CHAPTER IV
PROFILE OF THE STUDY AREA

4.0 Introduction

Since, the study area for this study includes university libraries of Bangalore University of Karnataka and Hyderabad University of Andhra Pradesh, India and Ferdowsi University of Mashhad and Shiraz University of Fars, Iran, it was felt necessary to present an overview of these two countries. In addition, ICT and higher education in both countries, a brief description of the universities location, and the profile of the universities under study with an emphasis on their central libraries are presented in this chapter.

It should be noted that, the name of the universities, departments/colleges /schools and libraries are according to the official website of the universities.

4.1 India : An Overview

India (officially the Republic of India) is a country in South Asia. India is the seventh-largest country in the world, with a total land area of 1,269,219 square miles (3,287,590 square kilometers). It is the second-most populous country with over 1.2 billion people, and the most populous democracy in the world. Bounded by the Indian Ocean on the south, the Arabian Sea on the southwest, and the Bay of Bengal on the southeast, it shares land borders with Pakistan to the west; Bhutan, the People's Republic of China and Nepal to the northeast; and Bangladesh and Burma to the east. In the Indian Ocean, India is in the vicinity of Sri Lanka and the Maldives; in addition, India's Andaman and Nicobar Islands share a maritime border with Thailand and Indonesia.

India became an independent nation on 15 August, 1947 after a struggle for independence marked by non-violent resistance and led by Mahatma Gandhi.
The Indian economy is the world's tenth largest economy by nominal GDP and fourth largest economy by purchasing power parity. Following market-based economic reforms in 1991, India has become one of the fastest growing major economies, and is considered a newly industrialized country; however, it continues to face poverty, illiteracy, corruption and inadequate public health. A nuclear weapons state and a regional power, it has the third-largest standing army in the world, and ranks tenth in military expenditure. India is a federal constitutional republic with a parliamentary democracy consisting of 28 states and seven union territories. It is a member of the United Nations, the Non-Aligned Movement, the World Trade Organization, and the South Asian Association for Regional Cooperation.

Religious practices are an integral part of everyday life and are a very public affair. Although 80.5% of Indians report themselves as Hindus, India's Muslim population is the world's second largest, and they constitute 13.4% of the population. Other religious groups include Christians (2.3 percent), Sikhs (1.9%), Buddhists (0.8%), Jains (0.4%), Jews, Zoroastrians, Bahá’ís and others (0.7%).

In India, there are 1,652 languages and dialects in total, 216 of these have more than 10,000 native speakers. The largest of these by far is Hindi with some 337 million (the second largest being Telugu with some 80 million). The Indian constitution recognizes 23 official languages. Hindi and English are used by the government for official purposes, wherein Hindi has a rightful priority. Sanskrit and Tamil enjoy classical language status in India (New World Encyclopedia, 2011). Literacy Rate (Definition: Age 15 and over that can read and write) of total population is 59.5% [Male (70.2%), Female (48.3%)] (Indiaonlinepages.com, 2011). Figure 4.1 presents geographical map of India.
Figure 4.1
Geographical Map of India

Source: http://www.solarpaces.org/_Library/india_map.jpg
4.1.1 ICT in India

The Indian Information Technology industry accounts for a 5.19% of the country's GDP and export earnings as of 2009, while providing employment to a significant number of its tertiary sector workforce. More than 2.5 million people are employed in the sector either directly or indirectly, making it one of the biggest job creators in India and a mainstay of the national economy. In 2010-11, annual revenues from IT-BPO sector is estimated to have grown over US$76 billion compared to China with $35.76 billion and Philippines with $8.85 billion. The most prominent IT hub is IT capital Bangalore. The other emerging destinations are Chennai, Hyderabad, Coimbatore, Kolkata, Kochi, Pune, Mumbai, Ahmedabad and NCR. India's growing stature in the information age enabled it to form close ties with both the United States of America and the European Union.

India's IT Services industry was born in Mumbai in 1967 with the establishment of Tata Group in partnership with Burroughs. The first software export zone SEEPZ was set up here way back in 1973, the old avatar of the modern day IT park. More than 80% of the country's software exports happened out of SEEPZ, Mumbai in 80s.

India developed a number of outsourcing companies specializing in customer support via Internet or telephone connections. By 2009, India also has a total of 37,160,000 telephone lines in use, a total of 506,040,000 mobile phone connections, a total of 81,000,000 Internet users-comprising 7.0% of the country's population, and 7,570,000 people in the country have access to broadband Internet- making it the 12th largest country in the world in terms of broadband Internet users. Total fixed-line and wireless subscribers reached 543.20 million as of November, 2009 (Wikipedia, 2011).
4.1.2 Higher Education in India

India has one of the largest higher education system in the world. Central Government is responsible for major policy relating to higher education in the country. It provides grants to the UGC and establishes central universities in the country. The Central Government is also responsible for declaration of Educational Institutions as 'Deemed to be University' on the recommendation of the UGC. State Governments are responsible for establishment of State Universities and colleges, and provide plan grants for their development and non-plan grants for their maintenance.

