Information Literacy in India and Germany: University Libraries as Activators of Life-long Learning

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ABSTRACT

This paper discusses the role of university libraries in promoting and developing information skills of students activators of life-long learning. It defines information literacy and identifies major information literacy skills required by students, and highlights information literacy initiatives in India, particularly the role of agricultural university libraries in imparting information literacy courses as part of the course curriculum. It also discusses the information competency programmes of German universities and basic models of teaching information literacy skills by subject librarians at some German universities. The difficulties faced in incorporating information literacy into regular course curriculum are mentioned.

Keywords: Information literacy, information competence, user instruction, information skills, tool literacy

1. INTRODUCTION

Information literacy has gained importance world wide over the last decade. It is being increasingly realised that for an effective functioning of the democratic world, the citizens have to be information literate and be able to take right decisions for the development of their society. The building of information society demands development of skills and capacities of individuals connected with efficient locating, access, understanding, and using information in their day to day work and life in general.

Information literacy forms the basis for a life-long learning process that starts at a young age and proceeds until post work stage where each individual requires various kinds of information in different phases of life. At an earlier stage, individuals acquire knowledge through secondary and higher education. The teachers and library professionals impart information literacy competency through various academic programmes. Besides formal education, they acquire knowledge through several informal ways and update their existing knowledge in their fields of interest. An information literate person is able to recognise, and locate when information is needed and is able to use information

suitably to generate wealth and welfare for themselves and their living. The subsequent politicisation of the term information literacy has been broadly in connection with 'life-long learning' agenda. However, the term 'life-long' has become synonymous with economic development and social inclusion in reports and policy documents which set out agenda for development of an equitable information society[1].

Information literacy has broader perspectives and applications. Although information literacy embraces related concepts like user education, library instructions, bibliographic instructions and library research, libraries alone cannot address information literacy. This is an educational and societal issue, and cooperative efforts of the government, non government organisations, educational institutions, community information centres and academic/professional associations are to be involved.

Whereas historically, libraries focus on the search-process, information literacy also involves the basis of every search, viz., formulating a topic and formulating the right questions to answer the actual information need. Information literacy also focuses on the effective use of retrieved information.

As libraries are involved in a number of ways in supporting teaching and research in terms of resourcing reading material, facilitating use of these materials, and providing collaborative focus for partnership with other institutions, they play an important role in promoting information literacy of the students and staff members.

The focus of this paper is to examine the role of academic libraries in teaching information literacy skills to the students in Indian and German universities.

2. INFORMATION LITERACY

The first public use of the term 'information literacy' was done in 1974 when Paul Zurkowski suggested the establishment of a ten year strategic framework for achieving nationwide 'information literacy' in his report to the US National Commission on Libraries and Information Science in what is now perceived as seminal moment in the history of information literacy. However, the widespread use of the term 'information literacy' followed after the publication of the ALA final report of the presidential committee on information literacy in 1989 which set the agenda in the US for the activities that followed and provided a definition of infomation literacy which is commonly quoted in reports and papers to this day[2].

Bruce observes that it was the emergence of the information society characterised by rapid growth in available information and accompanying changes in technology used to generate, disseminate, access and manage that information, which allowed the infomation literacy movement to take root and flourish[3].

The Association of College and Research Libraries (ACRL) defines information literacy as a set of abilities requiring individuals to recognise when information is needed and have the ability to locate, evaluate and use effectively the needed information[4].

Information literacy has its root from user instruction or user education. In large academic institutions the readers were oriented to the library services or user services by guided tours to libraries or demos and written instructions. As open stack libraries became common with several types of publications and other technicalities in publications like merging and splitting of journal titles, etc., the users needed additional knowledge and skills in retrieving the various types of literature scheduled in open stacks of the library and in using the reference information, especially the catalogue in an effective manner. Consequently, a number of academic libraries began to offer courses for library users. The advent of internet, the World Wide Web, other electronic and digital resources and application of information and communication technologies in automation of libraries and house-keeping operations has highlighted the need of

information literacy to a larger extent. The use of these automated libraries and digital resources became difficult without guidance and basic skills, therefore, user instruction became mandatory to readers to provide necessary skills for best exploitation of digital resources.

