CHAPTER 2

Literature Review

2.1 Introduction:

Basically Literature review gives a birds view of the research concept. It helps researcher to get acquainted with his research problem and also helps in finding out research gaps in existing the existing literature. This helps researcher in fine tuning his research methodology and problem.

2.2 Facets of study:

Researcher reviewed the literature of 124 research articles from 1974 to 2015 on Information Literacy and found articles on following five sections i.e.

   a) Education & Information Literacy
   b) Library & Information Literacy
   c) Information Communication Technology & Information Literacy
   d) Information Literacy skills
   e) National commission & Information Literacy

2.2.1 Education & Information Literacy:

Information Literacy term is widely accepted in education system. Initially it was known as information skills knowing how to use various tools to retrieve information. In this information age information literacy plays major role in education system which enables students to independently find information and use it whenever need arises to complete his academic assignments. Information literacy in education system makes students a lifelong learners. Following are reviewed literature on information literacy and education.

According to Kemp, Barbara E.; Nofsinger, Mary M (1988) describes growing concern over the concept of articulation of educational programs and services. Survey results of Washington State University on the level of library skills/retrieval skills of students and faculties, problem faced by library professionals in teaching library skills and key to achieve its goal of lifelong learning or information literacy for all.
Burrell, Jennifer; Foster, Jennifer. (1991) describes importance of cooperation between public and school libraries for ensuring to build the foundations for information literacy for students in Australia.

American Library Association, Chicago, IL (1989) Article discuss information literacy as a tool in reaching personal professional goals. The importance of being information literate in business demonstrated through examples and the role of information literacy in taking effective decisions in business. Information literacy also considered as main central element in practice of democracy with responsibility on both side of government and users. Government should make available the information and users use it effectively for effective decision making. A new education curriculum is suggested depends on available information resources.

As described by Kester, D D (1994) this article is a study of survey at East Carolina University, to identify student’s information skills. The study focused on: training on library use in school; reasons for library usage, methods used to access information and identification of standard reference terms. Statistical analysis of the study is presented and it is observed only a few students are benefited by library orientation, library curriculum in course content is very less, most of the students are unable to use online catalogue and search strategies. Author recommended that more research to be conducted on problem solving skills.

Grover, R. (1994) as in school library 'library instruction/orientation has changed to 'information skills instruction' and is part of school's curriculum. Several models were developed for imparting information skills Because of the library media specialist's roles as teacher and instructional consultant, it is imperative that the library media specialist is able to design and assess information skills instruction. While several models have been advanced for the teaching of information skills, needed are guidelines for the assessment of information skills.

Bailey, L (1995): Since 1990 The Cheltenham and Gloucester College of Higher Education has used an information skills workbook as part of its first year student’s skills program. This article describes changes to be made in user manual/workbook by adding new learning or teaching styles.

Rader, H B (1996), this article deals with, in an information age all the citizens must become smart and efficient in managing the information. Everyone should need training
in organizing, evaluate and analyze available information in print and e format and retrieving skills taught from school to university level. Librarians worldwide should know the latest skills and technologies to impart effective information literacy programs.

Fox, L M; White (1996), this article deals with nursing college students, main goal of information literacy program is to develop users skills in locating, evaluating and applying information for problem solving. After literacy program indicate improvement in students’ information. In 1988, the University Of Northern Colorado School Of Nursing began working with a librarian to integrate an information-literacy component, entitled Pathways to Information Literacy, into their curriculum.

Baker, Robert K. (1997), Most academic librarians endorse the development of information literacy skills for undergraduates and equate these skills with effective use of the library. Many studies, however, show that few students use the library, and that most of their use is a function of faculty expectations. Consequently, further research into the reasons why faculty decide to require their students to do library research is important. An exploratory single-case descriptive study is presented that explores this area of inquiry by identifying and describing the purposes, levels of importance, and self-perceived roles of faculty at a large urban multi-campus community college (Pima Community College, Tucson, AZ) in making student library assignments.

Julien, Heidi (1998) this article deals with practices of user orientation in New Zealand’s higher education sector and comparing similar study conducted in Canada and discusses research in the US on same topic. Article also address questions of Who has responsible for user education in academic libraries, what are resources allotted for user education, Evaluation policy, Curriculum of user education, Methods and objectives of user education etc.

Furlong, Katherine; Roberts, Franklin D. (1998), author describes pro-activness of Maine university in providing information literacy to their users. Actions taken to teach students in better information retrieval skills and helping them to become lifelong learners. Also discusses outlines, goals and objective of IL Program and tips to academic librarians on providing effective information literacy program.
Spitzer, Kathleen L (1999), article presents strategies for the implementation of Information Literacy Standards for school Student. Resources and checking of various websites that can help in the understanding of standards or to locate relevant standards. Collaboration with library professionals to integrate information literacy with the school curriculum.

Engeldinger, Eugene A (1999), author is of opinion that fundamental of higher education is to prepare students for the future. To face this high tech world graduates of today and tomorrow must have effective information seeking and technology skills. They must be information and technology literate. For this it is necessary for the institution to develop and maintain high class information technology infrastructure, network infrastructure and service infrastructure. Concludes how high class infrastructure of an institution plays a very important role in creating effective information literates.

Higgins, Carla; Face, Mary Jane Cedar (1999), author writes at Southern Oregon University information literacy was developed and implemented during the year 96-97 for fresher. The content designed with writing speaking and critical thinking skills. Role of information literacy program in university’s learning process.

Giannini, Grace (1999), Monash University recognized the need to revised existing user education, or library orientation. Traditionally, librarians had offered a program of general and specialist user education tailored to the disciplinary needs of students in the form of classes and in the revised one-on-one reference interview and hands on session were created.

