# A SURVEY ON THE PRESENT STATUS OF ENGINEERING COLLEGE LIBRARIES IN SRI VENKATESWARA UNIVERSITY AREA, ANDHRA PRADESH, INDIA

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## ABSTRACT

*Analysis of data collected from 29 librarians of engineering college libraries in S.V.University area, Andhra Pradesh, India using questionnaire indicates that all the engineering college libraries work from 9-11 hours a day on working days. Most of the librarians (75.9%) possess M.L.I.Sc degree along with another Post-graduate degree in Arts, Science or Commerce. A high percentage of them (41.4%) get UGC Pay Scales. Most of the libraries (86.2%) follow open access system. The majority of libraries acquire books from local distributors/agents (55.2%) and procure periodicals directly from publishers (89.7%). Most of the libraries (93.1%) classify books using Dewey Decimal Classification. Most of them (96.6%) catalogue books using either AACR-2 or one of the catalogue modules of various software packages. All the libraries offer circulation, reference and reprographic services.*

*The majority of libraries offer Internet facility (86.2%), referral service (75.9%) and newspaper clipping service (68.9%). A few of them offer document reservation facility (41.4%), and abstracting and indexing service (34.5%). A majority of engineering college libraries (79.3%) have no separate buildings. All libraries have display racks, water cooler, reprographic equipment, and computers. A majority of them have catalogue cabinets (75.9%) and microfilm readers cum printers (68.9%). A few recommendations are made based on the findings of the study.*

**Keywords:** Working hours, Access system, classification, cataloguing, Internet facility and Services.

## 1. INTRODUCTION

Engineers invent, design, build, and produce most of the things that make up our modern civilization. Roads, bridges, dams, computers, automobiles, airplanes, telephones and thousands of other items are the results of engineering.

Engineers are important for every civilization, either ancient or modern.  Now-a-days they are more important than ever before. They play a key role in socio-economic development of any nation.  They find out the solutions for practical problems of the society.  Engineers are of various types and are wide spread in various fields viz., Aerospace and Astronautical Engineering, Civil and Construction Engineering, Computer Engineering, Electrical Engineering, Industrial Engineering, Marine Engineering, Mechanical Engineering, Metallurgical Engineering, Mining Engineering, Geological Engineering, Nuclear Engineering and Petroleum Engineering.

In India, Engineering education is imparted at various levels namely craftsmanship, diploma, degree, post-graduate and research in specialized fields.  Engineering graduates today require not only adequate technological ability and problem solving skills, but also must be endowed with soft skills like cooperative working, communication and presentation skills, business ethics and inter-personal relationships. They must also possess deep commitment to safety, reliability, quality and sustainability of all engineering activities in which they take part. Now, Engineering Institutions have a new responsibility of providing opportunities to every student to acquire these abilities in addition to their technological knowledge.

## 2. IMPORTANCE OF ENGINEERING COLLEGE LIBRARIES

Libraries provide support to engineering colleges for achieving the goals and vision of respective engineering colleges through ensuring quality based library and information support services to the students, research scholars and faculty members. Librarians are professionally committed to update the collections continuously in order to reinforce and enrich the knowledgebase for assisting the stakeholders of engineering colleges to achieve excellence in academic, research and development, consultancy, continuing engineering education, and interaction with external environment.  With the passage of time, the needs of engineering users have been drastically changed.

Libraries are the soul of any research or academic institution.  They form the most vital forum of education, especially in the field of engineering education.  Due to the rapid development taking place in various fields of science and technology, it becomes imperative for the libraries to remain up-dated so that information becomes accessible to its pursuers. The main purpose of engineering libraries is to support the teaching and research programmes of engineering colleges.

## 3. REVIEW OF LITERATURE

The studies that were conducted on engineering college libraries are discussed in the following paragraphs.

