4.1 Introduction

Modern libraries are understood as extending beyond the physical walls of a building, by including material accessible by electronic means, and by providing the assistance of librarians in navigating and analyzing tremendous amounts of knowledge with a variety of digital tools. The Information Technology application of different techniques in each and every area of library functioning has brought a tremendous change in effective performance of information services in or its ramifications.

The advancement in the field of information technology has worked its impact on library services. Due to the changing environment and automation, there is a demand and increase in the use of electronic information resources. And it is more in the academic institutions, especially in those institutions of Higher Education and Technical Education. Hence, there is every need to study the existing situation as well as to identify the areas to be improved. At the same time, there is a need to study the procedures followed for management of electronic information resources as the future of library services depends greatly on the knowledge and attitude of the users in accepting the electronic information.
In view of the growing number of Engineering Colleges and the growth in use of the E-Resources, the present study is important and a need is there to understand different criteria used by the librarians for selection, acquisition and management of the electronic resources in their college libraries. This will help to identify the best practices, so that the library can adopt a more effective, efficient and meaningful management procedures. Although some studies are available in literature, they are limited to few aspects and available in the form of research papers. There are no systematic and comprehensive studies on this topic. Therefore the present study is taken up. The present study fills the gap.

The main purpose of present research study is to understand the management process of different electronic resources in engineering college libraries and to identify the best practices for the management (selection, acquisition and management aspects like License agreements, De-Selection etc.,) of the e-sources.

4.2 Study Design

A study design or research design is a plan according to which, observations are to be made and this provides the empirical and logical basis for drawing conclusions and gaining knowledge. There is a variety of research designs used in accordance with the type of problem viz., descriptive, diagnostic, exploratory and experimental. The present study is designed to be descriptive or narrative type.

A well-planned research study basically requires a well-defined and delimited aspect or aspects to be studied and should be as precise as possible. Clearly defined objective(s) of the study is basically more important.
4.2 Objectives of the Study

The following are the objectives of the present study:

- To study the electronic resources available in the selected NBA accredited engineering college libraries.
- To study the present situation and identify the problems on electronic resources (selection, acquisition, management) in selected NBA accredited engineering college libraries.
- To study the network infrastructure available to make use the electronic resources in the selected NBA accredited engineering college libraries.
- To study the awareness and knowledge of library professionals on various aspects of electronic resources like, selection, acquisition, management and De-Selection etc., in the selected NBA accredited engineering college libraries.
- To study the tools used for selection of Electronic resources and criteria followed in selected NBA accredited engineering college libraries.
- To study the management aspects like verification of access, feedback, updating, renewal, AMC etc., of electronic resources in selected NBA accredited engineering college libraries.
- To study the licensing and evaluation aspects of electronic resources in selected NBA accredited engineering college libraries.

4.4 Methodology

In order to elicit the needed information for the present study, it is decided to employ the most popular survey method. In view of the objectives of the
present study, it is meaningful to elicit the needed information from the librarians concerned of the selected engineering college libraries in Andhra Pradesh.

4.4.1 Sampling Procedure

In the present study, for the selection of the engineering college libraries, the following criteria have been followed:

- The college must be an NBA accredited private engineering college.
- At least 4 courses should have received accreditation.

Before picking up sample for the study, a list of all engineering colleges in Andhra Pradesh is obtained. As per the official list, there were 711 colleges in Andhra Pradesh (2011-2012). These colleges are spread over the 23 districts of the state across the three distinct geographic regions i.e. Telangana (340), Rayalaseema (103) and Coastal Andhra (268).

For the purpose of the present study, following the criteria for selection, only those colleges which were accredited by NBA need to be selected with the assumption that best practices in selection, acquisition and management of electronic resources can be identified from the libraries of such accredited colleges.

Out of the 711 Engineering Colleges in Andhra Pradesh, at the time of the present study, there were only 61 private engineering colleges (8.6 percent) that were accredited by NBA. The distribution of these NBA accredited colleges is 29 in Telangana Region, 7 in Rayalaseema region and 25 in Coastal Andhra region.
Schematic Presentation of the Sampling Procedure

TOTAL
ENGINEERING COLLEGES IN ANDHRA PRADESH

TOTAL NBA ACCREDITED
PRIVATE ENGINEERING COLLEGES IN ANDHRA PRADESH

50% COVERAGE

30 NBA ACCREDITED PRIVATE COLLEGE LIBRARIES

SPREAD OF THE 30 LIBRARIES (Finally Covered)

TELANGANA REGION
RAYALASEEMA REGION
COASTAL ANDHRA REGION
Accordingly, a sample of 30 college libraries has been selected and the contact details of the 61 engineering college libraries are obtained to facilitate data collection plan.

4.4.2 Research Tools

In Social Science research surveys, the questionnaire method is widely used for data collection. In the present study also, this most popular and widely used ‘Questionnaire method’ is employed for eliciting the needed information. Keeping in mind the objectives of the study, a questionnaire has been designed covering all aspects of the study.

This questionnaire has been pre-tested and modifications were incorporated basing on the pre-test experience. The final questionnaire was used for data collection.

The researcher has personally visited all the 30 college libraries selected for the study and recorded the needed information.