The coordination and cooperation between the Union and the States is brought about in the field of education through the Central Advisory Board of Education (CABE) (Ministry of human resources development, 2011). As of 2009, universities and university-level institutions in India include 20 Central Universities, 215 State Universities, 100 Deemed Universities, 5 institutions established under State Act and 13 institutes of national importance apart from around 17,000 colleges including 1800 women colleges. The emphasis in the tertiary level of education lies on science and technology. Indian educational institutions by 2004 consisted of a large number of technology institutes. Distance learning is also a feature of the Indian higher education system (Ministry of Information and Broadcasting, 2009).

The engineering education and business schools are monitored and accredited by the All India Council for Technical Education (AICTE) while medical education is monitored and accredited by the Medical Council of India (MCI). Like-wise, agriculture education and research is monitored by the Indian Council for Agriculture Research. Apart from these, National Council for Teacher Education (NCTE) controls all the teacher training institutions in the country. The country has some ace engineering, management and medical education institutions
which are directly funded by the Ministry of Human Resource Development of the Union Government. Admission to all professional education colleges is done through all-India common admission tests of which the IIT-JEE, AIEEE, CAT and CPMT are the most popular ones. Most of the institutions reserve a small percentage of seats for foreign students (Academics-india.com, 2011).

4.1.3 The City of Bangalore

Bangalore is the capital and the largest city of the Indian state of Karnataka. Figure 4.2 presents geographical map of Karnataka.

Figure 4.2: Geographical Map of Karnataka

Source: http://www.cioffindia.org/karnataka-district-map.gif
Bangalore is situated in the Deccan Plateau, with an average elevation of 920 m above sea level. It is also called 'Garden City' for its beautiful gardens, flowers and trees which flourish in each and every street. It is India's fifth largest city and India's fifth largest metropolitan area, with a 2001 population of about 6.5 million.

After India gained independence in 1947, Bangalore evolved into a manufacturing hub for heavy industries such as Hindustan Aeronautics Limited and Indian Space Research Organization. Within the last decade, the establishment and success of high technology firms in Bangalore have lead to the growth of IT in India. IT firms in Bangalore employ about 30% of India's pool of 1 million IT professionals.

The city is also the Training Center for the Indian Air Force, the Madras Engineering Group (MEG) and Central Military Police, the latter two being arms of the Indian Army.

Bangalore is the scientific hub of India and it has the world renowned and the oldest Research University, Indian Institute of Science. The other research institutes are the Indian Institute of Astrophysics, the Raman Research Institute, the Jawaharlal Nehru Centre for Advanced Scientific Research, the National Center for Biological Science and the Indian Statistical Institute (Wikipedia, 2011).

As of 2009, Bangalore was inducted in the list of global cities and ranked as a 'Beta World City' alongside cities such as Dallas, Miami, Boston, Kuwait City, Lima, and Munich in the studies performed by the Globalization and World Cities Study Group and Network in 2008 (Wikipedia, 2011).

Today as a large city and growing metropolis, Bangalore is home to many of the most well recognized colleges and research institutions in India. Numerous public sector heavy industries, software companies, aerospace,
telecommunications, and defense organisations are located in the city. Bangalore is known as the Silicon Valley of India because of its position as the nation's leading IT exporter. A demographically diverse city, Bangalore is a major economic and cultural hub and the fastest growing major metropolis in India (Wikipedia, 2011).

4.1.3.1 Bangalore University (BU)

Bangalore University (BU) is a public university located in Bangalore, Karnataka State, India. It was established in July 1964 as an offshoot of the University of Mysore, primarily to include institutions of Higher learning located in the metropolitan city of Bangalore and the districts of rural Bangalore, Kolar. Initially, the two premier colleges of the city, the Central College (CC) and the University Vivesvaraya College of Engineering formed the nucleus of the Bangalore University. Soon after the establishment of the Bangalore University, as a first step in the reorganization of courses of instructions, the university introduced honors courses in the year 1965-66. Three-year honors courses in Botany, Chemistry, Economics, English, Geology, Kannada, Mathematics and Zoology which were conducted only at the university postgraduate departments, attracted many brilliant students (Bangalore University, 2011).

Since 1964, Bangalore University has grown both in size and strength to include a large number of affiliated colleges, P.G. Centers of research and a rich
diversity of program options. In consonance with this expansion, in 1973 the university moved into a new campus ‘Jnana Bharathi’ (JB) located on a sprawling 1,100 acres of land and shifted many of its post-graduate departments to this newly established campus. At present, the JB Campus houses the administrative office a large number of post-graduate departments, Directorates, Centers of higher learning, Gandhi Bhavan, Ambedkar Bhavan, NSS Bhavan, Outdoor Stadium and other support services. The Central College Campus retained as the city campus houses the main examination wing with the office of Registrar Evaluation, city offices of the Vice-Chancellor, Registrar, Finance (Examination part), Academic Staff College, Directorate of Correspondence Courses and Distance Education Centre, Directorate of College Development Council, a few postgraduate departments and support services. Besides, the college also has the Central College Cricket Pavilion where the Karnataka State Cricket Association was first established and trained several cricketers of International repute (Bangalore University, 2011).

Apart from this, in the vicinity of the city campus, the university has two constituent colleges, the University Visvesvaraya College of Engineering (U.V.C.E started in 1917) and Central College. The other constituent colleges of BU are the University College of Physical Education (formerly known as the Government College of Physical Education, started in 1959) and Law College are located in the JB Campus. Since 1973, the university is functioning from both the campuses- the main campus at Jnana Bharathi and the City Campus at Central College.