**Sharma (2001)** conducted a survey on engineering college libraries in Haryana using questionnaire method. The results show that four out of sixteen librarians are on the regular basis

and get proper pay scale and status as well. Ninety per cent of the libraries are kept open for eight hours a day to suit the college working hours. Seventeen responding libraries use DDC scheme to classify the library material. As far as cataloguing is concerned, 60% of the responding libraries use AACR-II and 15% CCC while 25% of libraries did not respond to this question.  Only nine libraries have the catalogue in card form. **Harish Chandra (2002)** described the various factors that motivate engineering colleges for implementing resource sharing. Various considerations for networking of engineering college libraries and major potential problems for resource sharing are examined as well. **Saibaba (1994)** conducted a study on cooperation and networking among engineering and technological libraries in India. His study revealed that cooperation and networking among libraries facilitate in saving money and time, especially in the escalation of prices and shrinking of budget. **Janak Raj and Rama Verma (1992)** conducted a survey on engineering college libraries in India by using a mailed questionnaire method. Twenty five out of 34 libraries indicated the number of Indian and Foreign journals subscribed separately. Regarding classification, 23 libraries use Dewey Decimal Classification (DDC), 8 libraries use Universal Decimal Classification (UDC) and 2 libraries use Colon Classification (CC).  One library has not given any information in this regard.  Regarding the Catalogue code followed, one library follows ALA Code, 14 libraries follow AACR-I, 8 libraries follow AACR-II and 11 libraries follow Classified Catalogue Code (CCC).

## 4. NEED AND PURPOSE OF THE STUDY

Excellent engineering colleges are essential to prepare engineers with good knowledge and skills in engineering. Teachers, laboratories and libraries are important components in providing good engineering education. Engineering college libraries have to serve a special type of users. Unless these libraries have adequate resources such as finance, building, furniture etc., they may not be able to render necessary services to their users.

The review of literature indicates that no survey has been undertaken so far on engineering college libraries with regard to their resource, services and facilities in Sri Venkateswara University area.  So, the present survey has been undertaken by the investigator.

Hence, the present study has been undertaken with a purpose to examine the existing conditions of engineering college libraries so that the necessary measures can be undertaken to improve their sources, services and facilities.

## 5. OBJECTIVES OF THE STUDY

The following are the specific objectives of the study:

- To examine the qualification, experience and scale of pay of librarians of engineering college libraries;
- To examine the working hours of the library and to know the type of access system followed in the libraries;
- To study the acquisition procedure of books and periodicals, and technical processing in engineering college libraries;
- To know the procedures for lending documents in engineering  college libraries; and
- To examine the services and physical facilities of these libraries.

## 6. METHODOLOGY

Questionnaire method is used for collecting the required data for the present study. The questionnaire consists of questions on qualification, experience, pay scales of librarians, library working hours, access system, acquisition, classification, cataloguing, services and physical facilities. There are 36 engineering colleges in Sri Venkateswara University area at the time of investigation.  This area covers the districts of Anantapur, Kadapa, Kurnool, Chittoor, and Nellore. Each college has its own library. The investigator selected 29 engineering college libraries out of 36 by simple random sampling to examine the present conditions of these libraries. Copies of questionnaire were distributed to the librarians of these engineering college libraries and the filled in copies were collected personally from them.

## 7. ANALYSIS AND INTERPRETATION OF DATA

The data collected from the librarians were analyzed and interpreted in the following paragraphs.

### 7.1 Qualifications

A question has been put to the librarians to know their qualifications. The responses given by them are shown in Table 1.

**Table 1: Distribution of librarians according to their qualifications**

| Qualifications | Librarians | |
|---|---|---|
| | **No.** | **%** |
| P G with  M.L.I.Sc. | 22 | 75.9 |
| P G with M.L.I.Sc. and M.Phil. (L I Sc) | 06 | 20.7 |
| P G with M.L.I.Sc. and Ph.D. (L I Sc) | 01 | 03.4 |
| **Total** | **29** | **100** |

It is observed from Table 1 that most of the librarians (75.9%) have P.G. with M.L.I.Sc degree, 20.7 per cent of them have P.G. with M.L.I.Sc. and M.Phil (L I Sc) and the remaining 3.4 per cent have P.G. with M.L.I.Sc. and Ph.D (L I Sc).  Hence it can be concluded that most of the librarians have P.G. with Master's Degree in Library and Information Science.