Rader, Hannelore B (2000), Because of data smog, in beginning of new millennium information environment is changing greatly. These changes affect the libraries specially its reference services. Previously librarians have been concerned with library orientation or library instructions now they are responsible for teaching users other valuable e resources and technology skills to cope effectively in changing information society. In 21st Century teaching effective information retrieval skills will become an important component of reference service. Article concludes challenges in academic libraries and success in these areas means effective professional survival.
Halverson, Aniko L.; Volker, Joye. (2000), two institutions--the Institute of Arts at the Australian National University, and the US-based California Institute of Arts--have implemented information literacy in their curriculum and are addressing the following areas of opportunity: the help desk; a formal, for-credit course in information literacy; and the concept of the information laboratory. Identified required skills for the librarian to manage such facilities. These include the development and delivery of literacy courses which cover variety of library resources; the use of a variety of software packages.

Iannuzzi, Patricia (2000)- Article focuses on Information literacy standards implementation developed by Association of College and Research Libraries in the United States to promote use of standards in education. Discusses need of information literacy competency standards, application of these standards in college and role of librarian in building information literate user.

Walker, Clare M (2001) - Author discusses standards for assessing information literacy which includes Association of College and Research Libraries (ACRL)’s Information Literacy IQ test and competency standards. SAQA Grid and its eight outcomes developed by University of the Witwatersrand, South Africa. Argues information literacy partly depend on Information technology literacy.

Julien, Heidi (2000) - Article examines information literacy program in academic libraries in Canada also observes method, content and challenges faced by librarians in providing information literacy program and comparison of same with United States and New Zealand.

Black, Christine; Crest, Sarah; Volland, Mary. (2001) Author describes faculty and librarian collaboration at Towson University in teaching and developing information literacy program. Article also indicates that that the collaboration brings effective curriculum for information literacy program and required searching skills.

Fiegen, Ann M; Cherry, Bennett; Watson, Kathleen (2002), article deals with model where information literacy competencies are adopted as learning outcomes for an undergraduate business curriculum. Develops an assessment instrument to measure students learning of information literacy competencies tied to the objectives of the course then uses the performance measures and learning outcomes to plan an
information literacy curriculum for higher education in management. Concludes how learning outcomes helps instructors in designing information literacy curriculum in business course.

Ivey, Ruth (2003): Report of a study conducted to investigate librarians and academics efforts to develop information literacy at the university of Waikato. Information literacy programs depends on provision of technical staff to develop and deliver the program. Effective communication and positive working relationships are some conditions essential to the success of collaborative teaching partnerships. Identifies strategies for initiating, developing, and sustaining such partnerships.

Entorf, Regina P.; Ye, Fred Y. (2004) The article presents an investigation undertaken while one of the authors was a visiting scholar during the spring of 2004 at the Zhejiang University Department of Information Resources Management, Hangzhou, China. The other author is Chairman of that department. The study presents a brief overview of information literacy instruction in China and then focuses on how it is actually carried out at one large, representative university. The Zhejiang University library system boasts five libraries at present, with a total of about 5,500,000 titles. Among the electronic resources available are e-book databases, including Net Library, that include over 100,000 titles, mostly in Chinese. The great majority of students surveyed were third year undergraduates, but also included four seniors and two graduate students. Students were asked how many term papers they had to write in the past year, as a means of gauging how much library research they may have had to do. The students surveyed generally expect to figure out how to operate databases by themselves or with the help of online instructions, instruction from professors, or help from their peers, not with help from librarians. Students wish they were more skilled at putting together an effective search strategy, including being able to choose appropriate keywords, but no great distress was expressed about the research process either.

Jones, Rebecca (2005): Author describes how Malvem Girls College has promoted information literacy as part of independent learning program. Continuous developments in information and communication technology change the education system and greater emphasis on how users use technology as a media for accessing information. This gave birth to Information literacy and librarians took lead role in delivering the program. To
conclude in order to develop the information retrieval skills there need to be introduce information literacy skills teaching across the curriculum along with practical exposure.

Singh, Neena and Klingober, Andreas (2009) are of the opinion that the academic libraries promoting and developing information skills of students in modern automated and hybrid libraries and their role in developing a knowledge society. It defines information literacy and major information literacy skills required by students. Information literacy in India and Germany – university libraries as activators of lifelong learning.

Pattar, Vijay; Kanamadi, Satish (2010): This article represents findings of a survey of the information literacy programs provided at the engineering colleges in New Mumbai, India. The content and execution of these literacy programs to the users are examined: Found that majority of libraries are providing information literacy programs at the beginning of the academic year by librarian Methods used for execution are limited to brief introduction by lecture method and library tours. Web based tutorials are not provided. Majority of libraries agree that ICT has had great influence on information literacy programs. Study also revealed that majority of libraries are not evaluating these literacy programs. Recommendations & suggestions are given to improve the Information Literacy programs.

Stewart, Christophe (2011) this article deals with importance of measuring information literacy (IL) effectiveness over and above the use of case studies. The author discusses examples of library outcomes for IL among research universities including the development of context research skills at the University of Illinois Libraries and the Competencies for Online Research Education (CORE) at Purdue University. He also discusses the need to devise broad methods for measuring effectiveness.

Smale, Maura A. (2011): Article deals with in all levels of education game based learning is an innovative pedagogical strategy employed which motivates and increase student learning. Many libraries have incorporated games into their collection. Academic Libraries begun to use games for information literacy programs. They use commercial games, create their own games apply these games to enhance their information literacy program, the benefits of this approach outweigh obstacles. Using
games in literacy program has strong potential to increase users’ involvement in the program.

Diehm, Rae-Anne; Lupton, Mandy. (2012): This article deals with students’ behavior to find and use the information wherever needed. In this article author interviewed Australian university students where he uses phenomenography as its methodological & theoretical basis and finds students use 3 strategies for learning information literacy. 1) Learning by trial and error. 2) Learning by discussing with others and 3) Learning by doing or practicing this outcome will help library professionals to design and develop literacy curriculum accordingly.