4.4.3 Aspects Covered

Generally, a study of the present nature requires a check list of different aspects/criteria that need to be checked with the respondent and recording information. Hence, check lists are carefully prepared for each of the different processes related to management of E-Resources.
The criteria / aspects listed are mostly from the available literature. However, basing on the personal experience in engineering college libraries, some more were added to make the list more comprehensive.

Questions on general information such as year of establishment and accreditation, Questions on the awareness and knowledge of the librarians regarding the electronic resources and network infrastructure facilities available in the library were included in the initial sections of the questionnaire. This is followed by questions related to different procedures such as Selection, Acquisition, Management and De-Selection (weeding) of electronic resources using the prepared check lists. The checklists are as presented below.

**SELECTION PROCESS**

**Tools for selection**

1. Publisher Catalogues through vendors
2. Reviews in Electronic periodicals or Journals
3. Vendor websites
4. Observation of other college library resources
5. Publishers’ demos in seminars/ Conferences
6. Opinion from experts/ Faculty
7. Enquiry with existing vendors
8. Trial offered by the Publishers
9. Trial offered by vendors
10. Consortia
CRITERIA FOR SELECTION

A. General Aspects: It is necessary to elicit information on needs of users, creditability of publishers or vendors’ technical information of E-Resources etc., to full fill the objectives of the study.

1. User needs
2. Vendor credibility
3. Publisher Reputation
4. Technical background of publisher
5. Technology oriented subjects it covers
6. Awareness about trial version
7. Full text and availability through web page
8. Full text of back volumes of journals
9. Search capability
10. Duplication of existing resources
11. Peer reviewed articles in journals
12. Language
13. Anticipatory use of electronic resources purchase
14. Structure of the electronic resource
15. Archival facility by vendors
16. Literature availability format
17. Consideration of professional awareness
18. Availability of sources in print format
19. Information literacy program by vendors/suppliers
20. Online user awareness program offered by publishers

B. Technical Aspects: In this part, the access to E-Resources, user-friendliness, updates etc., are included for designing the questionnaire.

1. Mode of access – Single user / multiple users
2. Kinds of Access - IP based / User name and password
3. Compatibility of Library hardware and software
4. User friendliness in setup files for run Offline
5. Data access - Direct from web page / Link with other web page
6. Quality of technical support by vendors - over Telephone / E-Mail/ online
7. Sufficiency of search speed
8. Easy to setup of electronic resources (off line)
9. Limitations of availability (access 24/7)
10. Timelines of updates
11. Observation of usage Statistics provided by vendor

C. Licensing Aspects: For successful use of E-Resources, the knowledge on various licensing aspects on the part of librarians is necessary. If these aspects understood thoroughly, the librarians can minimize administrative problems while using the E-Resources.

1. Access Method- IP based / User name and password
2. Limit of authorized users number
3. Breach of agreement by vendor
4. Information or warning in case of library violates
5. Time span for investigate and take corrective action
6. Reasons for termination of access
7. Confidentiality of business terms
8. Electronic reserves
9. Indemnification
10. Interlibrary loan conditions
11. Provision for modification of license terms
12. Perpetual Use
13. Archival Rights
14. Renewal terms
15. Cancellation terms
16. Dispute resolution (legal jurisdiction)
17. Warranty of the product
18. Reimbursement for downtime of resources
19. Terms & Conditions of Technical support by vendor
D. **Budget Issues:** For any library, financial sources are limited to acquire books and Electronic resources. In case of E-Resources, the librarian should keep in mind the expenses likely to be made on maintenance, AMC etc.

1. Final cost
2. Fitness to the Budget
3. Payment mode
4. Level of optimum utilization
5. AMC charges
6. Cost of additional infrastructure for use
7. Maintenance cost

E. **Evaluation (Pre-Acquisition) Aspects:** In order to use the E-Resources thoroughly and easily, aspects like user friendliness, quality of resource, technical support etc., are included.

1. Content Completeness
2. Currency
3. Reputation (Reliability)
4. Indexing
5. Impact Factors
6. Ease of access
7. Fitness of Final Cost to budget
8. Technical Support by vendor
9. Terms and conditions of Licensing agreement

**ACQUISITION PROCEDURES**

A. **Verification of bibliographic information:** Before acquisition of E-Resources, the bibliographic information of them to be understood thoroughly. The following aspects are included in this area.

1. Content provided in the resource
2. Coverage of the subjects
3. Frequency of updates
4. Cost
5. Search retrieval capabilities

**B. Pricing Options:** There are several pricing options, it is necessary to exercise suitable pricing options for each E-Resource to get maximum benefit.

1. Type of the product - Annual subscription / Subscription one time purchase for archival product
2. Institution size vs Price
3. No of users vs price
4. Journal package details
5. Content access

**C. Reviewing the License and Business Agreement:** For some E-Resources, it is necessary to review the license agreements periodically for un-interrupted access and minimize the administrative problems. In this context the following aspects are covered.

