Abstract
Information Literacy (IL) is defined and discussed here in brief underlining the need and importance of IL in teaching, learning and research, particularly in higher education and R&D institutions. The paper describes in brief the Information Literacy Programs and activities organised by Delhi University Library System (DULS) and reports the analysis of total feedback received from the participants in various IL activities organized. The pilot IL Program conducted at DULS received overwhelming response and is one of the most successful initiatives. Based on this experience an IL curriculum has been proposed. The authors point out the precisely defined objectives of IL course and describes the need and utility of IL as a regular course giving details of the proposed course content for IL with duration and brief description. The paper concludes with a positive note for IL course and its role in teaching, learning and research at University of Delhi.

Introduction
From leaf to clay tablets, from manuscripts to microfilms, from printed documents to CD-ROMS and online electronic resources, Libraries and Information Centers have always been in the business of facilitating information to its diversified categories of users. The profession has always been in front, since the time immemorial in devising, developing and using various tools and techniques to facilitate content-based and tailor made information to its end users. Today, from farming and horticulture to business and commerce, from aviation to shipping, from banking to life insurance, from health care to court of law, information communication technology (ICT) has made its effective presence in almost all sphere of human life. Libraries and Information Centers (LIC) have also not remained untouched with wide spread impact of ICT. It has drastically transformed the collection, processing, storage, retrieval and communication of information in libraries. Particularly the Internet has completely transformed the traditional method of processing information from collection to communication. It has emerged as the most powerful medium for storage, retrieval and communication of information. “With an unprecedented growth in the quantum of knowledge worldwide and the easy accessibility, Internet has become an unavoidable necessity for every institution of higher learning and research. (Ali)”. The World Wide Web (www), because of its ability to work with multimedia and advance programming languages, is the fastest growing component of the Internet. “The amount of publicly available information on the web is increasing consistently at an unbelievable rate.(Lawrence)”. It has turned into “a gigantic digital library, a searchable 15 billion-world encyclopedia (Barrier)” and is still growing every minute round the clock.

Information available on Internet in public domain as well as through different subscription based databases provided by various hosts and aggregators is bound to play a very important role in teaching, learning and research. Information is available from many sources and in many formats, such as printed text, television, videos, library databases, websites, and more. For maximum utilization of these resources in academics, the need of the hour is to make the users of information competent enough for defining their information need and retrieving precise and relevant information as per their needs. In this context the LIC has a very important role to play. Library and Information Science (LIS) professionals have the task cut out for them of handling the information explosion and delivering the right kind of information services to the right users at the right time. LIC professionals are expected to guide the users for using the right information and develop the skill of users. It is also increasingly important in the contemporary environment of rapid technological change and proliferating information resources that the users are equipped with basic/ advanced skills of information gathering.
What is Information Literacy?
Information Literacy can be defined in terms of a set of competencies that an informed citizen of an information society ought to possess in order to participate actively and intelligently in that society. IL has apparently become the "survival skill" in the information Society. With abundance of information and the diverse choices of resources available, scholars need to continually evaluate information to apply it to generate new ideas, which than change the organization of work, the value of knowledge in the economy, and cultural values (Dowler).

The concept of Information Literacy was introduced for first time in 1974 by Paul Zurkowski, the President of Information Industry Association. He opined that, “People trained in the application of information resources in their work can be called information literates. They have learned techniques and skills for utilizing the wide range of information tools as well as primary sources in molding information solutions to their problems (Zurkowski).” While emphasizing on information Literate individual, it shows that IL is a set of techniques and skills necessary for proper utilization of wide range of information resources.

According to Moor, Information Literacy means “a mastery of the processes of becoming informed (Moore).” The Association of College and Research Libraries defines Information Literacy as a set of abilities requiring individuals to “recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information (Association of College and Research Libraries Best practices and assessment of information literacy programs).”

According to Shapiro and Hughes Information Literacy is “a new liberal art that extends form knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure and its social, cultural, and philosophical context and impact (Shapiro, and Hughes).” Thus Information Literacy is not only knowing how to use computers and access information but also evaluating the nature and impact of information in relation to its technical infrastructure and its social, cultural and philosophical context.

The report of American Library Association’s (ALA) Presidential Committee on Information Literacy, defines Information Literacy, as, a American Library Association Presidential Committee on Information Literacy “set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.” In other words information literacy is a set of skills, which enables the individuals to recognize his/her information need. In addition it also enables to locate, evaluate and use the needed information effectively.

