CHAPTER – 3
INFORMATION LITERACY:
GLOBAL SCENARIO
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3.0 INTRODUCTION:

The information literacy movement has emerged in the last twenty years as a field of academic inquiry and a focus of professional practice in the wake of notions of an information society, and an information environment rapidly moving from print to digital; from local to international; from secure to uncertain; from poverty to overload and from service to self service. In addition, it has been stimulated by concerns about the impact of the explosion of information and advances in information technology on individuals, societies and nations. The growth of new technology, especially the Internet, has enormous effect on library service provision. The print based resources of the 1960s and 1970s have in many ways given way to the electronic full-text, on demand information retrieval of the new millennium. (1)

Information literate citizen will be the building stone of the knowledge society. People will need information skills for the professional, personal and even their entertainment activities. Librarians, teachers, technologists and some policy makers have recently begun to address the need for information literacy training and teaching on all levels of education. Training members of the existing workforce in effective information handling still needs to be addressed in a major way. All people need to be prepared for lifelong learning and teaching individuals appropriate information skills will be a major progression in that direction. Information literacy endeavors are just at the beginning and more work is needed to understand the complexity, long-term effects and importance of preparing people for effective information work. (2)
A survey of the literature published around the world especially in the developed countries are the inspiring indications to a developing country like India and even to other developing countries for that matter to catch up with the main stream. Professional associations, organizations and institutes of higher learning have brought out voluminous work in developed countries. A casual search in the Internet about Information Literacy programmes and projects in developed countries shows a visible competition among institutes of higher learning in the opportunities they gave to students and develop their Information Literacy skills and make them lifelong learners. Enormous research has been carried out in the developed countries especially in USA, UK, New Zealand, Australia and Mexico. These countries have brought out the finding in the form of books, articles, country papers, reports, standards and policy guidelines. It has been noticed that the collaboration between the professional organizations and the universities in developed countries has helped alot in bringing out the standards and performance indicators to judge the Information Literacy competency of the students. In the higher education sector library and information professional bodies like Association of College and Research Library (USA), Council of Australian University Librarians (Australia) and Society of College, National and University Libraries (UK) have produced standards for Information Literacy. The following section explains in detail the information literacy activities in the major countries of the world.
3.1 AUSTRALIA:

In Australia, information literacy is closely associated with the concept and goal of lifelong learning and many key documents and policy statements advocate the central role of information literacy in the lifelong learning process. Information literacy is a well developed and accepted concept in Australia where four successful national conferences on information literacy were organized. Through their national conferences and many discussions, publications and interactions they have begun to develop strategies to help advance information literacy as a major educational issue not only within higher education but society.

At the University of Ballarat information literacy is an emerging endeavor based on Boyer's four scholarships for teaching, application, integration and discovery. Librarians are working with faculty to integrate information literacy into the curriculum, to add it to the graduate certificate requirement, and to get it endorsed by the Academic Board. Information literacy has been an important concern at the University of Wollongong since the 1970s. In 1989, the university introduced a computer literacy policy and a new emphasis on information literacy was initiated three years later. A Working Party on Information Literacy was established in 1995 and an Information Literacy Policy was formulated in 1997. Much has been accomplished in terms of integrating information skill teaching throughout the curriculum. Librarians at the University of South Australia have a mandate to ensure that students achieve information literacy. At the University of Technology in Sidney, students receive information skills instruction as part of their required course work. At the Queensland
University of Technology, the librarians teach an intensive, advanced course on information retrieval skills to graduate students. At Central Queensland University, the use of synchronous and asynchronous technologies has enabled librarians to provide information skills instruction via the Web to their extensive distance education students.

More than half of Central Queensland University’s student population utilize distance education since they live in remote areas. Flexible use of technology has helped to enable improved teaching in distance education and has allowed librarians to deliver information skills instruction to distance education students in a timely manner. In 1996 and 1997, the library staff began using videoconferencing to instruct distance education students how to access and use a variety of databases. The University’s Teaching and Learning Management Plan has a commitment to information literacy and to teach lifelong learning skills. Librarians and faculty are working together to integrate information literacy instruction into the curriculum. A variety of instructional technology and instruction programmes are utilized to teach information skills. Computer-assisted programs and videoconferencing are used successfully with distance education students. Regular evaluations have helped to improve the various teaching strategies. Most of Australian universities are now working towards embedding lists of graduate attributes into the curricula and developing strategies for assessing and recording outcomes.

