CHAPTER – 3

RESEARCH METHODOLOGY USED IN THE STUDY

3.1 Introduction

The most important function of a university library is conservation of knowledge, supporting extension of knowledge (research) and transmission of knowledge (teaching). Therefore establishment of a good modernized library is seminal to a postgraduate institution like a university in its academic and intellectual development. All universities concentrate a great deal on the equipment of their libraries which can effectively cater to the needs of their academic community which comprises students and teachers. Since equal emphasis has to be played not only on the learning process but also on the teaching methods, libraries have to keep abreast of day to day changes which include technological and scientific developments. No wonder that T.H. Huxley in his letters to E. Ray Lankester (1892) has said that ‘The medieval university looked backwards; it professed to be a storehouse of old knowledge … the modern university looks forward and is a factory of new knowledge.’ Further with the advent of electronic information sources for higher education university libraries are increasingly acquiring them in addition to print or sometimes replacing print. This is more visible in journal collections. A need has been felt to know how this change in collection format is accepted by the libraries and user community. The present study “Collection Management of Electronic Information Resources: An Analytical Study of Selected University Libraries in Andhra Pradesh” is an attempt made in this regard. The objective is to compare the prevailing working conditions with special focus on strength, organization, technical processing, access, preservation and maintenance of print and electronic collections.

The study has been conducted in two parts; the first part is to gather data from the selected university libraries with regards to collection development and management. The second part is to ascertain the utilitarian aspect of these resources by the users and seek their preferences in formats. A library collection varies according to the mission and goals of its parent institution. It also has an impact on the nature and types of services provided and the size and type of population served. An attempt has been made to
examine how far heterogeneous university libraries specialized in different fields of disciplines like Agriculture, Arts and Sciences, Engineering, Health Sciences, Law, including a Central University that is offering conventional courses in A.P. and have reflected their objectives in Collection Management (CM). A survey was conducted to make a comparative analysis in the collection management activities that are prevailing in the selected libraries and to find out whether these libraries have modified their CM activities with respect to electronic information resources.

In order to study the effect of selection, organization, maintain and usage of electronic information resources along with printed collections and its impact on the management of university libraries, it was decided to use a multi faceted quantitative research approach to collect the relevant data from university librarians and the user community consisting of faculty members and research scholars from the selected six universities. The research method adopted forms an integral part of the whole process of the present study. It is considered as the central force for the progress and development of a systematic investigation. The data was collected using questionnaire as a tool that was personally distributed to the concerned university librarians and users. The investigator made personal visits to distribute the questionnaires and observed the prevailing conditions of these libraries.

3.2 Research Methodology

There are different methods and procedures used to gather data for quantitative research that include experimental research, survey method, historical method, descriptive method and case study method. Each method has its own strength and weakness. To fulfill the objectives of the present study, survey method was adopted with questionnaire as a tool for collection of data. Survey method is very popular as it allows for standardization and uniformity both in the questions asked and in the method of approaching the subjects. It is easier to compare and contrast the answers given by the respondent group. It also ensures higher reliability, efficiency and accuracy in determining the information about the given population. The results can be obtained relatively quickly depending on the sample size.
There are various tools and techniques used for the acquisition of data collection. The most frequently used tools of research for data collection are questionnaire method, interview, transaction log, observation method, rating scales, psychological tests, social scaling and citation study. The questionnaire method has been used to collect the data for the present study. Questionnaire is one of the most widely used and preferred social science research data collection tool because this method is amenable to statistical analysis. It is used to obtain accurate information from the respondents. It is more economical and easy to administer. It helps to cover a large group at the same time.

A well designed structured questionnaire covering the relevant aspects of the study was used to collect the data. The researcher has personally visited the selected six universities and sought data from university librarians. The questionnaire was filled by the librarians in the presence of the researcher.

3.3 Questionnaire Design

Keeping in view the objectives, scope of the study, hypothesis and taking into consideration the massive shift in the selection, management, dissemination and use of e-resources by library professionals and users, the questionnaire has been devised and used to collect the data for this study. Efforts were made in designing the questionnaire in such a way that accurate, valid and reliable results could be obtained. These questions were formulated to realize the extent of utilization of print and electronic resource collections, the information seeking behavior of the users, their preferences and expectations about the library collections and its impact on collection management. While designing the questionnaires, due care has been taken to make it comprehensive by including all the essential aspects without sacrificing its simplicity and objectivity. The length of the questionnaire had to be reduced to increase the response rate. Efforts were made to pre-test and finalize the questionnaire for distribution.

