Chapter I
Introduction

The role of library and information service is the provision of quick access to information. The traditional tasks of a library was to acquire the sources of information, organize these sources, and provide services to use them. This process still continues, but with new changes. The sources of information have increased in number and variety of forms and formats. This is a consequence of the tremendous expansion of knowledge and the need for organizing the knowledge for its convenient transmission to users. The present organization of knowledge in a variety of forms and formats render their acquisition and organization extremely difficult and complex. As Issac (1996) indicates “apart from rendering the traditional book service, the present massive output of literature and their wide dispersal in a variety of sources due to interdisciplinary research call for a variety of services to be organized and rendered by each library and information center. The information that is needed by a person may be published in various sources, and their retrieval may call for highly sophisticated and technological competence and skills”.

According to Singh (1998a, p.33), “the modern society is gradually emerging as the new information society with the information environment all around germinating from information infrastructure. The information society is characterized by change, rather an unprecedented change, in education, institutions, social structure, technology, etc. The new information society is therefore abound with new information contained in a variety of information packages such as computer disks, hypermedia, electronic journals, databases, micrographic, etc. Many information sources are being produced in new formats world wide that more specialists are needed to manage them”.

Carol Kuhlthau, Professor of communication, library and information studies has been instrumental in documenting this constructive approach to learning in the information-seeking process. Kuhlthau (1997, p.710) explains “living in the information age requires people to go beyond the ability to locate information and requires competence in seeking meaning and understanding...students learn to identify
what is important to them, to construct new meaning, and to explain their new understanding to others in some way that is authentic to the topic”.

**Changing environment**

As libraries are social institutions, the services provided by them must modify with a change in the needs of the society. Libraries should sustain with modern technologies of information transmission and communication. Libraries of today need to be updated with the development in the higher education curriculum and with changes in the skills and expectations of users and they are supposed to meet ever-rising expectations for the amount of services provided and the quality. Technological, educational and social changes make direct impact on higher education and bring more pressure on the libraries. Consequently, adoption of new technologies and integrated systems has been able to meet this challenge (Sherikar & Sangam, 1995).

Jobe and Grealy (2000, p.251) stated “as the library shifts from being a place to being a collection of services, libraries have pondered the future of their profession and their roles in the information age. Electronic resources also bridge the gap between residential and distance learners and ensure that each receives the same level of service. Electronic access to licensed information products, web-based training in research and retrieval methods, and electronic reference and referral services are all viable means of providing equal access to information to all members of community”.

The rapid growth of the Internet is having profound effects on the services that libraries provide their clients. Most library catalogs are now available online with remote access via modem or the Internet. In addition to providing information about local collections, many of these catalogs are now information malls that offer locally mounted databases, connections to other library catalogs and connections to bibliographic and full text databases. According to Jobe & Grealy (2000) many students believe that everything is available online. The Internet has helped create increasing demands for virtual libraries.

In his analysis of the future of electronic libraries, Buckland (1992) observes that there is a steady growth of documents in electronic form, and access will necessarily have to be provided for them. Libraries must provide access to electronic
publications, thus shifting from a place to a service. However, some libraries may lack the necessary human and technological resources to fully develop the electronic library. In today’s technology-driven environment, many libraries are exploring strategic alliances with campus computing departments. Thoughtful commentators (Ferguson and Bunge, 1997; Dougherty and McClure, 1997) stress that libraries need to develop closer connections with computing services to implement the electronic library of the near future. In 1988, Boyer argued that librarians needed to extend learning resources on campus and be leader in linking campus libraries to knowledge networks far beyond the campus. In 1998, many libraries have begun to implement his vision, providing seamless links from the electronic catalog to catalogs of other libraries, bibliographic and full text databases, and global bibliographic utilities.

Based on Dresang and Robbins (1999) idea, the information organizations in which our students will work in the early twenty-first century must be among those most adaptable to the rapid pace of change in a networked society. Contemporary organizations theory predicts that communication will be more through a web of collaborative relationship in these flexible, learning organizations. Often organizations will be without walls, operating in a global environment.

The concept has been described by Brophy (2000, p. 161) who writes “many observers have commented on the revolutionary changes which information and communication technologies (ICTs) are heralding—changes sometimes likened in scale to the impact of the Agricultural and Industrial Revolutions or of the invention of the printing press (For example Taffler, 1980 and Dewar, 1999). Whatever the truth may turn out to be, the impact of ICTs on the library and information sector will almost certainly be profound: indeed major change is already with us. The World Wide Web has introduced a wide audience to some of the tools of information retrieval. In these circumstances, both practitioners and researchers need new models with which to analyze and respond to these changes, and to help them plan—and to some extent create—the information and library services of the future”. Changes in attitude and behaviour pattern in information use, perhaps in view of developments in information technology, have gradually changed the role of librarians. To meet this growing change library schools need to modify their programs and prepare students for new roles and
careers in information acquisition and transfer. It all warrants an adequate consideration for redesigning the objectives of library education and curriculum in particular to create required level of manpower development (Shafi, 1995, p.146).