Governance of information literacy in Australia is wide reaching ranging comprehensively across public, school, tertiary, vocational and industry sectors. Depending on their parameters of formal influence, these groups provide significant leadership in resourcing and support
of and structure for information literacy policy, development and practical implementation.

Following are the key associations and peak bodies:

- Australian Library and Information Association (ALIA) Information Literacy Forum
- Australian and New Zealand Institute (ANZIIL) for Information Literacy
- Council of Australian University Librarians (CAUL)
- The Australian School Library Association Inc., (ASLA)

3.2 UNITED STATES:

In the last two decades information literacy has become a well-established educational goal throughout the United States. Associations and institutions have defined it, written tutorials to teach it, developed standards, rubrics and tests to assess it and librarians have devoted entire careers to helping their users achieve it. Many of the information literacy developments in the United States are based on national collaborations. National work groups, professional organizations, and task forces have worked together for several decades to define, develop and refine the concept of information literacy. In 1971, LOEX (clearinghouse for Library Instruction) was founded by librarians at Eastern Michigan University. To date there have been thirty annual national LOEX conferences and six LOEX-of-the-West conferences, which addressed many aspects of information literacy and library user instruction. In 1989, the American Library Association’s Presidential Commission on Information Literacy defined an information literate person as “one who is able to recognize when information is needed.
and who has the ability to locate, evaluate and effectively use the
needed information. In 1990 The National Forum on Information
Literacy (NFIL) was formed. Under the able leadership of Patricia
Breivik from San Jose State University in California, the Forum is
broadly based and has more than eighty-five organizational members
who represent educational, business, labour and social organizations.
The members are working together to promote international and
national awareness of the need for information literacy and to
encourage activities leading to the acquisition of information skills. The
Forum pursues activities in four primary areas. Through its member
organizations, the Forum examines the role of information in people's
lives, work, education and social and integrates information literacy
into their programs.

The Institute of Information Literacy (NILI) was established in
1997 under the auspices of the Association of College and Research
Libraries (ACRL). Its mission is to play a leadership role in assisting
individuals and institutions in integrating information literacy
throughout the educational enterprise. Its programs include an
immersion program for intensive information literacy training and
education, a best practices program to highlight effective information
literacy programmes, a community partnership program between
academic, school and public libraries and provision of Web resources.

In 1998, the American Association of School Libraries and the
Association of Educational Communications and Technology
collaborated on Information Power: Building Partnerships for Learning
including Information literacy standards for student learning from
kindergarten through high school. This and related publications address
the information skills standards and teaching methods for students in kindergarten through the twelfth grade. The education departments and boards in the majority of the states have begun to implement these information skills standards and are beginning to measure the learning outcomes of students related these skills. These initiatives have been very successful throughout the country.

In 2000, the Association of College and Research Libraries issued the Information Literacy Competency Standards for Higher Education, which was approved by the Association of Higher Education in 2001. These standards have been translated into Spanish, Chinese and German so far. Many academic librarians in the United States are using them to build partnerships with their faculty for teaching and learning. The standards are very helpful because they indicate how to assess the progress and outcomes of information skills learning. Many regional and state conferences on user instruction and information literacy have been held as well. More than five thousand publications related to user instruction and information literacy have been published in English since 1973, most of the in the US. Likewise there have been many articles and books published on this topic in other languages around the world. The journal Research Strategies was started in 1987 in Ann Arbor, Michigan, with the sole purpose to publish information literacy articles related to research and academic libraries and institutions. On the state level in higher education Colorado, Oregon and Wisconsin have adopted the information literacy standards. Several statewide systems such as the California State University System, the State University of New York, Wisconsin and University of Massachusetts have developed system-wide initiatives. Various individual colleges
and universities have implemented the standards within their curricula such as Earlham College, Florida International University, Kings College, University of Louisville, University of Texas, University of Washington and others.\(^{11}\)