In a study by Ray & Day pertaining to students' attitude towards electronic resources, it was apparent that a large number of students were finishing the university education without the necessary transferable skills to cope in an information-based society[5]. Some of the major information skills required by the students as defined by SCONUL institutions in UK[6] as seven pillars of information literacy are:

(1) Ability to recognise a need for information

(2) Ability to distinguish ways in which the information "gap" may be addressed (e.g. kinds of resources print and non print)

(3) Ability to construct strategies for locating information:

- Articulate information need and be able to match against resources

- Understand the principle of construction and generation of databases

(4) Ability to locate and access information

- Develop appropriate searching techniques (e.g. use of Boolean logic)

- Use information and communication technologies effectively including academic networks and online databases

- Use appropriate indexing and abstracting services, citation indexes, etc.

- Use current awareness methods and tools to keep up to date

(5) Ability to compare and evaluate information

- Awareness of bias and authority issues

- Awareness of peer review process of scholarly publishing

- Retrieve information matching the information need

(6) Ability to organise, apply and communicate information to others in ways appropriate to the situation. For example:

- Be able to cite bibliographical references in project reports and theses

- Communicate effectively using appropriate media

- Understand issues of copyright and plagiarism

- Be able to construct personal bibliographical system

(7) Ability to synthesise and build upon existing information; contribute to creation of new knowledge.

A course on information literacy integrated into the core curriculum is perhaps the best way to provide information skills to the university students. This will ensure that they leave the university as information literate citizens. Also the problems and challenges of infomation literacy (in particular getting it embedded into regular course curriculum) will continue to be left solely to library professionals' own initiatives, enthusiasm, networking, and persistence.

2.1 Information Literacy: World Scenario

Academic institutions, especially the university libraries, are promoting information literacy which is quite encouraging in the developed world. In UK, the report of National Committee of Enquiry into Higher Education (the Dearing Report, 1998) had emphasised the importance of skills which are key to future success of graduates on what ever they intend to do later in life. The Committee identified a list of four skills: (a) communication skill; (b) numerical; (c) use of information technology, and (d) learning how to learn[7].

In US, an influential report by the American Library Association (report of the Presidential Committee, 1989) emphasised the need for all people to become information literate which means that they are able to recognise when information is needed and are able to identify locate, evaluate, and use effectively the needed information[9]. A National Forum for Information Literacy has been established with representations from wide range of educational organisations. The land grant pattern universities in US already have courses on developing information competency of students integrated into their course curriculum. Besides there are good examples of infomation literacy programmes at California State University, Florida International University, University of Wisconsin, etc. Initiatives have also been made in other universities, viz., Syracuse University (New York), Massachusetts Institute of Technology (MIT), Yale University, Stanford University, etc.

Australian universities also have taken initiatives towards a strategic approach to information literacy development. Griffith University developed an information literacy blueprint called the 'Griffith Blueprint'. The document states that effective information literacy education depends upon co-operation between information specialists and discipline experts to achieve curriculum innovations which foster information literacy[7].

Many projects have also been under taken worldwide on information literacy. The UNESCO co-sponsored information literacy colloquia and meetings (Prague 2003, Alexandria 2005 and 2006) were attended by over 100 experts from different countries. Large academic libraries have undertaken information literacy projects to develop information literacy skills of their students. The Library of Chinese Academy of Sciences has done impressive work on information literacy and has a wealth of experience. In New Zealand, the Library and Information Association of New Zealand, Aotearoa (LIANZA) has been working on the concept of information literacy since the 1990s and developing existing user education programmes to achieve broader outcomes. In 1998, LIANZA developed a task force on infomation literacy to identify core issues, challenges and opportunities facing LIANZA in the area of infomation literacy and how this could be accommodated in the LIANZA structure. There have been several notable initiatives and influences within the library profession of New Zealand. The move from user education to information literacy involves two pronged approach from librarians. Internally, user education programmes had been refined and developed and externally librarians are looking to form partnership that will create broader information literacy outcomes[8]. Understanding the philosophy of user education and its purpose being broadened and promoted thus moving from an internal library focus to more collaborative approaches focused on learner needs.

Information literacy in Germany is fast catching up and is an important topic of discussion for the German academic librarians. Few pioneers raised the topic in late 1990s but no active pursuance was seen in this area. The first modular teaching approach was developed in 1996-97 at the University Library of Heidelberg. The programme involved small teaching units (1-2 hours), complementary online tutorials, and teaching modules integrating small curricula[9].

The year 2000 saw project-oriented approach to an information literacy programme developed by Dannenberg University of Applied Sciences[10], Hamburg. The approach was based on constructive and subject-oriented pedagogy, integrating information literacy with content of other subjects.