Changing needs

In the information age, the information workers are the essence of the vital information dynamics regulating the life of the present human civilization. The information market has expanded, and so has the work force, both in magnitude and diversity. According to Rehman, Abu Baker, and Majid (1998) the network of communication that makes information accessible and consumable engages diverse populations of professionals. With all the changes in the forms, formats and expressions of information, the processes of access, storage, transmission and reproduction have witnessed new media and technology, and the libraries and librarians have adapted themselves to new roles in order to cope with the impending changes. The character of the library has changed, modes and ethics of information transmission have been reconfigured and library work has been redefined in collaboration with diverse partners from the new world of information. A new role of library professional has emerged and so has a new identity. The primary occupation of the new breed of librarians, information professionals of the present day, is not just physical handling of information artifacts, but the role of information management. These changes are fundamental and a clear appreciation of the role and functions of the modern day librarian or information professional is only possible by examining the needed capabilities for effective performance in the changed context and setting. Definition of new capabilities has been accomplished in a variety of ways, with the perceptions of professional leadership being the most crucial factor in any such exercise.

The role of the librarian in supporting learning and research has always been important. The changes brought about by information technology will change the traditional view of librarians. According to Biddiscombe (2000, p. 63), it concentrates on the five aspects:

1. The changing cultural and social structure brought about by information technology.
2. The changed perception of the importance of information provision.
3. The explosion in information provision to the average citizen that presents the paradox of making more information readily available while requiring training in order to retrieve efficiently what is relevant.
4. The developing role of the information professional in the teaching and research process.
5. The growing realization amongst information workers that IT necessitates the cooperation of all those specialists involved in information provision.

The librarian’s training, in the organization of knowledge, the matching of need with solution, and a positive and professional approach to the service ethic, provides essential elements that are important in the era of IT. Such skills, born in a different environment, can now be used to address the demands of the technological age, helping others to solve learning problems by offering dynamic support initiatives. These can best be provided with the help of other information professionals, learning support technicians, IT trainers, computer officers, and television and video engineers all bring essential skills to the provision of effective support for learning and research (Biddiscombe, 2000).

In regard to nomenclature, the noble term librarian still implies custodianship and this remains one important aspect of the work. IT must be acknowledged, however, that the breadth of expertise that is necessary to encompass the skills of delivery, access, training, evaluation, and development requires us to talk in broader terms. Therefore, although the term librarian is used, it should be regarded as co-terminus with that of information professional.

As Khurshid (1998) indicates we do still need well-prepared catalogers, but not as many of them right now. This is because libraries are not hiring as many now that they are outsourcing more work. As organizing electronic resources becomes more important to libraries, this trend may be reversed. Today, the role of catalogers has taken on new meaning and greater significance. They must be conversant with a wide range of computer systems and software, and they must keep up with a continual flood of system and software enhancements in addition to knowing the cataloging principles,
Cataloging is not done in isolation. A cataloger who is cataloging an item from his or her small library's collection on the network has to produce a quality record acceptable not only to member libraries but to all those libraries that subscribe to network records world-wide. The access to networks as well as to online catalogs through the Internet has put the cataloger's work under scrutiny from every corner of the world. He concludes, “Today, cataloging is not limited to providing description and subject analysis of only one or two types of materials. Rather it is extended to all types of materials. Libraries are beginning to catalog materials – such as Internet resources – that they do not even own. The role of cataloging librarians, therefore, has changed a great deal in the electronic environment” (p. 2).

Impact on LIS education

The development in the library and information field requires that the librarian should be equipped to satisfy information needs. The LIS curricula should be equipped so that the graduates of LIS departments will really prove equal to the task of meeting the modern highly specialized information needs of the scholarly community.

Griffiths and King (1985, p. 124) observed, “Three major factors have led to or resulted from the information age; new technology; social adaptation to information availability and use; and the emergence of new information professions. New challenges are confronted by the library and information professionals due to this ever-increasing rate of change in the information age. In order to meet these challenges, library and information professionals must gain extensive knowledge, develop new skills, and adhere to professional attitudes. This requires an institutionalized approach and the library and information education programs in conjunction with professional organizations, have been adapting themselves by introducing appropriate changes in their formal education and training programs. Library and information education is passing through a critical phase of rebirth and rejuvenation and, in order for the profession to monitor an orderly transformation appreciation of the needed capabilities of future professionals is a prerequisite”.

Sutton, S.A. (1999) asks, “How do we build learning environments that support the development of professionals able to design, implement, and manage ambidextrous
organizations that provide information service and products”? He adds “it is in the context of this role of propagation that LIS educational institutions hear demands from the LIS profession for greater levels of competency in the academy’s human products. Such demands for competency are neither unfounded nor inappropriate” (p. 253).

According to Schement (1998), if the library is to reinvent itself in the twenty-first century, and if the profession is to respond accordingly, then the trust of changes taking place must be understood.

Saracevic (1983), identified some basic considerations for curriculum revision 15 years ago:

- Libraries are changing significantly and they will doubtless change ever more.
- New information systems and services continue to appear with others in the planning stage or development.
- The basic needs of information seekers have not changed, but they have broadened, intensified, and become more challenging.
- Access to information has improved and will continue to do so; agencies providing access to information now provide services that give direct content access.
- Effective management of libraries and information systems, and information resources in a variety of organizations must be adaptable to change.

