CHAPTER – I

THE TOPIC AND ITS RELEVANCE
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1.1 Introduction:

TQM is often used to refer to any set of changes, techniques and programmes that managers choose to institute in the name of improvement. The word 'Total' conveys the idea that – all employees, throughout every function and at all levels of an organization are to pursue quality. The word 'Quality' applies to every aspect of the organization. TQM has emerged as a response to the need for improving and assuring quality in business as well as in managerial and technological processes for effectively ensuring, restoring and achieving customers' satisfaction. It has become all pervasive on account of globalised economy. As a result, TQM has emerged as a predominant component of the management philosophy.

Total Quality Management (TQM) is accepted worldwide as an integral part of the management philosophy. Many organizations around the globe are conducting organizational development programmes to enhance quality awareness and change the attitudes of their employees. These efforts towards understanding, adopting and promoting TQM are needed primarily because of the changes taking place in the global economy, changing market conditions and customer's expectations and increasing competitive pressures.

TQM is a process of continuous improvement employing participative management and centered on the needs of customers. The concept of TQM presupposes employees involvement, problem solving teams, statistical methods, long term goals, thinking, analysis of the problems and continuous sharpening of quality performances leading to excellence.

The concept of TQM, therefore, is important to services in any organization or field of activity as it is in the manufacturing sector. Service Sector, in fact, is a generic term which covers many sectors such as healthcare, education, banking,
insurance, hotels, transport, libraries to name a few. A large number of people involved are white-collar staff. A direct interaction with customers is involved. The customers also vary in their cultural, economic background and thus in their expectations. The needs and priorities put forward by the customers and efforts made by the industries under the same category to meet their needs also change from time to time. The reactions and responses to services can be gathered directly as well as indirectly through surveys.

According to Besterfield, TQM is the art of managing the whole organization to achieve excellence. TQM is defined as both a philosophy and a set of guiding principles that represent the foundation of a continuously improving the organization. It is the application of quantitative methods and human resources to improve all the processes within an organization and to satisfy and exceed the customer needs immediately as well as in future. TQM integrates the existing fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach.

'Total Quality Management' popularly known as TQM, was largely experimented for post-war economic reconstruction in Japan. Most eminent names on the subject are W. Edward Deming, Joseph M Juran, Philip B Crossby and Kaoru Ishikawa. More or less the entire TQM is built around 14 cardinal principles laid down by Deming, Juran and Crosby. Deming, in the preface of his book 'Out of the Crisis' mentioned that 'Total Quality Management' is equally applicable to education, health, and other service sectors. Indeed TQM has been extensively tried out and experimented in education beginning in the late 80's. A large amount of professional literature has emerged on the subject of application of TQM in education particularly in higher education. "The basic approach of TQM revolves around three major principles namely customer focus, continuous quality improvement and improvement of all".
1.2 TQM - Definitions:

British Standard BS5750: Part 1:1992 Section 3.1, defined Total Quality Management as "Management philosophy and company practices that aim to harness the human and material resources of an organization in the most effective way to achieve the objectives of the organization".

This statement in the BS is accompanied by the following three explanatory notes:

Note 1. The objectives of an organization may include customer satisfaction, business objectives such as growth, profit or market position or the provision of services to the community etc., but they should always be compatible with the requirements of society whether legislated or as perceived by the organization.

Note 2: An organization operates within the community and may directly serve it, this may require a broad conception of the term customer.

Note 3: The use of this approach goes under many other names some of which are as follows:

Continuous quality improvement

➢ Total quality
➢ Total business management
➢ Company-wide quality management
➢ Cost effective quality management

Laire and Simintiras (1991) defines TQM as "the combination of socio-technical process towards doing the right things (externally) everything right (internally) first time and all the time, with economic viability considered at each stage of each process".

Oakland (1991) mentions that the concepts of TQM are simple, straight-forward and easy to understand. According to him, that "each part of an organization has customers, whether inside or outside and the need to identify what the customer
requirements are, and then set out meeting them forms the core of a TQM approach. Such an approach requires a good quality management system, statistical process control and teamwork."5.

1.3 Elements of TQM:

The TQM concept supports the philosophies of customer focus, continuous improvement, defect prevention and recognition of responsibility for quality by all the employees of an organization.