Other universities, for example the University Library of Konstanz started a project in 2003 entitled 'Informationskompetenz I' a prototype course for teaching information literacy at undergraduate level. Besides a set of online tutorials using ILIAS (Integriertes Lern-, Informations- und Arbeitskooperations System) an open source e-learning platform was also developed. Another project 'Informationskompetenz II' undertaken in 2006 was a cooperative project with Chinese Academy of Sciences with the objective to analyse graduate information competencies to find appropriate ways to inform and teach them[11].

Many in Germany see information literacy as a follow-up of the concept of key qualifications (Schluessel qualifikationen) established by Mertens in 1974[12]. He described competencies every working individual should have in addition to the specialised knowledge of one's subject. He marked the following key qualifications as

necessary; the ability to communicate, the ability to cooperate, the ability to manage conflict, empathy, and media literacy. The concept of key qualifications mentioned media literacy and fundamental problem-solving ability as the most important aspects of information literacy, long before the term 'information literacy' was used in German libraries.

In Greece, according to a research by Anthi on state of information literacy, 45 per cent of the libraries had established special programmes for users on library instruction. The study pointed out difficulties faced by the libraries with regard to the information literacy programme that included fewer staff, low budget, and lack of skilled staff[13].

From the foregoing it can be seen that the initiatives on information literacy worldwide in the past have been quite impressive.

3. INFORMATION LITERACY INITIATIVES IN INDIA

Initiatives for an information literate society in India have already been made in the year 2005 with the setting of a National Knowledge Commission (NKC) with a mandate to transform India of 21st century into a knowledge society. The government has clearly recognised public libraries as playing a pivotal role in dissemination of knowledge. Academic libraries by virtue of having information resources and staff trained in managing information sources are the best centres for developing information literacy skills of the students and staff.

The role of university libraries has been limited to orientation and library instruction. However, agricultural university libraries are already ahead with their user education programmes focused on teaching information literacy skills to Postgraduate and PhD students.

The user education in agricultural universities of India had its beginning from the land grant pattern colleges of American Universities of Agricultural Sciences. The agricultural universities in India had their roots from these colleges and follow the land grant pattern of imparting education. User education was considered important and was made part of the curricula to teach the students on use of library and its resources and to develop their information skills.

Agriculture universities started teaching library skills way back in 1970s with Indira Gandhi Krishi Vishvidhalaya, Raipur (MP) being the first university followed by GB Pant University of Agriculture and Technology in 1976, and Marthwada Agriculture University Maharastra. Annexure I gives the list of universities teaching library and information skills to post graduate

and PhD students. These courses are generally of one or two credit hours and integrated into the academic curriculum.

The concept of offering user education integrated into regular course curriculum was to make students information literate and acquaint them with various scientific sources of information, knowledge classification, and retrieval techniques.

According to a study by Singh[14] on user education and information literacy programs of 19 agriculture universities in India, the course content offered to the students has been devised basically to develop the information competency skills of students. The course content has been organised into two parts. One part deals with educating users on information retrieval techniques, use of catalogues and OPAC, classification, arrangement of books, use of national and international agricultural databases, library networks and web resources; library rules, type of libraries and its services. The other part deals with research skills like preparing dissertation and reports, writing scientific references, knowledge of compiling bibliographies, technical jargons like use of abbreviations, footnotes, etc.

Most of the agricultural universities in India follow semester system–except the Indian Agricultural Research Institute (IARI), New Delhi, that follows trimester system–and offers the course in the first or second semester. In most of the agricultural universities the course is compulsory and graded in the final examination. The only deficiency in these courses is lack of uniformity. While some universities have emphasised on library and information science subject others have given more emphasis to technical writing. Therefore, there is a need to bring some uniformity in the course curriculum and also update the curriculum in view of the latest developments in libraries.

Other conventional universities in the country are yet to come with concrete curricula-based user education programme for developing information skills of their students in higher education to meet the twin dimension of competent students and the information literate persons.

A study of 29 libraries and information centres of R&D institutions in Bangalore found that 23 of them provided information literacy programmes to their researchers and scientists for optimum utilisation of library resources although such programmes were not conducted at regular intervals. Besides, most of the information literacy programmes are for new users. Training for information skills is provided by the librarians and some times by guest speakers. All libraries felt that they had all resources required for imparting information skills to their researchers and staff[15].

With National Knowledge Commission (NKC) emphasising on educating citizens to be information literate, the libraries and information centres of traditional or conventional universities have to be proactive in formulating information literacy courses for their students based on patterns from developed countries in particular UK, US, and Australia where considerable work has already been done in this regard.