Based on Singh’s (1998a) idea with the information landscape in the new information society it is incumbent on the information professionals to equip themselves with different education and training than what they had been imparted hitherto. Information professionals must also prepare with the working knowledge of computer and communication channels. He suggests that LIS graduates must know and develop adequate competencies to enable themselves to give improved access to information in a traditional library or new library setting. A clear understanding about these competencies will enable us to design and implement effective educational and training programs.

Defining competency as the interplay of knowledge, understanding, skills and attitudes required doing a job effectively from the point of view of both the performer and the observer. These are identified as knowledge in the areas of information
resources, technology, management and research, and the ability to use these areas of knowledge as a basis for providing library and information services (Parekh, 1997). Marshall (1996) listed the following professional competencies:

- Knowledge of the content of information resources, including the ability to critically evaluate and filter them.
- Specialized subject knowledge appropriate to the business of the organization or client.
- Ability to develop and manage convenient, accessible and cost-effective information services that are aligned with the strategic directions of the organization.
- Ability to provide excellent instruction and support for library and information service users.
- Ability to assess information needs, design and market value-added information services and products to meet identified needs.
- Ability to use appropriate information technology to acquire, organize and disseminate information.
- Ability to use appropriate business and management approaches to communicate the importance of information services to senior management.
- Ability to develop specialized information products for use.
- Ability to evaluate the outcomes of information use and conduct research related to the solution of information management problems.
- Ability to continually improve information services in response to changing needs.
- To be an effective member of the senior management team and a consultant to the organization on information issues.

On going in the field could continuously acquire new competencies throughout their career. The recognition to develop skills and acquire knowledge leads to the provision of appropriate training courses (Singh, 1998a, p. 35).

Statement of the problem
The fact that the nature of library and information science has changed a great deal during the last three decades has meant that library administrators are now trying to recruit librarians with new competencies. Mastering these competencies may require
traditional skills as well as computer knowledge. Library schools that have the prime responsibility of training and developing the desired competencies in librarians have always responded to the demands of employers by making changes in their curricula. However, there is a need to review the curricula to determine whether the changes are in line with present and future job requirements. There should be a correlation between the cognitive requirements of professional positions and the cognitive objectives of courses in library science. These courses should reflect not only present trends but also future trends and should prepare for a work span of five to ten years.

The researcher, who has been a teacher of library science for more than a decade in Iran, has been working in one of the leading universities in Tehran, the capital of Iran. She is also aware of the conditions prevailing in a majority of Iranian library science schools. As it is described in chapter III of this study, LIS education in Iran has followed a uniform program, which was adopted by High Council of Planning. A specialized committee for library and information science prepared curricula for all levels of LIS education. As far as courses, curricula and evaluation were concerned, Iran has followed a single standard pattern at the national level. Hence, all teachers were conversant with these aspects reasonably well. According to the regulation of the Ministry of Science, Technology, and Research on 1st May 2000, curriculum planning was delegated to the universities to make more adoption between curriculum planning and needs of the society, and updating curriculum planning more quickly. Afterwards, each LIS school is preparing its own curriculum. However, no revised curriculum is being run yet.

In India, the scene is different. Though UGC provides models for various factors of higher education yet autonomy in the academic affairs available to the universities in India is an important and integral part of its educational system. As such, though broadly every subject has a reasonably comparable model and pattern yet there is no unanimity in curricula, courses, methods of teaching and evaluation and many other related matters. There are a vast variety of schools having a variety of standards in many respects.

The researcher has studied a reasonable amount of literature about LIS education in India and has also visited a few schools of library science and some important libraries. As Ramaiah (1995 p. 126-127) noticed “The curriculum for bachelor and master's level are largely based on the recommendations of the UGC
Review Committee on Library Science in Indian Universities, 1965. The scheme of subjects recommended by the Committee was covered in one way or the other in all the library science courses, though there are variations among library schools in emphasis, number of lectures and practicals for each of the subjects, marks allotted for evaluation, methods of teaching used and inclusion of some additional subjects. The core papers are in vogue for the last 30 years in departments of library and information science in our universities...Except for minor changes in some library schools, there were no major changes in the LIS curriculum". He has stated the pace of change in this direction has been rather slow, while a triple revolution at global level has brought metamorphosis in the libraries. The elements of that revolution are knowledge revolution, communication revolution, and computer revolution. This triple revolution brought change more rapidly than any that mankind has witnessed in the past. Library professionals, both teachers who create the manpower and the librarians, who use the manpower in their libraries, cannot ignore the impact of the triple revolution. The contents of the LIS programs have to change necessarily to meet the present challenges and further demand of the profession. The author concluded it is urgent that the library science schools in the country give a fresh look to the existing syllabi and give a new orientation to their programs.

Even otherwise, Iran and India share many similarities. For example, India was ruled by kings and later by Britishers, before Independence. Independence was achieved after a lot of struggle at the national level. The government has since been trying to remodel various systems, including education, according to its local needs and to develop institutions so as to keep them comparable with the international standards. The position in Iran is not much different. Till 1979, it was a monarchy. After a revolution a popular government was established in 1979. Thereafter, the whole system and the functioning of all organizations, including education, were reviewed and remodeled. There has been a constant effort at the national level to improve its institutions, organizations and the system of education. It is here that both the countries meet. Moreover, they share many other aspects, conditions and aspirations.

