Chapter 3 Quality Library service

Introduction

“Higher education is a dynamic and quickly growing service diligence and becoming more and more exposed to the globalization processes” (O’Neil, Damme 2001; and Palmer 2004). Ivy and Naudé (1999) mentioned, new upcoming fields, new situation, academic challenges most of all the universities are finding themselves which requires challenging for students. In this difficult situation university requires to satisfy the students, understanding their educational need and attract them towards the education field, hold on to them and to make us of techniques of measuring and maintain service quality. They required identifying themselves with present appliances which designed to measure service quality.

3.1 Quality: Concept

The concept of quality has engendered use, loss, prevention and meeting and exceeding expectations. In other words ‘quality’ is a measure of achievement of an organisation in when the customer is satisfied. Quality is a unending and continuous process. Organisations have to respond to any change that takes place in any aspect of work.

Indeed, quality is an initiative process that allows freedom-without fear –for both the organisation and the people in the organisation to take charge of continual improvement, so that they both can prosper. Quality is synonymous with ‘high standard’. Quality is then an ideal which is to be achieved in every sphere of life. The very existence of an industry or a profession or any organisation depends on its quality. Libraries and librarianship too are no exception.

However, the concept of quality has changed now days from provider orientated to customer oriented and it has now been well established that quality is not what producers define but it is what the customers require.

In 1992, Philip B. Crossby broadened his definition of quality adding an integrated notion to it. He says about quality, ‘the first thing is the skeletal structure of an organisation finance is the nourishment, the soul, getting everyone to do what they have agreed to do and to do it right’
The definition of quality given by ISO 9000\textsuperscript{118} is as follows: “The totality of features and characteristics of a product or services that bear upon its ability to satisfy stated or implied needs.” (Dalela S & Saurabh)

According to the US, Department of Defense\textsuperscript{119}, “Doing the right thing right the first time, always striving for improvement and always satisfying the customer.”

W. Edward Deming\textsuperscript{120} has stated the following view in his landmark book, “Quality can be defined only in terms of the agent. Who is the judge of the quality? In the mind of the production worker he produces quality of he can take pride in his work. Poor quality to him means the loss of business and perhaps of his job. Good quality, he thinks, will keep the company in business. Quality to the plant manager is the quality numbers out and to meet specifications. His job is also, whether he knows it or not, continual improvement of leadership.”

H. J. Harrington, a leading American quality analyst, suggested that quality should be defined as ‘delivering your product or service when they need it, meeting expectations, at a price that represented value for money to them,’ Customers’ expectations included not only the features of the products or services they buy, but all-important aspects of customer service such as courtesy and product knowledge as well. These intangible elements are encompassed in the pithiest definition of quality. Quality is delighting the customer.

According to B.K. Dalai and others\textsuperscript{121}, quality means, “To meet or exceed the needs and expectations of the customer in the most cost effective way.” It has four basic elements, which are Customer, Expectation, Competitor, Cost and Technology.

3.2 Quality: Definitions

Sarkar D\textsuperscript{122} in his book Handbook of Total Quality Management has listed the following Definitions

1. Fitness for purpose or use’ by Juran J M
2. It is conformance to requirements by Crossby P B
3. Quality management is to meet and exceed customer expectations by developing, a leadership-driven process for providing a product or service with built-in –driven process for providing service or product with built-in-
quality. It also asserts that quality is a first persons job and not of someone else. Gupta and Jain.

3.3 Library and information services Quality management approaches

There are three stages for quality management approaches i.e. feedforward (before an activity commence), concurrent (while activity occurs) and feedback (after the activity has been completed). Robbins and De Cenzo (1998). The most desirable type of management control is feed-forward control that future directed and takes place in advance of the accrual activity. Feed-forward control is advantageous because it allows management to avoid predictable problems rather than having to cure them later and o avoid wasting resources. Concurrent control takes place while an activity is in progress. When control is endorsed while the activity is being performed, management can rectify problems before they become too costly. Usually conventional mean of control relies on feedback. The feedback control takes places after the activity but a disadvantage of this approach is the damage will have already occurred after that the manager has the information to takes corrective action. Feed-forward control is the most economic approach and it can meet the requirement of customers. It followed by the concurrent control and feedback control respectively. Quality management approaches developed and implemented to assess and develop product quality it can be related to types of management control from the perspective of an open system.

3.4 Quality approaches and related techniques

To produce services of consistent quality and low costs, three types of quality are recognised. They are

3.4.1 Quality by inspection: to evaluate quality the first scientifically designed quality control system was the inspection based system. The system can be applied throughout the process i.e from the raw material to the end product and Compared, Measured, examined, are characteristics of this system. Thus this system is a transmission process without having any direct mechanism to decrease imperfection. Developed to control product quality and decreasing the damage in the initial process in the sampling plans inspection techniques were used.
3.4.2 **Quality by design**: here the focus is to develop products and services suitable to the customer’s need at a given cost. It begin with sales call analysis; the consumer research, and leads to determination of products that meet customer requirements. This is follow by development of adequate specification. This process of developing product demands effective crosspollination of ideas among marketing, sales, service call analysis are the heart of this process. Consumer research provides the customer needs present and future, sales call analysis determine the customer needs people provide during purchase if services and service call analysis investigates the problems users have with the products performance.

3.4.3 **Quality by Performance**: studies focus on characteristics in quality –of-design, its improvement and innovated in quality-of-conformance studies, are performing in the marketplace. The major tools used here are study of after-sales service and service-call analysis. These tools evaluate why consumer like or dislike a product.

Quality function development and failure mode and effect analysis are two important techniques for designing quality products.

**Table No. 3.1 Quality function development & Failure Mode**

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<tr>
<th>Quality function development is a structured approach:</th>
<th>Failure Mode and Effect Analysis is methodical approach:</th>
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<tr>
<td>i. Identifies and rank the relative importance of customer requirements</td>
<td>i. Identifying and listing modes of failure and the subsequent faults</td>
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<td>ii. Identifies design parameters that contribute to the customer requirements</td>
<td>ii. Assessing the probability of these faults</td>
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<td>iii. Estimates the relationship between design parameters and customer requirements among different design parameters</td>
<td>iii. Assessing the probability that the faults are detected</td>
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<td>iv. Sets target value for the design parameter to best satisfy customer requirements.</td>
<td>iv. Assessing the severity of the consequences of the faults</td>
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<td>v. Calculating a measure of the risk</td>
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<td>vi. Ranking the faults on the basis of the risk</td>
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<td>vii. Attempting to resolve the high risk problem</td>
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The final manufacturing products can be measured objectively while the quality can be managed by output control. The deliverables of services are frequently intangible and difficult to measure objectively.