For this study two sets of questionnaires one for the University Librarians and the other for the Users were designed for collecting the data. Details of the contents in both the questionnaires have been given in the subsequent sections.
The librarian questionnaire has sought information about the University Library. It has therefore covered following aspects:

1. General Information.
2. Library Organization Structure.
3. Budget
4. Collection Development
5. Organization and access.
6. Services
7. Maintenance and security.

The user questionnaire was used to collect information focused on the use of e-journals and databases. Users were thus asked questions regarding their awareness, usage, preferences, perceptions, preferred practices and attitudes. It has covered the following aspects.

1. Personal identification
2. E-Resource Collection
3. Library Collection
4. Any suggestions to improve library collection/access.

The questionnaires have been enclosed vide Annexure Number 1 and 2.

3.4 Scope

The scope of the study covers six universities that were selected from Andhra Pradesh. The main criteria used for selection was that each of the selected university which specializes in one of the fields of Agriculture, Health Sciences, Law, Technology, or conventional offering all types of courses. Under conventional, one State and one Central University have been selected for study. It is a heterogeneous sample. The present study has been carried out taking a sample of the following six university libraries. All the six universities under study are arranged in a chronological order according to their year of establishment.
1. Dr V. S. Krishna Library, Andhra University Visakhapatnam (1926).
2. ANGRAU Central Library, Acharya, N. G. Ranga Agricultural University, Hyderabad (1964).
3. University Library, Jawaharlal Nehru Technological University, Hyderabad (1972).
5. Dr NTR UHS Library, Dr. NTR University of Health Sciences, Vijayawada (1986).

The study has been limited to the above six universities so that the application and the extent of use of electronic information resources by the users can be easily gauged and compared. These universities constitute the core group of users who significantly use electronic resources very frequently with respect to other universities in the state. However affiliated colleges of these universities are not included owing to the limitations of time and resources.

The total population of user survey comprises full time Ph. D scholars, registered with effect from 2007-08, permanent faculty members belonging to the various departments of six universities have been covered. The following criteria were considered for the selection of respondents from the above six universities.

1. University Librarians : All six university librarians.
2. Teaching faculty of the University : 20% of the total strength that consists of professors, associate professors and assistant professors of the universities.
3. Research scholars of the University : 10% of the total strength of research scholars from each university.
1. Dr. V. S. Krishna Memorial Library, Andhra University, Visakhapatnam.
2. ANGRAU Central Library, Archarya, N. G. Ranga Agricultural University, Hyderabad.
3. University Library, Jawaharlal Nehru Technological University, Hyderabad.
4. Indira Gandhi Memorial Library, University of Hyderabad, Hyderabad.
5. Dr NTR UHS Library, Dr.NTR University of Health sciences, Vijayawada.
6. NALSAR Library, NALSAR University of Law, Hyderabad.
3.5 Sample Selection

In order to probe into the print and electronic library collections simple random sampling technique was applied. The sample was selected using the statistical tables. The sample size of the teaching faculty and research scholars from each university has been arrived on the basis of present total strength of faculty and research scholars for a period of four years from 2007-2011. In NALSAR University 50% of total strength of teaching faculty and research scholars was selected as the size of the total population is low. Details of the sample size and response rate of faculty and research scholars are displayed in Table 3.5.1 and Table 3.5.2

Table 3.5.1: Total Population of Teaching Faculty from each University.