The situation of LIS education in Iran and India is comparable. For example the courses taught and the curricula being followed are primarily traditional; equipment and facilities are conventional; the schools do not have adequately qualified faculty to teach courses in information technology and other inter-disciplinary emerging areas of
knowledge; some schools have insufficient faculty and necessary equipments and other facilities where hands on training and proper exposure could be given to the students. Evidently, the students passing out of these institutions are not fully trained to deal with the current and emerging needs of libraries and information centers in the near future, even today. Hence, a comparison of the existing system of library education in these two countries would be relevant and useful.

Keeping in view that the limitations of the library schools, especially owed to the current financial crunch being felt by the institutions of higher learning in both the countries, yet the situation cannot be allowed to stay as it is. In no case, it can be allowed to prolong beyond a certain limit. However, a review of the whole situation in the light of the latest developments, the present and the future needs of the libraries and the information centers, is necessary vis-à-vis the curricula, the facilities, the methods of teaching and evaluation, as being followed by the library schools in India and Iran today. The existing curricula would only be of partial relevance to the expected duties to be performed by the personnel in the merging forms of libraries and information centers in both the countries. There is an obvious and urgent need to make the existing education for librarianship more relevant to the current and future needs of these dynamic institutions. Therefore, the curricula, the methods of teaching and practice need a review. Thus, an analysis of the problem would make it clear that:

- The courses of study are not up-to-date and relevant to the present and future needs of the libraries and information centers.
- There is deficiency of the teachers who are competent to teach the new and emerging areas in the field of LIS such as international networks, electronic resources, digital libraries, etc.
- There is an urgent need to review and revise the qualifications prescribed for the faculty to be appointed in LIS schools.
- Necessary facilities in the form of suitable laboratories for practical training equipped with modern and sufficient equipment are lacking. The present situation calls for intensive use of computers and other electronic devices. Hence, regular laboratories should form part of LIS education. This would also significantly influence methods of evaluation.
• With the introduction of computers and other information technologies in the field of LIS, conventional methods of teaching and evaluation primarily limited to lecture and blackboard teaching, would not be sufficient.

Review of Literature
Though some studies had been made in Iran and in India about LIS education in general, yet no comprehensive study pertaining to curricula and its relevance to the current needs of libraries and the role of the professionals therein had been made so far in these countries. Two researches were conducted to compare LIS education in Iran and India. The first is a PhD thesis by Kiani, who graduated from Panjab University Chandigarh, in 1999. Kiani (1999) examined growth and development of LIS education in Iran and India, and made a comparative study of both the countries. He considered some features such as commencement of LIS education and number of universities in both the countries. The study covered 20 LIS departments in Iran and 63 in India. A comparison of the two systems revealed that in Iran, MLIS and PhD programs were extremely limited, while adequate LIS schools existed in India. Based on Kiani’s investigation about LIS education in India, no accreditation of the programs, no minimum standardization for library schools, no internship and a great diversity in the standards and size of the departments existed. In contrast, Iran had much better system in many respects. There were accreditation of the programs at the national level; the curricula, admission requirements, duration of programs and certain other requirements were followed uniformly by all the schools throughout the country. Also, he concluded that there was a need to restructure the LIS programs in both the countries in respect of objectives, curricula, course contents, strength of the faculty members, admission procedures and requirements, practical training and other facilities for each department.

The second research was conducted by Mortezaei (2001) who studied LIS graduate courses in UK, USA, India and Iran. The researcher has considered several factors such as number of schools, teachers and students, eligibility conditions, duration of courses, curricula, examination and evaluation, in different universities. By comparison of these factors she concludes that LIS education in UK and USA have many similarities, while India and Iran are compatible with each other. Furthermore she
has demonstrated that there was a huge disparity in LIS education in developed and developing countries on the basis of professional qualification, which needed radical changes in the system. She gave some suggestions and recommendations. Most significant of them are:

- An independent school, in each university, should impart LIS education.
- LIS curricula need to be restructured by exploiting the experiments and improvements of developed countries as well as consideration of national information needs.
- Authority of LIS curricula planning should be delegated to the LIS department of universities. Each department is responsible for determination of course contents, textbooks, etc. for its related program.

However, some papers had been published from time to time in both the countries wherein some deficiencies in the curricula had been pointed out or changes had been suggested. The details of the outcome of the literature search undertaken by the researcher are given hereunder in two sections.

A. Literature about Iran

Ganjian (1974) in his MLS dissertation pointed out that professional knowledge and the abilities acquired by the students were not up-to-date to meet the needs of the world of libraries today.

Dayyani (1984), a Professor of Library and Information Science has been teaching for a long time in Iran, through his paper has highlighted such deficiencies and shortcomings in the present curricula which are a hindrance in the development of LIS education.

A collection of ten articles about LIS education in India, Pakistan and Iran written by expert librarians or teachers from the respective countries and edited by Anis Khurshid was published in 1987. The article by Haider (1987) entitled Library education in Iran and Pakistan is important in the present context. It can be concluded; from the articles that LIS Education is not relevant for today’s needs in these countries.