### 3.5 Structure of quality management approaches in libraries

Library services management having different characteristics approaches about quality of besides the simple acceptance of manufacturing techniques for a product. Related to library functions quality management have three phases i.e. before service, during service and after service. Library services eventually highlights on satisfying the information needs of customer. Before services are provided, the technical service department should have required books and information collected and value-added to enhance their value to the customers. Therefore, the customer-oriented library should regard technical services as resource development system to ensure that every customer has resources properly acquired, organised, displayed or accessed. With the help of direct contact with user the public services should be considered as information service delivery system and try to providing information to customers accurately, promptly and responsively to help customers solve problems and build up customers’ knowledge and finally enhance their productivity. Administrative management should be regarded as the service support system to coordinate and allocate resources as well as provide support for technical services to satisfy customers’ needs and to evaluate service performance periodically and to continuously improve service quality.

#### 3.5.1 Resource development system

Resource development process which has no direct contact with customers, it is offline, backstage activities. The service transaction can be standardised in which the customer need not be present. Regular order preparation and communication is necessary for acquisition is considered to be a customised service only. To follow technical and procedural standards such as classification, cataloguing and also at the
time of acquiring and procuring materials to weeding out process these are most routine activities related to technical services and many practical technical services are standardised by when the actual work is going on. Quality management plan for the resource development system by process control.

3.5.2 Information service system

It is dynamic, customer service delivery system with straight contact with customers where the customer servers as the coproduce and work with the librarian and library system to access and reference services which enhances skills as a result it is the best quality management strategy.

Hsieh (1996) and others quality function development for reference service proposed a modified framework categorised under four phases

To identify the customer’s needs and service requirements, at very beginning of service design to define the service requirement, best producing for process planning and quality management planning.

Circulation service is a starting point to use all other library service and a major contact between customer and library. The primary users’ needs reference services for ‘right answer’, ‘good employee’, ‘good attitude’ which may subdivided into ‘kind and polite’ then to meet the profession terminology to actually management activities and quality to build a service delivering standards. And quality of resource may be assesses according to the indicator of acceptability, accessibility, availability and credibility. According to situation library managers can apply approaches and techniques of quality management and it can help libraries but do not give conform result.

Significantly managers must identify, analyse the issues such as accessibility of resource and information, competence, organisation culture and mission, and skills and suggest appropriate methods.

3.6 Characteristics of the quality

According to Dash and Padhi Characteristics of the quality are
**Intangible:** Quality like value is unnoticeable only when it noticeable itself in a person, a matter, a method or an idea that it is describable. But through intangible, its presence is apparent and its loss expressive.

**Relative:** there is nothing like absolute quality. Quality is allied with time, place, environment and the people. A quality product or a service in one situation may not essentially be a quality product or a quality service in another.

**Tendency to depreciate:** Quality has a natural tendency to depreciate with the course of time. It is highly appreciable to the aspect of obsolescence. Therefore Standards have to maintain and have to modify from time to time to promote improve it.

**3.7 Dialectical relationship between quality and quantity:** it is observed that many times quality tends to go down as the quantity goes up. There is an aspect of truth in it may be because of this quality suffer under the assault of quantity. The managerial quality lies in maintaining both quality as well as quantity, definitely not behind it and ultimately creating conditions in which quantity can upsetting itself into quality. The relationship between the two is of dialectical nature and not of continuous antipathy.

Quality is a seamless whole: quality is indivisible. It cannot be partial it is either it is or it is not.

**3.8 Quality Movement in India**

In the Indian industries, 1980s the quality movement was began and also brought about a synergy of resources by the pioneering efforts of Confederation of Indian Industries Walter Shewart, the father of Statistical Quality Control, visited India for a short period three months during 1947-48 and initiated the SQC movement through visits to factories, personal discussions and lectures. W. Edward Deming who taught the Japanese the means of applying the Plan-Do-Check-Act cycle came to India in the early 1950s. While the Japanese attributed their success to the learning from two American Gurus, Deming and Juran, the rest world was lagging behind until the 1970s when the effect began to hurt their business.
3.8.1 ISO 9000

It is observed from the article “Need and application of ISO 9000 in the libraries with a special reference to CFRI: A case study” published in the University News has emphasized the main objectives of ISO 9000 as follows:

It is the most extensively organized quality management tools for effective quality management and achieving greater customer satisfaction, being adopted by most every quality system standards formulated and published by international organisation for standardization. It provides operational and develop of quality management system, applicable to all types of organisations, which can consistently meet the quality requirements of every kind of products and services.”

ISO 9000 is a system for managing activities in an organisation that affect quality. Any quality management system worth its name cannot be set up overnight. Apart from organisation commitment and dynamic leadership, the quality management system to be effective, needs a team of alert, dedicated, trained personnel to implement the system and to maintain its once sustained basis.

**Origin**

In 1946, The International Organisation for Standards (ISO) was established with an objective of fostering trade and commerce among member countries. The actual standards are prepared by ISO technical committees. They are helped by over 30,333 specialists in their fields. ISO technical committees are number serially as they are established. In 1979, ISO/TC-76 is the 176th ISO Technical Committee was formed to address the need for standards in Quality Management and Quality Assurance.

This series was introduced in 1987 by the ISO in Geneva and revised in 1994. This series is a set of generic standards that state the requirements for an acceptable quality management system. The standards are of two types. The conformance standards consist of ISO9001, ISO9002 and ISO 9003. ISO 9000 and ISO 9004 are the Guidance Standards, appropriate conformance standard and guideline for quality management & quality system requirements respectively.

The Indian Standard ISI 4000 and the British Standard BS 5750 are equivalent standards to the ISO 9000 and they are set by the Bureau of Indian Standards and the
British Standards Organisations respectively. For running a business within India the ISI 4000 is enough, but presently, it is not recognized outside India. The ISO 9000 series has earned international acceptability and has become popular to compare quality at the international level. This serves as an indicator of the capability of a supplier to manufacture product/ provide service of consistent quality. It eliminates the need for multiple assessment of a supplier by various purchasers.