1. Content of licensed materials
2. Web Site
3. Specification of authorized users
4. Copyright and fair use
5. Confidentiality
6. Cost
7. Governing law (legal jurisdiction)
8. Perpetual access
9. Terms of termination
10. Terms of payment
11. Indemnification
12. Usage statistics

**D. Ordering and Acquiring the Product:** Suitable order format is necessary for placing orders and processing the bills.

1. Availability of Order format
2. Providing technical information to vendor
3. Activation information by vendor
4. Intimation to management about access of the ordered product
5. Invoice processing

MANAGEMENT ISSUES

Once the Electronic resources are acquired in the library, several management issues are to be taken care of, in order to satisfy the management as well as the potential users.

1. Verification of Access – Content / No of users / Access method
2. Organizational chart
3. Periodical reviewing
4. Enquiries and feedback from users - Content not covered / Down loading
5. Monitoring speed of Information Download Facility
6. Monitoring Information storage Facility
7. Print facility to all documents/ part
8. Data Records (accession register)
9. Shelving (non book materials) – Accessioning / Classification / Cataloguing
10. Updating in OPAC
11. Information literacy program - Presentations by publishers / Announcements by library
12. Staff training
13. Database administration
14. Communication with vendors
15. Tracking of Utilization statistics
16. License Tracking
17. Conservation & Preservation
18. Overdue alerts to management
19. Archiving
20. AMC Tracking

DE-SELECTION (WEEDING) ISSUES

The electronic resources would also get outdated and damaged in course of time, so these should be withdrawn from active collection.
1. De-Selection (weeding) policy
2. De-selection criteria:
   - Non circulated materials since no of years
   - Materials not compatible with existing hardware or software
   - Outdated or inaccurate materials
   - Duplication of materials
   - Materials damaged beyond repair

4.5 Data Analysis

Data obtained were entered into a personal computer and were analysed using SPSS 15.0 v software. The study is designed to be mainly narrative or descriptive and this does not require elaborate statistical treatment of the data. Because of the highly homogenous nature of the sample (all are NBA accredited private Engineering Colleges), scope for making comparisons and application of other statistical tools was restricted.

Hence, the analysis is mainly focused on bringing out the number of criteria considered or followed relating to different procedural aspects in selection, acquisition and management of E-Resources by the 30 libraries covered. The observations are supplemented by graphical presentations wherever possible for a better understanding of the observations made. The observations were tabulated and presented sequentially maintaining the logical flow of the analysis.
4.6 Limitations of the Study

1. In view of the time and budget constraints, the study was limited to the NBA accredited engineering college libraries in the state of Andhra Pradesh.

2. The study is limited to NBA accredited private engineering college libraries in Andhra Pradesh.

3. The engineering college libraries considered for study, those have four or more courses accredited by NBA.

4.7 Organization of the Thesis

The present thesis is organized into 06 chapters as detailed below:

Chapter-1 gives a detailed account of history and development of engineering education in India, engineering education in Andhra Pradesh, the role of All India Council for Technical Education (AICTE), and the role of National Board of Accreditation (NBA), about engineering college libraries, various resources in engineering college libraries and history & development of electronic resources.

Chapter-2 describes various types of electronic resources in engineering college libraries, various aspects involved in selection of electronic resources, areas considered for evaluation of electronic resources, aspects to be observed for licensing considerations for electronic resources, various steps involved in acquisition of electronic resources, steps involved in management of electronic resources, steps taken for preservation of electronic resources and De-Selection.
Chapter-3 provides reviews of existing literature referred on different aspects related to selection, evaluation, acquisition, management, De-Selection and preservation of electronic resources. These reviews are divided into three areas: selection of electronic resources, acquisition of electronic resources and management of electronic resources.

Chapter-4 gives objectives of the present study, details of sampling procedure & coverage, description of the questionnaires used for gathering data from librarians about the selection, evaluation, acquisition, management of electronic resources followed by profiles of the 30 selected NBA accredited engineering colleges and their libraries.

Chapter-5 provides detailed analysis and observations of the data collected from the librarians on various aspects of management of electronic resources.

Chapter-6 is the concluding chapter that presents summaries of the previous chapters and suggestions to be followed in the management aspects of electronic resources in engineering college libraries.

Bibliography and Annexure are provided at the end of the thesis.
4.8 Profiles of selected NBA Accredited Engineering Colleges

4.8.1 Anil Neerukonda Institute of Technology and Sciences

(Accredited by NBA and, Approved by AICTE and Affiliated to Andhra University, Visakhapatnam)

Anil Neerukonda Institute of Technology and Sciences (ANITS) is established in the year 2001 by Anil Neerukonda Educational Society, to envisage to emerging as a world class technical institution whose products represent a good blend of technological excellence and the best of human values and is engaged in imparting quality technical education. It constantly services towards achieving high standards of teaching, training and development of human resources by encouraging its faculty and staff to work as a team and to update their knowledge and skills continually to match the needs of industries. It is located in Sangivalasa, Bheemunipatnam, Visakhapatnam district of Andhra Pradesh.

The Central Library along with six departmental libraries collectively supports the teaching, research and extension programmes of the Institute. All students, faculty members and employees of the Institute are entitled to make use of the library facilities on taking library membership. The central library has subscription to online resources of IEEE, ASME, ASCE, McGraw-Hill, Springer, J-Gate, Elsevier and ASTM Digital library, besides 625 video lectures on various engineering and science subjects. All the sections are computerized through LIBSYS and connected on LAN. The digital library section has systems
exclusively with internet connectivity and the students can browse the internet and video lectures during their free time.