Dastmalchi (1987) in her MLIS dissertation attempted to clarify the interconnections of the formal and informal LIS programs with that of manpower
requirements of libraries and information centers. The study also tried to recognize recent changes and developments, which occurred in the field of library and information services. The study revealed that there was no coordination between the increasing needs of information services and information specialists with that of formal and informal information education in the country, even though the need for the proper education in the field was emphasized by the librarians and information specialists. The statistical analysis showed that the educational system was not successful for training and the specialists in the field were not adequate both quantitatively and qualitatively. The researcher therefore recommended for more information courses to be added in the educational system.

Harvey (1989) in a report about Iranian information education describes the history, levels of LIS education, facilities available and existing situation in Iran. Finally, he notes the shortcomings in the system and sums up its merits.

Ansari (1994) advocated that according to the current experience and needs, it was important to revise all programs at various levels. She also emphasized that it would be equally important to see as to who is selected to revise the course and also how it is to be done.

Bani Eqbal (1994) has pointed out that there are two deficiencies in the existing courses of LIS. One – there was insufficient provision for new methods and techniques like information technology, and two – the courses pertaining to reference sources needed to be revised to accommodate other types of materials like databases etc.

Dayyani (1994a) in his article evaluated the textbooks available for BLS course. After the survey of the courses and the books, he expressed that the existing curriculum for the course demanded a review and revision.

In another article Dayyani (1994b) compared job performance of librarians, holding BLS in basic science branch with respective curriculum. According to his investigations, contents of subject courses in basic sciences branch in BLS program include theoretical discussion in basic sciences such as: Physics, Chemistry, Geology, Physiology, Mathematics, etc. while librarians working in specialized libraries need to be acquainted with literature existing in various scientific subjects. The author,
therefore, laid emphasis on the practical aspects of basic sciences to enable librarians perform better tasks and learn to use and evaluate scientific texts.

Hariri (1994) in her article, has suggested some means for the improvement of Library Science Education as follows:

- Need for the training of instructors in methods of teaching and research.
- Need for up-dating instructors through seminars and through publication of more journals in librarianship.
- Reviewing the levels of education according to the needs of the society.
- To invest more in practical courses and library resources.
- To add research in the instructional program.
- To motivate students to undertake research.
- To promote ethics of librarianship.

Horry (1994) believed that in order to improve and bring dynamism in the field of library science education it is necessary to revise seriously and precisely all factors of education, viz. programs, curricula, teachers, facilities, evaluation and also the standards for admission to the schools.

Hariri (1995), in an article about educational needs of medical science librarians in Iran, desired properly trained librarians to undertake various information services and tasks for medical sciences libraries with more than 200,000 users. The present curricula of BLS and MLIS in medical science branch, though it meets partial needs of these specialized libraries, yet there is a great need for the revision of curricula according to changes and challenges emerged in the field. The author also concluded that the working librarians in medical libraries must be detailed for refresher courses, which cater to the new issues of information technology in order to improve their knowledge, abilities and efficiency.

Hayati (1996) a PhD graduate from University of New South Wales, Sydney in his thesis has given a complete report about the LIS Education in Iran including the history, the levels of education, programs, courses, curricula revision, situation before and after the establishment of Islamic Republic of Iran. Information is also given about the National Library and some other important libraries and documentation centers.
Samaniyan (1996), in his MLIS dissertation surveyed viewpoints of BLS students and teachers about practical courses. The researcher studied five courses including Internship, Collection building, Organization of materials (cataloging and classification), and Reference sources. This study was conducted by distributing a questionnaire to BLS students and teachers in five universities across the country. The researcher then concluded that increase in credit hours of these courses would affect on the quality of LIS education and lead to the improvement of the abilities and efficiency of students. He also recommended some new courses to be included in BLS curriculum, such as Information storage and retrieval, Information technology, Computer application, etc.

Mirhadi Tafreshi (1997) in his MLIS dissertation determined the viewpoints of MLIS graduates about the present curricula and its core courses, to find out how much it conforms with information needs of the society and helps the graduates to get a job. Besides, the researcher tried to explore the necessary changes, which should be made to decide the proper curricula. The results of the study showed that, between 1989 and 1996, out of 143 persons who graduated from MLIS programs in the country only 77 person have had more than one year experience in libraries or information centers. 83% of these people believed that the existing curricula did not conform with the requirements of the profession, especially in the field of information technology. They were of the opinion that information technology affects their social situation and economic conditions and therefore emphasized the application of IT in MLIS curricula. The respondents also recommended that contents of some courses such as Management, Statistics, Data Processing, Computer training, etc. be revised. The researcher concluded that, according to graduates view point, core courses do not include any unnecessary subject and also pointed out the desirability of changing the tendency from library science to information science.