Al Awadhi, Suha; Rehman, Sajjad Ur (2012): This article deals with importance of information literacy course in helping students to develop skills and capabilities needed to use information effectively. It is observed that information literacy course made a significant difference in skills and capabilities of a user who took this course. Also discuss with students groups benefits and obstacles with students while taking this course. Examine the course content and facilities supporting delivery of the course.

Haji, Haji Ali; Mwitumbe, Khamis Hamad; Omar, Abbas Mohamed (2014): The article describes current situation and information literacy level and awareness at Zanzibar University. Also discusses frequency of literacy programs and role of library professionals in promoting the program. Author conducted survey at three universities of Zanzibar where university teaching staff, library staff, deans, Head of Depts. and students were involved in this study. About 200 users participated in the study and data analyzed quantitatively. Result shows bit of information literacy awareness exists among teaching staff and library though its promotions and required skills are still at nascent stage. It was found inadequate number of professionally qualified library professionals, lack of background in teaching literacy programs and lack of cooperation between teaching staff and library professionals were source of the problems. Respondents made recommendations to address the shortcomings which includes Creating awareness programs, Information literacy workshops/ seminars. Effective information literacy curriculum in all levels of education.

Lawal, Vicki; Akintunde, Stephen. (2014): Authors examine the potential role of information literacy (IL) within the changing context of the e-learning environment at the University of Jos in recent years. It focuses and emphasizes the role of the
University library in facilitating teaching and learning through the use of e-learning platforms in teaching information retrieval skills. The article aims to identify gaps in students’ information skills that could be addressed through IL program. The study employed a case study research design while the methodology involved the administration of structured questionnaires to the two groups of respondents. Findings from the study provide useful insights to the skills challenges experienced by students and point to a need for effective collaboration between the library, faculty and management in order to promote a better approach to learning at the institution.

Blas, Elise A (2014) sociocultural literacy guides an instructor's pedagogy in the multicultural university classroom. By employing sociocultural literacy in the information literacy classroom, the instruction librarian can better teach students from all cultures including international students, first generation students, or students from a wide array of socio-economic status. Sociocultural literacy goes beyond cultural sensitivity and awareness. Through small changes in the classroom environment, communication behaviors, and ways to teach information literacy, students are encouraged to relate the presented material to their own lives. Such changes require effort on the part of the sociocultural literate instructor to learn more about each student and teach in a wider perspective.

Ilogho, Julie, E, & Nkiko, C. (2014): This article is a survey of students in 5 private universities in Ogun state Nigeria on information literacy awareness and searching skills. Also examined students level of distinguish information according to their needs and level of information program. The sample consists of 359 respondents, descriptive survey method was used. Data analysis done with simple percentages. It was found that respondents have low knowledge of Information literacy programs, skills etc. Lack of skills in identifying right resources. The study concludes effective information literacy skills are part of everyone’s life in this 21st century. Cooperation of teachers and library staff is must to deliver effective information literacy programs and awareness.

Sadlapur, Shivanand & Patil, Vinay (2014) It is case study of database usage at NMIMS University. Author discuss students’ information literacy skills, impact of information literacy programs on utilization of library resources and future user needs.
2.2.2 Library & Information Literacy:

Library & Library professionals plays a very import role in imparting quality information literacy program. In educational institutions students are surrounded by rich information environment. They need integral system to manage the information. At the beginning students have less exposure for internet and e-resources this results in mismatch between students behavior and academic expectations. Here librarians are natural in-house experts in teaching ICT applications to information for students and faculties, how to find select and use required information effectively. Researcher reviewed following literature on role of library & Library professionals in information literacy.

Taylor, (1979) introduced the term in the library literature (Library Journal) defining the elements of information literacy and role of librarians in effective execution of information literacy. Martin Tessmer defined “information literacy is ability to retrieve, access and evaluate information for their needs.” List of information literacy skills are also described.

Deekle, P V; De Klerke,(1992)This paper is a result of survey undertaken to determine whether the roles responsibilities of the librarian have really changed, in promoting information literacy what are the roles of library staff and computer center. Role of library professionals in curriculum development.

Keefer, J. (1993) In this article author discusses 2 recurring themes in reference information: Whether reference is only the delivery of information or helping users in dealing with system, and the debate concerning the merits of content-oriented as opposed to process-oriented, programs. Some of the implications of the concept of library anxiety within the content of information literacy and the delivery of reference and instruction service in academic libraries are studied. Findings from the realms of psychology for the physical and intellectual organization of academic libraries are also presented.

Brock, Kathy Thomas (1994) article deals with making a library literature-based model for developing information literacy through the information intermediary process and librarian and teachers plays the role of information intermediaries also deals with Methodology, Process involved in model development, Refining of model; Interaction between information intermediaries and library users.
Bruce, Christine Susan. (1995) describes information literacy and examines the areas of primary concern. Few definition of information literacy and information literate person; Role of library professionals in information literacy program and content of information literacy education.

Baker, Robert K (1995) this article deals with what librarians can do for teaching faculties to increase library’s involvement in their curriculum development. Describes the characteristics of Information literate person and also considered as information literacy is must for educated person.

Ercegovac, Zorana (1998), Information Literacy, library and information science literature becomes interesting subject for many. In particular national goals for education 2000 and emerging world digital library researchers do invest in the area of Information literacy. Reports case study in Information literacy and elaborate information literacy skills for college students.

Poustie, Kay(1999), Author describes role of public libraries in implementing information literacy through the internet and details on the construction of Mirrabooka Library and Information Technology Center in the City of Sterling, Australia cope with handling information literacy programs

Caravello, Patti Schifter (2000), article deals with the library instruction course offered by university of California-Los Angeles. Goals of the course; Availability; Course format; Lecture and online demonstrations offered; Evolution of the course; Course approach and offers for providing practical skills for learners/users.