<table>
<thead>
<tr>
<th>Name of the University</th>
<th>Total Population of faculty</th>
<th>Sample Size</th>
<th>Sample selected and Questionnaires distributed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr V.S. Krishna Library AU</td>
<td>575</td>
<td>20%</td>
<td>115</td>
</tr>
<tr>
<td>ANGRAU Central Library</td>
<td>349</td>
<td>20%</td>
<td>70</td>
</tr>
<tr>
<td>University Library, JNTUH</td>
<td>124</td>
<td>20%</td>
<td>25</td>
</tr>
<tr>
<td>IGM Library, UOH</td>
<td>351</td>
<td>20%</td>
<td>70</td>
</tr>
<tr>
<td>Dr NTR UHS Library</td>
<td>182</td>
<td>20%</td>
<td>37</td>
</tr>
<tr>
<td>NALSAR Library</td>
<td>25</td>
<td>*50%</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>1606</td>
<td></td>
<td>329</td>
</tr>
</tbody>
</table>

*NALSAR University has less number of faculties and sample size of 20% may not be adequate to draw generalizations. Hence 50% of the total population of faculty has been taken as sample.
Table 3.5.2: Total Population of Research scholars from each University

<table>
<thead>
<tr>
<th>Name of the University</th>
<th>Total Population of Research Scholars</th>
<th>Sample Size</th>
<th>Sample Selected and Questionnaire distributed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr V.S. Krishna Library AU</td>
<td>1326</td>
<td>10%</td>
<td>135</td>
</tr>
<tr>
<td>ANGRAU Central Library</td>
<td>92</td>
<td>10%</td>
<td>10</td>
</tr>
<tr>
<td>University Library, JNTUH</td>
<td>1992</td>
<td>10%</td>
<td>200</td>
</tr>
<tr>
<td>IGM Library, UOH</td>
<td>1531</td>
<td>10%</td>
<td>153</td>
</tr>
<tr>
<td>Dr NTR UHS Library</td>
<td>35</td>
<td>*50%</td>
<td>18</td>
</tr>
<tr>
<td>NALSAR Library</td>
<td>20</td>
<td>*50%</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>4996</td>
<td>*50%</td>
<td>526</td>
</tr>
</tbody>
</table>

*NALSAR Library is having 25 faculty members and 20 research scholars. 20% of the total population of faculty and 10% of the total population of research scholars will be low to seek their opinion. Hence 50% of the total population of faculty and research scholars has been taken.

3.6 Data Collection

The two different set of questionnaires were administered one for university librarians and the other to the library users consisting of teaching faculty and research scholars. Some of these questionnaires were collected personally. However the response has been 100% in the case of librarians. Repeated attempts were made to have maximum response rate. Few of the respondents refused to complete the questionnaires due to unexpressed reasons. The data was collected during the period August 2011 to August 2012.

Table 3.5.1 reveals that out of the total population of 1606 faculty, the sample selected was 329. Questionnaires were distributed among 329. Only 295 (89.66%) duly filled in questionnaires were received from faculty of selected universities under study.

Table 3.5.2 reveals that out of the total population of 4996 research scholars, the sample selected was 526. Questionnaires were distributed to 526 research scholars. Only 485 (92.50%) duly filled in questionnaires were received from research scholars of selected universities under study.
Though questionnaire remained the main source of data, however the gaps were filled through the use of other techniques like personal interview, annual reports, brochures, university library website when needed for the requisite information. Further relevant information for the study was collected through observation of users, professional staff and system of workflow that prevailed in respective libraries at the time of personal visits to respective libraries. It proved to be useful in collecting hidden aspects of usage. But in few cases, despite several attempts, the information was not provided as they were considered confidential especially financial aspects.

3.7 General Profile of Libraries

A university is rightly described as a community where scholars and teachers are the head, students are the body and the library its heart. It plays a significant role in the development of the society. The main objective of any university is to seek and cultivate new knowledge by way of research, extend higher education to youth and to encourage academic investigations to the problems of the society for the advancement of civilization.

University libraries in India have passed through several stages of development since 1947. The establishment of University Grants Commission (UGC) in 1953 is an important landmark in the growth and development of University libraries in India. The importance of library in higher education has been emphasized by educationalists, librarians, scholars, education commissions and committees. To quote from the report of the Radhakrishnan Commission (1948) library is “Heart of University’s work”. Similarly the Kothari Commission on education in its report submitted in 1966 emphasized the importance of libraries in higher education. It has quoted that “No University, recommended that no college or department should be setup without taking into account its library needs in terms of staff, books, journals, space. The library should be an important centre of attraction on the university campus”. Our President Dr Shankar Dayal Sharma has rightly stated that “a library is more important than a university because it can function without a university whereas a university cannot do without a library”.