### 7.2 Experience

A question has been put to the librarians to know the number of years of experience they possess. The responses given by them are shown in Table 2.

**Table 2: Distribution of librarians according to their experience**

| Experience (in years) | Librarians | |
|---|---|---|
| | **No.** | **%** |
| 5 or less than 5 | 12 | 41.4 |
| 6-10 | 08 | 27.6 |
| 11-15 | 06 | 20.7 |
| More than 15 | 03 | 10.3 |
| **Total** | **29** | **100** |

Table 2 shows that a high percentage of the librarians (41.4%) have 5 years or less than 5 years of experience, 27.6 per cent of them have 6-10 years, 20.7 per cent of them have 11-15 years and the remaining 10.3 per cent of them have more than 15 years.

**7.3  Scales of Pay**

In order to know the scales of their librarians working in engineering colleges, a question has been put to them.  The responses given by them are shown in Table 3.

**Table 3:  Distribution of librarians according to their scales of pay**

| Scales of pay | Librarians | |
|---|---|---|
| | **No.** | **%** |
| UGC | 12 | 41.4 |
| State Government | 09 | 31.0 |
| Consolidated pay | 08 | 27.6 |
| **Total** | **29** | **100** |

It is evident from Table 3 that a high percentage of the librarians (41.4%) get their  scales of pay according to UGC, 31 per cent of them get scales of pay A.P. State Government and the remaining 27.6 per cent of them get consolidated pay.

**7.4 Library Working Hours**

The functioning of the library on working days and on holidays is described in the following paragraphs.

**7.4.1 Working hours on working days**

A question has been put to the librarians to know the library hours on working days. The responses given by them are shown in Table 4.

**Table 4: Distribution of libraries according to their working hours on working days**

| Working hours (a.m. – p.m.) | Libraries | |
|---|---|---|
| | **No.** | **%** |
| 9.00 – 7.00 | 12 | 41.4 |
| 9.00 – 7.30 | 6 | 20.7 |
| 9.30 – 8.00 | 7 | 24.1 |
| 10.00 – 7.00 | 4 | 13.8 |
| **Total** | **29** | **100** |

Table 4 shows that a high percentage of the librarians (41.4%) informed that their libraries work from 9.00 a.m. to 7.00 p.m. on working days, 24.1 per cent of them from 9.30 a.m. to 8.00 p.m., 20.7 per cent from 9.00 a.m. to 7.30 p.m., and the remaining 13.8 per cent from 10.00 a.m. to 7.00 p.m.  It is also evident from the study that all the libraries function from 9 - 11 hours in a day on working days.

**7.4.2 Working hours on holidays**

A question has been posed to the librarians to know the library hours on holidays.  The responses given by them are shown in Table 5.

**Table 5: Distribution of libraries according to their working hours on holidays**

| Working hours (a.m. – p.m.) | Libraries | |
|---|---|---|
| | **No.** | **%** |
| 9.00 – 12.30 | 15 | 51.7 |
| 9.00 – 1.00 | 9 | 31.1 |
| 10.00 – 2.00 | 5 | 17.2 |
| **Total** | **29** | **100** |

Table 5 shows that the majority of the librarians (51.7%) informed that their libraries work from 9.00 a.m. to 12.30 p.m. on holidays, 31.1 per cent of them from 9.00 a.m. to 1.00 p.m. and the remaining 17.2 per cent from 10.00 a.m. to 2.00 p.m.  Hence it can be concluded that all the engineering college libraries work for 3 - 4 hours a day on holidays.

 **7.5 Access system**

The library can follow either open access system or closed access system.  In open access system, the reader has the freedom to choose the books he/she likes in the stack area of library. In closed access system, the reader approaches the librarians for the book he/she needs. A question has been put to the librarians to know the type of access system followed in their libraries.  The responses given by them are shown in Table 6.