Bangalore University has completed forty-one years of fruitful existence and has come to be hailed as one of the largest universities of Asia. Though original intended to be a federal university, it has eventually emerged as an affiliating university. The university has been accredited in 2001 by NAAC and has received five star status. Academically, the university is structured into six
faculties—Arts, Science, Commerce and Management, Education, Law and Engineering. It has 41 post-graduate departments, one post-graduate centre at Kolar, (started during 1994-95), 4 constituent colleges, 473 affiliated colleges (of which 88 have PG courses) and several other centers and directorates of higher learning and research under its purview. At present, the university offers 51 post-graduate courses (Bangalore University, 2011).

4.1.3.1.1 Bangalore University Library

The Bangalore University Library came into existence on 1966 with about 35,000 books and several bound volumes of periodicals of the Central College Library affiliated to Mysore University. The university has a Central Library at a sprawling campus called Jnana Bharati and a Branch library in the heart of the city at the Central College Campus. All the affiliated colleges have independent libraries. The Central College Library as well as the Campus library have a rich collection of documents relating to science and technology, humanities and social sciences. Some of the affiliated college libraries, particularly located in Bangalore City also have good collections. A number of these libraries have already computerized their housekeeping operations and have created bibliographical databases of their collections (Bangalore University Library, 2011).

Today, the Bangalore University Library is housed in a magnificent building which includes separate wings for reference section, stack rooms and reading halls, periodical sections, computer centre and administrative divisions.
The library presents the following services to its patrons: Web OPAC, Borrowing & Circulation, Reference Service, Digital Information Service, Career Information Service, User Training Programs, Current Awareness Bulletin, Document Delivery Services and Inter Library Loan. The Bangalore University Library is well equipped with modern facilities such as self-check station, workstations, wireless access connections and audio-visual equipment. Apart from the provision of individual reading areas, group study areas (discussion rooms and reading rooms) are also available to facilitate group-based assignments among students.

Bangalore University has put its fullest effort to help its teachers, students and research scholars in terms of providing print as well as e-resources through the university library. The library has provided a wide range of e-resources for its clients through UGC-InfoNet Digital Library Consortium such as ACS, AIP, APS, Blackwell Publishing, Cambridge University Press, Elsevier Science (Cell Press), Emerald (LIS Collection), IOP, JSTOR, etc (Bangalore University Library, 2011).

The constituent libraries at Bangalore University are as follows:
(i) Central College Campus Library-City Campus- K.R. Circle;
(ii) University Visvesvaraya College of Engineering (UVCE) Library-City Campus- K.R. Circle;
(iii) University Law College Library-Bangalore University-Jnana Bharathi Campus; and
(iv) Physical Education Library-Bangalore University-Jnana Bharathi Campus.

All constituent libraries in Bangalore University are connected to the Internet. The Internet connectivity type of most libraries is wireless. The internet speed is 1-2 Mbps. The library management software is 'NewGenLib'.

The library collection consists of Books (331,284), Reference books (5,000), Project reports (1,500), Print foreign journals (106), Print Indian journals
(147), E-journals (7,000), Online databases (10), and CD-ROM/DVDs (300) (Table 4.1).

Further, ICT facilities of the library includes Net server (7), Computer workstation (PC) (20), Laptop (1), CD-writer (15), Data projector (2), Scanner (2), Printer (4), Barcode scanner (2), Barcode printer (1), Fax machine (1), Security gate (1) and UPS (1) (Table 4.2).

4.1.4 The City of Hyderabad

The city of Hyderabad is located in Andhra Pradesh State of India. Figure 4.3 presents the geographical map of Andhra Pradesh State.

Figure 4.3
Geographical Map of Andhra Pradesh

Source: http://www.mapsofindia.com/maps/andhrapradesh/andhrapradesh-district.htm
Hyderabad is the capital city of Andhra Pradesh which is the largest state in the south of India and one of the fastest growing cities in India. The city is a developed one though it maintains its traditional essence. The Hyderabad city has a population of almost 4 million.

The culture of Hyderabad is a diverse one. Not only does it have an amalgamation of different cultures, Hyderabad boasts of a rich cultural heritage too. Today Hyderabad flourishes in its rich cultural history.

Hyderabad is rightly known as the high-tech city. IT in Hyderabad is renowned world over. Hyderabad is the hub of information technology in India. Hyderabad city is today known not only for its IT and IT Enabled Services, but also Pharmaceuticals and Entertainment industries. Many call centers, Business Process Outsourcing (BPO) firms, dealing with IT and other technological services were set up in the 1990s making it the hub of BPO firms. Ramoji Film City, the largest film studio in the world is located on the outskirts of the hi-tech city.

The progress of a township with state-of-the-art services called HITEC City encouraged several IT and ITES companies to setup operations in the city. A rapid growth of technology in this area has led civic boosters to call the city 'Cyberabad'. Hyderabad has also been referred to as the second Silicon Valley of India after Bangalore. There have been widespread investments in digital infrastructure within the city, which includes several multinational corporations having established centers in the city. The major areas where such campuses have been setup include Madhapur and Gachibowli (hyderabad.org, 2011).

Hyderabad also has the merit of being The Software Training Capital. The city offers innumerable number of software courses that are taken up by thousands from all over the world. Hyderabad is on the brink to become a global city as it has been selected as the location for India's first Fab City, a silicon chip developing
facility, being setup with an investment of $3 billion by the AMD-SemIndia syndicate (hyderabad.org, 2011).