Information Literacy (IL) is the ability to identify information needs, seek out resources to meet those needs, and then analyze, evaluate, synthesize, and communicate the resultant knowledge. Information and computer literacy, in the conventional sense, are functionally valuable technical skills. Over a period of the time, many academic institutions conceived the IL more broadly as a new liberal art that extends from knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure, and its social, cultural and even philosophical context and impact.

The history of information literacy can be traced in various library instructions programs, such as Bibliographic Instruction, Library Initiation, Library Orientation, User Education, etc. Thus, from Bibliographic Instruction to information literacy, the desire to name the library’s educational program mirrors our desire to name and rename in other spheres. Some of the terms used in describing educational programs or goals have specific connotations related to institution-specific objectives. In defining these programs or goals, one can see how they mimic one another with minor variation. Information Literacy is basically a library instruction program. It focuses on content, communication, analysis, information searching and evaluation. In view of the contemporary environment of rapid technological change and proliferating information resources Information Literacy in libraries have become increasingly important. It “forms the basis for life long learning (http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm)” by enabling the learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning.

Need of Information Literacy
Today libraries are functioning in a hybrid environment. Most of the libraries are providing traditional as well as ICT based services. Indeed, libraries have been conducting instruction programmess with varying nomenclature to describe their resources, various services, marking and parking patterns, library use ethics etc. However, the changing library environment requires the libraries to play a more important role through information literacy programs. The abundance of information available through the Internet in public domain in the form of subject gateways, e-books, e-journals, subject and subject concept based web pages, etc., as well as the information available through different subscription based databases offered by various hosts and aggregators, is bound to play a very important role in teaching, learning and research, particularly in higher education and R&D institutions.

Keeping in view the huge amount of information available through the Internet today, library and information profession is at crossroads. The LIS profession is striving to find out the ways and means
to organize and make accessible this huge information available through the Internet. For maximum utilization of these resources in teaching learning and research, the Information Literacy Program (ILP) is the need of the hour. It is essential to educate the users as to how to determine his/her information need; what are the different information sources, their coverage and features; how to find out relevant and precise information from various electronic information sources; what are the web searching techniques; how to evaluate and establish the authenticity and reliability of information retrieved from public domain; what are the ethics and legalities in using electronic information sources; how to make proper bibliographic citations etc. Information Literacy is essential to make the end users competent enough for retrieving precise and relevant information as per their need.

**Information Literacy as a Pilot Program at DULS**

Delhi University Library System (DULS) has initiated Information Literacy Programme since 2006 with a view to sensitize the students, researchers and faculty to seek, evaluate, use and create information effectively and efficiently to achieve their educational, social, occupational and personal goals. At the planning level it was visualized that in addition to their academic requirements such programme will also assist them to access information about their health, environment, and work and empowers them to make critical decisions about their future plans. While planning itself, it was also visualized that the young students of today are tomorrow’s researchers, scientists, economists, managers, etc.—in nutshell they are the future of our country—and the various programs have been planned accordingly, with precisely defined objectives.

DULS has organized a total of 51 Information Literacy programs since 2006 in various departments and colleges of University of Delhi including 39 E-Resource Orientation Programs, 10 Hands on Training Sessions, 2 One Day Workshops for Research Scholars in Social Sciences. A total of 956 P.G. Students, 295 Research Scholars, 857 Faculty members, and 66 library professionals have attended the ILP. To promote Information Literacy, DULS is regularly conducting following activities and programs.

- E-Resource Orientation Programs
- Online Searching Techniques
- Open Access/Public Domain Resources
- Bibliographic Citations
- One day Workshops
- Hands on Training Programs
- E-mail Alerts
- DULS Website

**Feedback Analysis**

A close analysis of the total feedback provides very encouraging figures and facts.

- A total of 96.23 per cent of the respondents have either strongly agreed or agreed that the presentation is focused on materials and skills that are relevant to their current course assignments.
- A total of 90.69 per cent of the respondents have found that the concept selected from their course of study represents their information needs.
- With regard to usefulness of instruction material such as multimedia and websites, 94.90 per cent of the respondents either strongly agreed or agreed to have found the instruction materials useful for their teaching, learning and research.
- A total of 75 per cent respondents have either strongly agreed or agreed that the physical environment, i.e. class room environment was suitable for instructions.
- 88.47 per cent of respondents have accepted that as a result of this presentation they are now better prepared to use library and www services in their academic pursuit.
- 92 per cent respondents either strongly agreed or agreed that the content given in the presentation shows the academic flavour about the librarians’ grasp on the subject matter.
- 92.90 per cent of respondents have found these presentations appropriate to their present information needs.
- 94.01 per cent of the respondents have opined that after the presentations they are more informed and aware about the library services available to them.
- As far as the overall grading of the presentation is concerned a total of 88.92 per cent of the respondents have graded the presentation either excellent or good.