**Table 6: Distribution of librarians according to their responses with regard to  type of access system followed**

| Response | Librarians | |
|---|---|---|
| | **No.** | **%** |
| Open access | 25 | 86.2 |
| Closed access | 00 | 00 |
| Both | 4 | 13.8 |
| **Total** | **29** | **100** |

Table 6 shows that the most of the librarians (86.2%) informed that their libraries follow open access system and the remaining 13.8 per cent of them replied that their libraries follow both open access system and closed access system.

**7.6 Acquisition**

One of the most important activities of a library is the acquisition of library materials.  These materials can be acquired by purchase, exchange and gift. The basic activities of an acquisition department include selecting and ordering materials, checking in receipts and verification of materials following upon non-receipts and paying invoices.

**7.6.1 Methods of purchasing books**

A question has been put to the librarians to know the methods of purchasing of books in their libraries.  Their responses are shown in Table 7.

**Table 7: Distribution of librarians according to their responses with regard to methods of purchasing books**

| Methods of purchasing books | Libraries | |
|---|---|---|
| | **No.** | **%** |
| By inviting quotations | 5 | 17.2 |
| Directly from publishers | 8 | 27.6 |
| Local distributors/Agents | 16 | 55.2 |
| **Total** | **29** | **100** |

Table 7 shows that the majority of libraries (55.2%) acquire books from local distributors/agents, 27.6 per cent of them get directly from publishers and the remaining 17.2 per cent obtain by inviting quotations.

**7.6.2 Subscription of periodicals**

Primary periodicals usually report the results of recent researches more quickly than books. The other types of periodicals are abstracting, indexing and reviewing periodicals.  All these are essential to users of engineering college libraries.  Librarians were asked to know the methods of subscribing to periodicals in their libraries. The responses given by them are shown in Table 8.

**Table 8:  Distribution of librarians according to their responses with regard to methods of subscription to periodicals**

| Subscription method | Libraries | |
|---|---|---|
| | **No.** | **%** |
| Through agents | 3 | 10.3 |
| Directly from publishers | 26 | 89.7 |
| **Total** | **29** | **100** |

Table 8 shows that the majority of librarians (89.7%) replied that their libraries procure periodicals directly from publishers and the remaining 10.3 per cent of them procure through agents.

**7.6.3 Evaluation on Present subscription to periodicals**

According to latest AICTE norms, there should be a minimum of 12 technical journals – 6 Indian and 6 International for each branch of engineering. Librarians were asked to know the number of engineering periodicals subscribed (Indian and foreign) in each branch of engineering.

The analysis of periodicals revealed that majority of the college libraries (58.6%) fulfil the norms of AICTE with regard to the subscription of periodicals and the remaining 41.4 per cent of them do not fulfil.

### 7.7 Classification and Cataloguing

Every library should classify and catalogue the documents so that they should be made available to users on the shelves.

### 7.7.1 Classification of books

Irrespective of the size of the library collection, it is essential that the library classification should make each document readily available. In other words, it should enable one to locate the document immediately. A systematic arrangement will lead to maximum use of the library collection. The distribution of librarians according to their responses with regard to classification of books in their libraries is shown in Table 9.

**Table 9: Distribution of librarians according to their responses with regard to classification of books**

| Response | Libraries | |
|---|---|---|
| | No. | % |
| Yes | 27 | 93.1 |
| No | 02 | 06.9 |
| **Total** | **29** | **100** |

Table 9 reveals that most of the librarians (93.1%) replied that they classify books, and the remaining 6.9 per cent of them replied negatively.

### 7.7.2 Classification scheme used

The distribution of librarians according to their responses with regard to classification scheme used in their libraries is shown in Table 10.

**Table 10: Distribution of librarians according to their responses with regard to classification scheme used**

| Classification schemes | Libraries | |
|---|---|---|
| | No. | % |
| C.C | 00 | 00 |
| D.D.C | 27 | 100 |
| U.D.C | 00 | 00 |
| **Total** | **27** | **100** |

Table 10 shows, all librarians replied that their libraries use Dewey Decimal Classification scheme for classification of documents.