4.1.4.1 University of Hyderabad (UH)

The University of Hyderabad was established on 2 October 1974 by an act of parliament and recognized as premier institution in the country for providing postgraduate education and conducting research. The university is a central university and fully funded by the University Grants Commission (UGC) of India. UGC also has recognized University of Hyderabad as 'Universities with Potential for Excellence'. The National Assessment and Accreditation Council (NAAC) has given Grade A***** to the university. The National Information System for Science and Technology (NISSAT) rated the university under the 'High Output – High Impact' category among the top 50 institutions in India. The university is a member of the Association of Indian Universities (AIU) and the Association of Commonwealth Universities (ACU).

The University of Hyderabad, has, over three decades, distinguished itself as one of the best in the country as a centre for teaching, research and innovations. With a highly qualified and internationally renowned faculty, motivated students, scholars, and support staff, it has carried out cutting edge research in disciplines such as the Sciences, Social Sciences, Humanities, Technology, Visual Arts, Communication, Management and Education (UH, 2011).
Right from its inception, the university has pioneered teaching, research and extension activities in the best possible manner, keeping with the mandate given to it by the nation. It has vigorously sought interdisciplinary and interface studies in frontier areas across disciplines. It has hired high quality faculty, and the admission of outstanding students, at the national and international level, while keeping its commitment to the important goal of social justice. Today, it has a thriving undergraduate program of the integrated kind, and its post-graduate studies and research programs rival some of the best in the country. It has broken fresh ground in the Study in India (SIP) Program involving international students.

Located in the historic city of Hyderabad, on a sprawling campus, sylvan and idyllic, it is indeed the envy of any Nature lover. The University of Hyderabad combines high academic excellence commensurate with the national goals. Today these goals include public-private partnership, research that is socially relevant and empowers large sections of our marginalized population, and above all, innovation of radically new thinking that can make us effective players in the domain of international education.

The university’s mission is to promote a dynamic mindset in the field of education and research, and address the challenging tasks of the contemporary world. To this end, it seeks active collaboration, cost sharing and partnership programs with the industry and the corporate world.

The UH is proud of the resources, human and material, it has built over the years. It has a flexible system of a Memorandum of Understanding and can quickly take up initiatives for interaction that are mutually beneficial (UH, 2011).

Students and scholars will find this university an oasis for study and reflection. The university is proud of the fact that it is the only university in the country to provide fellowships to every student at all levels. The fellowship has another unique feature where the toppers at the end of every semester will be
regarded as achievers and an increase in their fellowship is offered. With state of art computing support, the university will have the distinction of being the first institution in the country to have 68 mbps wi-fi connectivity. This will considerably improve connectivity and speed, vital for sustaining the high academic credentials of the university. They will have a most comfortable stay in well furnished halls of residence: best of the library, state-of-art laboratories, computer, sports and recreational facilities, and above all, an outstanding faculty that is friendly and accessible, and an administration that is responsive and proactive. The university has ten schools of study as follows:

1. School of Chemistry,
2. School of Engineering Sciences & Technology,
3. School of Humanities,
4. School of Life Sciences,
5. School of Management Studies,
6. School of Mathematics & Computer/Information Sciences,
7. School of Medical Sciences,
8. School of Physics,
9. Sarojini Naidu School of Arts & Communication,
10. School of Social Sciences (UH, 2011).

The Schools of Physics, Chemistry, Management Studies, and Engineering Sciences & Technology are single discipline schools and the others are multi-department schools.

All the Schools of the University, Departments and Centers are located on the main campus in Gachibowli. Several of the Schools and Departments of the University have obtained financial support from the University Grants Commission under the Special Assistance Program and COSIST for excellence in teaching and research. Over the years, the teaching and research programs of the
University have been firmly established. The students are selected through a nationwide entrance test. About 30% of the students are Ph.D. scholars and more than 32% of the students are women. Till 28.2.2010, over 17626 students of the University had been awarded various degrees through formal education, which consists of 1,506 Ph.Ds., 3,228 M.Phils. 1,275 M.Techs. and 11,617 postgraduate Degrees and Diplomas. The Faculty of the university includes 156 Professors, 82 Readers and 112 Lecturers (UH, 2011).

4.1.4.1.1 Indira Gandhi Memorial Library

University Library is a central facility to support the teaching and research activities of the University. Over the years, the library has been successfully catering to the information needs of all the academic community viz., teachers, research scholars and students of Sciences, Engineering, Social Sciences, Humanities, Performing Arts, Fine Arts, Communication and Management Studies. The library has a separate air-conditioned reading hall which is kept open round-the-clock for the benefit of the students (Indira Gandhi Memorial Library, UH, 2011).

The National Board of Higher Mathematics (NBHM) has recognized this library as a 'Regional Library' for Mathematics and provides financial support for the acquisition of Mathematics journals for advanced research. The library is an active member of the UGC- INFLIBNET and has been identified as one of the 22 Document Delivery Centers in the country. The university library has achieved several distinctions in the country for application of IT:
(i) It is the first university library in India to computerize all its in-house operations and services;

(ii) The first university library to subscribe to electronic journals;

(iii) The first library in undertaking the computerization programs of other libraries on a turnkey basis;

(iv) The first to become the governing council member of the OCLC, USA;

(v) The first in installing an electronic security gate with magnetic detector;

(vi) The first in starting a Post-Graduate Diploma course in Library Automation and Networking (PGDLAN); and

(vii) The first library to start digitization of rare books in India.