Elements of TQM: The main elements of TQM are shown in the following figure:

- **Actual and potential users**
- **Error free process**
- **Quality is customer defined**
- **Performance measurement**
- **Continuous improvement**
- **Total Employees involvement**

*Quality is user defined*: The ultimate objective of any information centre is the satisfaction of its clientele. Thus, quality should be defined in terms of user’s perceptions. It has to fill-up the gap between the expectations and perceptions.

*Performance measurement*: Performance measurement needs to be based upon timely measures and feedback on performance through superior quality information systems.

*Total employees involvement*: To meet the objectives of any library and information center, the employee involvement is necessary. Each individual must take the initiative and not rely upon someone else. They must understand that they contribute equally and to the best of their ability and they can succeed only through cooperation and support of all others in the organization.
Continuous improvement: Continuous improvement must be seen as the responsibility of everyone in the organization. To develop this, a focus on training, education, communication, recognition of achievements and teamwork is often seen as appropriate.

Error free process: As the library is a growing organism, the focus of TQM should be on the reduction of costs of service, achieve error free process and save the time of the user.

Actual and potential users: It should be ensured that the libraries have equal focus on all types of users such as actual and potential users. The staff should be encouraged to identity these users who are in need of different types of sources and services and educate them for utilizing the library facilities.

1.4 Principles of TQM:
The major principles of TQM according to Parag Diwan, described in a nut shell, are as follows:

1. **Pre-production quality evaluation**: This implies that clear procedures are to be defined to analyze both the product and process design. This analysis must conclude whether or not the designs will lead to fulfillment of customer’s requirement.

2. **Quality planning product and process**: This means that plans must be formalized before the start of manufacturing as to how to measure, attain and control the desired product quality and consistency of the manufacturing process.

3. **Quality planning – purchase activities**: This lays down the procedures necessary to control the quality of purchased material. Such procedures must clearly delineate to the vendors the quality requirements and how they can conform to them.

4. **Quality evaluation – product and process**: This includes
 Establishment of quality checks by personnel or shop floor,
Provision of adequate measuring means to operators, and
Maintain proper quality records

5. **Quality information system and equipment**: This provides for information system and equipment for quality systems. Equipment for quality information systems include measurement methods and types of measuring equipment. Quality information system means a proper analysis and utilization of information to control the quality activities.

6. **Quality training and orientation**: This activity of TQM system provides the means for developing the 'human resources' required to properly operate the quality system. The effectiveness of quality training and orientation is measured by personal capability developed as part of this programme.

7. **Post-production quality service**: This activity is part of a function namely, 'after-sales-service'. This activity also includes the establishment of procedures to answer complaints and making rectifications which will result in customer satisfaction.

1.5 **Quality Gurus' Ideas:**

Quality Gurus' ideas have influenced most areas of TQM. The following seven point summary can be a guideline for getting the best out of the quality gurus' ideas:

a. Management commitment and employee awareness are essential from the early stages of TQM implementation. W Edward Deming's philosophy is possibly the most useful for encouraging these necessary attitudes.

b. The awareness should be backed up by facts and figures. Planning and data collection are important. Costs of quality can be used to measure the progress of improvement. Joseph M Juran has made the biggest impact in this area.
c. TQM programmes normally employ teamwork to facilitate improved communication and problem solving. Quality Control Circles are particularly advocated by Kaoru Ishikawa, and can be very successful if the rest of TQM structure is in place.

d. Ishikawa advocated simple tools for problem-solving and improvement to be used by all employees.

e. There are also more technical tools to control industrial design and manufacturing. Shigeo Shingo’s work has been associated with successful just-in-time systems.

f. Management tools should be studied to achieve quality. These include the concepts of company-wide quality control and total quality control associated with Ishikawa and A V Feigenbaum respectively.

g. In order to move from an inspection to a prevention culture, emphasis is placed on serving the internal customers and suppliers. This customer focus has been strongly stipulated by Juran and Deming.

One priority that needs emphasising is that Deming’s work is so challenging that it should deserve serious consideration. Finally of vital importance is the need to develop a specific quality system by an organization. It is likely that different organizations or establishments will have different priorities and targets. The quality gurus have an important contribution to make to TQM but as it has been pointed out by almost all gurus, it can only be planned and implemented by the senior management of the organization or establishment. 