Association of College and Research Libraries Institute for Information Literacy Immersion Program provides instruction librarians with the opportunity to work intensively for four-and-a-half days on all aspects of information literacy. Whether the institution is just beginning to think about implementing an information literacy component or whether a program is well underway, the Immersion Program will provide practical techniques to help institution build or enhance its instruction program.\(^{12}\)

The information literacy instruction discussion list (ILI-L) was created in May 2002 as a new iteration of the online community that Martin Raish created with the BI-L discussion list in 1990. ILI-L is hosted on the ALA server, sponsored by the Instruction Section of the Association of College and Research Libraries, and moderated by the ILI-L list administrator. With ILI-L, the Instruction Section hopes to sustain the thriving exchange on instruction and information literacy that made BI-L such an important avenue for communication among librarians from a variety of settings and backgrounds.\(^{13}\)

### 3.3 UNITED KINGDOM:

Information literacy has not been recognised as such at the highest political level in the United Kingdom. In United Kingdom there is a great concern that there should be active participation and success in the global information society. However, this has tended to translate
into a focus on information technology rather than information literacy. But, media literacy is receiving attention from the government, primarily driven by concerns about use of the Internet and digital media. Initiatives in the area of lifelong learning have been well supported but again information literacy has not necessarily been foregrounded. Amongst library and information professionals there has been a real explosion of interest in information literacy over the last few years and a growing tendency to use the term “Information Literacy”. United Kingdom academic and school librarians have been actively involved in developing theories and programs related to user instruction and information literacy. The polytechnic universities and schools in particular have experimented with and set up a variety of information skills instruction programmes. Among the different methodologies used have been mediated instruction packages and computer-assisted instruction modules. Information skills programmes have also been focused on the open learning and adult education programs. In 1998 SCONUL (Society of College, National and University Libraries) created a task force to prepare a statement on information skills for higher education. SCONUL, founded in 1980 has 157 members. It works to improve the quality and to extend the influence of the libraries in higher education in the United Kingdom and Ireland. It has recently published its vision for academic information services in 2005. SCONUL proposed seven sets of skills developed from a basic competence in library and information technology skills. The majority of academic librarians are engaged in some type of teaching of information skills. The SCONUL vision for 2005 stresses the development of Web portals, managed information
environments and formal partnerships. It describes learning and research as a distributed model in a seamless system of local, regional, national and global resources. Finally, it predicts the role of library staff as one of advisers and trainers. SCONUL holds meetings and conferences, works on staff development, provides information and advising services, provides guidelines on learning and teaching and publishes working papers, briefing papers, statistics, guidelines, and newsletters.¹⁵

United Kingdom universities such as Cranfield University, University of Sheffield, and University College Northampton are working with the SCONUL guidelines. Other British universities are utilizing virtual training sites, online modules, tutorials, distance education modules, and a variety of other modes of instruction to teach students appropriate information skills. In addition to these collaborative efforts other noteworthy stand-alone initiatives are Northumbria and Cardiff Universities. An interesting research project currently conducted at Northumbria University is JUBILEE (JISC User Behavior in Information seeking: Longitudinal Evaluation of EIS), a study of user behavior in information seeking, to predict, monitor and characterize information-seeking behavior related to electronic information services in British higher education institutions.¹⁶

In 2001, Cardiff University adopted an information literacy policy. It took much cooperation among many departments to accomplish this. Librarians identified a strategic direction in harmony with the institutional mission to help integrate information skills instruction into the curriculum and to create a campus-wide information literacy policy. Cardiff University librarians offer a very
extensive information skills programme. Another noteworthy project is the JISC (Joint Information System Committee)-funded Big Blue project, which teaches information skills to students and is managed by librarians from Manchester Metropolitan University and University of Leeds. It provides a model of the information literate person, a tool kit and learning outcomes. EduLib, Educational Development of Higher Education Library Staff focuses on the important role which libraries and other support staff must play in turning the use of networked information resources into an everyday part of teaching, learning and research. Librarians are identified as key agents in the provision of training to use these resources. It provides a national program for the educational development of library and information services staff. EduLib participants will acquire both the networked information skills, and the teaching skills needed to work as training and support staff in the electronic library.