### 7.7.3 Suitability of classification scheme

In order to know the scheme that is suitable for classification of documents in engineering college libraries, a question has been put to librarians. The responses given by them are shown in Table 11.

**Table 11:  Distribution of librarians according to their responses
with regard to  suitability of classification scheme**

| Classification schemes | Libraries | |
|---|---|---|
| | No. | % |
| C.C. | 00 | 00 |
| D.D.C. | 29 | 100 |
| U.D.C | 00 | 00 |
| **Total** | **29** | **100** |

Table 11 shows that all librarians opined that Dewey Decimal Classification scheme is more suitable to classify the engineering documents.

**7.7.4 Cataloguing of books**

Cataloguing is the process of creating a catalogue in libraries. This usually includes preparation of bibliographic description, determination of access points, assignment of subject headings and activities involved in physically preparing the item for the shelf.  The distribution of librarians according to their responses with regard to cataloguing of books in their libraries is shown in Table 12.

**Table 12:  Distribution of librarians according to their responses
with regard to cataloguing of books**

| Response | Libraries | |
|---|---|---|
| | No. | % |
| Yes | 28 | 96.6 |
| No | 01 | 03.4 |
| **Total** | **29** | **100** |

It is observed from Table 12 that most of the librarians (96.6%) informed that the books are catalogued in their libraries, and the remaining 3.4 per cent replied negatively.

**7.7.5 Cataloguing code used**

In order to know the catalogue code used in engineering college libraries for cataloguing of documents, a question has been put to the librarians. The replies given by them are shown in Table 13.

**Table 13:  Distribution of librarians according to their responses with regard to catalogue code used**

| Response | Libraries | |
|---|---|---|
| | No. | % |
| AACR-II | 16 | 57.1 |
| Catalogue modules of Software  packages | 12 | 42.9 |
| **Total** | **28** | **100** |

Table 13 shows, the majority of the librarians (57.1%) informed that their libraries use AACR-II for cataloguing of books and the remaining 42.9 per cent use one of the catalogue modules of software packages.

**7.7.6 Physical form of library catalogue**

There are different types of physical forms of library catalogue, namely book form, sheaf form, card form and computerized catalogue. In order to know the physical form of library catalogue in engineering college libraries, a question has been put to the librarians.  Their responses are shown in Table 14.

**Table 14:  Distribution of librarians according to their responses
with regard to the physical form of the library catalogue used**

| Physical form of catalogue | Libraries | |
|---|---|---|
| | No. | % |
| Book form | 05 | 17.2 |
| Sheaf form | 00 | 00 |
| Card form | 11 | 38.0 |
| Computerized catalogue | 13 | 44.8 |
| **Total** | **29** | **100** |

Table 14 shows that a high percentage of the librarians (44.8%) informed that their libraries use computerized catalogue.  It is obvious that 38 per cent use card form and the remaining 17.2 per cent use book form.

**7.8  Charging systems**

Librarians were asked to inform the charging systems used in their libraries. The responses given by them are shown in Table 15.

**Table 15: Distribution of librarians according to their responses with
regard totype of charging system used**

| Charging system | Libraries | |
|---|---|---|
| | No. | % |
| Ledger system | 7 | 24.1 |
| Browne system | 2 | 6.9 |
| Newark system | 5 | 17.3 |
| Computerized system | 15 | 51.7 |
| **Total** | **29** | **100** |

It is evident from Table 15 that the majority of  librarians (51.7%) replied, their libraries  use computerized system for issue and return of books, 24.1 per cent of them  use Ledger system, 17.3 per cent of them use Newark system and the remaining 6.9 per cent use Browne system.

**7.9 Services**

Library services are the facilities provided by a library for the use of books and the dissemination of information. Engineering college libraries provide certain essential library services to their users. The services provided by them are circulation service, Inter-library loan service, document

reservation facility, reference service, bibliographical service, indexing/abstracting service, referral service, CAS/SDI service, reprography service, newspaper clipping service and Internet facility.

In order to know the type of services provided by engineering college libraries, a question has been put to respondents. The responses are shown in Table 16.