The ILPs at DULS have been very successful and yielded very positive feedback. The Department of Information Technology of the Ministry of Technology and Communications, Government of India had recognized the importance of Information Literacy Program and had provided a sizable grant of Rs. 8.00 lakh in the year 2007 to develop an online tutorial and ICT based infrastructure for imparting hands-on training to the students, teachers and library staff.

The success of ILP as a pilot programme, its importance in teaching, learning and research, worldwide trend of Information Literacy being a credit course system, and the opinion of the faculty members who participated in different IL activities (as good as 80.85 per cent favored that Information Literacy should be made an academic course) has created the
platform to propose IL as an academic course at University of Delhi.

A Background Note on Information Literacy Curriculum
It is believed that the university level experience for students should facilitate both intellectual and personal growth, and encourage the development of lifelong learning skills. It is also believed that the students need to be nurtured with various skills under the general education program which could instill in them a confidence of leading a qualitative life with a pursuit to gain effective knowledge exploiting the ICT environment. Many of the international universities have adopted such general education program to empower their students with more value addition in their knowledge pursuit. In support of this philosophy, DULS proposed to start an optional credit point course on Information Literacy for post graduate (PG) students.

It is a well-known fact that researchers are the maximum consumers as well as creators of information. The role of the IL course in the context of a curriculum is intended to encourage and facilitate lifelong learning. Among many other things, information literate students are competent and independent learners. They are aware of their information needs and are capable of actively engaging in the world of ideas. They are confident about their ability to solve problems. It has become a basic right in a digital world. Information literacy and competency enables to interpret and make informed judgments as users of information sources, as well as to become information generators in their own right. DULS is dedicated to serving the needs of its students by providing a quality learning experience which prepares them for productive roles in society. Hence, the library professionals aim to edify the students about the skills of identifying, locating, and evaluating information.

The Objectives of the Course
The course aims at creating competency among the researchers to:

- Comprehend the importance and value of Information Literacy in the lifelong learning process and achieve their educational, social, occupational and personal information needs.
- Use accurate and complete information for critical thinking, problem solving and intelligent decision-making.
- Articulate a research statement. Formulate a research strategy to find information about a selected topic.
- Demonstrate understanding of the organization of libraries and various finding aids, how information is formally and informally produced, organized, and disseminated and recognize different information systems and be able to find needed information. Find materials in the online catalog and obtain them for use.
- Be aware of the wide range of sources available for locating information and select the sources which will best meet their needs; use appropriate tools to identify and situate potential sources of information; be aware of appropriate indexing and abstracting services and databases and understand the principles of their use;
- Develop a systematic method of searching for information in connection with their studies;
- Demonstrate understanding of search engines, web directories and other web resources to find information on the www. Develop database searching techniques for accessing both online and CD-ROM databases for needed information.
- Develop knowledge of Information Retrieval system and select the most appropriate information retrieval systems for accessing specific information based on the scope, content, and organization of the retrieval systems
- Use a variety of information tools to identify, select, and retrieve information in various formats.
- Be able to use current awareness methods to keep abreast with the published literature after the initial search;
- Demonstrate a complete understanding of e-resources in their varied forms and formats to meet out their information needs.
- Be able to use international academic networks for getting information;
- Be able to compare and critically evaluate information obtained from various sources for authority, accuracy, currency, objectivity, appropriateness and select best sources;
- Demonstrate an understanding of the legal, ethical and security implications of creating, sharing and using information and ICT technology.
- Demonstrate a basic understanding of plagiarism and copyright as applied to the research process.
- Read and write citations using APA, MLA, Harvard, Chicago styles.
- Be able to cite bibliographic references in the project reports or theses; and construct a personal bibliographic system.
- Manage and communicate information professionally.