The United Kingdom’s Open University (OU) has an advanced information literacy programme with its Information Literacy Unit coordinating its programmes. There is encouragement for course leaders to embed information literacy into their modules and the OU library has been developing an assessment tool. Additionally, information literacy is identified as one of the key skills for students, there is an online tutorial which anyone can access (SAFARI) and also a credit-bearing one-semester module (MOSAIC) which can be taken by OU students as part of their degree.

There are two major conferences being conducted annually to promote information literacy initiatives. One is the LILAC – Librarians’ Information Literacy Annual Conference started in 2005 and the other is
eLit started in 2002. The papers published in these two conferences can be accessed from their respective websites.

The two main UK groups that focus on information literacy are:
- SCONUL working group on information literacy and
- CILIP community service group information literacy group

3.4 NEW ZEALAND:

Information literacy in many New Zealand libraries would stand comfortably alongside best practice in the rest of the world. Being a small country with strong influence from Europe, America and Asia/Pacific, New Zealand librarians scan for ideas from the rest of the world, apply them to their own situations and develop them into their own local variations. There have been several notable initiatives and influences within the library profession which have enhanced the understanding of librarians and engendered discussion and cooperation. Local and regional activities have shown marked development and nationally both LIANZA (Library and Information Association of New Zealand Aotearoa) and National Library have been making progress over several years. New Zealand has had a national curriculum framework for information skills in compulsory education since 1993. However, teachers felt that they needed staff development to prepare them for teaching information skills. A study was conducted in 1998 to determine the specific needs of teachers in terms of preparing students for effective information use and becoming facilitators of resource-based learning. It was found that although the teaching of information skills in the schools was a requirement, it had not consistently been integrated into the curriculum. It was also found that
although teachers value information skills they have little knowledge related to teaching such skills. Information literacy is not consistently supported in the schools.\textsuperscript{(22)} The principles of information literacy and its goals have been accepted in New Zealand and many scholars are working on increasing the understanding and use of information skills instruction throughout the country. A major component of the educational activities in New Zealand involves the development of assessment tools for information literacy outcomes.\textsuperscript{(23)} An international initiative between New Zealand and Canada compared user education objectives and practices, and the relationship between user instruction and information literacy in academic libraries. It was found that there are far more similarities than differences in the attitudes and practices of librarians responsible for user education in New Zealand and Canada.

A major initiative hosted and organised in the year 2000 by the National Library in association with LIANZA was the Information Literacy Forum with special guest Dr. Patricia Breivik (Chair of the US National Forum on Information Literacy). The purpose of the forum was to stimulate debate among key people and agencies about the value of information literacy in the knowledge society and to look for strategies for widening the discussion.

3.5 EUROPE:

The information literacy movement in European countries, similar to other countries has evolved from precursors such as library instruction, bibliographic instruction and user education. Although the majority of information literacy initiatives and programmes in Europe
have been initiated in recent years, academic librarians in Europe have been involved in user education for many years. From 1994-1997 the European Union funded the EDUCATE (End-user Courses in Information Access through Communication Technology) project involving universities from Ireland, Sweden, France, Spain and the United Kingdom under the leadership of Chalmers University. The collaborations within Europe resulted in two Web-based Into Info programs to teach information literacy in seven subject areas (architecture, chemistry, energy, electrical and electronic engineering, environmental science, medicine and physics). These programs are designed for professional education and include indicative tools and full-text materials. In the future, more models are planned for other subjects. The programs are used as networked support for undergraduate and post-graduate courses on campus and in distance education. Pathfinders for the various subject areas are available for structured learning support and an access module, Information Sources, features explorative approaches to learn information skills. During 1998-99 the DEDICATE (Distance Education Information Courses with Access Through Networks) project funded through the European Union Telematics for Libraries Fourth Framework, developed cost-effective information skills courses for distance education involving nine European countries. The courses use a flexible learning design with networked course delivery and support. Participants rely on the Into Info Modules to develop information literacy courses for their own institutions. A key feature of DEDICATE model is the use of collaborative learning in small groups with active support of peers and tutors.
3.6 GERMANY:

A reorientation towards user expectations and user services took place in German libraries as a result of democratic movements and educational reforms in the seventies. Fundamental results were the opening of former closed stacks and the expansion of reading room capacities. In particularly users got direct access to up-to-date literature. These new and easier possibilities of using the information offer of the library were accompanied by new demands on the users. They needed new additional knowledge and skills in retrieving the increasing amount of literature in the open stacks of the library and in using the reference into, especially the catalogues in an efficient way. Because these new requirements, big academic libraries in Germany began to offer courses for library users. In the former German Democratic Republic user education for information use was a major part of education at all levels, from elementary to secondary and post secondary institutions. Library user education was a requirement and part of the general curricula during that period. In part, this requirement was related to controlling to what type of information citizens could have access since freedom of information was not an option and the government tried to control what type of information students and citizens could access. After the collapse of the Berlin wall and unification of East and West Germany this type of user education was eliminated.

Meanwhile West German academic libraries featured closed stacks and users had to request every item they wanted to have. Access to libraries was very restricted and user services were not well developed. However, in the 1990s German academic librarians began to
open up their libraries to their clientele and realized that they needed to address user training based on needs expressed by users in the digital environment, online teaching and learning. Both the University of Heidelberg and the University of Hamburg have been experimenting with courses in information literacy and online tutorials. They have also helped to found a consortium for information competencies, which serves for information exchanges among librarians related to information literacy. The annual conference of the German library association in 2001 featured a program on information literacy for the first time. Other university libraries are likewise slowly beginning to utilize a variety of instructional models to help user gain information skills. In Germany the conditions for improving the teaching activities of libraries have changed since a couple of years in a fundamental manner. While educational issues had been of secondary importance during the eighties and nineties now concepts to improve the quality of all kinds of education are discussed as being of fundamental importance for the future of German society.\(^{(27)}\)

3.7 SOUTH AFRICA:

The systematic education policies and wide spread use of information and communication technologies lead to the increased interest in information literacy by the South African society. The policy framework for information literacy has been derived from three policy domains viz. Education policies, Information Communication Technology (ICT) policies, Library and Information Services policies. The government’s awareness of the knowledge-based economy, and its desire to raise awareness of the benefits for citizens of becoming an
information society has been well documented. Much emphasis has been placed by the government on the link between educational and economic development and information technology and is engaged in a number of national and global projects to promote information technology and its use. Commitment to various aspects of information literacy is apparent in many of the associated policy statements and documents. The formation of the 1994 government of national unity heralded major changes to the pattern of educational provision. The instance was a fractured and partly dysfunctional education system, with severe inequalities in funding. Replacing or even fixing such a system was never going to be easy, especially given the expectations of a transformed and improved quality of life by the majority of the inhabitants of South Africa.\(^{(28)}\)

The National Government Information and Communication Technology Strategy called \textit{Info.com} has been launched Government which serves as a collective program of ICT projects designed to establish a networked information community and make South Africa globally competitive. \textit{Info.com 2025} addresses issues of policy, infrastructure, human capacity and local content within ICT industries. One of its objectives is to facilitate and promote education and training using telecommunications technologies. In recent years academicians and librarians have cooperated to improve the learning process for all populations and information literacy instruction has been used as part of the preparation for lifelong learning. For example, the Coalition of South African Library Consortia adapted user instruction as a strategic direction for the consortia in 1999.\(^{(29)}\)
A noteworthy project, INFOLIT, an information literacy project launched in 1995 with support from the Reader's Digest until 2000, helped the Western Cape Librarians develop curriculum-integrated information literacy programmes in academic institutions as well as schools and communities. The programme utilizes needs assessment and the best information literacy practices. A credit-bearing course "Information tools and skills" was started in 1996 at the University of Cape Town and has continued ever since. INFOLIT operates within partnerships of academics and information workers to offer information literacy appropriate to the needs of learners. At the University of South Africa (UNISA), at the University of Pretoria and at the Natal Technicon several initiatives related to information literacy have been in operation for several years. Since 1997, at UNISA, a fully integrated course on research information skills has been taught to graduate students in chemistry in the distance education environment, utilizing workshop component such as hands-on training and innovative evaluation methods. An electronic survey of twenty-six South African academic institutions was completed in 2001 to assess the extent of institutional support for information literacy and existing related activities. Indications from that survey are that only one institution placed primary emphasis on "educating for life" and that there is little evidence of institutional strategic plans to integrate information literacy throughout the curricula. In most institutions, the libraries provide information skills through various courses and many attempts are made to integrate such instruction into the curricula. Concern with assessing outcomes of information literacy instruction is also growing. South African academic librarians are recognizing that
information literacy instruction should be integrated into the curricula to be most effective and a sharing of experiences and best practices will be necessary. What has become clear is the need for information literacy to move from being an ideal, to be mentioned in mission statements and high-level plans, to bring incorporated into the daily practice of educational institutions, libraries and information services. It needs "champions" and benchmarks by which its effectiveness can be gauged and demonstrated. It needs recognition at national, provincial and local levels of government – and it needs resources.