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After 1960 the situation started changing. University libraries grew at a rapid rate with the generous support of the UGC. The Review Committee Report(1959) under the chairmanship of Dr. S. R. Ranganathan, doyen of Indian librarians and other eminent professors, researchers to mould university libraries as ‘centers’ to promote excellence in scientific research and teaching contributed for their advancement.

The library of the modern university is conceived as a multifaceted learning centre dedicated to serve the multifunctional agenda of the university. To play this role effectively the university library has acquired, maintained and replenished its collection, services and resources through user friendly management practices, networking among university libraries and information centers, employed appropriate marketing strategies to win over its users in all possible ways.

The present chapter gives a brief overview about the selected university library profiles in Andhra Pradesh on which the study was carried out.

3.7.1A Andhra University, Visakhapatnam.

Andhra University was constituted by the Madras Act of 1926. The former President of India Dr. Sarvepalli Radhakrishnan was one of its Vice-Chancellors who succeed Dr. C. R. Reddy in 1931. The University College of Arts was inaugurated on 1st
July, 1931. The inaugural courses were Telugu language and literature, History, Economics and Politics. A year later, the College of Science and Technology came into being with Physics and Chemistry courses. The University pioneered in introducing many new courses in Science, Arts, Management and Engineering in the country. Since its inception in 1926 Andhra University has an impeccable record of catering to the educational needs by keeping in pace with the global needs and challenges by offering several new courses of relevance and contemporary significance.

The character and efficiency of a University may be gauged by its treatment given to its central organ, the library. It is regarded as the most important equipment of the University. The University promotes intellectual excellence for its students and faculty through its library. It is considered as a permanent investment guaranteeing returns for centuries to come.

3.7.1B Dr. V. S. Krishna Library, Andhra University.

Library: Andhra University was started in the year 1927, but was renamed as V. S. Krishna Memorial Library in 1968 as a mark of respect to the former Vice-Chancellor Dr. V. S. Krishna who use to spend most of his time in Andhra University library. This was a fitting tribute to a scholar believed in the importance of a library in the academic growth of a university. The library has two branches in Engineering and Law college.
dealing with their respective disciplines. The building consists of four floors and a cellar. The total plinth area of Dr V. S. Krishna Memorial library is about 60,000 sq ft.

**Working Hours:** The library is opened from Monday to Saturday from 8:00 AM to 10:00 PM and on Sundays from 10:00 AM to 5:00 PM. It is closed only on Public holidays as per the university academic calendar.

**Collection:** Dr V. S. Krishna Library has huge collection of books apart from important journals, microfilms, and palm leaf manuscripts. It maintains a collection of 4,44,000 books and 497 current research journals on various subjects in addition to back volumes.

**Functions and Services:** The main functions of the library are management of acquisition, technical, periodical, circulation, computer, binding sections besides the regular administrative routines. The Library offers a number of information services to its users for using the printed and electronic resources like reference, current awareness, lending, reprographic and internet browsing. Access to e-resources is made available to various departments in the campus through UGC Infonet e journal consortium programme. In addition to this an exclusive reading room facility is provided in a spacious two storied building adjacent to the main Library.

The library is equipped with state of the art technology to handle e-resources. It works as a hub of knowledge base for students, research scholars, teachers and R&D wings of local industries such as Visakhapatnam Port Trust, Indian Navy, Visakhapatnam Steel Plant, Simhadri Power Project, Bharat Heavy plates & Vessels, Hindustan Petroleum Corporation Limited, Coramandel Fertilisers, Hindustan Zink Ltd. etc.,

(Source: [http://www.andhrauniversity.info/programs.html](http://www.andhrauniversity.info/programs.html))
3.7.2A Acharya N. G. Ranga Agricultural University, Hyderabad.

The Andhra Pradesh Agricultural University (APAU) was established on June 12, 1964 with Shri O. Pulla Reddy, I. C. S(retired) as the first Vice Chancellor at Hyderabad. It was formally inaugurated on March 20, 1965 by Late Shri Lal Bahadur Shastri, the then honorable Prime Minister of India. Later the University was renamed as Acharya N. G. Ranga Agricultural University on November 7th 1996 in honour and memory of an outstanding Parliamentarian Acharya N.G. Ranga, who rendered remarkable selfless service for the cause of farmers and is regarded as an outstanding educationist, kisan leader and freedom fighter.