Mazinani (1998) surveyed vital skills of university libraries and specialized information centers in Iran. In this study 915 librarians and 323 managers, who were engaged in 424 academic libraries and information centers, contributed. According to managers, priority of professional needs were Information technology, library software, special reference sources, computer application, and information storage and retrieval,
whereas librarians addressed their skill priorities were information technology, library
software, special reference sources, databanks, and computer application. Also findings
of the study showed that correlation coefficient between librarians and managers were
97%, which proved a high correlation. The respondents were of the opinion that the
existing situation did not depend on the MLIS curriculum, but teaching method and
lack of required facilities and equipments caused these deficiencies.

A PhD thesis by Jafarnejad (2000), graduated from Azad-e Eslami University
surveyed existing facilities of information technology in LIS departments of Iranian
universities. This thesis reviewed the application of IT and educational media in 15 LIS
schools in Iran. Results of the survey indicated the need of using multimedia, computer,
telecommunication, information networks, and other technologies and innovations. The
study revealed that role of IT in the present curricula was less than 50%. Therefore
using of educational media and devices in LIS education needed improvement and
development. It also emphasized the application of IT in LIS education, urgently.

Olurhi (2000) evaluated MLIS program at three universities, which conducted
this program at the time of the research commenced in 1994. These universities were
University of Tehran, Tarbiyat Modarres University, and Iran Medical Sciences
University. The study considered the curricula, teachers’ qualifications, subjects and
research methods of MLIS dissertations, resources and facilities available with these
universities. The researcher concluded:

• Out of four branches existing in the MLIS program, two branches (viz. public
libraries and school libraries) have not been offered in these universities, so far. The
emphasis in all three universities has been on the information science branch. The
reason is likely on the one hand, insufficient growth in school and public libraries
in the country, and on the other hand, the LIS students preferring information
science branch, which is supposed to be more desired in modern libraries and
information centers.

• Totally, there are 29 courses in four branches of MLIS program. Only 13 courses
(i.e. less than 45%) have been offered in these universities, due to lack of qualified
teachers for other courses.
• Any teacher has not paid enough attention to the internship – a two credit course, though it enables students to acquaint with library works.

• Some courses such as data processing, audio-visual materials and management are taught by teachers who are invited out of the universities. This shows that the faculties are faced to inefficiency in these fields.

The research also made some recommendations and suggestions. The most significant are:

• MLIS curriculum needs to be reviewed after every five years period to cater information needs and challenges of the society.

• Refresher courses and workshops for faculty members help them to update their knowledge and improve their capabilities to make them to continue their job with more efficiency. These courses should be provided from time-to-time.

• To encourage faculty members to take part in professional national gatherings and to provide facilities for participating in international seminars, conferences, etc. in the field of library and information science.

• To assist faculty members to benefit from their sabbatical leave at foreign universities in countries, which have exploited IT at a high level (i.e. UNK, USA, Canada, Japan).

• LIS departments should include all elective courses, which exist in the program to make more flexibility and variety in the curriculum.

• Subjects of MLIS dissertations need to be compatible with the branch of LIS education, which is offered in each university.

• To authorize other universities for the establishment of new LIS department, is necessary to evaluate their abilities and facilities as is required according to the standards of the High Council of Planning.

Asadi Garakani, Jamshidi, and Alibeig (2001) surveyed MLIS graduate view points about the contents of core courses and elective courses (i.e. data processing, information storage and retrieval, organization of materials, indexing and abstracting, special reference sources, interlibrary cooperation systems, manuscripts, audio-visual materials, organization and administration of libraries, theories and systems of
reference services, archives management, statistics, periodicals, national and international information centers). In this study 194 persons who graduated between 1989 and 1998, from three universities conducting MLIS programs in Iran, were consulted. They were engaged as information specialist for more then one year. According to results obtained, respondents believed that four courses including special reference sources, indexing and abstracting, organization of materials and audio-visual materials were the most useful courses, while data processing, and organization and administration of libraries were the least useful. Researches concluded that, the present course contents were obsolete and did not cater to the needs of today’s information society. They recommended urgent revision of the course contents of MLIS program.

Mokhtari me’mar (2002) has surveyed viewpoints of faculty members and BLS students of eight universities about internship course. The researcher considered objectives; number of credits and hours that students have to spend in libraries; form and quality of internship; and factors which affect it. The results show that most of respondents agree with the objectives of internship, but are not satisfied with the method and performance of the course. The researcher concludes that while internship is under sponsorship of libraries not related to university system, it cannot obtain due significance, which it should have. Therefore, LIS departments must sponsor, control and coordinate the activities of students during the period of internship course.

B. Literature about India

There was a huge amount of material about LIS education in India. Some of the main titles are:

Bansal and Tikku (1976) have pointed out that courses designed by various universities and recommended by UGC have not been framed strictly keeping in view the requirements of training and knowledge by the candidates entering various levels of jobs in the field of librarianship. Since the library is an ever-growing social institution, its organization, management and routines need to be reviewed and reshaped regularly to fit it in the changed social structure. Therefore a course, required to educate and prepare people who would organize and manage such a dynamic social institutions effectively and efficiently, can be designed only if the approach is pragmatic.
Batta (1987) a PhD graduate from Panjab University Chandigarh, in her thesis investigated the LIS education in India and UK as a comparative study. Her work was limited to Master’s course in 24 library schools in India and nine in UK. She found that:

- India and UK have identical LIS programs
- There are some common problems that are faced by LIS schools in both the countries such as shortage of resources, qualified faculty, etc.
- The use of technology is more readily incorporated in the curriculum in UK than in India.
- The library professional associations in India have not played any important role in formulating courses as compared to the UK.