1.6 ISO 9000 and TQM:

International Organization for Standardization (ISO) is a world wide federation of National Standards bodies, having its headquarter at Geneva, Switzerland. ISO 9000 is not a revolutionary international quality standard. It is evolutionary. It evolved from the existing and widely used quality standards. ISO
9000 can be traced directly to the initial military quality standards developed in 1963, MIL-Q 9858A. It evolved as well from the NATO quality standard, AQAPI and the British Quality Standard, BS5750. Almost all the quality standards in the world can be traced back to these roots. MIL-Q also became the amalgamation of many commercial standards, especially in regulated industries such as safety, health, aerospace and nuclear. It was used to evaluate internal as well as supplier's quality systems. An important part of the MIL-Q evaluation was periodic quality auditing.

ISO 9000 series is a series of standards concerned with quality assurance. It strives to provide a model for managing the organization from the production stage to delivery to the customer. The standard also provides a framework for measuring the consistency of an organization, its systems for dealing with customer orders, purchasing, stock, service provision and service delivery.

**ISO 9001:** Provides a framework for organization where design and servicing are customer requirements.

**ISO 9002:** Provides a framework for a product or service which does not require regular redesigning or servicing for each customer.

**ISO 9003:** Provides a framework for those organizations whose business is the inspection and testing of other products and services.

**ISO 9002:** It is regarded as the most appropriate for service organizations like a library.

### 1.7 Benefits of TQM:

<table>
<thead>
<tr>
<th>Tangible benefits</th>
<th>Intangible benefits</th>
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<tbody>
<tr>
<td>- Better product quality</td>
<td>- Effective team work</td>
</tr>
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<td>- Productivity improvement</td>
<td>- Enhancement of job interest</td>
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<tr>
<td>- Reduced quality costs</td>
<td>- Improvement in human relations and work area morale.</td>
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<tr>
<td>- Increased market</td>
<td>- Participative culture</td>
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</tbody>
</table>
- Increased profitability
- Reduced employee grievances
- Improved communication
- Enhanced problem-solving capacity
- Improved corporate health and character of the company
- Better company image

1.8 TQM for Libraries:

Although the library and information professionals have recognized long back the need for organizing the library with customer orientation in the five laws of library science, the route to have the customer focus could not be found out. It emerges from a workplace culture built on trust, team work and other important factors of quality of working life. The provider focused policies in fact have enhanced the gap between acquisition and utilization of resources. Moreover, new values, needs, expectations, consciousness and attitudes of the employees are a large step forward from traditional, hierarchical and bureaucratic job structure and design of the university libraries. The university library staff has so far not developed any mechanism to identify the latent, potent and dormant needs of library users. Innovations in information products, services and processes, either or both, are being instituted but not implemented due to lack of organizational flexibility, adaptability and synergy.

TQM in libraries influences the three concepts, namely, every process, every job and every person:

Every Process: All functions in the library system. They are acquisition, technical, maintenance, circulation, serial control, administration functions, all sections involving in quality improvement

Every Job: All individual jobs in library organization. They are preparing book indents, order routine, accessioning, passing of bills for payment, classification (universal scheme) cataloguing (universal code), stock rectification, bibliographical
work, charging and discharging, resource sharing, binding, reprography service, indexing service, cleaning, dusting, accounts, tools and plants, supervision, readers services, computerization etc. All these jobs must involve correct work to avoid errors and to achieve quality.

*Every Person:* Library staff such as professionals, semi-professionals, non-professionals and authority. All employees and authority must feel responsible for the quality of his or her work and that of the group.

The application of TQM in the context of libraries seems to be of comparatively recent origin. In the Indian context, Dr. S.R. Ranganathan's Fourth Law ‘Save the time of the reader’ has implications similar to what is advocated in the TQM approach. His explanation for the term ‘Documentation’ as pinpointed, exhaustive and expeditious organisation and retrieval of information is what the sum and substance of the TQM approach. This shows that the focus in library and information science even in 1931 was on customer satisfaction, symbolized by user satisfaction.