Cunningham, Thomas H; Lanning, Scott (2002): In this knowledge age information literacy is essential. Describes definitions of information literacy, challenges in promoting IL Role of faculties and librarian in designing information literacy.

Nyamboga, Constantine M (2004), this article deals training opportunities for Library and Information science professionals arise due to information literacy program in India. The need for training to users is to make appropriate use of resources available in the libraries. Library professionals need continuous training, professional development courses to cope with emerging digital resources.
Galvin, Jeanne. (2005): This article deals with strategies for promoting information literacy rather than traditional library orientation. Library collection, infrastructure and services like digital resources, web pages and technology infrastructure will be useful in imparting effective information literacy programs.

Gayathri Mahapatra (2006) Author describe the concept of e information literacy, which helps in delivering user education or information training through electronic media. Which required internet, intranet, LCD’s. Broad band facility, DVD, VCD etc. Discusses effect of e learning platform in distance education stress on paradigm shift from teacher to learner. Discussing new role and responsibilities of library and librarian because of introducing ICT in libraries. Further article elaborates status of e learning/education programs along with course curriculum and techniques used in effective delivery and implementation in India. Library professionals and web technologists’ plays important role in implementing e information literacy program in the society.

Florea, Mona (2008): Author describes librarians as a service providers always looking for innovative ways of using technology for delivering library services and information literacy skills. Online learning and teaching tools offer librarians enormous opportunities to enhance face to face information literacy program. Concludes librarians experience with using WebCT Campus Edition and Vista, e-Portfolios, and Wikis to deliver online information literacy program.

Ramesh Babu (2008) states, the information literacy is an area of interest to librarians and information professionals and it is pivotal to the pursuit of lifelong learning process. Information literacy competency standards and performance indicators.

Norris, Tiffany Davis. (2009): This article discussed challenges faced by librarians in providing Information Literacy program. The author points out that to address Gen Y users’ information needs librarians should well verse with technology that can be used in academic environment, also emphasis role of librarian to help users in finding appropriate databases according to their information needs.

Sanderson, Heather. (2011): Author is of the opinion that many librarians are using different learning styles in their literacy programs. Research reveals that theory of learning styles is problematic and complex. It is important to delivery information literacy program with sound knowledge.
Dunaway, Michelle. (2011) Author describes Information literacy program created new openings for freshers in Library and information Science field across the world. Article also describes role of web 2.0 in delivering effective information literacy program. Author engage the students in critical thinking which helps them to recognize social and political aspects of creation of knowledge or information. The School of Information Science at Pittsburgh University provide education to traditional librarians to become knowledge managers, where they should handle effective information literacy programs. School offers graduate degree program in Library & Information science with specialization in information literacy so that they should deliver effective literacy programs. Master’s program is offer on campus and also online and is accredited by ALA (American Library Association).

Buckley Owen, Barbara (2012): This article deals with authors insights on role of the libraries in improving information literacy. Owen is worried that information literacy is being missed, citing the observed innocence regarding the issue. Owen mentions the need for information professionals to develop skills to be involved in the agenda. Owen adds that public libraries must ensure that they integrate information literacy.

Sadlapur Shivanand (2014) Author is of opinion that. In this ICT age Libraries are spending huge amount of money on their collection development and for proper utilization marketing is must for getting better ROI on the investment and it is possible only through information literacy or user education.

Klipfel, Kevin Michael (2015) this article articulates and defends a student-centered approach to reference and instructional librarianship defined by authentic engagement with students' interests. A review of the history of the construct of authenticity in philosophy, humanistic and existential psychology, and contemporary educational psychology is traced. Connections are drawn between the philosophy of authentic engagement and the tradition in librarianship of "Counselor Librarianship." Recommendations for applications to the library context are then outlined.
2.2.3 Information Communication Technology & Information Literacy:

Information Communication Technology with literacy means thinking analytically and innovatively about information and information communication as citizens of global community while using ICT reliably and ethically.

Now a day’s technology is a part of every one’s life and learning which makes work and communication for business and pleasure always with strong importance on softwares, hardwares, applications and portable devices. In this 21st century it is not enough to be merely ICT literate but one should need literacy that helps the use of these application and tools. Researcher reviewed following literature on Information communication technology and information literacy.

Horton, FW Jr- (1983) described Information literacy as beyond computer literacy and defined as “as raising level of awareness of individuals and enterprises to knowledge explosion and how machine-aided handling systems can help identify, access, and obtain data and documents needed for problem-solving and decision-making”.

Mioduser, D.(1985) in his paper discusses the concept of information literacy as the main framework and within computer literacy may be defined, describes in detail the design and curriculum of Information literacy for elementary and junior high school students with an example for grade 6 entitled 'Information in-Formation. ‘and is consists of four chapters i.e. (1) The World of Information; (2) Information Processing; (3) Information Processing in the Human Brain; and (4) The Computer--An Information Processing Machine. Materials are briefly described, including a textbook containing various activities and reading excerpts, models to be built and operated, games, computer software, enrichment notebooks, and kits for assembly.

Doyle, Christina S (1995) describes the concept of information literacy which is the ability to access, evaluate and use information from a different sources and also include definitions for information literacy, ICT, Terminology impact and information literate etc.

Perkins, Michael; Bosseau, Don L(1996), author is of opinion that information competency is more than computer literacy and not only involves how to
access information, but involves awareness of information available, how it is organized and how to use for one’s information need and this activity needs proper education and training.

Thomas, N R(1997), the author discusses merits and demerits of licensed software’s in providing Information Literacy and proper planning in arranging information literacy program so that most of the students should benefited from this.