An article by Asundi and Kemparaj (1989) traced the history of education for librarianship in India and analyzed the nomenclature and course contents of Bachelor and Master level courses in library and information science. The authors concluded that the curricula needed review urgently.

Lalitha Bai and Varghese (1989) in an article advocated that environmental change in librarianship is not an entirely new phenomenon, but speed and complexity, due to the emergence of information science, have brought up fresh challenges for librarians today. Information science with its interdisciplinary core and vastness makes its logical induction to the course structures and syllabi of library schools in India very difficult. They suggest a new approach to the problem from the broader angle of information science, which will help identification of topics to be retained, modified, deleted or introduced afresh in the existing courses.

According to Prof. Issac (1989) this is a time when serious thinking is going on, among the professionals, regarding the restructuring of library and information science courses at the university level in the context of new developments taking place in the library and information science field. This thinking has stemmed from a feeling of inadequacy of the present university level courses to enable the products to meet the new challenges effectively.
Rajan and Satyanarayana (1990) in their article identified a few parameters for professional preparation and suggested a few ideas that should be kept in mind while drafting course modules, which should include learning and teaching package. They have also given an outline of the course contents for library and information science courses at Bachelor and Master's levels.

Keeping in view that the field of library and information science is a dynamic and inter-disciplinary area of study, and the curriculum must deal in all the components of the information handling and transfer cycle, the University Grants Commission appointed the Curriculum Development Committee to restructure the courses of studies. The Committee through several meetings prepared a report and submitted it to UGC in 1993. The report stresses that modern libraries and information centers need professionally educated and trained personnel and it is only by establishing proper training institutions that this cadre of staff can be built. The schools of library and information science are, therefore, expected to educate the library and information personnel accordingly. This report has defined objectives of LIS education, introduced BLIS, MLIS and PhD programs offered by universities of India, analyzed course contents, recommended teaching hours, teaching methods, teaching staff, teaching aids and requirements of LIS schools (e.g. library, workshop, laboratory, etc.), buildings, and accommodation. This report has prepared BLIS and MLIS curriculum and recommended some books to be taught in each course.

Professor Bansal (1994), Panjab University, Chandigarh in his article studied the important issue of standardization of LIS education. He is of the opinion that recent developments in the field of science and technology has further enhanced the need and value of such standardization. He adds that at present, there is no uniformity or standardization in LIS education in India. UGC has, of course, played some role and has been trying to exercise some control in this direction. He has suggested that a National Council of Library and Information Science education should be established by an act of Parliament.

Professor Mangla (1994), University of Delhi studied LIS education in South Asia. He described LIS programs including courses, objectives, admission requirements and duration, curricula, examinations, faculty members, accreditation, etc.
Agarwal (1996) in a complete directory provides necessary information about library schools in India including addresses and courses offered and other details such as, duration, date of commencement, medium of instruction, fees, and facilities available, standards of admission, curricula and course contents.

Singh (1998a) presented a paper at the 49th FID Conference and Congress about impact of new information society on education and training in information area in Indian context. He stated, “Library profession finds itself challenged by emerging technological and social environment that is changing information sources and their formats. The academic environment is also changing particularly in the universities which are going electronic thereby the entire system of scholarly communication. This pressure on higher education system will also have its implications for education of library and information professionals who will have to change their roles significantly. It is suggested that LIS graduates must know and develop adequate competencies to enable themselves to give improved access to information in a traditional library or new library setting. A clear understanding about these competencies will enable us to design and interment effective educational and training programs” (p. 35). He concluded, “Education of library and information professionals will continue to be adapted to changing technological, social, economic, educational circumstances. For introducing information technology components in the curriculum the necessary infrastructure in the form of computer laboratories is essential. LIS education programs may be made more relevant to the needs of the market and employers thereby enabling library and information professionals to look forward to provide leadership by becoming dynamic professionals who should plan further changes in the future”.

In another paper, Singh (1998b) indicated the competence of present LIS curricula and challenges thrown by IT and its fruits such as networked communication, electronic publishing, hypermedia, and so on. In the light of these developments, the author examined LIS curricula as being taught in LIS programs in the state of Punjab, and puts some suggestions for reshaping the curricula. He concluded, “The concept of electronic library is a distant cry at least in this part of the world as most of the libraries will remain largely book-based. The present LIS curriculum at BLISc level seems adequate to meet with the demands of a large number of traditional libraries but should
also include the basics of information technology, which enable the professionals to work with an insight into the changing roles. The mission should generate man power capable of enhancing and improving access to and use of information and information resources and capable of functioning in a wide variety of operational environments" (p. 12). Some of his suggestions are:

- The objectives of LIS curriculum may be redefined in view of the challenges and opportunities of the emerging new information society. The emphasis may be shifted from process-oriented to service- and access-oriented curriculum.
- In view of changing market demands, there is need to give a hard look at subjects like universe of knowledge, library cataloging and classification, bibliography and literature, methodology of studying subjects, as their relevance is on the decline. Instead, paper may be included on online information access and retrieval, users' needs and surveys, marketing of library and information services, bibliometrics, and the like.
- Emphasis may be increased on practice with regard to reference and information sources in both the courses. There may also be literature searching practice and library automation practicals in MLIS.