The mission of the Library is "to support the research and educational endeavors of students, research scholars and faculty of the university by collecting, organizing, preserving and disseminating information and instructional programs in all formats through need-based services and enable access to online information resources using modern information & communication technologies" (Indira Gandhi Memorial Library, UH, 2011).

The library management software is VTLS. The library collection consists of Books & monographs (275,100), Reference books (5,000), Theses/dissertations (3,265), Print foreign journals (305), Print Indian journals (280), Project reports (5,500), E-books (2,889), E-journals (17,000), Online databases (20), CD ROM/DVDs (1,600), Newspapers (27), General magazines (37), and Braille books (418) (Table 4.1).

Furthermore, ICT facilities of the library consists of Net server (9), Computer workstation (PC) (200), Laptop (4), CD-writer (200), CD tower (2)
Data projector (1), Scanner (10), Printer (25), Barcode scanner (2), Barcode printer (1), Fax machine (1), Security gate (1) and UPS (6) (Table 4.2).

4.2 Iran: An Overview

Iran, officially the Islamic Republic of Iran is a country in Central Eurasia and Western Asia. Iran is bordered on the north by Armenia, Azerbaijan and Turkmenistan. As Iran is a littoral state of the Caspian Sea, which is an inland sea, Kazakhstan and Russia are also Iran's direct neighbors to the north. Iran is bordered on the east by Afghanistan and Pakistan, on the south by the Persian Gulf and the Gulf of Oman, on the west by Iraq and on the northwest by Turkey. The Country Iran with 1,648,195 kilometers square areas is located in southern part of north moderate zone between 25 03’ and 39 47’ of northern latitude from equator circle and 44 14’ and 63 20' eastern longitude from Greenwich meridian.

About 90% of Iran territory is situated in Iran Plateau district. Generally, Iran is mountainous and semidry land, which its mean altitude is more than 1,200 meters above sea level. More than one half of Iran consists of mountains, one quarter is plains and deserts and less than one quarter is farming lands. Lut Desert with 56 meters altitude is the lowest internal point and Damavand Summit in central Alborz Mountains with 5628 meters altitude is the highest point of Iran. In southern coast of Caspian Sea, the altitude of the ground is 28 meters lower than sea level. Iran has climatological diversity with several types of climate. Tehran is the capital, the country's largest city and the political, cultural, commercial and industrial center of the nation (National Geoscience Database of Iran, 2011).

Iran is one of the world's oldest continuous major civilizations, with historical and urban settlements dating back to 4000 BCE, making it a possible candidate for the earliest human civilization. Throughout history, Iran has been of geostrategic importance because of its central location in Eurasia. Iran is a founding member of the UN, NAM, OIC, OPEC, ECO. It occupies an important
position in international energy security and world economy due to its large reserves of petroleum and natural gas. The country is known for its independent stances in the global arena. Iran is currently a regional power.

Iran has 30 states, 368 counties, 1082 cities and 2438 villages. On the basis of 2006 census Iran has 70,495,782 population (50.9% male and 49.1% female, 71% urban, 29% Rural). The population aged six and over is 52,295,000, of which literate population is 41,582,000 (79.5%) and illiterate population is 10,713,000 (20.5%) (Iran Statistical Centre, 2010).

Most Iranians are Muslims. Around 90 to 95% belong to the Shia branch of Islam the official state religion, and about 4 to 8% belong to the Sunni branch of Islam. The remaining 2% are non-Muslim religious minorities.

Iran is a diverse country consisting of people of many religions and ethnic backgrounds cemented by the Persian culture. The majority of the population speaks the Persian language, which is also the official language of the country, as well as other Iranian languages or dialects. Turkic languages and dialects, most importantly Azeri language, are spoken in different areas in Iran. In addition, Arabic is spoken in the southwestern parts of the country.

According to the CIA World Factbook, the main ethnic groups are Persian (51%), Azerbaijanis (24%), Gilaki and Mazandarani (8%), Kurds (7%), Arabs (3%), Baluchi (2%), Lurs (2%), Turkmens (2%), Laks, Qashqai, Armenians, Persian Jews, Georgians, Assyrians, Circassians, Tats, Mandaens, Gypsies, Brahuis, Hazara, Kazakhs and others (1%). However, Persian and its dialects are spoken as first language by 58% while Azeri is spoken by 26%, Kurdish by 9%, Luri by 3%, Balochi by 1%, Arabic by 1% and that some 2% have other languages as first language (Wikipedia, 2011). Figure 4.4 presents the geographical map of Iran.
Figure 4.4

Geographical Map of Iran

Source: http://www.mapsofworld.com/iran/maps/iran-political-map.jpg
4.2.1 ICT in Iran

Iran's telecommunications industry is almost entirely state-owned, dominated by the Telecommunications Company of Iran (TCI). In 1993 Iran became the second country in the Middle East to be connected to the Internet, and since then the government has made significant efforts to improve the nation's ICT infrastructure. Iran's national Internet connectivity infrastructure is based on two major networks: the public switched telephone network (PSTN) and the public data network. The PSTN provides a connection for end-users to Internet service providers (ISPs) over mostly digital lines and supports modem-based connections. The Data Communication Company of Iran (DCI), a subsidiary of TCI, operates the public data network. Iran's external Internet links use the basic Internet protocol of TCP/IP (transmission control protocol/Internet protocol) via satellite exclusively. For data lines, copper, fiber, satellite and microwave are the available media, and popular services are high-speed Internet via digital subscriber lines (DSL), high-bandwidth lease lines and satellite. About 33 Iranian cities are connected directly by the Trans-Asia-Europe cable network, or "silk road", connecting China to Europe.