Dupuis, E A (1997), the article describes in this technological world most of students will be techno savvy and they prefer to refer e resources in completing their assignments. Some students are reluctant to adopt new technologies; by considering the technological developments, computer access and Internet resources available to elementary school students today, one can only imagine user expectation from libraries tomorrow. It is found although college students may arrive with sound technological skills but their knowledge in using digital information is lacking. Author’s opinion that to overcome this, information literacy is must for every student, there they should know how to retrieve the information from digital resources

Herrington, Verlene (1998). Author discusses impact of information technology on library orientation. Paradigm shift in e library. Limitation and problems with existing Library orientation and importance of information literacy skills into the system.

Saunders, Laverna M; Saunders, Laverna M. (1999), authors writes concepts of virtual library and describes how dependence on computers and digital information has effected the users. Impact of technology on libraries have evolved library jobs, organizational structure and working conditions have changed. Need of highly technical librarians to teach information literacy skills and to help users to cope with changing technology.

Squire, Jan S (1999), author is of the opinion that with advancement of technology more and more information is available and is need of the hour and library should provide these materials and train the user on usage of these material. Academic libraries become place where information literacy programs takes place involving access, evaluation and use of information.

Negish M (2000) in the age of digital contents, information literacy has become widely acclaimed as the indispensable skill for every citizen. It is regarded as being comparable
to conventional literacy and arithmetic, and its content is discussed by checking governmental documents and information-related qualification examinations. Examines the importance of the distinction between business-oriented information and entertainment-oriented information, and suggests that the usual discussions about information literacy have only been applied to the former. Maintains that recent developments in mobile telephone services and gaming machines for entertainment use should be seriously considered as constituting an important part of information literacy.

Sato, Kazuyo; Shirota, Masayuki (2001) – Author describes in this growing information age information literacy is very important part of any organization. To overcome this corporate libraries providing with information literacy program to their users. At Asahi Breweries installed necessary hardware and software in their library to operate digital information, arranging training programs to their end users on internet and commercial databases for effective retrieval.

White, Marjorie V. (2003), author opinion that with rapid advances in information technology increase in variety in information resources and increasing complexities of access and evaluate the information and libraries recognize the necessary of Information literacy program for its users, universities took initiative in information literacy training workshops and deployed successful models in this regard.

Karsidappa.C.R. and Iqbalahmad (2007) Author is of opinion that revolution in technology and application of same to information has opened new age in the mankind history. Along with increase in e commerce, e health, the internet has been considered as boon to learning society. The revolution in information technology creates new form of electronic interactive education for lifelong learning and learning makes simple allows anyone to learn anything from anywhere any time.

Katz, Irvin R (2007). Author is of the opinion that in this information age users at all level lack of ICT skills and were confused in selecting, evaluating available information. This article describe available ICT infrastructure for internet based information literacy programs. From beginning to present library professionals involved in design, development of information literacy programs

Jackson, Pamela Alexondra. (2007): This article deals with using leaning management systems like Blackboard in delivering library services and through Blackboard it is
possible to include online course of Information literacy. Concludes utilizing LMS platform for providing library services remained underdeveloped and recommends suggestions to improve students’ awareness/learning.

Knecht, Mike; Reid, Kevin. (2009), Article describes how LMS Software Blackboard is used by the librarians at Hinderson Community College to deliver Information literacy program and students feedback. Advantages of information Literacy program through black board are greater collaboration with faculty, instant feedback from users, global access from remote locations and compliance with accreditation guidelines.

Tariq Ashraf and et.al (2009) state that the emerging virtual learning environment, the information literacy (IL) instruction is alive and functional on campus today. It needs to be treated differently from the usual programmes.

Shiao-Feng Su; Kuo, Jane (2010) Authors describes ,the current study conducts a thorough content analysis of currently prepared or up-to-date high-quality digital information literacy programs conducted by academic libraries in a peer-reviewed resource, PRIMO. This article describes PRIMO’s topics or skills and their teaching skills and strategies considered as very effective and suggest to deploy these techniques in information literacy programs.

Shri Ram (2010): The article deals with Web 2.0 application as information awareness tool about the resources available in library and connecting all other Jaypee Group of Educational Institutions’ libraries also discuss influence of Web 2.0 application on library services. Web 2.0 technology provides users a virtual environment. It enables users to interact with users of similar interest through networking and present myriad of resources and information in the form of multimedia, blogging, tagging, bookmarking, messaging, and social networking.

Click, Amanda; Petit, Joan. (2010): This article deals with using available open source applications and internet tools in executing information literacy programs by librarians with focus on Web 2.0 and social media technologies.i.e. Social networking websites Facebook and Twitter, blogs, RSS, wikis, video sharing etc. Many users are already using these technologies which made them simple to grasp when applied these technologies to library services.
Magnuson, Marta L (2013): This article deals with how Web 2.0 tools in an online information literacy instruction course gel with ACRL’s Information Literacy Competency Standards for Higher Education. For graduate courses, a qualitative case study was undertaken on an online information literacy program. Collected data includes assignments, course activities, online discussions, surveys and emails. Theory of constructivism, active learning and social interaction was used to find data patterns. Activity theory provides frame work for data analysis while students using web 2.0 tool. It is found Web 2.0 supports five information literacy standards i.e. collaboration, information organization, creativity, discussion and technology education.

Koltay, Tibor; Špiranec, Sonja; Karvalics, Laszlo Z (2015) in this article author describes the important feature of Research 2.0 and its relationship to information literacy. Research 2.0 is combination of various technological innovations and Web 2.0 applications. This will transform research activities. Author is of the opinion that impact of research 2.0 on information literacy is fantastic but still it is not widely adopted.

Chalmers, Wendy. (2015): The article deals with Digital and Information Literacy (DIL) framework of the Open University (OU). Topics discussed include creation of Digital and Information Literacy framework to support a structured and consistent approach in the development of Digital and Information Literacy skills for students, this framework endorsed by faculties is being used by academic staff and librarians to integrate skills into modules, enables systematic building of skills through qualifications and focuses on creating a student-friendly version of the framework.