Libraries and information centres require huge investments and students have the right to draw maximum benefit by exploiting the resources fully. Information literacy courses make this possible. It is high time that academic libraries of conventional universities too realise their role of teaching as library educators. However, the proposed development of the idea of information literacy requires a collaborative and integrated approach to curriculum design and delivery based on close co-operation between library professionals, department faculty, and administrative staff like college deans, etc.

Besides the academic libraries focusing on teaching infomation literacy to students, the efforts made by publishers and producers of electronic resources and library associations in promoting information literacy has been quite encouraging.

4. INFORMATION LITERACY FOR ACADEMIC STAFF MEMBERS

Unlike information literacy course for students in universities and colleges there are no formal courses for teaching/upgrading information literacy skills to teaching and support staff. The universities and research institutes have access to several digital resources on consortium or individual bases. The publishers or producers of these electronic resources train the information professionals through user training programmes who in turn train their students to access and use databases effectively. Some like Indian Medlars Centres of National Information Centre (NIC) conduct user training programme from time to time on their products and services like MedIND open access journal literatures, UNcat union catalogue databases, etc. Besides many academic staff colleges have been established in the universities with ideas to organise regular orientation/refresher courses for teachers and information professionals to upgrade their skills in changing environment. Some national institutes of technology like IITs and documentation centres like National Social Science Documentation Centre (NASSDOC) and National Institute for Science Communication and Information Resources (NISCAIR) erstwhile INSDOC play important role in training the information professionals in the country to acquire and upgrade their skills on retrieval techniques from time to time.

5. LIBRARY ASSOCIATIONS AND INFORMATION LITERACY

Library associations both at national and the state level have been promoting information literacy in particular for the working professionals. The Indian Library Association (ILA) organised the 51st All India Conference on Librarians, Information Literacy and Life-long Learning in December 2005. In this Conference, ILA also recommended to form a National Information Literacy Mission and a National Information Literacy Task Force to implement information literacy competency programme throughout the country[16]. Another International Information Literacy Workshop was held at the Punjabi University, Patiala in India in October 2005, to promote information literacy in South and South East Asia growth with support from UNESCO and other partners. Besides Associations of Agricultural Librarians and Documentalists of India (AALDI) has been promoting information literacy through various platforms. In 2010, the National Conference on Knowledge Management in Globalised Era focused infomation literacy as one of the important theme for discussions.

6. INFORMATION LITERACY INITIATIVES BY GERMAN UNIVERSITIES

Libraries in Germany also went through fundamental change initiated by information and communication technologies. The orientation towards user expectation and user services had taken place in German libraries as a result of democratic movement and educational reforms in the seventies. The opening of formally closed stacks and expansion of reading rooms required knowledge and skills of retrieving literature shelved in open stacks and using catalogue in efficient way as a result of which large academic libraries started offering user education courses. After acquiring some experiences it became obvious that apart from existing expert knowledge the librarians needed pedagogical qualifications and organisational conditions to ensure efficient courses. Recommendations for these tasks were developed in a project at the end of 70's, however, there had not been enough resources and initiatives for a systematic and sustainable development of teaching task. During 80's the activities in the field of user education were reduced in nearly all libraries of Germany due to the reason of missing staff resources; for systematic development of teaching activities; neglect of users expectations and perspectives especially in forming and providing information concept; missing adult education course for those willing to take pedagogical task, etc[9].

At the beginning of 90's new discussions and activities started as a reaction to increasing demand for support during the introduction of new electronic information system like OPAC, bibliographical databases on CD-ROM, etc. This led to the expansion of user

education courses and these were pragmatic and object-oriented. They were pragmatic because they were not integrated in a pedagogical concept with broad education target and object-oriented because their focus was providing skills required to handle OPAC or a database. Often the course structure was derived from the hand book of the publishers or producers. These courses were self contained entities of one or two hours without any relation to other courses in methodology of content.

New activities were started at the end of 90's with focus on new pedagogic concepts and foreign developments influenced by curriculum theory; Anglo American models of information literacy; online learning methods and techniques, etc. A lot of teaching activities in German universities are now based on smaller curricula and learning target especially in big academic libraries. Anglo American models of information literacy are of significant relevance for extending the content and methodology of new approach in German user education[9]. However, the discussion on information literacy in Germany during the last few years has concentrated almost exhaustively on teaching undergraduates due to the reason that information literacy was quite a new topic of discussion for German academic libraries[11].

The University Library of Heidelberg developed the perhaps the first modular teaching approach in 1996-97, following the DYMIK (Dynamic Model of Information Kompetenz) or literacy. The course was started following small modular teaching unit of 1-2 h complemented by online tutorials. The participation by students was voluntary as the course was not integrated into regular curriculum of faculties. The courses focused on contents of library catalogue, internet, and databases[10].