**Need of the ISO 9000 standards**

Various quality gurus have prescribed their respective methodologies for managing quality in an organization. With so many models for quality management, a quality manager may be confused as to which model to follow. The result is that he may create his own recipe for quality management, based on his own understanding and the preference of his superiors in the organization. However, the state of affairs is unsatisfactory, as shown by following reasoning:

- The quality of product is a major factor in any purchase decision. Before placing an order, the purchasing organization likes to know whether the supplier is capable of supplying products that will meet all its requirements.
- The assessment of quality control systems is subjective in nature. Experts from different purchasing organizations, drawing on their companies’ own experiences, may have different perceptions of an effective quality control system. As a result, a supplier may receive varying assessment reports from different purchasers for comparable products and production systems.
- Thus there arises an urgent need for standardization of quality management methodologies.
- Such a system could also be useful for third party assessments, reducing the need for purchases to carry out individual evaluations and sparing suppliers the burden of multiple assessments.

**Quality Management Principles**

These principles have been derived from the teachings of various quality gurus and were standardized based on extensive discussions within the ISO technical committee 176, which has developed the original ISO 9000 standards. These quality management principles are described as follows
1. **Customer Focus**- The main reason for the existence of an organization is to serve its customers. It is they who finance its operations. Therefore, organizations should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations.

2. **Leadership**- The top management of an organization establishes the vision and mission for the organization. They should create and maintain the internal environment in which employees can be motivated to achieve the organization’s objective.

3. **Involvement of People**- People at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization’s benefit.

4. **Process Approach**- A desired result is achieved more efficiently when activities and related resources are managed as a process.

5. **System Approach to Management**- Identifying, understanding and managing inter-related processes as a system contributes to the organization’s effectiveness and efficiency in achieving its objectives.

6. **Continual Improvement** – Continual improvement of the organization’s overall performance should be a permanent objective of the organization.

7. **Factual approach to Decision-making**- Effective decisions are based on the analysis of factual information

8. **Mutually beneficial Supplier Relationships**- An organization and its suppliers are inter-dependent and a mutually beneficial relationship enhances the ability of both to create value.

Of the three conformance standards, the ISO 9000 is the most complete. It includes 20 requirements, namely:

1. Management responsibility
2. Quality system
3. Contract review
4. Design control
5. Document and data control
6. Purchasing
7. Control of customer supplied products
8. Product identification and traceability
9. Process control
10. Inspection and testing
11. Control of inspection measuring and test equipment
12. Control of non-conforming products
13. Corrective and preventive action
14. Inspection and test status
15. Handling, storage and packaging
16. Control of quality
17. Records
18. Internal quality audits
19. Servicing
20. Statistical techniques

The ISO 9002 is the same as the ISO 9001 except that there are no requirements for design control. The ISO 9003 is for final inspection and test only. The section of the ISO 9000 series which is most relevant to the LIS services is the element of 4.5 of the ISO 9001, which is meant for document and data control which covers:

- Updating national and international standards
- Review and approval of different quality systems documents
- Availability of the latest issues and
- Removal of obsolete documents.

The philosophy of the Quality Assurance System is that quality is the hallmark of every operation and customers are the focus of everything we do. Quality means meeting the requirements of the customer without error the first time and every time. Hence, all the activities are written down and work is accomplished according to the written procedures.

**Benefits of ISO 9000**

1. Customer orientation
2. Marketing advantage
3. Recognition
4. Confidence creation
5. Consistency in quality
3.9 Service Quality

It is conformance of service to customer specifications. Competitive quality requires designing, implementing and continuously improvement that are important to a wide range of organizational stakeholders.

The four characteristics most commonly ascribed to a service are:

   a. Intangibility: service is to a large extent abstract and intangible.
   b. Heterogeneity: Service is non-standard and highly variable
   c. Inseparability: Service is typically produced and consumed at the same time with customer participation in the process
   d. Perishability: It is not possible to store service in an inventory.

To apply all these mechanisms to satisfy the varying needs of customers most off all white-collar staff working with a purpose.

3.9.1 The quality dimensions in a Service Sector involve:

   1. Time dimension: The times factor is decides the quality of service it includes arrangement time, waiting time, service and delay time.
   2. Cost dimension: The cost of service to the satisfaction of the customer decides the quality of services.
3. Error dimension: To decide the error amount of error associated with nature, time and cost decides the quality of service.

4. Psychological dimension:

5. Service involves dealing with people

3.9.2 Garvin’s Eight Dimensions of Quality for The service sector

1. Performance: It refers to the primary operating characteristics of products. For a car, for example, they would include acceleration, top speed, and miles per gallon, size and comfort. For a library they would include availability of books from stock, access to databases, and access to subject experts, somewhere to sit and work and so on.

2. Features: these are the secondary characteristics that supplement the product’s basic functioning.

3. Reliability: The probability of product’s failing within a specified period of time. For products this usually means that they perform as expected. For libraries, a major issue is usually availability of advertised services for example, is a working photocopier available or are ‘out of order’ notices in use again?

4. Conformance: the degree to which a product’s design and operating characteristics match with pre-established standards. In library services there are standard classification, cataloguing scheme and also library management software which provides service.

5. Durability: it is a measure of product life, having both economic and technical dimension. This is applicable to libraries if we bear in mind that the answer may be ‘infinity’ for those items which are literally irreparable. For most customers, however, the library issues will centre on the question of the rate of obsolescence of information and hence on how up-to-date the information provided. It may be appropriate under this heading, therefore, to consider the age of the library’s book stock or the frequency of update of a CD-ROM database.

6. Serviceability: it refers to speed, courtesy and competence of repair. In general, libraries didn’t have to give a great deal of attention to these issues in the past but they could be of major importance if, for example, an online information service which is provided on a commercial basis suddenly goes
wrong. With the increased use of IT-based system libraries can be vulnerable catastrophic failures.

7. Aesthetics: it refers to as to how a product looks, feel, and sound. Is the service area clean and well designed? Is it welcoming? Does it appear user friendly or as someone put it user lethal”? Everyone has come across libraries which look old, worn, gloomy and generally uncared for. Equally we all also know libraries which are bright, well designed, welcoming and fresh. There are customers who prefer the former of course and others who would rather have a dog-eared and annotated text than a book fresh from the publisher. Nevertheless, all the customers judge a library as much by its aesthetics as by its services.