4.8.2 Sri Vishnu Engineering College for Women
(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Kakinada)

Sri Vishnu Engineering College for Women, is Located in Bhimavaram, the central part of coastal Andhra. However, recently it has also become a centre for academic activities attracting many professional institutions of higher learning.

The college has modern and fully computerized library on a picturesque location. Its serene and peaceful atmosphere and salubrious climate make it an ideal place for healthy and undistracted pursuit of knowledge and skills by the students. It has vast collection of books, periodicals and monographs in the fields of Engineering, Technology, Science, Management and Literature. The SVECW has established a spacious library and Information centre with an area of 980 sqm. It is divided into different sections like Stack area, Reading room, Reference Section, Digital library, Technical Processing Section, Periodical Section and Reprographic Section. It is having the collection of more than 44,600 volumes, 800 Project reports and 5,200 CDs. The library subscribed 329 National and International Journals. It has automated library House Keeping Operations by using ECAP Software. It subscribes online journals, ABSECO, ASME, ASCE, IEEE, MC Graw Hill and NPTEL Video Lectures.
4.8.3 Jayaprakash Narayan College of Engineering  
*(Accredited by NBA, Approved by AICTE and Affiliated to JNTU)*

Jayaprakash Narayan College of Engineering was established in the year 1997 to produce engineers required for the local development and in addition, providing opportunities for the students in this area. The college is continuously supported by a group of technocrats and is guided by renowned professors and administrators. JPNCE is located in beautiful lush green environs surrounded by scenic mountains and is at an accessible distance from Hyderabad.

The Institute has established a specious Library & Information Centre with an area of 9,500 sft. spread. This library has Book Bank, News Papers and Back Volumes of the Periodicals, Reference Books, Current Periodicals, Digital Library and Discussion Rooms etc.. It is subscribing more than 190+ Online E-Journals through DELNET and 213 International & Indian Journals & Magazines are in E-Learning Reference Section.

4.8.4 Gokaraju Rangaraju Institute of Engineering and Technology  
*(Accredited by NBA, Approved by AICTE and Affiliated to JNTU)*

GRIET was established in 1997, under the patronage of Gokaraju Rangaraju Educational Society, created by Dr. Gokaraju Ganga Raju, the spirit behind the Leila group of industries. To achieve and impart quality education with an emphasis on practical skills and social relevance. To provide an integrated
learning environment to enable students to grow towards their full potential and meet the high expectations of the Industry and the Society.

In keeping with the Vision and Mission of the Institute, the GRIET library and information centre play a vital role in supporting, teaching and learning activities and provide the main source for individual research at GRIET. The library system normally consists of a ‘Central Library’ and ‘Departmental Libraries’. The large campus environment often defines the use of the library in terms of the strength and size of the text and research collection. The library have the NPTEL Video lectures and member of DELNET. Through DELNET Infotrac Engineering Science and Technology Collection and Infotrac Management Collections are subscribed.

4.8.5 Bonam Venkata Chalamayya Engineering College  
(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Kakinada)  
BVCE is established in the year 1997. It is accredited by NBA, affiliated to Jawaharlal Nehru Technological University, Kakinada and approved by AICTE, New Delhi, with a vision “To provide technical education in various disciplines to rural students by encouraging social, cultural and literary activities who shall lead the Nation to a better future”. The Institute offers 5 UG programmes in Engineering and Technology and 4 PG programmes. 24 X 7 cable and Wi-Fi enabled 10 Mbps internet connectivity campus and language labs are value added assets to the college.

The library has a floor area of 800 Sq Mts. which can accommodate about 250 students. The library has Open Access system, therefore users are allowed
to stack area and select books by themselves. Books are classified using Dewey decimal classification and Online Public Access Catalogue (OPAC) to search the library database. It is a fully automated and it uses Barcode technology. C.D ROMs, Floppy Disks and Audio Cassettes on various technical topics are also available. Updated study material for students to prepare for examinations such as, GRE, TOEFL, CAT, GMAT, IELTS, GATE, Campus placement materials and Competitive Examination material are made available. Digital library is established. The Library has the LAN version of the Bees Campusoft Automation and networking software for the library database which consists of all the books, back volumes of periodicals, project reports etc. The database is connected to the campus-wide Local Area Network (LAN) for the benefit of network users in all the departments. The Book Collection is 29692 and Journals national and International are 257.

4.8.6 Gayatri Vidya Parishad College of Engineering  
(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Kakinada)

GVPCE is spread over 25 acres of land in Visakhapatnam, Andhra Pradesh. The Institute was established in 1996. The self-financing institute is affiliated to Jawaharlal Nehru Technological University (JNTU), Kakinada to conduct undergraduate and postgraduate technical courses. In addition, the college has gained the approval of All India Council for Technical Education (AICTE), New Delhi. The undergraduate programs offered by GVP College of Engineering holds the distinction of being accredited by National Board of Accreditation (NBA).
The Library has well equipped Digital Library with 25 systems with one server to Access of Online Journals like IEL / IEEE (241) and Springer link (587). Full Text of the Journals can be downloaded. The Library has a membership of DELNET AICTE - INDEST Through which we get IEL / IEEE Online and Springer link Journals. NPTEL Video lectures, Stanford University and MIT are available, E-Journal archives, materials for competitive examinations are available through campus LAN.