The government's proposals for ICT development are laid out in a plan known as the National Information and Communication Technology Applications. The plan is not so much a strategy as a list of areas of concern and in general advocates the involvement of the private sector. The government aims to provide 10% of government and commercial services via the Internet by end-2008 and to equip every school with computers and Internet connections by the same date. This is budgeted to require investment of US$12bn, of which US$6.8bn is expected to come from the private sector.

Iran imports a large part of its software. According to the EJISDC, around 95% of the output of the domestic industry is bespoke development-as opposed to
product work-meaning export possibilities are low. Foreign investment in the sector is minimal, although some links are being developed with the Indian industry (Zawya.com, 2011).

4.2.2 Higher Education in Iran

The term higher education in Iran is attributed to the education offered by either a public or a non-public university or an institute at the tertiary level. Higher education in Iran is, however, offered by public and non-public sectors. The public higher education sector includes 105 universities, 16 independent schools, 9 higher education centers and 135 institutes. The non-public higher education sector is run by 39 non-profit institutes, as well as the Islamic Azad University (IAU) with over 150 branches throughout the country and some branches abroad. Public higher education is financed by state funds and includes the programs offered by Ministry of Science, Research and Technology (MSRT), as well as Ministry of Health and Medical Education (MHME), whereas non-public higher education is not funded by the government.

The type of education offered by the Iranian higher education system is versatile and they come as follows:

(i) **Regular Higher Education** forms the major body of the higher education in Iran. It refers to the kind of education that requires the students to attend classes in two semesters during each school year. The classes are held daytime or in the evening.

(ii) In order to meet the growing public demand for higher education, the facilities of the universities are mobilized to offer education in the evenings. The funding of this kind of education, called *Evening programs*, is secured through the tuition fees the students pay.

(iii) **Distance Higher Education** is another type of education in which students are not required to attend classes. Instead, they have their hands on the
required course books through intermediary links mainly through Payam-e-Noor University.

(iv) \textit{Medical Higher Education} applies to that part of higher education delegated to the Ministry of Health and Medical Education upon parliament ratification in 1985. Ever since, higher education in medicine and related field have been offered by the universities affiliated to MHME, as well as the medical sector of the Islamic Azad University.

(v) \textit{Applied-Scientific Higher Education}, a vocational and technical type of higher education, refers to a particular type of education that aims to upgrade the know-how, productivity and experience in various professions.

(vi) \textit{Technical-Vocational Higher Education}, is mostly provided by the centers affiliated to Ministry of Education. Technical-vocational programs aim to train, refresh or promote the capabilities of high school teachers who work in specialized vocational fields.

(vii) \textit{Further Education} is a post-secondary education which is offered on the basis of applied, specialized, short term courses. Upon successful completion of the programs, participants receive a certificate but not a degree.

Admissions to the universities are possible through entrance examinations. The admitted, upon enrollment, are known as 'students' and can major in one of the disciplines (i.e., Humanities, Basic Sciences, Engineering, Agriculture, Veterinary, Medical Sciences or Arts) (Maftoon, 2004).

\textbf{4.2.3 The City of Mashhad}

Mashhad (literally the place of martyrdom) is the second largest city in Iran and a holy city in the world. It is located 850 kilometers east of Tehran, at the centre of the Razavi Khorasan State close to the borders of Afghanistan and Turkmenistan. Mashhad has a population of 2,427,316 based on 2006 census (Iran Statistical Centre, 2010).
Geographically, the city is located in the valley of the Kashaf River near Turkmenistan, between the two mountain ranges of Binalood and Hezar-masjed. The City benefits from the proximity of the mountains, having very cold winters, pleasant springs, mild summers, and beautiful autumns.

The Ferdowsi University of Mashhad, named after the great Iranian poet, is located here and Mashhad is also home to one of the oldest libraries of the Middle-East called the Central Library of Astan-e Quds Razavi with a history of over six centuries. The Astan-e Quds Razavi Museum, which is part of the Astan-e Quds Razavi Complex, is home to over 70,000 rare manuscripts from various historical eras. There are some six million historical documents in the foundation's central library (Wikipedia, 2011). Figure 4.5 presents geographical map of Razavi Khorasan State.

Figure 4.5
Geographical Map of Razavi Khorasan State

Ferdowsi University of Mashhad is housed in Mashhad. FUM is a state university named after the great epic poet and scholar Ferdowsi whose Shahnameh (The Book of Kings) is a well-known classical chef-d'oeuvre in Persian literature. The university was established in 1949, making it the third oldest major state university in Iran. It is the largest university in the northeast of Iran, and has a large faculty.

Encompassing currently 15 departments, 2000 staff, 650 faculty members, and an official enrollment of 19,000 students, FUM is one of the most comprehensive universities in Iran and neighboring countries. The university offers 180 majors and admits over 3,500 students each year at the Bachelor's, Master's, and Ph.D. levels.