Learning in the University is promoted by various methods like field trips, in the laboratory and through the use of the University Library which is considered as the sun around which all teaching and research revolve. The University Library remained as a great conservatory of learning.
3.7.2B ANGRAU Central Library.

**Library:** The library system was reorganized in 1980, forming a Central Library at Hyderabad and Regional Libraries at Tirupati and Bapatla and College Libraries at other campuses. The Central Library is located at Rajendranagar, Hyderabad. The Central Library functions under the overall supervision of the University Librarian. The Regional Library and the College Libraries are run by the Assistant Librarians under the administrative control of the Associate Deans in the respective colleges.

**Working Hours:** ANGRAU Central Library functions from 9am-6:30pm and the circulation section functions from 10am- 4:30pm.

**Collection:** The Central library has a collection of about 1, 22, 062 books, 412 national periodicals, 88 international periodicals, 42,564 back volume periodicals, 8000 dissertations, 6800 national e-journals, 900 international e-journals and 10, 000 reports. The Central Library at Hyderabad and two Regional Libraries at Tirupati and Bapatla are provided with CD-ROM database searches by subscribing to CAB Abstracts online services, J-Gate, indianjournals.com, Consortium for e-Resources in Agriculture (CeRA) and CRCnetBase. Through EBSCO e-journal subscription online searches to e-journals can be accessed in the Central Library. It subscribes to CMIE (Indian Harvest) Database where area production and productivity of all the crops in India can be searched. The
other databases housed in this Central Library include biotechnology abstracts, food science & technology abstracts and AGRIS

Functions and Services: The following services like internet access facility, CD ROM search services, current awareness services, book bank services, online printing services, reprography services and career guidance service are being offered. Online Public Access Catalogue is available at the Central Library. Readers can access bibliographic details of the books through the computer terminals. Under e-Granth project ANGRAU Central Library has uploaded all the cataloguing data to Agricat/worldCat.

Library Automation: The library has fully automated its housekeeping operations. It uses LibSys software. Central Library has started digitization project under Krishi Prabha Project. It has completed digitizing 8000 Ph.D and M.Sc theses. Full text thesis is available through Krishi Prabha website. Books are now being issued through barcode labels and scanners. The serial control module is also finished and the readers can search for the journals through computers.

The library system serves the teaching staff and research scholars of the university through its well trained library professionals. (Source: http://www.angrau.net/)
Jawaharlal Nehru Technological University (JNTU) was established on 2nd October, 1972. It has been divided into four different universities namely JNTU, Hyderabad; JNTU, Anantapur; JNTU, Kakinada and Jawaharlal Nehru Architecture and Fine Arts University with the aim to make higher education accessible for students from rural areas. JNTU, Hyderabad caters to the information needs of its primer institutions like Institute of Science and Technology, School of Information Technology, School of Management Studies and JNTU College of Engineering, Hyderabad.

It is a premier institution that offers academic Bachelor of Technology programmes in 21 disciplines and Bachelor of Pharmacy for undergraduate level, integrated 5 year dual degree Masters programme, Master of Technology programme in 56 disciplines and post graduate and research in core areas in the field of Engineering and interdisciplinary areas of Science and Technology besides Management and Distance Education Programmes.

The conservation and transmission of knowledge and research is the important function of the University as a whole. This is achieved through its university library. University library performs effective library service conducive to good teaching, learning and development of research. University library is housed in an independent building named after first Vice Chancellor T R Doss Bhavan.
Library: Initially during 1990, the library functioned on a spacious floor in the academic block on the main campus of the university at Masab Tank, Hyderabad. This engineering Library was merged with university central library along with the books & staff. Later in the year 2004 the library was shifted to a new building with three floors constructed in 45,000sq feet spacious area at Kukatpally campus of JNTUH.

Working Hours: Library functions from 8:30am to 11:30 pm and on week days and holidays from 9:00 am to 5:30 pm. The circulation section is open for regular students from 10am-4:30pm. It functions again from 4:30 pm- 9:00pm for part time post graduates.