4.8.7 Aditya Institute of Technology and Management

(Accredited by NBA, approved by AICTE and Affiliated to JNTU-Kakinada)

Established in 2001, Aditya Institute of Technology and Management is located near Tekkali in Srikakulam District, Andhra Pradesh, India. Through a fledgling, the Institute has earned a place of esteem and the patronage of reputed business organizations within a short time. To make the life at Aditya Institute of Technology and Management pleasant and comfortable for its students, the campus is provided with the finest facilities and educational resources.

The Central Library spread across 9000 sft. provides for a wide collection of over 25,457 books and 170 national and international periodicals encompassing the entire gamut of the disciplines of engineering and management. The library also provides access to a wide range of electronic and print resources. Aditya Institute of Technology and Management has digital library having 34 Computers connected on LAN and allows browsing the Internet for academic purpose. The Library has IEEE, ASME, ICFAI, online subscription
and Membership in Development Library Network (DELNET), through which one can access specialized bibliographic database of books, serials and non-book materials. The Digital Library also has NPTEL video lectures and 2450 general educational and SONET CDs.

4.8.8 Velagapudi Ramakrishna Siddhartha Engineering College

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Kakinada)

Velagapudi Ramakrishna Siddhartha Engineering College established in the year 1977, is the first private Engineering College in the state of Andhra Pradesh. It is a self financing institution which owes its foundation to the bold and inspired vision of Siddhartha Academy of General and Technical Education, Vijayawada. The College is recognized by the AICTE (All India Council for Technical Education) and the Institution of Engineers (India) and accredited thrice by NBA (National Board of Accreditation, AICTE, New Delhi). The college is affiliated to Jawaharlal Nehru Technological University, Kakinada, Andhra Pradesh.

At present the library has a stock of 79,119 volumes of books and about 3000 back volumes of scientific and technical periodicals. The library also subscribed to over 142 national journals and more than 500 e-Journals. The VRSEC library follows the open access system, encouraging the user to browse freely in the stock area. Standard text books and books by authors of repute in all fields taught at the college are stocked. The library has subscribed EEE, ASCE, Springer, McGraw Hill, H-Gate, EBSCO, ELSEVIER, ASTM, N-List and Delnet.
4.8.9 Prasad V Potluri Siddhartha Institute of Technology

(Accredited by NBA and ISO 9001:2008 Certified Organization, Approved by AICTE, and Affiliated to JNTU-Kakinada)

Prasad V Potluri Siddhartha Institute of Technology established in 1998, at Vijayawada. The policy of PVPSIT commits and offer quality professional education in Engineering.

Fifteen systems are made available for browsing the internet at free of cost and Multimedia systems are provided for using the CD’s like GRE, GMAT, TOEFL etc. and two systems are provided for Housekeeping purpose and one system for maintenance of Library Database. This Library is a member of DELNET. Digital library having 20 computers with internet facility to cater the user needs.

4.8.10 Gudlavalleru Engineering College

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Kakinada)

The college is located at Gudlavalleru, Krishna District, and Andhra Pradesh. The plinth area of the library building is 1264.2 sqm. and has capacity to accommodate 450 users and the library has a collection of 37,750 books (excluding SC/ST Book Bank) and subscribing 239 national and International journals. Library avails the 10MBps internet connectivity from BSNL Leased Line. The Library subscribed to AICTE Mandatory E-Journals like IEEE, SPRINGER (EE, EC&CS), ASME, ASCE, ELSEVIER, J-GATE Engg, J-GATE Management, EBSCO, McGraw-Hill and ASTM Digital Library. The library
subscribes to 153 Technical print Journals and Magazines, out of which 141 are Indian and 12 International. The library also subscribes to quite a number of high value International, Asian and Indian general magazines.

4.8.11 Bapatla Engineering College

(Accredited by NBA, Approved by AICTE and Affiliated to ANU)

The Bapatla Engineering College one of the seven educational institutions sponsored by the Bapatla Education Society, was established in 1981 with a vision to impart quality technical education and is affiliated to Acharya Nagarjuna University. Acclaimed as one of the biggest Libraries with 22,000 sft. The Central Library of BEC has been playing a vital role as Information Centre catering to the academic and learning needs of the faculty and students. The facility is serving the student fraternity ranging from under graduate to Masters and ultimately aiding the Research stratum of Bapatla Engineering College. As a jewel in the crown of BEC, the Library aims at providing premium quality learning resources in the form of Books, Journals, E-Journals and C.Ds pertinent to curricula of diverse Engineering and Technology and of general nature to the students and Teaching Staff. The Library also supports Departmental Libraries for acquisition and maintenance of Titles throughout the academic year. As the veritable abode of Knowledge, the library of BEC houses 25,756 titles, 62,200 Volumes, 2,312 International Online Journals (IEEE, ASME, ASCE, Springer, Science Direct, Mc Graw Hill access Engineering Library, J Gate, ASTM Digital Library) and 111 print journals and Digital Library.
4.8.12 Pragati Engineering College

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Kakinada)

Pragati Engineering College is an epithet for progress. The Pragati has been getting accolade from all the students for 20 years for its high standard of teaching and support it offers to students to help them succeed in achieving their goals. It is an Educational hub for making better Engineers and Innovators. Pragati is blessed with a well stocked library and regular subscription to national and international journals form the year 2007 onwards. It subscribes many e-journals from different sources.