8. Perceived quality: it refers to assessment of standards relying on indirect measures when comparing product brands. They do not carry out detailed surveys or examine the library’s performance in answering reference enquires over a six months period. Most users do not read the library’s mission statement or service standards, or even the ‘welcome’ leaflet. However, they will quickly come to a judgment about the library based on their preconceptions as users and on the reputation of the library among their colleague and acquaintances. (Premchand P)\textsuperscript{126}

3.9.3 Customer-driven Quality

Quality begins with understanding customer needs and ends when the customer is satisfied with the resulting product or service. That is why customer focus is the first quality principle of the ISO-9000 standard, a strategic concept. It’s important in quality management can be judged by the fact that all major quality awards in the world allocate maximum marks to customer satisfaction. To develop a customer focused organization, management should begin by looking at quality from the customers’ point of view. It should be realized that the customer is not really interested in the internal processes, or sophisticated process controls and quality management systems of any organization from which he acquires a product or service. The bottom-line for him is whether the relevant product or service meets his/her requirements and whether he considers it as good value for money, rapid and flexible response to customer. Important parts of customer-driven quality requires
more than defect and error reductions, reducing complaints, nevertheless, defect and error reduction and elimination of causes of dissatisfaction contribute.

3.9.4 Creating A Customer -Centric Culture: Customer focus cannot be developed in an organization merely by having systems and procedures specifying the responsibilities of various departments and functional groups. Every one needs to create organizational culture of sensitivity and empathy with respect to the customer. A culture of customer focus can be developed only through the total commitment of top management, which should be reflected both in a formal Quality Policy and in concrete action by the management.

Measuring customer satisfaction: one of characteristics of a customer –focused organization is that it strives to continuously improve customer satisfaction. There is an old adage- you cannot improve any entity if you can’t measure it. Thus measurement of customer satisfaction is essential if you want to improve the experience of customers while dealing with the company and secure customer loyalty. An organization needs to develop formal plans for measuring customer satisfaction. For this it needs to decide what to measure, how to measuring it and how to make use of measurement results. One or more of the following methods can be used for measuring customer satisfaction:

a. Customer feedback after delivery or product or service: this is one of the simplest, fastest, and the most effective methods of measuring customer satisfaction. Shortly after a new service has gone into use, the customer should be immediately asked to evaluate the service and comment upon areas of satisfaction and dissatisfaction.

b. Customer complaints and suggestions: the organization must have a formalized system of recording all customer complaints and as well as the methods of their disposal. Customer complains must be taken very positively as valuable inputs by the organization and should immediately trigger the improvement activities as relevant.

c. Customer survey: if the organization decides to carry out a customer survey, it would need to design a suitable questionnaire to obtain maximum information. It should also decide the scope of survey that is to how many customers are to
be covered by the survey i.e. by mail survey, telephone survey, website/e-mail survey etc.

Whatever method is adopted for obtaining customer feedback, it is important that responses received from the customers be properly analyzed and improvement actions be initiated where adverse comments have been received.

3.9.5 Quality checking parameter for library and information science:

Library and information service has its set of limitation, own terms of parameters. **Library Collection** should be right document, at right time, for largest number at least cost and for the right users. Proper collection needs review and evaluation of resources before acquisition. It will be based on customer needs. the collection should be based on collection development policy consisting of different policies like selection, de-selection, preservation or retention, digital conversion, stack management, weeding policies etc. Collection development in libraries is the process of planning and acquiring balanced collection of documents in any format including online database and electronic information resource. Develop different policies to simply the functions of library and information centres. Collection development is complex due to new technologies and formats. Changes in technology, book publishing, trade industry and new techniques for library collection are responsible for reshaping of collection development policies. The future collection development policy will be focused on quality of information resources than quantity.

**Library procedure** should be simple to follow and uniform in application.

**Library users** document are readily available so that time should be save.

**Library infrastructure and environment** should be functional, aesthetic, comfortable and conductive reading atmosphere.

**Library staffs have** to be professional, qualified trained and update with information.

**Library management** ought to be capacity to organising, planning, reporting, budgeting etc.

3.9.6 Changing concept of quality in a library services
The concept of quality is not a latest trend for library and information science professional as it is embedded in library principles, practice and activities. Ranganathan’s five laws of library science, implies the importance of quality library services. However, in the present day circumstance, satisfying the needs of the users is very important and dependence on the traditional methods may not be adequate to assess the quality and effectiveness of the library from customers’ perception. Today’s academic libraries face competition from substitute, cost-effective information contributors. All libraries basic philosophy is to provide the highest quality service. If library provides right information to the user at the right time and in right form, then it could be argued to be maintaining quality. Service quality and satisfaction are two major elements of effective service management. Library and information science researchers have followed the principles of marketing philosophy with emerging trends in library science to focus concentration on expectations and an alternative view of quality.

In the world of digital technology, the information business is no exception. It is estimated that over 90% of data in a digital format. It is fact, modern life that a large amount of data generated and stored in the electronic exchange. Digital involves the acquisition, conversion, storage and retrieval of standardization and organized with the help of modern technical equipment. Information centre accumulate and maintain materials to make their nominations to the position, to preserve and provide aggregation of different resources in digital format, with the help of digital technology and resources are also available for current use. Rarer materials housed in various libraries of the world are not in good condition and special techniques needed for conservation. Library staffs are waiting for records as potential solution. With the digitization of library collections, libraries are not just the work of conservation and restoration, but also provide users easy access to knowledge sources by means of powerful tools for recycling in modern life. By the following transformation trend Electronic and digital Information Management is being done in library.

**Library automation:** in the age of information explosion, it becomes necessary to automate library network because users seek to get information on their desk as quick as possible to satisfy the users’ demands in the age of information explosion, modern technology by the automation is the only solution of controlling. There are many library software are available, existing software packages are mostly provided by
computer professional who have less knowledge of library and information. LIS professionals with software skill can be attempted to develop user friendly software. Selection of software suitable for the requirements of the library is a complex and time consuming process. While selecting the software one has to consider the needs of the library, also the system features, functions performance, hardware requirements, cost etc. have been considered.

**Digital Library:** the concept of digital library is growing speedy. The digital revolution is leading to great changes in libraries all over the world. An important role of the digital library plays is in promoting the use of information. Due to information explosion, technological development, increasing cost, globalisation etc. there is need for global library with all modern facilities. The digital library’s challenges are not its own in the higher education system. they need to be resolved at an appropriate institutional level that they belong to its host institution. There are many digital resources such as search engines, library portal, library resources, e-books, e-newspapers, e journals, e-thesis and dissertations, e-statistics, databases, library networks, subject gateways, FAQs, digital archives, discussion forums, virtual conferences, virtual help desk etc.

**Institutional Repository:** are now been created to manage, maintain, preserve, intellectual output, and the digital assets, histories of institution. Here leadership role are taking by the Library professionals. They plane and build these repositories, and also fulfilling their roles as experts in collecting, describing, preserving and providing stewardship for documents and digital information.