3.8 SCOTLAND:

The University of Glasgow has been working on the CITSCAPES Project\(^\text{32}\) since 1999 to investigate student computer and information technology training at universities and colleges of higher education throughout the United Kingdom. Information literacy has been discussed in terms of staff development and networked learning throughout the University of Glasgow. The Joint Information Systems Committee (JISC)\(^\text{33}\) has provided funding for projects related to information literacy for students in UK tertiary education. Several learning materials have been developed to help with this endeavor and to help students develop research skills. In addition, several Scottish universities have developed extensive information literacy programmes. For example, the University of Glasgow has had an information technology literacy programme since 1994 and more than 5,200 students participate in it. Other universities have also been involved in various aspects of teaching information technology skills. Robert Gordon University in Aberdeen has been involved in a study of
Scottish schools to articulate core information technology skills for the 5-14 curricula in Scotland.

3.9 IRELAND:

The need for information literacy activities in Ireland are emerging and several academic institutions are beginning to address such needs. In-depth interviews with twenty academic lecturers from social science faculties in five Irish universities were analyzed to assess the role of information literacy in academia. It was found that information literacy holds a relatively insignificant place in academia. Based on the need for information and communication technology training both for staff and students Queens University in Belfast established a three-year Training and Accreditation Program (TAP) in 2000, funded by the Northern Ireland Department for Employment and Learning. So far, the results indicate that the program is effective for staff and staff will be ready to teach appropriate information and technology skills. However, a more appropriate approach will be explored for students utilizing lecturers for the information literacy training integrating it into their existing courses of study. Queens University hopes to ensure that all graduates have appropriate information and communication technology skills to function in a modern business environment.\(^{(34)}\)

3.10 SWEDEN:

In the Nordic countries Sweden seems to be at the forefront of information literacy developments. During the past two decades, Chambers University of Technology has developed comprehensive
information literacy programmes. For example, Fjallbrant and her colleagues were targeting information literacy goals as they are understood today already in 1980s. Their subjects designed to introduce postgraduate students and researchers to electronic and other information networks, continue to be regarded as a model. They have utilized information technology to provide more efficient instruction to beginning students, thus freeing librarians to develop advanced electronic information skills instruction for upper-level and graduate students. Academic librarians in Sweden have been involved in user education for more than twenty years, particularly, in areas of engineering, medicine and economics. Tovote notes that changes in learning and teaching during the 1990s have led to increased demands for broader and more varied sources of information at all levels of education in Sweden. Librarians at Malmo University, established in 1998, are working on integrating information literacy into the curriculum to meet the many diverse information needs of their students. In 1999, the first international conference, Creating Knowledge, was held in Malmo to address information literacy concerns. A second conference was held in 2001 and it is planned to hold a similar conference every other year.