Collection: It is one of the modern libraries that stocked a collection of printed books over 80,844, around 17,250 reference books, nearly 5349 thesis and dissertations, 10,000 books in SC/ST book bank and 8,500 books in the SC/ST Integrated Book Bank. It subscribes to 102 printed Indian journals, 18 printed foreign journals, 6 magazines and 12 news papers. It has a collection of 3330 back volumes of bound journals. Library has 4882+ electronic journals, 8 journal databases and 1709 e books. Through Indest Consortium, library can access AICTE funded e-journals as well as university funded e-journals.
**Services:** The library provides routine services like reference, referral, abstracting and indexing, current awareness, selective dissemination of information, on line searching, document copying service on CD, internet facility and photocopying for students, teachers and researchers.

**State of Art Technology:** The infrastructure in this university library is well planned. It has a local area network developed throughout University Library (Three floors) with CAT 6 Cable, with 4 CISCO Switches, with 24 ports each of 96 nodes and 1 Router. A Firewall (CISCO Make) and L3-GIGA Switch (CISCO Make) are installed to protect Computer Servers to prevent the users in viewing unwanted sites, monitor and regulate all incoming and outgoing internet traffic. The circulation counter is equipped with 2 Nos. of Motorola LS 2208 hand held scanners for issue and return of the books.

There is a surveillance System that has been installed on all the three floors in the University Library with 44 colour dome cameras, 10 C-mount cameras, and one Night Vision camera at the main gate. The university library has installed a photo colour identity card printer to issue library cards for students, staff and researches.

The University Central Library was fully automated with bar coding of the books in the year 2006 through VTLS-Virtua Library Software. The main features of the VTLS Software are OPAC, Acquisition, Cataloguing, Circulation, Serial Control and, the Digitization of the content of the books.

Thus university library is well equipped with modern facilities and resources in the form of online databases, e-journals, e-books, standards, thesis, dissertations, books, journals and news papers. (*Source: http://www.jntu.ac.in/new/ *)
3.7.4A University Of Hyderabad, Hyderabad.

University of Hyderabad is a Central University created by an Act of Parliament in 1974. It is one of the premier institutions established at Andhra Pradesh, India. It has distinguished itself as one if the best in the country as a centre for teaching, research and innovation. The University Grants Commission (UGC) has recognized the University as a ‘University with Potential for Excellence’.

The University is located on 2,000 acres of serene and green campus about 20Kms, from the city of Hyderabad on the old Hyderabad-Mumbai road. The University has ten schools of study and many centers of excellence. It has excellent support facilities and infrastructure such as a computer centre with high speed internet band width and a well established library with the state of art facilities to serve the information needs of its faculty, research scholars and the student community.

In order to meet the information requirements of its users under its jurisdiction UOH library plays a very important role. It is considered as the heart of academic pursuits as its research and teaching work are derived from its library.
Library: UOH library is known as Indira Gandhi Memorial Library or IGM Library. The main motto of the library is to make the library the most effective learning resource centre that contributes to quality learning experience. It supports teaching and research activity of the University.

Working Hours: IGM Library functions from 8.30am to 11:30 pm on week days and on holidays from 9:00 am to 5:30 pm. The circulation counter for issues and return closes by 5:30 pm. It follows separate timings during summer and winter vacations. Library is closed on Holi, Dussehara, Diwali, 26th January, 15th August, 2nd October

Collections: IGM Library houses one of the largest and richest learning resource collections in the field of arts, science, humanities, social sciences, engineering and management. The library collection consists of books and monographs (3,58,740), thesis and dissertations (3265), back volumes of journals (82,384), e-books (2889), journals in print format (510), e-journals (17,000), news papers (27), general magazines (37), Braille books (418), CD-ROMs and DVDs (1600). It also has a good collection of reference
books and serial publications. At present the library subscribes to 560 print journals. Nearly 17,000 e-resources and 19 full text online databases, in addition to JCCC @ INFONET are accessed in the library through subscription of UGC INFONET e-journal consortium since January 2004. The library acquired indexes and abstracts besides bibliographic databases in CD format supplied by publishers and aggregators of databases. IGM library participated in resource sharing activity by sharing 100 journals related to chemistry, pharmaceutical sciences and mathematics to the network JCCC@VIC during 2002-2004.