4.8.13 St Martin’s Engineering College

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Hyderabad)

St. Martin’s Engineering College came in the year 2002. SMEC is approved by AICTE New Delhi, affiliated to JNTU, Hyderabad and accredited by National Board of Accreditation (NBA). SMEC is an ISO 9001:2008 certified institution and JKC Centre. SMEC has been built upon a spacious 15 acres campus, aesthetically designed with lush green landscape Central Library with Digital library and over 52 international, 102 national journals and about 50,000 volumes of books besides 2000 E-journals are available in the college. Library is having membership with British Library & DELNET. Video lessons from IIT Madras are available in college digital library to the students, covering all the modules of various Engineering subjects.
4.8.14 Jayamukhi Institute of Technology and Sciences

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Hyderabad)

Sponsored by the Jayamukhi Educational Society, the Jayamukhi Institute of Technological Sciences came into being in 2001 to provide quality and contemporary education with social relevance in the engineering faculty with an ultimate vision to maintain global standards in higher learning and research. The Institute has the approval of AICTE and recognized by the Government of Andhra Pradesh. It is permanently affiliated to Jawaharlal Nehru Technological University (JNTU), Hyderabad. The Institute has come upon 40 acres of green pastures in Narsampet, about 30km away from the historic city of Warangal and presents a picturesque and panoramic view. Based on its outstanding academic, curricular and co-curricular track record established by it within a period of just seven years, the National Board of Accreditation of the AICTE has for the first time accredited all the four branches of engineering offered by Jayamukhi Institute of Technological Sciences. The branches include CSE, ECE, EEE, and IT. The library has the NPTEL Video lectures and Member of DELNET. Through DELNET Infotrac Engineering Science and Technology Collection and Infotrac Management Collection are subscribed.

4.8.15 Vignan Institute of Information Technology

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Kakinada)

VIIT is established in industrial city of Visakhapatnam in proximity to important industrial sectors and industries. Vignan’s massive academic structure VIIT, is a centre of excellence in value based education, training, research and
consultancy. The institute has been successfully growing and moulding the students into complete individuals who are competent enough in meeting global challenges of the industry.

This library is maintained with multiple titles of various authors. The management updates this Library with new editions and titles, technical books 21451, technical journals 55, news papers, magazines etc. as per requirement. Internet Facility is provided for both Staff and Students with 512Kbps broadband connectivity for immediate access e-journals.

4.8.16 Bharat Institute of Engineering & Technology

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Hyderabad)

Bharat Institute of Engineering & Technology established in the year 2001, believe in the holistic development of society at large and are researching its efforts in multi-disciplinary activities.


4.8.17 Aditya Engineering College

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Kakinada)
Established in year 2001, the NBA accredited Aditya Engineering College is a front runner in providing quality engineering education,

Unified Library Server for receiving NPTEL (National Program on Technology Enhanced Learning -- a collaborative project carried out by the consortium of seven IITs and IISc. programs) that includes Stanford University Video Lectures. The library is part of DELNET and INDEST AICTE Consortium.

4.818 CVSR College of Engineering

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Hyderabad)

The Anurag Group of Institutions is an integrated campus of existing institutions CVSR College of Engineering (Estd: 2002). The Institution is approved by AICTE, New Delhi, Accredited by NBA, New Delhi Permanently affiliated to JNTU-H, Hyderabad.

The Anurag library consists of three sections. The library consists of over 18000 Volumes of the textbooks and reference books and receives over 125 National and International journals. The Digital Library in the central library with state-of-the-art systems connected to a high-end server with 4MBPS high speed internet connectivity. The switch Mail search centre is an innovative concept that provides instant mail access to students. The facility is ideally located in the Central Library and operates on two high configuration systems with broadband connectivity to the internet.
4.8.19 GMR Institute of Technology

(Accredited by NBA and NAAC and ISO 9001:2008 Certified Organization, Approved by AICTE and Affiliated to JNTU Kakinada)

GMR Institute of Technology (GMR) is established in the year 1997 by GMR Varalakshmi Foundation, the corporate social responsibility arm of GMR Group. GMR Institute of Technology offers aspiring engineers high quality technical education. It is located in Rajam, Srikakulam district of Andhra Pradesh, GMR Institute of Technology provides its learning community state-of-the-art facilities, infrastructure and a competent faculty.

The Central Library along with seven departmental libraries collectively supports the teaching, research and extension programmes of the Institute. All students, faculty members and employees of the Institute are entitled to make use of the library facilities on taking library membership. The central library has subscription to online journals of ASME, IEEE and ASCE through INDEST – AICTE Consortium and DELNET. Library functioning in all sections is computerized through LIBSYS and connected on LAN.