**Table 16: Distribution of librarians according to their responses with regard to library services offered**

| Services | Libraries | | | |
|---|---|---|---|---|
| | Yes | | No | |
| | No. | % | No. | % |
| Circulation service | 29 | 100 | 00 | 00 |
| Inter-library loan service | 2 | 6.9 | 27 | 93.1 |
| Document reservation facility | 12 | 41.4 | 17 | 58.6 |
| Reference service | 29 | 100 | 00 | 00 |
| Bibliographical service | 5 | 17.2 | 24 | 82.8 |
| Abstracting /Indexing service | 10 | 34.5 | 19 | 65.5 |
| Referral service | 22 | 75.9 | 7 | 24.1 |
| CAS/SDI service | 10 | 34.5 | 19 | 65.5 |
| Reprographic service | 29 | 100 | 00 | 00 |
| Newspaper clipping service | 20 | 68.9 | 9 | 31.1 |
| Internet facility | 25 | 86.2 | 4 | 13.8 |

It is evident from Table 16 that all the libraries offer circulation, reference and reprographic services. It is also evident from the table that the majority of libraries offer Internet facility (86.2%), referral service (75.9%) and newspaper clipping service (68.9%). It is evident from the table that a few libraries are offering document reservation facility (41.4%), abstracting/indexing service (34.5%) and CAS/SDI service (34.5%). A very few libraries offer bibliographical services (17.2%) and Inter-library loan service (6.9%).

**7.10 Physical Facilities**

Good physical facilities in the libraries are essential for comfortable reading and to sit in the library for longer hours to utilize the resources properly.

**7.10.1 Library building**

The library building itself plays a vital part in the important mission of bringing the library's materials into the lives and thinking of those who normally might not make use of this treasure house of knowledge.

A question has been put to the librarians to know the provision of a separate library buildings in their colleges. The responses given by them are shown in Table 17.

**Table 17: Distribution of librarians according to their responses with regard to the provision of library buildings**

| Response | Libraries | |
|---|---|---|
| | **No.** | **%** |
| Yes | 6 | 20.7 |
| No | 23 | 79.3 |
| **Total** | **29** | **100** |

Table 17 shows, the majority of the librarians (79.3%) replied that their colleges have no separate buildings for the library and few rooms are allotted for the library.  It is observed from the table that 20.7 per cent of colleges have separate library buildings.

**7.10.2 Furniture and Equipment**

Among the items included in the furniture and equipment category are books shelves, chairs, tables, staff desks, vertical files, card catalogue files, small book trucks, phonograph record players, sound motion picture projectors and screens, microfilm readers, type writers, supply cupboard, staff lockers and exhibition cases. The cost of furniture and equipment will vary in relation to the amount, style and type of equipment selected.

In order to know the adequacy of furniture and equipment in engineering college libraries, a question has been put to the librarians.  The responses are shown in Table 18.

**Table 18:  Distribution of librarians according to their responses with regard to adequacy of furniture and equipment**

| Furniture and Equipment | Libraries | | | |
|---|---|---|---|---|
| | **Yes** | | **No** | |
| | **No.** | **%** | **No.** | **%** |
| Binding equipment | 10 | 34.5 | 19 | 65.5 |
| Book trolleys | 03 | 10.3 | 26 | 89.6 |
| Display racks | 29 | 100 | 00 | 00 |
| Catalogue cabinets | 22 | 75.9 | 7 | 24.1 |
| Water cooler | 29 | 100 | 00 | 00 |
| Vacuum cleaners | 03 | 10.3 | 26 | 89.6 |
| Reprographic equipment | 29 | 100 | 00 | 00 |
| Microform readers cum printers | 20 | 68.9 | 7 | 24.1 |
| Computers | 29 | 100 | 00 | 00 |

It is evident from Table 18 that all the libraries have display racks, water coolers, reprographic and electronic equipment and computers. It is also evident from the table that the majority of libraries have catalogue cabinets (75.9%) and microform readers cum printers (68.9%). A few libraries have other types of furniture and equipment.