At FUM, many departments are considered as Centers of Excellence in different specializations nationwide viz., the Department of Mathematical Sciences and Statistics, the Department of Animal Sciences, the Department of Geology, the Department of Persian Language and Literature, the Department of Veterinary Medicine, and finally the Department of Agronomy (FUM, 2011).

The university is regarded as a prominent institution in attracting international students of different nationalities. At present, FUM is a major
university in recruiting international students from 17 nationalities, all of which add greatly to the educational and social experience available at the university. Furthermore, the university is ranked 3rd in Iran amongst other universities in recruiting foreign students.

College and faculties of Ferdowsi University of Mashhad are as follows:

01. College of Agriculture,
02. Faculty of Architecture and Urban Planning,
03. Faculty of Economics and Business Administration,
04. Faculty of Education and Psychology,
05. Faculty of Engineering,
06. Faculty of Letters and Humanities,
07. School of Mathematical Sciences,
08. Faculty of Natural Resources and Environment,
09. Faculty of Sciences,
10. Faculty of Sports and Physical Education,
11. Faculty of Theology,
12. Faculty of Veterinary Medicine.

In addition to 'Herbaceous Sciences Research Centre' in the university campus, 'Neyshabour Faculty of Arts' and 'Shirvan Higher Education Centre' are located in Neyshabour and Shirvan towns (FUM, 2011).

4.2.3.1.1 Central Library and Information Centre, FUM
Ferdowsi University of Mashhad includes central library and 12 constituent libraries. The central library started functioning in the year 1971. Now with an area of more than 2,400 square meters, it is one of the largest university libraries in the country and in particular, the largest of all libraries in Razavi Khorasan State and in the northeast of Iran.

The library mission and goals are acquisition, organization and providing resources and services make scientific information needed by researchers available to advance education and research. The main goal of the Information Center and Central Library is providing access to resources and information is needed. Therefore, the following tasks for this center has been considered:

• Collecting library materials including print and electronic resources;

• Technical services (cataloging, indexing and organizing) all sources of Ferdowsi University Libraries;

• Expert review of the status of college libraries

• Short-term training courses for library and information workers;

Central Library and Information Centre, Ferdowsi University of Mashhad is a place that scientific documents, books, magazines, research documents, etc., were gathered and ready to be served to students, teachers and staff. The Central Library and Information Centre uses Library of Congress (LC) classification and it has library management software (Simorgh). Also, it has different sections: 'Acquisition', 'Organisation', 'Reference', 'Circulation', 'Information Centre', 'Audio-Visual', 'System Support', 'Professor Shanehchi Collection' and 'office'.

At present central library has a good collection of Persian books and other language books (60,471), Reference books (6,821), Theses and dissertations (1,104), Research projects (800), Print Persian journals (333), Print foreign journals (273), E-journals (16,000), E-books (958), Online databases (26),
National databases (10), CD-ROMs/DVDs (3600), Audio-video cassettes (300), Microfilm/microfiches (70), Slides (300), and Films (97) (Table 4.1). Full bibliographic information of all books available in different libraries of Ferdowsi University can be searched through the online public access catalogue (OPAC) (Central Library and Information Centre, FUM, 2011).

All libraries at Ferdowsi University of Mashhad are connected to Internet through Cable or Wireless. The internet bandwidth is 80 Mbps. The library has ICT facilities such as Net server (9), Computer workstation (PC) (115), Laptop (2), CD-writer (115), CD tower (1), Data projector (3), scanner (4), printer (18), Barcode scanner (10), Barcode printer (1), Fax machine (4), Security gate (1) and UPS (3) (Table 4.2).

4.2.4 The City of Shiraz

Shiraz is the sixth most populous city in Iran and provincial capital of Fars. Located in the southern Iran and covering an area of 133,000 square km. It is bounded on the north by Yazd and Isfahan, on the west by Kohgiluyeh va Boyr Ahmad, and on the south by Hormozgan, and on the east by Kerman. Shiraz has a population of 1,711,186 based on 2006 census (Iran Statistical Centre, 2010).

Shiraz is known as the cultural capital of Iran, and the 'City of roses and poets'. It is the heart of Iran’s history and a center for the rich Persian literary heritage. It has been the cradle of civilization and art for many centuries. Famous philosophers, thinkers and poets produced their masterpieces in this beautiful city. Shiraz is situated in a plain surrounded by two mountain ranges. Shiraz is 935 km away from Tehran. It enjoys a mild climate and its magnificently impressive gardens have been famous from distant past. Being the hometown of two of the greatest Persian poets, Hafez and Sa’di, and a great Islamic philosopher, Molla Sadra, this city has been the tourists’ focus of attention. Being the capital of Iran in
different periods, it includes numerous monuments (Shiraz University, 2010). Figure 4.6 presents the geographical map of Fars State.