**Library Networking:** library network for reference to lend a defined community or a concerted collection of resources. It provides physical or digital access to material, and may be a virtual space. Collections can include cassettes, CDs, DVDs, videotapes, e-books, audio books and other number of formats. A number of benefits are being offered to member libraries of thee particular networks.

**Consortia Membership:** The development of digital form information, library consortia is now become globally. A consortium is on the allocation of resources and improving access to information. These resources are distributed among the libraries that have joint missions, goals, customers and act on these similarities.
Cloud computing: It is a new breed of service offered over the internet, which has completely changed the way one can use the power of computers irrespective of geographic location. The basic principle of cloud computing entails the reduction of in-house data centres and the delegation of a portion or all of the information technology infrastructure capacity to a third party.

Frequently Ask Questions (FAQ): is an introductory guide to library resources, is a collection of basic information regarding libraries.

Library Portal: Portal is a single –user interface for accessing wide variety of electronic resources, both within and outside the library. It is a networking service that brings together content from diverse distribution resources using technologies such as cross searching, harvesting and altering, and collates this in to an amalgamated form for presentation via a web browser to the user. Library portal is a single access point uniting the library catalogue, subscription databases, subject gateways, electronic journals etc. Library portal meets the individual needs of users, which either the system itself can tailor the delivery and presentation of information content or the users themselves can customize the type and format of information displayed. Library portal is now the standard interface to generate library resources and services through a single access and management point for users. Most library users want information regardless of where they find it. They don’t want to limit themselves to their library’s collection. A portal offers them one step shopping that takes them from the initial need for information through its delivery without having to use several different tools. If well designed, a portal also provides effective navigation of complex, multiple collections. Over the past decade, academic librarians have been evaluators, selectors, and organizers of information on the web. Our experience and expertise make us valuable player in a team approach in planning and implementing library portals. An interactive service such as “Ask a Librarian” can make requesting assistance simple and convenient by connecting web users with librarians.

Information Technology Infrastructure: the users are different and their expectations are different hence it requires digital environment more pervasive. The digital technology and its application brought enormous changes in our arena that too computerisation to automation to cloud computing now. The cloud computing means that it is possible to buy them on demand by the minute or hour, network capacity
which provides a specific new service instead of buying dedicated processors, storage. It has cloud storage provides scalable, on-demand storage capacity. ICT tools and techniques now based to mouse and icon based displays and become standard interaction techniques to Lib 2.0 and 3D smart library where voice recognition and gesture facial. A number of trends will impact the ICT infrastructure that supports research and learning. The digital library social networking, blogs, wiki, etc are laying impact on data science/ mining, cyber infrastructure, transformation of teaching & learning and virtual learning. As far as space and services there is a large trend towards free, open-access, scholarly works to enable access and remove barriers to indulge within. In a digital landscape, there is no need to visit the library to obtain access for reference material. Libraries are providing varying digital services and access to information in – 24/7/365. The bundle of modern services such as providing quicker approach to information, the data bases, and consortia based access, aggregators, search services based on the searching techniques, indeed now library becomes one –on one teaching of software /hardware and finding seats without computers at them. As far as cultural role the Netizen online access makes digital divide and this is a visible impact of today, because of the hybrid and lib2.0 or 3D smart library feature.

Knowledge management (KM): people and ideas interact with the real and virtual environments, the creation of new technology to progress of learning field. KM mainly consists of four steps: Knowledge collection, Organisation, Data protection, Dissemination of Knowledge and Preservation. It is the process of generating, communicating and leveraging human assets. Knowledge management is generic descriptions of culture, process, infrastructure and technologies within organizations which maintains, grows and optimize the use of its intellectual capital to deliver strategic goals of an organisation with measurable financial results in the market place. Knowledge management is the process of professional knowledge in the hands of professionals, who have traditionally used their knowledge to batter power, prestige and autonomy from management. It represents the last battleground between management and intellectual labour. Organizing information for its gainful use in development interventions against the environment of information technology expansion all over the world has become a highly contentious issue that poses a great challenge for today’s information professionals. Academicians are the best knowledge
creators and universities are the best knowledge performer for these purpose universities should empower their libraries which are knowledge organisation.

The dynamic symbiosis of information literacy, lifelong learning and knowledge management is an essential condition for the learning individuals’ of organisation.

**Facebook in academic library** – A Facebook profile is an excellent mechanism for communicating with students it allows the library professionals to go where they are already. Creating a profile in Facebook is a quick and easy task. It doesn’t require any programming skills and is also easy to configure and delivers the service very quickly. Facebook is user friendly. While creating face book library fan page, it is important to include several basic elements. The profile should include professional contact information, office address and contact number and email addresses where students can send reference queries. Academic library professionals can effectively use face book to reach out the students, by marketing library services with a library fan page, library related information such as new arrival, library services, journal database etc. The successful implementation of social networking tools in library services promise to offer value added service to the existing library operations.

**Marketing library services & resources:** Marketing of library services is a new concept. It is an attempt to draw upon advances in the field of marketing to maximize research to the end customers. Marketing library services can be termed as the strategic initiatives to retain current customers and attract new customers to the library by creating awareness of the value delivered by library resources and services. The motto of marketing library services is to enhance awareness about library resources and services, increase usage and improve Return on Investment (ROI) through value addition to the end customers. Marketing in the library is necessary because of library is non profit organization. In order to increase its awareness, it is essential to market it; to showcase the value delivered by library service and resources; to enhance the value proposition of the organization and thereby improve ROI on the investment; to map and improve customer satisfaction, as a way of life. Marketing helps in the library services for spreading the awareness of library resources, services and informed users about library activities. Effective marketing is possible only when library professionals keep abreast with the activities of research scholars and library users. Marketing strategies depends on the type of audience and resources available.
There are few effective and successful strategies by which library professional can market their library resources and services such as improving customer connect, orientation, library brochure, database flex, new arrivals display, library website, mailers, current content service, author/expert speak, use of library walls, web OPAC, book fair, festival celebration and so on.

**Best practices:** the digital era is also an era of ‘great expectations’ from library users. The world around libraries, particularly the commercial world is booming with varieties of products and services. This is the result of globalisation. Experiencing the great variety in various spheres of life our users too expect diverse services in great number with utmost efficiency. The users’ expectations could be better attended to by planning and implementing various best practices.

### 3.9.7 Quality assessment and its scope in library

Library quality can have many phases in the point of various groups and an interest of an institution and these groups are the users, funding institutions like policy makers, UGC, a university, library staff, library managers and general public. Library quality perception will differ in the respect to these groups. They will care for the effective delivery of services.