4.8.20 Annamacharya Institute of Technology and Sciences

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Hyderabad)

AITS Hyd. (Annamacharya Institute of Technology & Sciences at Hyderabad) of Andhra Pradesh was established in the year 2005 to play a pivotal role in the development of the intellectual capital in engineering fields, especially in electrical, electronics, computer & IT fields.
The Library supports the teaching and research programmes of the Institute and provides facilities for general reading and disseminates information according to the requirement of the users. It is housed in a separate building with a plinth area of 650 sq. mtrs. It has around 17742 books, back volumes, technical pamphlets, standards, CD-ROMS. It has 76 national Journals and 55 international journals. The services and operations in the Library are fully computerized. The database of entire Library acquisitions was created using LIBSYS software and it works under NT environment. The main server is Xeon Server-Dual CPU (DELL PE 2900). The Library has campus LAN connectivity through the Computer Center.

4.8.21 Godavari Institute of Engineering and Technology

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Kakinada)

Godavari Institute of Engineering & Technology (GIET) was established in 1998 to offer engineering education of world-class standards. An ISO-certified and NBA-accredited institution, GIET has many distinctions to its credit.

A well-stocked, media-rich library is yet another remarkable feature of GIET. Substantial time, efforts and financial resources have been spent to develop the library so that it leaves nothing to be desired. Apart from housing a large collection of volumes related to diverse streams of engineering education, the Library subscribes to over 400 prestigious journals of national and international repute and also e-journals from INDEST. The library has an exclusive space reading room and an audio-visual section.
4.8.22 Sagi Ramakrishnam Raju Engineering College
(Accredited by NBA, Approved by AICTE and Affiliated to AU)

Sagi Ramakrishnam Raju Engineering College (SRKR Engineering College), is a co-educational, independent and a private Engineering college. It is one of the oldest seminaries formed in 1980’s to provide a better quality technical education to students. The college was accorded permanent affiliation by Andhra University from 1987 for four-year degree courses.

The automated library system is one of the best computerised library systems. Through the Library Catalogue terminals, Internet facilities and multimedia terminals, information in electronic and multimedia formats has fast become an integral part of the library’s resources.

4.8.23 CMR College of Engineering and Technology
(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-Hyderabad)

CMR College of Engineering & Technology (CMRCET) is sponsored by MGR Educational Society, which was established in 2002. The college is located in 25 acres of serene environment which is lush green and free of pollution. The College endeavors to impart Quality Technical Education and to meet the challenges imposed on, by being in Syncs with the fast changing Technology & Globalization. All Labs, workshops and library are well equipped conforming to the norms specified by AICTE and JNTU.

To promote a spirit of continuous learning among its students the college assures peaceful and enriching hours in the library. One of the major highlights of the library is its built up area of 1386 Sq.m, which is best in twin cities. Excellent
reading halls that has reference books, hand books, dictionaries and encyclopedias. It has about 55,108 volumes and 6802 Titles and there are a total number of 243 National and International journals in our library. The Library subscribes to various national and international journals/periodicals including e-journals from various vendors for staff and students.

4.8.24 Chaitanya Engineering College

(Accredited by NBA, Approved by AICTE and Affiliated to JNTU-
Kakinada)

Established in 2002, Chaitanya Engineering College marks yet another effort on the part of the Chaitanya Group is located in an over 50 acre naturally scene idyllic environment near Kommandi in Greater Viskhapatnam. The Chaitanya Engineering College has been Accredited by National Board of Accreditation (NBA), New Delhi in 2007.

Chaitanya Engineering College Central Library is a Central facility to support the teaching, research and student community of the college. The library has been successfully catering to the needs of all the departments like Computer Science Engineering, Electronics and Communication Engineering, Electrical Engineering, Mechanical Engineering, Civil Engineering, Basic Science and Humanities and Management. The Central library is having a digital library with twelve computers connected to Internet and students can browse online journals. The library is further strengthened by subscribing to e-journals from Springer (Electrical, Electronics and Computer Science), Springer (Mechanical), ASME
and NPTEL Video Lectures. More than 198 journals are accessible online. The library is having a membership to DELNET (NEW DELHI) through which Inter library loan facility is provided.

4.8.25 M V G R College of Engineering

(Accredited by NBA and NAAC, approved by AICTE and Affiliated to JNTU-Kakinada)

The college was established in the year 1997 by Maharaj Alak Narayan Society for Arts and Science (MANSAS). Maharaja Vijayaram Gajapathi Raj College of Engineering strives to become a center par excellence for technical education where aspiring students can be transformed into skilled and well-rounded professionals with strong understanding of fundamentals, a flair for responsible innovation in engineering practical solutions applying the fundamentals, and confidence and poise to meet the challenges in their chosen professional spheres.

The library has been successfully cater the needs of users in Science, Engineering, Information Technology, Electronics Communication and Chemical Engineering and Basic Science and Humanities.

The Central Library is having a digital library with fifteen computers connected to internet and students can browse journals. The library is further strengthened by subscribing to e-journals from IEEE and ASME. Around 240 journals are online and 120 national Journals. The Book Collection is 30330. The
Library is having a membership to DELNET (NEW DELHI) through which interlibrary loan facility is provided.