**Figure 4.6**

**Geographical Map of Fars State**

Source: [http://www.summagallicana.it/lessico/p/p%20Fars%20map.jpg](http://www.summagallicana.it/lessico/p/p%20Fars%20map.jpg)

### 4.2.4.1 Shiraz University

The initial nucleus of Shiraz University was formed in 1946 with the establishment of the junior College of Health which aimed at training specialists in the Medical Sciences during a four year program. In 1949 this was transformed to a Medical College and shortly thereafter in 1953 the Namazi School of Nursing and in 1955 the Colleges of Agriculture and Arts and Sciences were established.
Shiraz University which, prior to the Islamic Revolution, was called 'Pahlavi University' was founded in 1954 with the addition of the College of Engineering and College of Veterinary Medicine. Other units that were subsequently added were the Dental School in 1969, the Graduate School and the Junior College of Electronics in 1969, and the Colleges of Law and Education in 1977. After the victory of the Islamic Revolution, Revolutionary Council was founded in 1980 and extensive fundamental changes were implemented at universities at large. These changes were also reflected in the context of Shiraz University which presently consists of 1 college and 8 schools as follows:

1. College of Engineering,
2. School of Agriculture,
3. School of Arts and Architecture,
4. School of Economy, Management and Social Sciences,
5. School of Education and Psychology,
6. School of Law and Political Sciences,
7. School of Literature and Humanity Sciences,
8. School of Sciences,
9. School of Veterinary Medicine (Shiraz University, 2011).

Moreover, Junior Agricultural College of Darab and Junior Teachers Training School of Kazeroon are located in Darab and Kazeroon towns.

Presently Shiraz University has over 12,600 students who study in 3 programs leading to the Associate diploma (A.D.), 53 programs leading to the Bachelor’s degree (B.A., B.S.), 61 programs leading to the Master’s degree (M.A., M.S.), one professional Doctorate (D.V.M.) and 25 Ph.D. programs. The constituent libraries in Shiraz University are as follows:

(i) Kharazmi Library (School of Engineering),
(ii) Mollasadra Library (School of Sciences),
(iii) Mofatteh Library (School of Agriculture),
(iv) Art and Architecture Library,
(v) Hashemi Nejad (School of Veterinary Sciences)
(vi) School of Law and Political Sciences Library (Shiraz University, 2011).

4.2.4.1.1 Central Library and Documentation Center, Shiraz University

The Central library started functioning in the year 1986. Now it is housed in three floor building with the area of 11,000 square meters. It is one of the largest university libraries in the country and in particular, the largest of all libraries in Fars State and in the southwest of Iran (Central Library and Documentation Center, Shiraz University, 2011).

Central Library and Documentation Center, Shiraz University is a place that scientific documents, books, magazines, research documents etc. were gathered and ready to be served to students, teachers and staff. Central library of the university provides timely and effective access to information resources, specially, books, journals, etc. for all library branches to support educational and research activities of teachers and researchers. The library has different sections: 'Acquisition', 'Organisation', 'Reference', 'Circulation', 'Information Centre', 'Professor pope Collection', 'Abbaspour Collection', 'office' etc.
The central library is responsible for creating records for books and also maintaining library databases. It uses Dewey classification and the library management software is 'Pars Azarakhsh'.

At present Central Library collection has a large number of Persian, Arabic and English books (153,643), reference books (13,252), Persian journals (400), English journals (383), Microfilms (800), Microfiches (700), CD-ROMs/DVDs (272), Audio-video cassettes (80), Online databases (20), E-journals (16,000), and National databases (3) (Table 4.1).

Full bibliographic information of all books available in different libraries of Shiraz University can be searched through the computerized catalog (OPAC).

All libraries at Shiraz University are connected to Internet through cable or wireless. The internet bandwidth is 80 Mbps. The library ICT facilities includes Net server (6), Computer workstation (PC) (50), Laptop (1), CD-writer (50), CD tower (1), Data projector (1), Scanner (2), Printer (11), Barcode scanner (2), Barcode printer (1), Fax machine (2), Security gate (1) and UPS (1) (Table 4.2).
### Table 4.1
Library Collection in University Central Libraries of India and Iran

<table>
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<th>Iran</th>
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<tr>
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<td>UH</td>
<td>BU</td>
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<td>5000</td>
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</tr>
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<td>10</td>
</tr>
<tr>
<td>10</td>
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</tr>
<tr>
<td></td>
<td>Films</td>
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<td>---</td>
</tr>
</tbody>
</table>

**Note:**
- NR=No Response,
- UH= University of Hyderabad,
- BU= Bangalore University,
- FUM=Ferdowsi University of Mashhad,
- SU=Shiraz University
### Table 4.2
ICT Facilities in University Central Libraries of India and Iran

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<th>Iran</th>
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</tr>
<tr>
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<td>Total No. of CD-Writers</td>
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<td>15</td>
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<tr>
<td>5</td>
<td>Total No. of CD Towers</td>
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<td>0</td>
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</tr>
<tr>
<td>7</td>
<td>Total No. of Scanners</td>
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<td>Total No. of Printers</td>
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<td>4</td>
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<tr>
<td>9</td>
<td>Total No. of Barcode Scanners</td>
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</tr>
<tr>
<td>10</td>
<td>Total No. of Barcode Printers</td>
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</tr>
<tr>
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<td>Total No. of Fax Machines</td>
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<td>1</td>
</tr>
<tr>
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<td>Total No. of Security Gates</td>
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<tr>
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<td>Total No. of UPSs</td>
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</tr>
</tbody>
</table>

**Note:**
UH= University of Hyderabad,
BU= Bangalore University,
FUM=Ferdowsi University of Mashhad,
SU=Shiraz University