University of Applied Sciences, Department of Library and Information Studies, Hamburg, developed the first project oriented approach to teaching information literacy in 2000. The approach was based on constructive and subject centred pedagogy. The main characteristic of this approach is the use of individual thematic problems or interest as starting points to trigger process of learning so the learning of competencies of information literacy can be integrated with contents of other fields like economy or history[23].

Bibliographic instruction (BI) took place in a very tool-oriented way for example at University of Konstanz. Stand-alone sessions were offered called 'Using the local catalogue' or 'Introduction to databases'. These sessions were not well attended by students and the libraries were not content. This description seems to represent most German university libraries[17].

The situation changed when Bologna process (named after the Northern Italian city Bologna) where the treaty was signed in 1999, by Ministers of Education from 29 European states to harmonies higher education of the European Union States and to allow students to switch between counties and universities and to improve mobility in European Higher Education. The process seeks to harmonise the higher education system of the participating European Union States with vision to improve European higher learning education system by 2010[18].

German students had to work for 5-6 years for their first academic degree which was a Diploma (Diploma) and Magister (magister artium). A shorter degree course such as bachelors and masters was not known. The Bologna process aims to define and implement a two-level study structure similar to the one already existing in Anglo American world in the undergraduate level a bachelor's degree of three years qualifying students to enter a job that could be followed by masters or doctoral.

The implementation of bachelor and master degrees at universities of applied sciences in Germany has lead to a bizarre situation: The duration of study mostly was shortened from eight semesters (Diploma) to six semesters (Bachelor). The aim was to harmonise courses of study in all European countries and to make it easier for students to change the university and to change the country. So contents of teaching and the curricula had to be worked over. In fact contents of the curricula were just deleted. For instance some universities of applied sciences deleted phases of practical learning. When at that time librarians insisted on integrating information literacy skills into new bachelor curricula, deciders often rejected any suggestions. The Bologna idea of harmonising led to studies at a lower level in general and at a lower level concerning information literacy skills in particular. Whereas, the need for information literacy skills was provoked and intensified through the development of the so called information society. Apart from that the idea of information literacy has not yet reached the bigger part of higher academic levels and professors in Germany.

On the other hand, information professionals and librarians are now discussing pedagogical issues and didactics. Instruction and information literacy as well as aspects of life-long learning are now part of most information/library related studies in Germany. So there is new young generation of information professionals and librarians growing up with knowledge on (library) didactics and ways of teaching and learning. Also the number of trainings for working librarians on pedagogical issues and didactics is increasing since the last one or two years. And if librarians get the chance to apply what they have learned during their studies or trainings, even mostly, professors (who had doubts) started to recognise the worth of information literacy–not only for their students, but also for themselves.

After five semesters of testing and discussing, the library of Hochschule Ostwestfalen-Lippe University of

Applied Sciences now achieved a first success. A semester-long training on information literacy developed by a university librarian is now implemented into the new Bachelor curriculum. It is a required course every student on landscape architecture has to complete (Annexure 2).

At the University of Konstanz, situated in Southern Germany, senior LIS professionals, informed that the debate on information literacy started in 2002 when first bachelors curricula were designed and some department requested the subject librarians for teaching. It was then thought that, this was a unique chance to develop librarian position towards a more research and teaching-oriented focus and to improve libraries standing in the university. Although, there had been some bibliographic instructions before, a new era started at this point of time. In the last few years the integration of information literacy in certain undergraduate curricula has been incorporated in the University of Konstanz. This has led to three basic models of teaching information literacy at this level[11].

(1) Ninety-minute stand-alone sessions in subject-specific resources are still offered in most subject, but attendance remains low.

(2) Course-integrated arrangements allow the subject librarians to teach 90 or even 180 min sessions in a seminar run by the faculty. This is the case in subjects of sports science, ancient history, or political science. The subject specialist can only show some of the most important resources, so teaching remains predominantly tool-oriented.

(3) A completely new approach is a subject-oriented full semester information literacy credit course that may be integrated in the curriculum. This model is already followed by five of the ten subject specialist, who cover a range of approximately 12 fields of study (Annexure 3).

The courses in social sciences and humanities are offered in the first year whereas in sciences, the courses are scheduled in the 2nd or 3rd year because of the different ways the students learn to work during their time at university. The underlying structure of the course agenda is similar in most courses and covers the whole range of information literacy from research strategy via catalogue, database, internet, and fact retrieval to evaluation citation, bibliographic management software, etc.