The funding institution are promoted by cost-effectiveness and staff by sufficient offers for further education, by their working condition charge the library’s quality. All of the issues certainly maintain quality of library service.

For assessing library quality:

- a. measures the cost efficiency & effectiveness with the help of Performance indicators
- b. User survey measure the perceived quality
- c. to prove the importance and advantage of libraries by the individual users by outcome assessment tries

Tann emphasis on following points for general assessment of library quality:

- ✔ perceptive the user’s need
- ✔ flawless delivery of service
- ✔ Good services
Trustworthy equipment
Professional administration
Well-organized back up service
follow-ups treatment for better improvement

3.9.8 What does quality mean to an organisation?

There are a number of advantages to pursuing quality as a business strategy. In the present complex and rapidly changing environment, customers tend to be sophisticated and demanding. As Allen Paison, President of Walker Customer satisfaction measurement commented: ‘Customer today wants quality and value in the products and services they buy. Moreover, they usually can find it, and tend to look until they do’. Quality means survival, competitiveness and success.

3.9.9 Quality Movement in Indian Higher Education

The British Standard Institution (BSI, 1991) defines quality as “the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs”. In education system as teachers, HOD’s, principals, policy makers have to think and worry about quality because of the following reasons

1. Competition: - educational institutions are entering a new system, for students and funds will be highly important these institutions should be worry about their quality.

2. Customer satisfaction: - students, parents or sponsoring agencies are the the educational institutions customers, they are highly aware of their rights for time spent and their money.

3. Maintaining standards: - As educational institutions should set their individual standard and make efforts to improve quality of educational institutions make provisions and facilities for the same.

4. Accountability: In terms of the funds (public or private) every institution is accountable to its stakeholders.

5. Improve employee morale and motivation: institution will improve the staff in performing their duties and responsibilities by improving the morality and motivation.
6. Credibility, prestige and status: Quality is not once time process it is continuous process, it will bring in credibility to institution and individuals for the reason that of and status and brand value, uniformity leading to reputation.

7. Representation and visibility: institutions have to developed capability to catch the attention of better stakeholder support, increased donations/ grants from charity donors/ funding agencies similar to getting merited students from far and near.

3.9.10 Quality Management Systems in the Context of Five Laws of Dr. S.R. Ranganathan (Thakuria)\textsuperscript{127}

The quality of a library can be evaluated according to Dr. S R Ranganathan, that soughed material provide to users at the time they are needed. His Five law of library science advocated that library collection and services are for sure and necessary measures should be taken to connect the user with the information sources and services available in the library and save the valuable time of the user by providing quality services to them. All the laws are guiding principles for quality development and its improvement on a regular basis with focus on the user in the library. The five laws state thee goals and the ways of storing organising, coding and disseminating information in recorded material in a traditional library. It helps in quality improvement of library services as the laws are focusing the user very seriously.

1st law- “Books/ information are for use”- It implies that books and documents are not meant for storage purpose, but for usage, direction to quality service measurement and so the documents acquired must be a good quality in terms of their physical condition as well as contents. The quality of library collection not only depends on their content alone, but also on its accessibility and availability as and when needed. Besides, the opening hours of the library, physical facilities available, accessibility offered, helping mentality of the library staff, etc. Also affect on information resources quality and their use in the library while developing collections facilities and services

2nd law-“Every reader his/her books/ information” implies the users actual requirements are considered seriously. In order to meet this law, modern libraries should collect all macro and micro documents in the library. These documents enabling the user to get his/ her needed information documents in time not only that,
the library should participate in resource sharing programme and this increase its information and documents resource as well as libraries should use the modern form of information sources like bibliographic and textual database, online information sources and internet service. If the user gets his/her document on information in the form in which it is expected is a symbol of quality service in the library.

3rd law- “Every book/information its reader”- stated documents and information importance and availability in the library which are to be used maximum. It helps to identify the materials and match the same with the requirements of users. There for the law advocates scientific document section, effective and efficient locating and searching tools, open access, extension service, publicity programmes, personal help, marketing of library and information products and services, to get maximum users to the documents and information available in the library. All these lead to quality works and services.

4th law “save the time of the reader”- indicate appropriate, efficient, the importance of timely service to the users by using advance techniques with the help of technology and tools provision of open access, classified arrangement of document, location and directing guides, efficient and effective tool for searching documents, personal to the users for search access & retrieve needed information from other library website, database, homepage, Xerox facility, experienced and qualified and staff etc. will provide effective services to their users. In order to have quality in libraries or to satisfy the users, the libraries have to focus and use modern methods of management like implementation of the quality standards of national and international level. Total quality management techniques, system analysis.

5th law “Library is a growing organism” – implies that the library components such as the documents, the users, the services, the methods and techniques, the technologies used etc. are changing. These changes give new phases of libraries such as electronic, computerization, networking, online libraries and virtual libraries.

The quality of library can be perceived either from organizational level or user level or both of them it's offered to users and judged by the user. The quality of an information product and services is influence in the library by Environment; Library resources; library aid and library staff.
Quality Objective in ISO 9000 concern with Dr. Ranganathan’s Five Law- the father of Indian library science Dr. Ranganathan’s Five Laws are the quality objectives or primary goals defined in ISO 9000 standard. Customer’s satisfaction is basic requirements in ISO 9000 standard. The great visionary Dr. Ranganathan has visualised this requirement in 1931 when he formulated library science five laws. When these laws are compared with quality objectives defined in the ISO 9000 standard, it is found that these same laws are reflected in these service quality objectives are continuous improvement service, customer’s satisfaction with professional ethics and standards. The management should translate these standards as goals and objectives for the activeness.

These three quality objectives are Ranganathan’s law numbers 1 and 3 in other words.

- Creative of collection commitment to quality within services organization.

A. Ranganathan’s law no. 4 applied to this objectives.

- Continues evaluate about requirements regarding service and identify opportunities for achievements of service quality improvement.

A. Ranganathan’s law no. 5 implies this objective.

- Prevention of adverse effects by service organization on society and the environment.

Ranganathan’s all five laws are considered together in the objective of ISO 9000 in different words.

- Customer’s satisfaction resulting in getting more customers.
- It enables the staff to identify users’ needs and suggest suitable services for users.
- It saves the time cost and energy of staff though elimination waste reworking.
- Increase the credibility of the organization.
- Effective use of manpower through procedure task orientation.

To implement quality assurance management system in any organization one of the major task is documentation of the procedures.