**8. FINDINGS**

The following are the findings of the study:
- About three-quarters of the librarians (75.9%) have PG with the M.L.I.Sc., degree.
- A high percentage of them (41.4%) have 5 or less than 5 years of experience.
- A high percentage of them (41.4%) get their  Scales of pay according to UGC norms.
- A high percentage of the engineering college libraries (41.4%) work from 9.00 a.m. to 7.00 p.m. on working days.  However, on holidays the majority of the libraries (51.7%) work from 9 a.m. to 12.30 p.m.
- The majority of the libraries (86.2%) follow open access system.
- The majority of them (55.2%) acquire books from local   distributors/agents.
- The majority of them (89.7%) procure periodicals directly from publishers.
- Most of the libraries (93.1%) classify books using Dewey Decimal Classification. All the librarians opined that Dewey Decimal Classification scheme is more suitable to classify the engineering college books.
- The majority of the libraries (96.6%) catalogue books either by using AACR-2 or one of the catalogue modules of software packages.
- A high percentage of the librarians (44.8%) informed that their libraries are using computerized catalogue.
- The majority of the libraries (51.7%) use computerized system for issue and return of books.
- All the libraries are providing circulation, reference and reprographic services.
- The majority of them are providing Internet facility (86.2%), referral services (75.9%) and newspaper clipping service (68.9%).
- A high percentage of them (41.4%) are providing document reservation facility.
- More than one-third of them (34.5%) provide Abstracting/Indexing service.
- More than one-third of them (34.5%) offer CAS/SDI service.
- The majority of colleges (79.3%) have no separate buildings for their libraries concerned.
- All the libraries have display racks, water cooler and reprographic equipment and computers.

**9. RECOMMENDATIONS**

More than one-fourth of librarians (27.6%) are not getting either the UGC  Scales of pay or State Government Pay scale, instead getting only consolidated pay.  Hence, the AICTE should take necessary steps for providing UGC/State Government Pay scale to librarians working in engineering college libraries so that they can serve the users with more devotion. Hence, the Government of India, State Government and AICTE should raise the quality of education in engineering by taking appropriate measures to improve the facilities and services in engineering college libraries.

A few engineering college libraries did not classify (6.9%) and catalogue (3.4%) books.  The authorities concerned of these libraries should take necessary steps to classify books according DDC and to catalogue them according to AACR 2 as the majority of engineering college libraries have been using DDC and AACR 2. For providing subject headings, all engineering college libraries can use Library of Congress Subject Headings (LCSH), or Sears List of Subject Heading.

According to latest AICTE norms, there should be a minimum of 12 technical journals – 6 Indian and 6 International for each branch of engineering. The study revealed that 41.4% of engineering college libraries does not fulfill the norms of AICTE pertaining to the subscription of periodicals. Hence the State Government and AICTE should insist the college authorities to follow the norms in this regard at the time of accreditation or inspection.

The majority of engineering college libraries do not offer Inter-library loan (ILL) service (93.1%), document reservation facility (58.6%), bibliographical service (82.8%), CAS/SDI service (65.5%), and abstracting and indexing service (65.5%). A few of the engineering college libraries do not offer referral service (24.1%) and newspaper clipping (31.3%).  The libraries, which are not offering the above services, should introduce these services after ascertaining their feasibility.

As per AICTE guidelines "The central library for an admission of 240 students per year will have a carpet area of 400 sq.m.  But 17.2% of libraries do not have plinth area of 400 sq.m. as per AICTE norm. The study also revealed that 79.3% of libraries do not have independent buildings. Hence, it is suggested that the library authorities concerned should take necessary steps to provide a minimum plinth area of 400  sq.m. and also construct independent buildings for their libraries if feasible.

The majority of libraries do not have binding equipment (65.5%), book trolleys (89.6%), vacuum cleaners (89.6%), catalogue cabinet (24.1%), and microform readers cum printers (24.1%). Hence, the authorities of these engineering colleges should make necessary provision for adequate equipment in their libraries concerned.

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