**Services** A wide variety of services are provided in the IGM Library. It provides Document Delivery through JCCC@INFONET and Inter Library Loan services not only for internal users but also for external users of the library. The information technology services provided in the library are Internet browsing, OPAC searching, CD-ROM databases and scanning of documents. Reprography services in photocopy form all available in the library. In addition services like personal telephonic, email consultations for discussions on access problems, searching techniques, education of users like researchers, faculty for using online access databases through orientation and training programme from publishers and aggregators, access to bibliographic records of databases through Web OPAC, compilation of alphabetical directory of e-journals to help users to locate the availability of specific title among hundreds and thousands of research journals from different databases. Further it provides multimedia links to enable users access digitized text of thesis and web pages of journals to access table of contents.

**State of Art Technology:** IGM University library takes the credit of being one of the first university library in India to have fully automated all its housekeeping operations. It started its automation activity in the year 1989. An integrated library application software LIBSYS is used using the XENIX operating system. In 2001 the library switched to VTLS software package for library automation and digital library. It also allows CD/DVDs for network access through Cyber Storage System. It also replaced its card catalogue with Online Public Access Catalogue.
The major projects undertaken by the IGM library are the computerization of Dr. B.R. Ambedkar Open University library, city central public library i.e. Grandhalaya Samstha which will be one of the first public library in the country to be computerized with e-mail, Internet, CD-ROM databases and online search facilities. It successfully completed the compilation of three volumes of social science union catalogue of periodicals and serials in major libraries of Hyderabad and Secunderabad. Initiated the digital library project with special funding from UGC in collaboration with M/s SUN Microsystems and M/s VTLS Inc.

Thus the mission of Indira Gandhi Memorial Library is to support the research and educational endeavours of students, research scholars and faculty members of the university. This has been achieved by this library by collecting, organizing, preserving and disseminating information and instructional material in all formats through need based services and access to online information resources using modern information communication technologies (Source: http://igmlnet.uohyd.ernet.in:8000)
3.7.5A Dr NTR University of Health Sciences, Vijayawada.

The Andhra Pradesh University of Health Sciences is the first University of Health sciences in the state established by the Act. No.6 of the Andhra Pradesh legislation. It was inaugurated on 9th April 1986 by Sri N.T. Rama Rao the then Chief Minister of Andhra Pradesh. The University of Health Sciences started functioning at Vijayawada from 1st November 1986. After the demise of Sri N. T. Rama Rao the University was named after him as Dr. N. T. R University of Health Sciences with effect from 2nd February 1998 vide Act No.4 of 1998. In April 2002 separate infrastructure was provided with spacious accommodations for office, staff and students.

The University provides interactive programme on research methodology focused on medical research, introduced Ph.D courses, post graduate courses, Dental courses, Medical degree in Ayurveda, Homoeopathy, Unani and non clinical degree courses.

The free access to ideas and the excellent functioning of the untrammeled mind is achieved and widely available through the maintenance and use of the University Library. The University through its library provides an indispensable asset for the continuing teaching and research work on their campuses.
3.7.5B Dr. N. T. R. UHS Library.

Library: Dr. NTR University Library is mainly a reference library in the field of medicine and allied sciences. The aim of the library is to develop its services and resources so as to form a state medical library for reference purpose for the whole medical community in the state of Andhra Pradesh. It was established in the year 1986.

Working hours: It is kept open from 9:00am to 7:00pm.

Collections: Dr NTR UHS Library holdings consist of reference books, books, journals, thesis and dissertations in the field of medicine, aurveda, homeopathy, allopathy, dental and unani are available only in electronic format. It subscribes to 3900 e books on various fields of medicine.

The library has the distinction of being the digital library that has a collection of electronic books and journals. The digital library is equipped with multimedia, reprographic and internet services. This digital library is a member of ERMED e- journal consortium hosted by the National Medical Library, New Delhi. This university has established a consortium with the libraries of the affiliated colleges and named it as NTRMEDNET Consortium.
Services: Dr NTR UHS Library provides various user centric services to its members. It offers regular services like reference services, reprographic services, net based services and online services to its users. Proquest medical library is available on a series of CD-ROMs. This library serves as a depository of medical collections for the entire state of Andhra Pradesh. It’s online archive is most frequently used by its users. (Source: www.ntruhs.ap.nic.in/)

3.7.6A NALSAR University of Law, Hyderabad.