The purpose of documentation is not only to satisfy ISO 9000 standards, but in fact primary objective of documentation is to achieve the quality characteristics of the product, which will satisfy the customer. Documented procedures are at heart of the
quality system. They are the documents, which tell staff how to follow a quality system day to day in their own work. The ISO 9000 standards focus on documentation to ensure quality systems are in place.

Documentation of procedure is a framework, a foundation of quality system. Once the procedures are documented, on that basis the improvements to procedure are documented, on that basis the improvement to procedure can be made. And do this, it is necessary to document the exercise’s procedures while documenting procedures a clear picture of organization emerges.

3.9.11 NAAC role in Promoting Quality on Higher Education

In the world, India is the Second largest system in Higher Education. To undertake, educate, train, research and provide service to the community and afterwards to protect the quality of the higher education institutions, the National Policy Mission proposes the Accreditation unit is the fundamental mission of higher education. Based on this, University Grants Commission (UGC), UGC Act (Act 3 of 1956) under section 12 CCC established the NAAC as an Autonomous Institution on 16 September 1994 with Registered Office at Bangalore.

The decade-old history of NAAC is a story of many achievement and effort also adding up numerous dimensions to the occurrences of quality assurance programme of NAAC, Quality assurance forms of higher education systems are planned to fulfil long-term collective requests. The quality assurance agencies are grateful to face durable questions such as defining and maintaining standards of quality and equally important necessitate to keep their methodologies up-to-date and approachable to changing community needs. The important actions and methodologies of NAAC are explained here.

To provide the quality cause of higher education to continual review NAAC charge with the responsibilities and improvement of a current practice.

The LIS of higher education institutions play a central role in enhancing the quality of academic and research environment. The NAAC strive for quality and excellence in higher education and advocates for enhancing the role of LIS in improving the academic environment. Through, it is institutional accreditation that NAAC does the overall evaluation, a great initiative in promoting the libraries in identifying and
sharing good or best practices that can be adopted in the Indian academic environment. A Best practise positively process policy, strategy and may be innovative and be a philosophy, that solve a problem or create new opportunities and positively impact on organisations, Institutional excellence is the aggregate of thee best practices followed in different areas of institutional activities. NAAC developed the format under following four broad areas i.e. Management and Administration of a Library; Collection and Services; Extent of use of services and Use of technology.

Scheme, Procedure and its effect on Management and Administration of NAAC as the result the quality of library services and usage has been enhanced

**Table No. 3.3 Management and Administration of Library**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Procedure</th>
<th>Its effect</th>
</tr>
</thead>
</table>
| Observation of other library practices by institutional visits | The library staff member are taken for visit to other College/ Institutional libraries to study their functioning | Staff being to refresh and also make aware about other libraries functions
Staff become enthusiastic and more capable |
| In-service program                          | Staff members are given the opportunity to make acquainted with library automation, e-library services by arranging external and in-house training programmes. Staff Development programmes organized on the areas such as Gardening, Yoga, Health and Team building. | The morale and E-skills of the staff has been increased |
| Maintenance of service areas                | Library is a place where atmosphere should be inviting; cleanliness in and outside of the library and maintenance of calm and neat atmosphere in the reading and stack areas. | Library Users are appreciative of the library efforts |
Resource generation

Library facilities are made available all working days. Provide individual members are on charged basis and Computers with printers made available to the external users are provided free and with nominal charges.

Earned annually through external membership and more access is being provided to the users

Student internship or participative programme

The students were divided into groups and a work and time schedule for relocation the student groups in the different sections was prepared; The students are instructed understanding about the library and it’s working by trained staff before involving them in the activities of maintenance

Students possibly will get a clear understanding of the functions in each subdivision of the library. Development of a positive attitude in students and understanding about the importance of a library and its services.

<table>
<thead>
<tr>
<th>Table No. 3.4 Collection and Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compact storage of less used collection</strong></td>
</tr>
<tr>
<td><strong>Collection enhancement in different formats or</strong></td>
</tr>
<tr>
<td>hybrid library</td>
</tr>
<tr>
<td>Library book exhibition</td>
</tr>
<tr>
<td>Extended library opening hours and extended hours of service</td>
</tr>
</tbody>
</table>
### Table No. 3.5 Extent of the Use of Services by Information Literacy Programme

<table>
<thead>
<tr>
<th>User Education</th>
<th>On the circulation / reference counter where gather details of information needs and take them to the process of retrieving information from the library. Formal training on how to use Internet to access databases is arranged every fortnight at the library for the assistance of faculty and scholars.</th>
<th>View is acquired to appraise and improve quality of information services and products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to fresher / User orientation</td>
<td>Library has been conducting Orientation Program to the new students admitted every academic year. Students are explained about the resources, facilities, services the library provides them and give them training in searching the library database, e-journals, e-mail and Internet browsing etc.</td>
<td>Students find it useful to know about the resources available in their discipline and they also know specific locations of different types of materials and the privileges the library provides them. Students are know how to search the documents</td>
</tr>
<tr>
<td>Library best user award</td>
<td>Data is gathered through visitor register maintained in the library and usage data is compiled through circulation of library items. Based on the data and the explanation of the librarian one best user award are given to the student who has made maximum use of the library.</td>
<td>Increase in the use of library reference materials and visits to the library.</td>
</tr>
<tr>
<td>User feedback practice through different formats.</td>
<td>Library services evaluation through suggestion box, feedback forms. Appropriate actions are initiated regularly on the suggestion received from the users. Book recommendations boxes are also kept at stack room, reference and reading halls and users are encouraged to recommend books for additions to the library.</td>
<td>Helps in collection development. Changes and improvement in facilities and services.</td>
</tr>
</tbody>
</table>

Table No.3.6 Use of Information Technology in Libraries

| On-line information retrieval (Internet access facility) | One of the most important roles the libraries play in society is providing access to information. Access to current and comprehensive information is important to improve teaching and learning activities. For this purpose, an air-conditioned computer room with five computers with broadband connection of 512 kbps is created exclusively to the students and researchers with a nominal fee of Rs.300 for 50 hours to access online information resources. Library staff members monitor this service during the working hours of the Library. | The User Community received it with enthusiasm. Within a short span of time, it became one of the most utilized services of the library. |
| Free browsing Unit (Internet access facility) | Large numbers of resources are available in the Web and students need to be provided with the required facility to access the same. A browsing unit with five computers | Students are well informed about the e-resources and they are permitted to use the facility only for |
with Internet connectivity is created for free use by the students during working hours. Librarian and senior faculty members are guiding them in searching the relevant topics and also taking printouts