The information literacy programme of the University of Konstanz Library has been appreciated by the university faculty and viewed as teaching support in the field of research and information seeking skills. With this step, the library made clear the importance of teaching information literacy as a new task for subject librarians and for the libraries as a whole. This has led to a certain change over from collection development to a more research and teaching-oriented position of the subject librarian.

Besides the undergraduate courses, the University Library of Konstanz from 2006 started a semester long credit bearing course for masters students of politics and management. The course of four credits is included in the study regulation and is mandatory for all masters' students. The course content, for example political science students, includes full range of basic information literacy, viz., research strategy, knowledge of and searching relevant information sources in political sciences, evaluation, citation, bibliographic management software, etc.

In 2003 the University of Konstanz started a project 'Informationskompetenz I', a prototype course for teaching information literacy at undergraduate level was developed as well as set of online tutorial using ILIAS an open source platform. The university started another project 'Informationskompetenz II', funded by DFG in cooperation with Chinese Academy of Science to analyse graduate information competency and to find appropriate ways to inform and teach them[19].

The situation of information literacy at the University of Konstanz can not be generalised for all the German universities. There are still a variety of different approaches between universities and libraries in teaching information literacy from stand-alone presentations to course-embedded sessions and complete credit courses. For example the University of Applied Sciences in Hanover and the Hanover University (Lower Saxony) the course for teaching information literacy has not been integrated in the course curriculum. However, the discussions are still in progress to include the same into regular course curriculum of the undergraduates and post graduates students.

The University of Applied Sciences, Hanover, offers five credits course for engineering students recognising the fact that Informationskompetenz (in German) or information literacy is an important key qualification for efficient and effective supplement to their main study (engineering sciences) as well as central resources like library which will help in future for job entrance and work place[11]. The course content focuses on ability to recognise the need of information, to formulate search strategy, locate right information, evaluate, and use effectively for problem solving (Annexure 4).

The information literacy programme of Hanover University Library, and the National Library of Science and Technology (the TIB), includes research strategies, tool literacy, and resource literacy. The programme is modular, discipline specific and taught by subject librarians (Annexure 5). It is noted that inclusion of information literacy into the core course curriculum is still under active discussion with the faculty to offer through blended learning by integrating into e-learning mode, presently, it is not included in to the core curriculum. At

Hochschule Ostwestfalen-Lippe University of Applied Sciences the situation is different, although information literacy is one of the key competencies for learners there are difficulties in getting implemented into regular course curriculums for the reasons of common consensuses among the faculty members.

Out of nine departments the course is integrated into only one department, i.e., of landscape architecture and environmental sciences. The situation of information literacy in other German university libraries are into different phases of implementation and needs to be further explored. The universities are in transition to implementing the Bologna process of harmonising the higher education system to define and implement a two level study structure of bachelors and masters degrees to students. As already existing in Anglo American world some universities, for example the University Library of Konstanz recognised the possibility of including information literacy as a key competence at a very early stage of the process.

New challenges are arising these days. The problem of plagiarism is reinforced by the possibilities of information technology and the internet. Students tend to search a topic on the internet first. As we all know you will always find 'something'. The computer makes it then easy to copy a text and paste it into your own writing. Information literacy programs have to react on the problem of copy and paste. On the one hand copyright issues and ethic use of information have to be addressed. That also leads to citing and formals in academic writing.

On the other hand information literacy programmes have to teach students how to find reliable (i.e., scientific) information and how to evaluate the found information. And as you will always find 'something' on the internet, students also need the ability to judge whether their search results are useful for their topic or not. And they need the persistence to go on searching if search results are neither reliable nor useful.

7. CONCLUSIONS

Teaching information literacy is not a new role for the library professionals in India or Germany. The librarians have been doing so in a general way by orientation or user instruction at the beginning of the academic session. Although the concept of information literacy has roots from these user oriented programmes, it has not gained much attention or interest from the working LIS professionals in particular the traditional or conventional universities, and other engineering and management institutes of India. The situation of agricultural universities in the country is different, as these universities had their roots from American land grant pattern universities. Teaching library or user education had been integrated into the course curriculums. However, these courses now

require more refinement, owing to the growth of electronic and web-based information, the changing socio-economic and educational demographics. The information explosion with which students have to cope demands information literacy. It is not sufficient for the students to be able to use the libraries and the information they provide.