Information Literacy Course for Whom?
The course is meant for post graduate students of the University of Delhi. It is proposed to incorporate this course into the departmental curriculum of PG as an elective/optional course. The objective is to develop a close collaboration between various departments and the library in matter of teaching and learning.
Why a Regular Course?
DULS has been conducting various Information Literacy Programmes in class room environment for PG students, research scholars, and faculty since, 2006. These programs are highly appreciated by the audience. However, these programmes are basically orientation programmes and are only effective to create awareness of the various facets of e-resources and library services. There is felt a need to make it a structured course, which could benefit the students for lifelong learning. The structured course is required to impart competency and fluency in information handling and communication.

Utility of the Course
The basic purpose of the course is to impart ability and skill to the learners so that they can identify their information need, locate and evaluate the needed information, effectively and ethically use the needed information and efficiently communicate their knowledge and ideas to rest of the world. This course is highly important at international level. Almost all international universities of repute are running courses of this nature.

The rapidly changing format of information from print to electronic or digital has also necessitated such courses worldwide. The course will also enhance the usage of electronic information sources and ultimately add to the academic excellence of the university. Today, in terms of availability of electronic information sources to the academics, University of Delhi is at par with any international university of repute. For maximum utilization of these electronic information sources in academics, such course is inevitable. The PG students do require more of such skills and abilities for their future. This course will provide skills for their lifetime learning.

Duration of the Course
It will be a one semester course for the first year PG students and preferably in the beginning of the first semester.

The Faculty For IL Course
The DULS has been able to grasp the various requirements of the course and the senior professionals are well trained to impart program. In addition, the new recruits at the level of Professional Assistant, Assistant Librarians are also going to be trained to impart such courses to the PG Students. Hence, the faculty will be from the DULS itself. Involvement of library professionals as faculty to impart applied teaching on information literacy will provide an opportunity to have a close interaction with the students and improve the skills of professional staff in providing reference service and other library services.

Why Library Run this Course
Library and information centers are knowledge agencies and facilitate content based information to the users. The Information Literacy Course entails the skills necessary for information handling and knowledge dissemination. Thus the course naturally falls in the realm of libraries. Everywhere such courses are being run by the libraries. A list of universities running the course is enclosed as Appendix-A. The content and purpose of the course also necessitates complete involvement of libraries. Besides, the skills and expertise of senior library professionals are quite suitable to meet the requirements of the course.

Committee on IL Course
The DULS Governing Body discussed and deliberated on various aspects of IL Course in its meeting held on 18th December, 2008. The Governing Body, though agreed to the proposal in principle, constituted a committee comprising of teaching faculty and library faculty to work out various details and formalities for running the course. The committee met and discussed and observed that a short term course for both PG students and research scholars should be introduced as a pilot in collaboration with Institute of Life Long Learning. The proposed course content be tailored to suit the requirements of a short term course. Based on the outcome of the pilot study, an optional credit course for PG students will be started. It was also decided that based on the outcome IL should also be incorporated in research methodology paper for research scholars. The revised and simplified course content of proposed short term pilot course is given below:

Teaching Methodology
The methodology for imparting Information Literacy skill will vary, but may include: Class workshops, hands-on instruction, in-class assignments, out-of-class work and assignments, online demonstrations, readings, online exercises, small group discussions and group presentations with demonstrations, lecture, final project.

Grading System
The following five point grading system which is universally followed has been proposed for the course.

- 5 Excellent
- 4.5 Very Good
- 3 Good
- 3.5 Above Average
- 3 Average
- 2 Below Average
- 1 Failure
- 0 Incomplete work

Conclusion
As the concept of Information Literacy is still being discussed and deliberated in conferences and seminars in India, DULS has initiated and started the ILP at practical grounds to the end users since 2006. The recognition from DIT, Government of India in the
The Proposed Content for Pilot IL Course