Ram, Shri (2015): Article discuss the application of tag clouding for information visualization and information retrieval over social cataloguing tool such as Shelfari. A case study where tag cloud is being used as a tool for information visualization and information retrieval to create awareness about new arrivals in the library. For the purpose of creating awareness amongst the user of the library and promote the use of newly catalogued resources, an online social cataloguing system 'Shelfari' has been used. The new arrivals are catalogued through social cataloguing system. The Library of Congress subject heading (LCSH) and Medical Subject Headings (MeSH) are being used as tag words for each resource. The tag cloud created
in this way has been evaluated for the effectiveness of the social cataloguing. The results suggest that tag clouding helps to create a visual effect and help users to learn about availability of the resources in the library along with the collaborative activities such as reviews and feedbacks, to choose right kind of reading materials. Social cataloguing activities are now getting momentum in online social network system. The use of internet and social network activities are increasing day-by-day so as the use of reviews and feedback for choosing right reading material. This study shall be valuable for those who are interested in choosing right reading materials based on popularity.

2.2.4 Information Literacy skills:

Skills defined as abilities of a person to perform the tasks effectively. In information literacy skills are required to be information literate requires an understanding of following i.e. Should be able to understand the need of information, available resources, how to find required information, knowledge to evaluate the results, how to use the available information effectively, ethics of information, and how to communicate and manage the findings or outcome. Researcher reviewed following articles on information literacy skills.

Burchinal (1976) states that information literacy as a set of skills and linked information literacy with 1. Skills which include using and finding information. 2. Role of information in decision making and problem solving.3. Effective and efficient location of information and utilization.

Lubans (1978) author defined competences for library with special references to selecting perfect resources for their information needs.

Garfield (1979) in his paper ‘The Industry Association’ (IIA), defined information literate person as a person who knows the techniques and skills for using information tools in molding solutions to problems.

Demo, W. (1986) - examines certain characteristics of information technology which might actually hinder information literacy for many. i.e. 1) Oversupply of information; 2) cost of information tools ; 3) cost of information access; 4) invisibility of
information revolution to average person; 5) the 'demassification' of mass media. The function of school libraries and public libraries for those who are pre-information literate is considered, as are certain problems which must be overcome in these resource areas, such as underuse and underfinancing.

Wittkopf, Barbara (1990) author states Importance of critical thinking skills and information literacy to librarians for providing effective users’ needs and his vision of model research library in 21st century.

Behrens, S and J. Mousaion (1992) this article deals with concept of information literacy, also describes how user education becomes base for information Literacy. However, since information literacy is beyond library skills which will limited to location skills, user education curricula need to be modify for teaching information literacy.

Johnson-Cooper, G (1994) author is of the opinion that information literacy is critical for African Americans. It is very basic and is extension of literacy skills required in today’s world. The article begins with a discussion on Afro centricity, and moves to discussion on racism and also discuss the responsibilities of Afrocentric librarians.

Behrens, Shirley J. (1994) describes in brief ‘information literacy'. Mentioning some definitions and describe concept also discuss skills required to deliver effective information literacy.

Arp, Lori (1996) author discusses ways of Library instruction and information literacy in technical and academic colleges, challenges faced in information literacy and innovations in literacy program.

Bruce, Christine Susan (1999), author Investigates the information literacy (IL) skills among various types of professionals. Exploration of differences and interrelations between individual and organizational literacy; Identification of ways of experiencing IL; Implications of individual and organizational IL in professional education.

Christian, Gayle R.; Blumenthal, Caroline (2000) in looking for answers to their learning and information needs, adult learners face an information explosion as one component of their complex world. While adult learners represent a wide variety of developmental stages for information literacy and for a successful search for
electronic information, each one must learn to cope with the burgeoning explosion of information. Explores the challenges of information gathering, and examines the specific needs and characteristics of the adult learner in relation to information gathering. Presents strategies to assist the reference librarian in developing the necessary skills as well as methods to assist the adult learner.

VanderPol, Diane; Taranto, Cheryl. (2002) – Article deals with need of information literacy skills at music library discusses importance of information literacy standards in music library that address lifelong learning and critical thinking. Also discuss on the question is information literacy is different for the music library.

O'Sullivan, Carmel. (2002): Article deals with corporate sectors awareness of information literacy which is solution to overloaded information. Industries invest huge, they should know how to use the available information for company's benefit. Concludes that there is little awareness of the term information literacy incorporates as a result many corporates are poorly equipped with required infrastructure to deal effectively retrieval of information in their everyday work.

Williams, Peter (2006) Author criticizes the emergence of the information literacy (IL) movement in the U.S. and in Great Britain. According to the author, he is an IL practitioner who is becoming increasingly disillusioned with both the term and some arguments made by its more prominent advocates. He states that the key to successful information-skills teaching is precisely to make a connection with the research that students are about to embark upon. He adds that all that talk by IL proponents about information in abstract terms holds little appeal for non-librarians.

Amudhavalli (2008) states, information Literacy is not limited to information centers and libraries, so what the dimensions of IL instruction beyond libraries should be requires a wider discussion. A multidisciplinary approach to IL research and instruction will create opportunities for substantial, curriculum-integrated and long-lasting instructional experiences.

Heider, Kelly (2009): Author is of opinion that, in this 21st century information age it is impossible to educators to prepare students for the future without teaching them effective information retrieval skills. The American Library Association define those students who manage information effectively as information literates. Since American
Association of School Libraries published the Information Literacy Standards in 1998. Many adopt information literacy program on priority. These standards were written for early childhood education still Information literacy sidelined in many schools. Concludes that early information literacy instructions promotes critical thinking and increases the ability to solve problems and these two skills are necessary to cope with information explosion.