In Germany, the university libraries are into different phases of implementing information literacy course into their under graduate and post graduate course curriculums. While some universities, like the University of Konstanz Library, has made clear the importance of teaching information literacy as a new task for subject librarians and library as a whole. This has led to a certain change from the role of information managers to more research and teaching-oriented position. The situation at the University of Konstanz or Hochschule Ostwestfalen-Lippe University of Applied Sciences cannot be generalised for other German university libraries. Many universities, viz., the Hanover University now Leibniz University and University of Applied Sciences are offering information literacy courses though not credit-based, and are now in the process of active discussions on getting the course integrated into the regular course curriculums.

World wide many projects, namely, the UNESCO programmes in promoting information literacy; the Chinese Academy of Sciences; initiatives of Library and Information Association of New Zealand, Griffith University, Australia are quite impressive. In India, researches in the area of information literacy is still in preliminary stage. More discussions, user surveys, and intensive researches have become inevitable to promote information literacy movement in the country.

8. ACKNOWLEDGEMENTS

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About the Authors

Dr Neena Singh is Faculty Deputy Librarian at GB Pant University of Agriculture and Technology in Uttrakhand. She has been involved in modernising the Information and Library System of Hill Campus of the same university, catering to information need of Agricultural Research and Education of Central Himalayan region for past 15 years. She has authored more than 40 research and popular articles in journals and books and has presented papers in national and international conferences. She has also been involved with professional activities of some European countries and is closely associated with International Association of Agricultural Information Specialist, IAALD, Kentuky. Her areas of interest are open access sharing of information, information literacy, content management, and scientometrics.

Mr Andreas Klingenberg is Co-founder and Chairman of INFOKOS (information literacy for students) Association. He is involved in conducting workshops and vocational training in information literacy instruction for librarians and teachers. He was Lecturer at the Faculty of Information and Communication of Hannover University of Applied Sciences. From 2006 to 2012 he worked as Department Head Librarian at Ostwestfalen-Lippe University of Applied Sciences. His key activities included information services, user instruction, information literacy, e-learning, etc. Presently, he is working as Head Librarian at the University Library of Hochschule für Musik Detmold.

List of agricultural universities offering curriculum based courses on teaching information literacy

Name of university	Title of the course	Year of starting	UG/PG/ PhD	Compulsory/ optional	Credit hours
Acharya Narendra Dev University of Agri & Technology, Faizabad	Use of scientific and technical literature	-	PG & PhD	Compulsory	1(1+0)
Assam Agriculture & Tech University, Jorhat	Technical writing and library use (TWL)	1983	PG	Compulsory	Non credit
CCS Haryana Agricultural University, Hisar (HAU)	Library science and technical writing	1982	PG & PhD	Compulsory	1(1+0)
Dr Panjab Rao Deshmukh Krishi Vidhyapeeth, Akola Extn-613	Scientific report writing and use of library	-	PG	Compulsory	1(1+0)
Dr YS Parmer Univ. of Horticulture & Forestry, Solan	Literature and technical writing-501	1985-86	PG & PhD	Compulsory	1(1+0)
GB Pant University of Agri & Technology, Pantnagar	Storage and retrieval of scientific information-610	1976	PG	Optional	1(1+0)
Himachal Pradesh Krishi Vishwavidhalya, PalampurIndian	Literature and technical writing–501	1982	PG	Compulsory	1(1+0)
Indian Agriculture Research Institute (IARI), New Delhi	Agriculture information system (AIS)	1982	PG	Compulsory	1(1+0)
Indira Gandhi Krishi Vishwavidhyalaya, Raipur	Biological literature and reference work	1970	PG	Compulsory	1(1+0)
Jawaharlal Nehru Krishi Vishwavdhyalaya. Jabalpur	Agril information system (AIS)	-	PG	Compulsory	1(1+0)
Rajasthan Agriculture University, Bikaner	Library and information usage	-	UG	Compulsory	1(1+0)
Sardarkrushinagar Dantiwada Agril Univ. Banaaskantha, Gujrat	Scientific and technical writing	-	PG	Compulsory	3(3+0)
Shere Kashmir University of Agriculture Sciences &Technology, Shalimar	Library science & technical writing (LIB 601)	1999	PG	Compulsory	1(1+0)
Sher-e Kashmir University of Agriculture & Technology, Jammu	Library science & technical education	1982	PG	Compulsory	1(1+0)
Tamilnaidu Agriculture University	Research methodology & library use ABT -610	-	PG	Compulsory	1(1+0)
University of Agricultural Sciences, Dharward	Introduction to library science (Lib-14)	-	PG	Compulsory	1(1+0)
University of Agriculture Sciences, Bangalore	Orientation course on utilisation of library facilities	-	UG & PG	As per requirement	-
Kerela Agriculture University, Trissur	Use of library RM (610)	1996	PG/UG	Compulsory	3(2+1)
Marathwada Agriculture University, Parbhani	Scientific report writing	1997	PG	Compulsory	-
Punjab Agriculture University	Technical writing & user education (TW 501)	1978	PG	-	2(1+1)

