: information literacy and the developing world". New Review of Information Networking. 4 (1998), pp 93-104.

34. Latham, J. "Knowledge leaders: Yes, but don't wait for it to happen". Information Outlook 3:5 (May 1999), p 52

35. Iyer, Vivek. "E-learning is the future of knowledge management". ZD Net India Sept 29, 2003. http://www.zdnetindia.com (Accessed on 27.11.2005)

36. Nyamboga, Constantine M. "Information skills and Information literacy in Indian University libraries". Program, 38:4 (2004), pp 232-239

37. Maheswarappa, B S and Tadasad, P G. "Availability and use of computers among college libraries in Karnataka state". Library Science with a slant to Documentation and Information Studies 36:4 (1999), pp 241-248

38. Maheswarappa, B S and Tadasad, P G. "Library and Information Services of College libraries in Karnataka: Issues in electronic information and networking environment". **IN**: Libraries and Information Services in the electronic information era edited by J L Sardana and others. Delhi: ILA, 1999, pp 275-282

39. Tadasad, P G. "Collection development, organization and management among academic libraries in Karnataka state". (Ph D Thesis: unpublished) Karnatak University, Dharwad, 1999, pp185-187

40. Skov, Annette and Skaerbak, Helli. Fighting an uphill battle: Information literacy in danish institutions of higher education". Library Review, 52:7 (2003), pp 326-332

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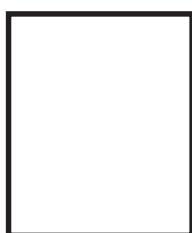
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