<p>| Broad band Internet Center (Internet access facility) | Entire Campus is networked with OFC connecting with library computerization. Library users are familiar in using the e-resources. Library conducts User Orientation and User Awareness programs on regular basis to expose them to the new environment. Thirty-Six Computers are exclusively placed in the entrance lobby of the Library with 2 Mbps Internet connectivity apart from six computers near the stack areas. All the registered library users are allowed to use the facility from morning 9.00 am to 12.00 midnight. These systems are connected to the UPS for reliable access without interruptions. Designated library staff members help the users and maintain the systems with minimum downtime. | This facility is heavily used from 9.00 am to 12.00 midnight. Library users are satisfied with identifying the resources, search results apart from accessing Web OPAC in locating the reading materials in the library. |
| Library homepage for Information dissemination | Regular display of information about the latest additions and other current information like job opportunities, fellowships, training, student placement, academic, research and | A good number of faculty and researchers regularly use this service and make effective use of their academic and research interests. Timely and wider |</p>
<table>
<thead>
<tr>
<th>Dynamic Library Website</th>
<th>Scientific news are displayed on the notice board as well as the library website.</th>
<th>Dissemination made effective use and recognition of Library &amp; Information Services and number of logs to library website increased.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Library has developed its website linking its OPAC. It has also linked to its electronic library consisting of all 4,000 e-journals through UGC-Infonet along with its own subscribed databases. Website also has links to various other resources created by the library. Library has linked to all the free resources on the web and enables the users to personalize their searches using “My Library” Software.</td>
<td>To access the library catalogues through the remote access this will enable the user familiarize with the library activities. User can also renew/reserve books, access the content pages of his formal journals and ask for a copy of the article to be delivered to him at his work place.</td>
</tr>
<tr>
<td>User feedback through library homepage</td>
<td>Library homepage is key to its resources with extended facility to link useful resources with dynamic and seamless access facility to electronic resources available globally. Library homepage is designed with less than four clicks in reaching to the required information. The page layout is user friendly with all the useful information organized logically. Library staff members, who acquired necessary skills created it and they maintain and update the information with periodic</td>
<td>Library users visit the homepage regularly and the total hits per day are a measure to know the steep increase over the period. Users interact with the web master with suggestions and appreciations as the case may be. Feed-back enabled the homepage to be user friendly with ease of access to useful information resources.</td>
</tr>
</tbody>
</table>
checks to the links in the library. This is linked to the University Website. Library OPAC is linked to the digital full-text resources created in-house as part of building a digital library. Links are provided to access over 18,000 full-text e-journals, databases, e-books and digital repository etc. FAQs, what’s new facility are dynamically updated.

<p>| 24/7 Access to e-resources | Library has five high-end SUN servers in a distributed network model. All the resources available in these servers including the CD Net server are available on the Intranet. Library database server, web server, digital library server are available on the Internet. These servers are available for access on 24/7 basis. The infrastructure and the resources are maintained in-house by the library staff. E-resources include: more than eighteen thousand full-text e-journals, subscribed external databases, digital resources created by the library by converting non-copyrighted printed books and other documents. All the digitized full-text content of theses and dissertations submitted to the University apart from the digital repositories created with internally generated materials are open for 24/7 access. Users are |
|---------------------------| Library Users have been accessing the e-resources created by the library and some material available on the net at the point of origin. Seamless Access to the resources with simple navigation is enabling the users appreciate the efforts of the library in providing them useful information resources. There is close formal and informal interaction with the users in improving the facility as and when required. |</p>
<table>
<thead>
<tr>
<th>Provided access at their desktops with all the facilities. Campus-wide LAN supports all the transactions in text and multimedia content.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group concessional Night Services offer for outside students and Scholars in accessing e-resources.</strong></td>
</tr>
<tr>
<td>Computer with printer is available for pay and use. Homogeneous group users are from various colleges among the southern districts, teachers from self-financing institutions, Academic Staff Colleges and other Universities. Charges are collected based on the use, printing etc.</td>
</tr>
<tr>
<td>On the basis of such marketing of information and information products, the University Library earned a sum of Rs.6.5 lakhs during the past three years. Researchers, Academics, Students of the region are greatly benefited.</td>
</tr>
<tr>
<td><strong>Access to Digital repository through library website.</strong></td>
</tr>
<tr>
<td>Bangalore University Library has installed a web server on Linux platform and installed D-space digital library software for creating different repositories. At present the faculty publications repository is created. It is proposed to create other repositories.</td>
</tr>
<tr>
<td>Users can access the repositories through the Bangalore University Library website. The important resources like theses and dissertations, project reports and question papers can be accessed from a remote location without visiting the library.</td>
</tr>
<tr>
<td><strong>Digital repositories</strong></td>
</tr>
<tr>
<td>University generates lot of information resources every year as internal publications apart from faculty publications, theses &amp; dissertations regularly. These resources are presently not accessible widely. Academic publications relate to primary</td>
</tr>
<tr>
<td>Users are able to access these resources using links on the library homepage and also some resources as links at the 856 tag of MARC21 to the Web OPAC. These resources are growing and along with the number of users of these</td>
</tr>
<tr>
<td>CD Mirror server facility</td>
</tr>
<tr>
<td>CD NET server facility</td>
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<tr>
<td>Digitization of</td>
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<tr>
<td>manuscripts</td>
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<tr>
<td>integrated, Multi lingual, complete automation of in-house services, web enabled database</td>
</tr>
<tr>
<td>Using self developed integrated Library software (Automation of in-house services)</td>
</tr>
<tr>
<td>Web OPAC</td>
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<tr>
<td>Information retrieval through Web OPAC</td>
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</tr>
<tr>
<td>Campus-wide local area network (LAN) facility</td>
</tr>
<tr>
<td>Database creation using international standard formats</td>
</tr>
<tr>
<td>Z39.50 protocol. All the resources available in the library are catalogued using MARC21, the International Standard for machine readable catalogue world over. The database server is Z39.50 compliant to enable the Internet Users to access the database with ease.</td>
</tr>
</tbody>
</table>

### 3.10 Conclusion

In today’s competitive age, quality is primary requirement of any field. In LIS has also not completed without the managerial concept, technological aspects with the higher qualities, in this regards chapter discussed quality concepts, Structure of quality management approaches in libraries, Quality Movement in Indian Higher Education, Five Laws of Ranganathan’s in the Quality Management Systems context and NAAC engage in Promoting Quality on Higher Education.