NALSAR University of Law was established in the state of Andhra Pradesh under the Act No. 34 of 1998 and amended by Act No. 7 of 2005 under the establishment of a university by the name of the National Academy of Legal studies and Research University at Hyderabad in Andhra Pradesh. The main motto of this University is “Thinking Ahead”. It actively involves in teaching and research in law and in allied disciplines. The various courses offered are Bachelors Degree in Law, LLM, M. Phil and Ph.D programs.

The University Library at NALSAR reflects the standards and quality of education being imparted. It is a pivot for its institution.
3.7.6B NALSAR Library

**Library:** The NALSAR Library has an independent building in the heart of the campus. It occupies a central location in the campus. It comprises of three floors spread across an area of 54,323 Sq. Ft. The first two floors have a reading space for more than 300 users. The library is also equipped with an orientation room, a discussion room and a moot court library on the first floor. Wireless run internet facility is available on all the floors of the library so as to ensure continuous access to information, necessary for the students and the faculty.

**Working hours:** The library functions on Monday to Saturday from 9:00 am to 9:00pm and on Sundays and holidays from 10:am to 5:00pm. During vacations it works from 10:00am to 4:00 pm. It is closed on 26th January, 15th August and Holi.

**Collection:** It has a rich collection of primary and secondary legal sources for all the users in the campus. It has a collection of more than 50,000 documents that includes back volumes of journals, around 6000 law reports and reviews. The reference section comprises of law reports from the supreme court cases, textbooks on law, humanities and social sciences that are arranged according to Dewey Decimal Classification. It also consists of other reports published in specialized fields such as Arbitration Law Reporter, company cases, income tax etc. The special reference section includes all reports related to Law from United Kingdom. A separate section is allocated for United Nations
Collections. This section consists of a substantial collection of conferences, seminar materials, handbooks published by United Nations and proceedings of the sessions from significant organs of the United Nations. Further it posses 9 CD-ROM databases, 100 CD-ROMS, 6 online databases and 15 VCDs. The library has 1800 books as gift collections.

It subscribes to 60 national and 9 international journals. It houses a collection of 6000 online journals and to 100 print journals. It also subscribes magazines for general purpose. The library also has a collection of legal materials, law commission reports and other published works by World Bank in CD format that can be used in network desktops. It is restricted by user license.

It has access to Thompson West’s Online Legal Research Service, Hein Online, JSTOR, Manupatra and UN collection depository of printed resources that can be accessed online.

**Services:** The library offers services like selective dissemination of information, table of contents page of books and journals, list of new accessions, online chat with library staff for reference services, user orientation sessions, separate bays for laptop users, six network terminals to access online catalogue, electronic databases, CD-ROM databases, moot court library that is equipped with moot materials and other materials usually gathered for the participants who represent NALSAR in various national and international Moot Court Competitions, internet facility, printing, photocopying, scanning facilities are provided in the library. Users can visit the Library Online Catalogue page to view the table of contents of each issue that is scanned and uploaded on the library portal.

**State of Art Technology:** The library has introduced the latest technology like RFID for circulation, management, inventory and security systems. All the housekeeping activities are automated and are powered by VIRTUA of VTLS In. In addition it has a software and hardware like kurzwell 1000, index Braille and job access with speech for visually impaired patrons.

Thus NALSAR LAW LIBRARY is the hub of all library activities established to accomplish the research and academic objectives of the University. (www.nalsar.ac.in )
3.8 Conclusion

Thus the oldest library established was Dr V.S. Krishna Library, Andhra University and the library of recent origin is NALSAR Law Library, Hyderabad. ANGRU library and JNTUH library were established much later after the establishment its University. Three of the six universities have named their libraries in honour and memory of well noted, famous, outstanding educationist, freedom fighter and parliamentarians like Dr. V.S. Krishna, Acharya N.G.Ranga and Indira Gandhi. All six university libraries possessed a unique web site and email ID for quick correspondence and exchange of information with the user community.
References

2. www.andhrauniversity.info
3. www.angrau.net
4. www.jntu.ac.in
5. www.uohyd.ac.in
6. www.ntruhs.ap.nic.in
7. www.nalsar.ac.in