Pranali B. Gedam and Ajay T. Agashe (2009) Authors are of the opinion that information literacy is a very important concept in this modern changing world. Information technology becomes part of everybody’s life and is taking new shape. More and more information is generating. For this user should know how to make use of this information. Information Literacy makes them lifelong learners, Information literacy makes user to recognize, evaluate and use the right information for his needs and he can search independently, effectively for his information needs. Conclude the article with need of information literacy in India.

Leavitt, Laura L. (2011): This is case study of information literacy program in 21st century and discusses importance of research skills and proper training on library web based resources. It studied a graduate level organizational behavior class, focusing on strategic analysis of a company, company and industry research, and quality information. Author also discusses importance of 21st century skill sets required for utilizing library and web based resources.

Johnson, Anna Marie; Sproles, Claudene; Detmering, Robert (2013): In this article author discuss selected bibliography on information literacy. Periodical articles, monographs and AV materials examined for information literacy and findings provide information about each resources. This information may be used by library professionals as a quick reference to literature on information literacy.

Dooley, Jim. (2013): Author discuss the Credo Student Survey, which researched students attitude topics, their research abilities, their use of resources, seeking assistance in finding information. Students use of e resources are discussed as well as library usage, Reference books usage, database usage and use of smart phones in this process are discussed.
Jinadu, Iliasu; Kaur, Kiran (2014): This paper critically review and identify issues in the literature relating to Information Literacy and how it is being assessed. It provides arguments that the existing information literacy conceptualization and subsequent models do not support the perspective and understanding of information literacy at the workplace, especially in developing countries like Nigeria. Key literature and common models of information literacy are examined to identify the conceptualization of the construct of information literacy and its relevance to practices in the workplace. Further points out that existing information literacy models are not inclusive of the theoretical perspective of the person-in practice workplace information environment and proposes a model that sets the basis for empirical studies on information literacy in the workplace, specifically in developing countries. The proposed model will assist researchers to understand the major components of workplace information literacy and how to assess information literacy of a person in practice at the workplace.

Price, Elizabeth; Richardson, Rebecca. (2015): This article review selected publications in library-related literature and discuss the thematic approach to course design in colleges and universities and how it has been implemented into information literacy (IL) courses. A literature review of peer-reviewed journals, professional journals, magazines and blogs contextualizes the thematic approach to instruction at the college and university levels. Search terms included "thematic approach", "thematic approach in education" and "theme-based instruction"; the search was restricted to articles published in the past 20 years. Findings, In addition to the IL courses, thematic-based instruction has been used in biology, chemistry, English, French literature, history, mathematics, philosophy and sociology courses in college and university campuses. While instructors report that the thematic approach enhances student learning, few studies have directly tested the impact. No studies have been published within the library science literature. Thematic approach is a newer concept in the world of IL instruction. While many professional journal articles and blog posts provide in-depth case studies of how thematic-based instruction has been implemented, this article draws from all disciplines and features a succinct summary of what works, what does not work and how to best implement a thematic approach in an IL course.
2.2.5 National commission & Information Literacy:

For the growth of information literacy, required national commissions across the country on Information literacy. They should work towards government policies and procedures, inclusion on information literacy in course curriculum at all levels of education. Curriculum should be revised on regular basis. Should regulate information literacy programs in educational institutions. Researcher reviewed following literature on role of National commission on information literacy.

Zurkowski, Paul G (1974) in his paper discussed, the relations of the national program for library and information services to information industry literacy and the information literacy and traditional relations of libraries with information are described. It is suggested that on top priority national commission on libraries and information science should be directed to establish a major national program for information literacy by 1984.

Fjallbrant, N (1995) this paper deals with EDUCATE Project--End-user Courses in Information Access with information Communication Technology. The aim of the Project is to produce a new type of model for user education by using information tools. The author discusses in the article progress made, goal, objective and evaluation of the EDUCATE Project.

Huang, S H. (1996) author describes future of in information literacy is very bright and will be the very important part of user education programs. In this coming era of the information society made available information tools or networks throughout the world. Information literacy is a very important skill for teaching users on selecting, evaluating and analyzing needed information also describes information literacy program development and its concept in Taiwan.

de Jager, Karin; Nassimbeni, Mary.(1998) , this article presents information on south African government paper entitled “The Information Society and the Developing World: A South African Approach”, which describes information literacy course offered by school librarians also deals with policies and purposes of the literacy course and impact of Literacy program on students.

Arai, Mariko (2001) - The Japan External Trade Organization (JETRO)’s business library is a special library provides current business information to their internal users
and public. To cope with growing e/digital information library try to provide latest infrastructure and constant information literacy programs for effective retrieval. Also discusses JETRO’s instruction programs and future plans.

Martorana, Janet; Curtis, Sylvia; DeDecker, Sherry; Edgerton, Sylvelin. (2001) - Describes how University of California at Santa Barbara librarian developed information literacy programs for local school teachers and librarians, how they introduced teachers to information literacy standards, provided technology training and added activates for incorporating critical thinking into the research process. Also worked with teachers for incorporating these literacy methods in their curriculum and their ultimate goal was to enhance students research skills.

Webber, Sheila; Nixon, Carol (2003) , article highlights the developments in information literacy worldwide, gives definitions and examples where latest trends are bringing information literacy to people’s attention.

Johnson, Wendell G (2004) article deals with library instruction oriented towards the outcome attached to ACRL’s (Association of college & Research Libraries) competence standards. Online resources and WWW (World Wide Web) are integral part of this program. Library orientation cannot fulfill all the standards. Information literacy demands the cooperation of institution, faculty, library and users.

Karisiddappa, C.R. (2004) in this article author has discussed concept and characteristics of information literacy program. Also discuss need and importance of information literacy program and also suggested to include information literacy curriculum in all level of education and must be part of Library and information Science program, Information literacy improves one’s searching skills.