Information literacy for landscape architects at Hochschule Ostwestfalen-Lippe University of Applied Sciences (Germany)

Lesson (90 min.)	Topics covered
1.	Academic work (basis)
	Define information literacy
2.	Library tour
	Preparing search
	Know information need
	Search terms
	Basic search strategies
3.	Publication types
	Bibliographic data
4.	Library catalogue (OPAC)
5.	Digital libraries
	Meta-search
	Inter-library-loan
6.	Databases
	Other specific information resources
7.	Internet searching and search-engines, specific use
8.	Choosing adequate information
	Evaluation of search results
	Reading techniques
9.	Mind Maps
	Writing
	Elements and setup of academic works
10.	Citation
	Bibliographic description
	Bibliography
	Copyright
11.	Web 2.0
12.	Presentation

Undergraduate information literacy courses at the University of Konstanz[*] (Germany)[11]

Subject	Course offered	Time per week	Credits
Germanic studies	Every summer semester	2 hours	3
Romanic Studies	Every other winter semester	2 hours	3
Slavonic studies	Every other summer semester	2 hours	3
Linguistic	Every other winter semester	2 hours	3
Media science	Every other summer semester	2 hours	3
History[**]	Every semester	2 hours	3
Philosophy[**]	Every semester	2 hours	3
Politics & management	Every summer semester	1 hour	2
Economics	Every summer semester	2 hours	3
Biological sciences	Every summer semester	2 hours	2
Life sciences	Every winter semester	1 hour	1
Chemistry	Every winter semester	1 hour	1

*The different number of credits is based on decisions of the respective departments. As the information literacy course have approximately the same workload per weekly hour, the idea of measuring workload with credits is somehow contradicted.

**Mandatory courses

Information Kompetenz (Literacy) for Engineering Science Students, University of Applied Sciences and Arts, Hanover

Course No. (M-H-48) credits 5(2+2+1)

Information Kompetenz-I :   2 credits

Aim and objectives:

To develop students skill on competencies to search and acquire the information in particular subject its technical and economics aspects, and to be able to use it effectively on concrete questions.

1. Structure of information markets
2. Knowledge about producers of databases
3. Information acquisition, document delivery
4. Searching information in library
5. E-journals, full text, search engines and portals

Information Kompetenz-II: 2 credits

Aim and objectives:

To develop students skills that they are able to detect and identify special media norms, standards, patents and information sources of firms, sources of supply and are able to integrate in their research, publication and thesis work.

Contents:

1. Knowledge about special media norms, standards, patents, trademarks
2. Type of information, data, information on firms, products, and congresses
3. Search strategies and how to differentiate
4. SDI services, different forms of information
5. Management of literature and publications

Information Kompetenz-III: 3 credits

Aim and objectives: 1 credit

To provide practical application of knowledge gained from lectures and theory, from I and II.

1. Practice in searching bibliographical information and facts on concrete questions in the field of engineering sciences and economics.

Information Literacy Programme at National Library of Science and Technology and the University Library of Hanover

Information literacy includes research strategies, tool literacy, and resource literacy

(I)   For freshman-objectives and contents

1. Become familiar with the library
2. Use the library home page effectively
3. Use of catalogue to find resources
4. Know how to conduct a search using author, title, keyword and subject identify location of books/media

Activities

1. Visit of Library and familiarity with various services (45 min)
2. Practice in performing searches and use of catalogue with search examples
3. Online tutorials in order to reflect topics and home

(II) For students of BA-contents

1. Visit of library (optional)
2. Use of the home page to find relevant articles
3. Select appropriate databases for topic or subject
4. Be able to develop search strategies using Boolean logic AND, OR, NOT, truncation etc.
5. Identify synonyms
6. Practice in performing searches and use of catalogue with online tutorials.
7. Online quiz

(III)   For students in MA/MSC–contents

1. Improve research strategies
2. Conduct an advance search
3. Utilise evaluation criteria on retrieved resources
4. Order resources not owned by the library
5. Demonstrate awareness of the scholarly communication process
6. Demonstrate awareness of copy write problems
7. Online quiz

* The National Library of Science and Technology, and University of Hanover Library are merged.