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Content</th>
<th>Duration</th>
<th>Brief Description of the Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Information Literacy</td>
<td>04 hrs</td>
<td>Definition, philosophy and overview, objective and purpose, standards, coverage and indicators, components, models, recent trends.</td>
</tr>
<tr>
<td>2.</td>
<td>General Computer concepts</td>
<td>04 hrs</td>
<td>Introduction to computers, hardware, software, system software, application software, various operating systems, general purpose software suit like MS-Office.</td>
</tr>
<tr>
<td>3.</td>
<td>Hands on practice</td>
<td>02 hrs</td>
<td>MS-Office</td>
</tr>
<tr>
<td>4.</td>
<td>Basics of Networking &amp; Internet</td>
<td>03 hrs</td>
<td>Networking concepts. Introduction, history, architecture, &amp; components of Internet. www, e-mail management, etc.</td>
</tr>
<tr>
<td>5.</td>
<td>Research Strategies</td>
<td>04 hrs</td>
<td>How to do a research?, research setting and design, critical thinking skills, formulation of research questions; identify research topics by applying critical thinking to research questions, identify keywords/ key ideas in the research questions.</td>
</tr>
<tr>
<td>6.</td>
<td>SPSS</td>
<td>03 hrs</td>
<td>Basics of SPSS</td>
</tr>
<tr>
<td>7.</td>
<td>Hands on practice</td>
<td>02 hrs</td>
<td>Using SPSS for data analysis</td>
</tr>
<tr>
<td>8.</td>
<td>Sources &amp; Types of Information</td>
<td>04 hrs</td>
<td>Use of library, format of sources of information—print vs. e-resources, and finding aids, popular vs. scholarly journals. Library reference collection and services in print. Ordering materials from various sources (inter-library loan, for example) Library homepage familiarization activities (e.g., checking borrower information at the library via the homepage, asking librarians questions via virtual reference), Critical issues in scholarly communications.</td>
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<tr>
<td>10.</td>
<td>General Databases</td>
<td>02 hrs</td>
<td>Overview of databases, scope, coverage and search features, search result analysis and limiting, expanding the search results. Registering with database(s).</td>
</tr>
<tr>
<td>11.</td>
<td>Hands on Practice</td>
<td>02 hrs</td>
<td>With various general databases</td>
</tr>
<tr>
<td>12.</td>
<td>Web Resources</td>
<td>04 hrs</td>
<td>Introduction to web resources. Subject directories, search engines, meta search engines. OAI, RSS, Wikies, blogs, newsgroups and forums. Application of critical thinking skills to using web resources, evaluate web resources.</td>
</tr>
<tr>
<td>13.</td>
<td>Hands on Practice</td>
<td>02 hrs</td>
<td>Using subject directories, search engines, meta search engines.</td>
</tr>
<tr>
<td>14.</td>
<td>Online Resources &amp; Searching Techniques</td>
<td>03 hrs</td>
<td>Features of online e-resources, Information Retrieval System, formulating a search strategy, recall vs relevance, search techniques, employing specific search techniques. Title, subject, author, keyword searches.</td>
</tr>
<tr>
<td>15.</td>
<td>Hands on Practice</td>
<td>02 hrs</td>
<td>Formulating a search strategy, employing specific search techniques for online searching with examples.</td>
</tr>
<tr>
<td>16.</td>
<td>Discipline specific databases(Two groups: Science and Social Science) optional</td>
<td>03 hrs</td>
<td>Overview of databases, scope coverage and search features, search result analysis and limiting expending the search result, registering with the databases.</td>
</tr>
<tr>
<td>17.</td>
<td>Hands on Practice</td>
<td>03 hrs</td>
<td>With various subject specific databases</td>
</tr>
<tr>
<td>18.</td>
<td>Information use Ethics</td>
<td>02 hrs</td>
<td>Define plagiarism, what constitute plagiarism, how to avoid plagiarism, Demonstrate ethical use of information, copy right issues.</td>
</tr>
<tr>
<td>19.</td>
<td>Group Discussion &amp; Brain Storming</td>
<td>02 hrs</td>
<td>Plagiarism and Copy Right Issues</td>
</tr>
<tr>
<td>20.</td>
<td>Citation Standards</td>
<td>04 hrs</td>
<td>Importance of citations, ranking system and standardization of bibliographical references using standard tools, various citation patterns and their use.</td>
</tr>
<tr>
<td>21.</td>
<td>Reporting research</td>
<td>03 hrs</td>
<td>Writing research out come, drafting, editing and final communication.</td>
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Year 2007 has already established the credit for DULS. Initially we had to approach various colleges and different academic departments in the University campus to conduct the ILP. However, today as an established programme, we are invited to conduct ILP at various departments and colleges. The quality of audience feedback and approach to the ILP has further boosted our moral to initiate an academic course “Information Literacy for Advance Learning” at University of Delhi. The course has already been
approved in principle by DULS Governing Body and the various details and formalities of the course have already been worked out by a committee constituted by the Chairman, DULS Governing Body and comprising of teaching and library faculty. We have planned to first start a short term pilot course and based on the outcome introduce it as a regular course.

References