Moore, Penny (2005) Author describes facilitate and hinder the drive while implementing information literacy across the world by consulting publications of International Association of School Librarianship (IASL) between 1998 to 2002. Initiative taken by schools discussed along with level of literacy program and available technological infrastructure to conduct the literacy program. The shift from literacy to information literacy, practices in delivering literacy program to students, learning needs etc. are explored. Government role in this regard are discussed and recommendations were made for future development.
Elmborg, James (2006): Author uses critical literacy theory to define information literacy. Discuss that to be educators, librarians must focus less on information transfer and more on developing critical awareness in students. Using concepts from literacy theory, the author suggests ways library practice would change if librarians redefined themselves as literacy educators.

Newton, Angela; Boden, Debbi (2006): An interview with Australian librarian Christine Bruce. When asked about her views on the state of information literacy in Australia, she stated that there is a strong interest in student learning. Australia has also strong relationship with Great Britain and Sweden in the area of education. She also stressed importance of information literacy because the quality of learning in educational institutions is at stake.

Suresh K. Chauhan, Prem Chand and TAV Murthy (2006) Author describes awareness of INFLIBNET programmes on Information literacy throughout the country through UGC Infonet and e-journals consortium. Describe the initiative of INFLIBNET in training and creative awareness about available e resources through consortium among academicians community.

Ghosh, S, B.; Anup Kumar (2006) Article describes importance of information literacy in effective use of available information in the institutions. Information Literacy will bridge the gap between digital divide that will found in India as Village information center, community information centers etc.

Varalakshmi, R. S. R (2007): Author describes an overview of the information literacy model for library trainers, undergraduates and post-graduates in India. Discuss the issue of information explosion at a faster pace. The model helps empower individuals to convert information into knowledge. Helping them to acquire and use information lifelong. A need is expressed to find ways to link the library and technology to create challenging learning experiences.

Babu, B. Ramesh (2008) Author explains the concept of Information literacy, UNESCO& IFLA’s standards and performance indicators for schools and higher education. Role of information literacy in education at India and international level.
Concludes with development of Information Literacy policy in the Indian education system.

Swati Bhattacharyya (2009) Author describes information literacy is very important vertical of knowledge society. Also describes need of developing information literacy programs and were integrated with class room learning as a mandatory subject. Concludes with the opinion that effective execution of information literacy programs possible only when there is strong faculty and librarians’ collaboration.

Shesh, Mishra et. al. (2010) Author is of the opinion that the world is witness information age and with the development in information and technology, there is great demand for cost effective tools to handle this increasing information. India is moving towards knowledge and information based society, it is necessary for everyone to have competencies and information retrieval skills to satisfy their information needs.

Uribe Tirado, Alejandro; Castaño Muñoz, Wilson.(2012) This article deals with Nonaka & Takeuchi’s cycle of knowledge generation and find out how expected results in Information Literacy standards and different indicators contribute to this cycle. Each standard and its interrelation is analyzed with four options to generate knowledge of Nonaka’s cycle. It is observed that these standards are more inclined towards explicit knowledge and need to work on other activities and proposed new Information Literacy standards which promote generation of tacit knowledge.

Bhatti, Rubina (2012) Author highlights the importance of information literacy for promoting higher education in Pakistan. Author of the opinion that Pakistani university libraries seriously consider in formulating a proper policy and mission statement on making their users information literate. It is based on the assumption that information environment is complex and is changing rapidly. University libraries at Pakistan have not developed any formal policy on information literacy to enable its users to meet their information need independently. They have to acquire these skills independently. Training users on effective retrieval skills is of great value in finding required information for their research. Various factors were identifies in implementing effective information literacy program. I.e. Lack of proper policy by authorities, lack of assessment of user’s information need, lack of library professionals technical
knowledge, poor response from students and faculties and insufficient budget for setting infrastructure. It reviewed various Information literacy models of advanced countries and proposed for the formation of a national committee for creation of knowledge society.

Seale, Maura (2013) 'This article deals with upcoming revision of the Association of College and Research Libraries' (ACRL) Information Literacy Competency Standards for Higher Education in marketing information literacy. New version is expected to the revision is expected to address some of the weaknesses of the original standards. Also discussed discourses of the information society deployed by a white paper from the Aspen Institute and the threshold concepts of library science.

**Summary of the chapter:**

It was found that lot of literature is available on information literacy, on education & information literacy, ICT & Information literacy, Library & information literacy, information literacy skills and role of national commission on information literacy. However literature available in Indian context is very limited also find very limited research on information literacy and education in India. Researcher found tremendous scope for research in information literacy in India.

Observing the above literatures hypotheses were formed and which were outcome of literature review and are as follows.

1) Information Literacy program improves the usage of library resources.
2) Information literacy enhance the qualities of research among management students.

In a nutshell literature review helps the researcher to identify the different social implications, barriers and ways of improvements and there is need to educate management students on effective information literacy skills
References:


47) Gayathri Mahapatra (2006) “Towards E=information literacy: Quest for interoperable web based information system” retrieved from ir.inflibnet.ac.in/dxml/bitstream


97) Pranali B. Gedam and Ajay T. Agashe” Information Literacy Competencies and Programmes in India” retrieved from crl.du.ac.in/ical09/papers/index_files-88_100_227_2_RV.pdf


109) Shesh, Mishra and et al (2010) “Raising the possibilities of information Use through Information Literacy in Indian Universities” retrieved from ceser.in/ceserp/ind.php/ijls/article/view/5


112) Singh, Neena and Klingenber, Andreas “Information literacy in India and Germany – university libraries as activators of lifelong learning retrieved from


117) Swati Bhattacharyya (2009) Information Literacy Programs through Faculty-Librarian Collaboration: Meeting the Challenges of an Emerging Knowledge Society Retrieved from crl.du.ac.in/ical09/papers/index files/ical-81_80_312_1_DR.pdf