4.8.26 Sir C R Reddy College of Engineering

(Accredited by NBA and NAAC, approved by AICTE and Affiliated to AU)

Sir C. R. Reddy College of Engineering, an NBA accredited institution is a constituent of Sir C. R. Reddy Educational Society a six decade legacy in quality education and today one of the premier colleges in India where opportunities thrive parallel with many of the apex professional colleges across the globe.

The Central Library is the significant feature of the college. Total built up area of 4,454 square meters at the cost of Rs 4.8 Crores with all modern facilities is constructed in the campus. Apart from conventional library facilities, with 400 seating capacity, digital library, discussion rooms, internet browsing centre and video conferencing hall with 120 seating capacity are included.

At present the college library has about 42,278 volumes with 13,325 titles, and subscribes e-Journals through AICTE, 121 Journals & 34 Magazines. It is being developed to meet the needs of the post graduate and doctoral candidates.

. Digital Library with media server 30 systems, Internet facility is available in the library with 70 systems. The college library is fully automated. The software was developed by the students of this college. The main features of the library
software are Bar code based circulation system; web based public on line catalogue, Provision for serials control and stock verification etc.

4.8. 27 GOKUL Institute of Technology and Sciences

(Accredited by NBA and NAAC, approved by AICTE and Affiliated to JNTU-Kakinada)

GITAS is situated in lush green and scenic surroundings, 8km from the famous town BOBBILI in Vizayanagaram District. Established in 2001. The College is approved by All India Council for Technical Education (AICTE), New Delhi and is affiliated to Jawaharlal Nehru Technological University (JNTU), Kakinada, A.P. The College is accredited by N B A (National Board Of Accreditation), New Delhi and accorded permanent affiliation by JNTU.

The Central Library keeping with the vision and mission of the institute, GITAS library and information centre play a vital role in supporting in teaching and learning activities and provide the main source for individual research. The library have the NPTEL Video lectures and DELNET. Though DELNET infotrac Engineering Science & Technology collection and Infotrac Management Collection are subscribed.

4.8.28 G. Pulla Reddy Engineering College

(Accredited by NBA and NAAC, approved by AICTE and Affiliated to JNTU-Hyderabad)

Institute approved by All India Council of Technical Education, New Delhi, Permanent Affiliation to JNTU, Ananthapur Accredited by National Assessment and Accreditation Council (NAAC) of UGC with 'A' grade. Six UG programs
namely CE, CSE, ECE, EEE, ME & CSIT are accredited by National Board of Accreditation (NBA) of AICTE ISO 9001 - 2008 certified institution Accredited by the Institution of Engineers (India), Kolkata Accredited by the Tata Consultancy Services (TCS).

The College Library is headed by a senior Faculty as Library in-charge and is supported by two Librarians, one Asst. Librarian, three Library Assistants and three helpers. The Central Library is spacious, well ventilated and provided with adequate furniture. The Library has a separate “Electronics Resources Wing” with more than 300 CD ROMS and also 30 PIV computers connected in WAN to APSONET to access various National and International Journals through 1MB Bandwidth. Four computers are connected through LAN and have the licensed software Microsoft Campus Agreement. To support WAN and LAN the library is equipped with TWO SERVERS of required higher configuration.

4.8.29 VITAM Engineering College

(Accredited by NBA and NAAC, approved by AICTE and Affiliated to JNTU-Kakinada)

VITAM engineering College was established in the year 1998 with prime vision is to keep pace with the internationalization of the higher education and to collaborate with the reputed universities and institutions in the country to offer academic programmes of national as well as international standards.

The Central Library is a proud partner in the institute's march towards its vision playing a vital role in acquisition, organization and dissemination of
knowledge. As a knowledge hub of VITAM, it offers a package of services. The Library subscribed IEEE and DELNET. The main thrust of the library continues to be the improvement of the quality of services and facilities, achieving higher degree of user’s satisfaction and modernization of its activities and operations.

4.8.30 G Narayanamma Institute of Technology and Sciences

(Accredited by NBA and NAAC, approved by AICTE and Affiliated to JNTU-Hyderabad)

The college G. Narayanamma Institute of Technology & Science was established in 1997, with the objective of providing excellent learning facility for women to pursue education in engineering, GNITS is affiliated to Jawaharlal Nehru Technological University (JNTU), Hyderabad and approved by All India Council for Technical Education (AICTE), accredited by NBA (AICTE). GNITS is the first women’s college in Andhra Pradesh to obtain ISO 9001 2008 Certification.

The library has been the most integral part of the college from its existence. The efforts to increase the 2000 volumes, 600 titles of 1997–98 to the present 33551 volumes, 7591 titles contributes to the strength of this temple of knowledge. This shows an average increment of 2000 volumes per year.

The college library has many journals for the students both technical and general, which helps them with technical assistance and also updates their information. It has 31 international journals in print version and also an online subscription i.e., the INDEST AICTE. Among the Indian journals, 46 are technical and 8 of them are general. The library also has 8 Indian technical and 19 general magazines.