Objectives of the study
The purpose of this study is to review the existing courses offered by library science programs in Iran and India to see whether they have been designed to prepare librarians to meet the challenges of the new environment. If they have not, then it is necessary to determine what steps would be needed for restructuring the courses.

Shafi (1995, p. 174) has defined curricula in two expressions. According to one, the curriculum is that which is taught to a person in order to educate him. But according to other opinion, the curriculum is the environment in which education takes place. Those who hold the first opinion; consider it to be the function of the school to cause Professional to master these things while as advocates of the second opinion believe it to be the function of the school to create the type of environment with which an individual may interact and reconstruct those experiences which foster his growth. Traditionally schools have begun their study of curriculum problems by first
considering the nature of subject matter they teach and thus have fallen into fallacy of confusing mean with ends. It has also increased the distance between the traditional demands of the schools and need of human beings. In this study curriculum has been considered with these basic characteristics definition and objectives, syllabi and course contents, and methods of evaluating educational process. Therefore, objectives of the study would be explained as:

• To identify the role of the professionals and the functions and duties to be discharged by them in the libraries and information centers.
• To undertake job analysis in the libraries and information centers and find out the relevance of the training being imparted by the LIS schools today.
• To analyze and evaluate the curricula of LIS education in the light of the changing needs of libraries and information centers.
• To identify the subjects, the areas and jobs in which the librarians should be trained.
• To identify the areas in which the faculty of LIS should be proficient.
• To identify the appropriate methods of teaching and evaluation that would be introduced in the schools of LIS for their efficient functioning.

Limitations
Library and information science education in Iran has emphasized on bachelor and master’s levels, though a few universities across the country offer associate diploma in librarianship, and four universities provide facilities for PhD program in a limited scale, recently. Therefore, this study is limited to bachelor and master’s levels in Iran and India, and those universities, which offer these degrees in LIS education.

In view of the number of LIS schools in India which is about three times than Iran, (Mortezaei, 2001) it was not possible to cover all the Indian universities. As such, the study is limited to about 15 representative universities in India scattered all over the country offering bachelor and master level programs. However, practically all universities offering the same courses in Iran are covered.
Methodology

For the purpose of the study in hand, a survey was conducted regarding curricula and course contents, qualifications and experience of teachers, their competence to handle and teach the information technology as also their familiarity and knowledge of the electronic media and services. The survey also covered the methods of teaching and evaluation in vogue vis-a-vis those required for up-to-date study and teaching.

To gather information a set of questionnaires was sent to the library schools, teachers of LIS and the librarians who passed out of these schools. In all, four questionnaires were circulated, two among the librarians and teachers in Iran and two among the librarians and teachers in India. The questionnaires circulated in Iran were prepared in Persian language whereas questionnaires circulated in India were prepared in English. All these questionnaires have been appended in the end of the thesis, (the translated version in English of both the two questionnaires has been added).

While preparing the questionnaires the objectives of the study and the problems were kept in view. An effort was made to model the questions in such a manner that the reaction of the respondents should throw light on the problems to be examined and the objectives set before the study.

For selecting the sample, from Iran and India, librarians were distributed in four groups: librarians working in public libraries; university libraries; special libraries and information centers. As far as teachers in LIS are concerned all teachers working in different universities in Iran were approached in view of the fact that their number was not very large and was manageable. On the other hand, in India since the number of universities that offer library science courses and the teachers working there is comparatively very large only 15 universities scattered in all the four directions and the center of the country were chosen for the purpose. These include universities at Jammu Kashmir, Amritsar, and Chandigarh in the North; Madras and Mysore in the South; Bombay, SNDT, and Pune in the West; Calcutta and Gauhati in the East, and Delhi, Aligarh, INSDOC, and University of Sagar in the Center. On the same pattern, librarian working in various types of libraries and scattered all over the country were chosen to find out their views.
In Iran, librarians working in various types of libraries scattered in seven important cities, which happen to have most of the libraries, were selected for the purpose. These cities are: Ahwaz, Isfahan, Kerman, Mashhad, Shiraz, Tabriz, and Tehran.

There is no denying the fact that the number of librarians is larger when compared to the number of teachers in the field of librarianship. Hence, a larger number of librarians were selected for the sample as compared to the teachers. In Iran, about 230 questionnaires were distributed among librarians. Out of this number, 171 have responded. In India, about 500 librarians were chosen for the purpose. Out of this number, 265 have responded. As far as the teachers are concerned, 70 teachers of library science were selected each from India and Iran for this study. There were 66 responses from Iranian teachers and in spite of sending reminders trice, only 31 responses from Indian teachers.

To collect more intimate information and to know the true picture, visits were made to a number of library schools and a variety of libraries. During these visits the faculty, the students, the chief librarians and other professionals working there were interviewed. Before the whole methodology was finalized, a pilot study was undertaken to systematize and improve the proposed routine and procedure.