The Council for Scientific Information, NORDINFO, has as its purpose to develop Nordic cooperation within information and documentation components in research libraries. A new initiative on information literacy has just been started called the NORDINFOLIT Group under the leadership of Christina Tovote. During the past two decades, Chalmers University of Technology has developed comprehensive programs to train student to become information
literate. The programs both for undergraduate and graduate students utilize project-based learning and have become Web-based. Plans are in process to establish a Nordic institute for information literacy. Information literacy efforts in Australia and the United States have had a substantial impact on Sweden's endeavors with information literacy instruction. An extensive list of Web sites and references has been compiled at Skovde University.(36)

3.11 CANADA:

Canada is the second largest country in the world in terms of land mass, but its population is only 32 million, approximately 1/9th that of the United States. Information literacy initiatives in Canada remain on the margins of the education process, from elementary school through to post-secondary institutions, much to the detriment of Canada's workforce and economic potential. Canadian academics, like their counterparts in the United States, have many different approaches to information literacy. The stand-alone workshops of the early days have been replaced or augmented by research assignments co-designed by faculty and librarians, classes on research strategies, online tutorials with topics such as evaluating information or avoiding plagiarism, and entire credit courses in information literacy. Still, it seems in many ways that information literacy programmes are still in their infancy, and in most institutions it seems they are not sustainable as currently funded and delivered.(37) The information policy of the Canadian government among various other information concerns promotes an information literate population. During the past three decades, academic librarians in Canada have been concerned with teaching students library and
information skills. An annual national conference has been addressing information skills concerns for more than twenty-five years. Instruction librarians in academic libraries are continuing to address the challenge of integrating information skills instruction into the total curriculum. In 1993, Canadian physicians called for a new approach to professional continuing education. The Royal College of Physicians and Surgeons of Canada established the Maintenance of Competence Program (MOCOMP) to help physicians with self-directed learning. Tools were developed to help doctors recognize when information is needed and to locate, evaluate and use information effectively. Physicians indicated that they need a tool to help manage their information needs. Eventually a software diary was developed and evaluated in 1997. The use of such a diary has also been explored in Australia, the United Kingdom, Switzerland and the United States. The diary is an interactive learning tool and enhances learner interaction and self-directed independent learning.\(^{(38)}\)

A national survey of information literacy instruction in Canadian academic libraries showed that trends in teaching objectives, methods and content have not changed very much in the past few years. Few librarians record their objectives formally and most do not assess their instructional outcomes formally. Some of the findings are compared to an earlier study in New Zealand. It seems that in Canada academics place less of an emphasis on teaching information skills than in the United States. Librarians need to work more closely with teaching faculty in the elementary, secondary and higher education environments to ensure that all students become information literate.\(^{(39)}\)
3.12 MEXICO:

Collaboration between librarians and faculty is a recent occurrence in Mexican academic libraries and few examples have been documented. Librarians are trying to assume the role of user information educators but they face more challenges in doing this than their counterparts in the United States and in countries with more advanced economies. Much of the population has been disadvantaged in terms of education and they lack basic literacy skills similar to citizens in other third world countries.

However, several academic librarians have begun to address the teaching of information skills to students. In these institutions, private and public, librarians are teaching students the use of electronic databases and advising them on how to acquire information skills for life-long learning. Librarians are slowly becoming involved in developing educational models for learning throughout Mexico. An excellent example of a user education program can be found at Juarez University in Ciudad Juarez. The librarians at Juarez University provide an up-to-date electronic information environment and access to a comprehensive selection of electronic databases. The library staff is working on integrating information skills instruction into the curriculum. Juarez University under the leadership of Jesus Lau has also sponsored three national conferences on information literacy.\(^{40}\)

3.13 CHINA:

At the beginning of this century, the information environment is greatly changing throughout the world, and China is no exception. One of the biggest challenges is the exponential growth of information.
Information has been regarded as a valuable commodity affected by the knowledge-based economy. The Chinese central government has made it a policy to promote industrialization in relationship to information. A group headed by the Prime Minister has been organized to lead the information development. This development is a very important factor and will influence the national economy and social activities, thus inevitably affecting the entire education environment as well as the fundamentals of education. Education, especially information education, has become one of the crucial issues. Furthermore, information literacy is an essential component to help individuals gain the competencies to meet the needs of the evolving information society. In China, more than ever, people who deal with education, library, and information science, are becoming involved in discussions on information literacy and are broadening their studies and practices in this arena. Since the early 1980’s, the Chinese government has supported and encouraged the teaching of library and information skills in academic institutions. Several national conferences have been held. Although many Chinese universities (39%) offer user instruction only a small percentage of the students enrolled in higher education are able to participate in this because the user instruction is offered through separate courses and not integrated into the curricula. As the network and technology environment in China grows the need for information skills instruction is growing as well. During the past twenty years, many articles on library user instructions have been published in Chinese journals and newspapers.

In order to advance the goal of information literacy within the population, the Chinese State Department has resolved "To deepen the
reform of education and to promote information literacy" for schools, colleges, and universities. Beginning in 2001, the goal that "every school will be networked" began to be realized gradually throughout the country. Information technology will be a major component and requirement for the curriculum in schools. During the next five to ten years, 150,000 schools in China and their 30 million students will be able to learn the fundamentals of information technology because it will become integrated into their basic curricula. Presently more than 80 percent of Chinese universities are connected to the CERNET (The China Education and Research Network, which began operating in 1994 and has two gateways to the Internet). Many universities own their campus LAN (Local Area Network) centres and support the various online computer servers for the use of libraries, offices, and labs, as well as dormitories. Advanced information infrastructures help create a new learning environment, which forms the base of initial digital libraries and virtual universities. New learning environments make higher education expand beyond the university and operate more effectively and efficiently. This also enables higher education to collaborate with other social agencies.

In January 2002, the first National Workshop on Information Literacy for Higher Education was held at Heilongjiang University in Harbin City. More than 170 librarians from various parts of China attended the conference and much interest was expressed in working with the ACRL Information Literacy Competency Standards to help students gain information skills. The ACRL Standards were translated into Chinese and distributed throughout the academic Chinese library community. The information skills instruction programme at Tsinghua
University serves as a good model for the future. Tshinghua University, located in Beijing, is a comprehensive public research university with heavy concentration in it is very instrumental in facilitating national economic development. Tshingua University includes forty-four research institutes, nine engineering centres and major national laboratories. Seven credit courses in information literacy are taught annually to more than two thousand undergraduate and graduate students. Other courses are taught to graduate students by librarians on information and document preparation for thesis work. In addition, librarians collaborate with their academic colleagues to address information retrieval needs on campus and in distance education. The current focus is on updating the existing information retrieval courses to more intense information literacy courses using the ACRL Standards.\(^{41}\)

3.14 SINGAPORE:

In Singapore much importance has been given to building of a knowledge-based society. Information skills are taught in primary and secondary education as required by the Ministry of Education. This initiative was begun in 1987 as a pilot program and resulted in the publication of *Information Skills* in 1991. These guidelines are specifically for primary and secondary schools to help them teach students information skills. In 1996 teachers and librarians collaborated in publishing *Collaborative Projects of Library Support Groups in Primary Schools* and in 1997 another publication was issued *Information Literacy Guidelines and Information Literacy: Supplementary Materials*. The Division of Information Studies at Nanyang Technological University
investigated the information skills of undergraduate and graduate students, particularly in engineering, and discovered particular difficulties students encountered in using information effectively. This information was used to incorporate information literacy instruction into the undergraduate curriculum. The findings of the research on information literacy conducted in Singapore can be most useful for institutions in other parts of the world.\(^{(42)}\)

A study in Singapore exploring processes employees utilize in seeking and using information in the workplace to complete their work responsibilities found that information literacy is not an orderly and systematic process but it is creative and personal. It is different for every individual and thus should be flexible, creative and reflexive. The study involved eight auditors from different companies who were interviewed regarding their audit assignments and related information work. It was found that information seeking behavior is diverse and not always systematic and homogenous. Information literacy in the workplace is effective if it is creative and dynamic and based on critical thinking and collaboration. Information seeking behavior should incorporate complex thought processes, and mandates that individuals develop their own information seeking skills. In the workplace information literacy can be developed if companies promote good communication, sharing of information seeking behavior, technology as a tool not as an end by itself and flexibility for staff.\(^{(43)}\)
CONCLUSION:

Important research related to information literacy is being done in many of the developed and some of the developing countries around the world. Among the developing countries South Africa and Mexico have begun several major initiatives to provide information literacy to a formerly underprivileged society. Cooperative initiatives in information literacy can be found in Europe apart from Sweden and United Kingdom. Several countries have developed their own information literacy standards and guidelines to help the citizens to be more informed citizenry. It can be concluded that of late information literacy has gained substantial importance among the librarians, educators and policy makers.
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