**1.9 ISO 9000 for LIS:**

Tann (1993) suggested, in a paper concerning with the application of the ISO 9000 quality assurance standard to libraries, that ‘Fitness for purpose’ would include;

1) Knowing the customer’s needs – stated and/or implied;
2) Designing a service to meet them on or off the premises;
3) Faultless delivery of service;
4) Suitable facilities – car park, café;
5) Good accommodation – seating, lighting, heating, toilets;
6) Good housekeeping;
7) Reliable equipment – computers, videos etc.;
8) Efficient administration – welcome, queries answered effectively and efficiently;
9) Helpful, courteous staff;
10) Efficient back-up service;
11) Monitoring and evaluation including customer expectation complaints, recommendations, for improvement, and
12) Feedback loops to build-in improvement procedures and/or checking that improvements are put in place."14

1.10 Benefits of TQM for libraries:

The general benefits of TQM are as follows:

i) It reduces bureaucracy, empower staff and create a team work base culture in library,

ii) It helps in gauging user needs and expectations in a proactive way and equips the library staff to provide more and better services,

iii) It is an evolutionary process and can easily be incorporated into the already existing management system of libraries,

iv) Reduction in user complaints and gain a competitive advantage over other information providers,

v) In TQM, quality is a high profile management tool, its implementations in libraries improve the image of the library staff and helps in public relations and marketing,

vi) It helps in breaking down inter sectional barriers/status in library and promotes co-operation and team work instead of competition,

vii) Empowers staff members to develop a sense of self determination.15

1.11 Objectives of the Study:

This study has been undertaken to examine the following objectives relating to the ‘influence of TQM in the university libraries in Andhra Pradesh.’ The main objectives of the study are:
1) This study is intended to measure all the functions of the university libraries in terms of quality and also to make a comparative study among the categories of the university libraries.

2) This study is aimed to identify the availability of physical facilities in the university libraries in terms of quality from the point of view of management, staff and users.

3) This study is intended to identify the quality of staff in terms of recruitment policy and qualifications (professional skills).

4) This study attempts to diagnose the management support for human resource development in the university libraries in terms of motivation, training, moral support etc.

5) This study aims to measure performance through standards and specifications adopted in library activities for quality maintenance.

6) Atmosphere and environment also influence the aesthetic value of the library. Hence it is intended to measure these values as apart of Total Quality Management.

7) It also tries to study the quality improvement initiatives such as participative management, staff training, staff recognition, staff morale etc.,

8) As a part of its objectives, this study is aimed to measure the quality in performance through staff commitment, quality in work efficiency, professional zeal etc,

9) The human relationship influences the quality services. Therefore, this study attempts to measure the human relationships within the library system.

10) Quality in service is one of the impacts of the Total Quality Management. As such, this study also attempts to measure quality in service through examining the quality in selection of documents, stock rectification, application of information technology and introducing modern electronic services.
11) Since user satisfaction reflects the quality service, this study intends to measure the ‘user satisfaction’ in all aspects of services in the university libraries.

1.12 Hypotheses:

Based on the above said objectives, the following hypotheses are formulated:

1) Physical facilities available in state managed university libraries are always inadequate when compared to central university libraries funded by central government.

2) Collection development in state managed university libraries is neither qualitative nor quantitative due to scarcity of funds, whereas the collection development in central university libraries is both qualitative and quantitative as adequate funds flow from the central government.

3) Both professional and non-professional staff strength is more inadequate in state managed university libraries when compared to central university libraries.

4) The standards and specifications meant for library activities may not differ from one to another.

5) The staff quality improvement initiatives such as in-service training, support for continuing education, deputation to conferences, seminars, organizing workshops etc. are always better in central university libraries when compared to state managed university libraries.

6) The state managed university libraries are lagging behind in implementing IT services when compared to the central university libraries.
7) The atmosphere and environment prevailing in the central university libraries create better aesthetic values when compared to the state managed university libraries.

8) The human relationship among the staff at all levels and also in between staff and readers does not differ from one university library to the other.

9) The readers satisfaction of the central university libraries always differs from that of state managed university libraries. The readers of the central university libraries are more satisfied from the point of view of quality library services when compared to the state managed university libraries.

1.13 Study Design and Methodology:

The use of Information Technology in library and information science has been received well by the professionals since this will enable them to cater to the needs of the users in a more accurate and systematic way without loss of time. However, aspects like providing necessary infrastructural facilities like computer hardware, software, training and skill development of the staff are to be taken into consideration while expecting the desired results. Although the process of automation and providing technical training to the professionals has been initiated, the situation is not uniform in the university libraries in the State of Andhra Pradesh as these universities were set up at different periods of time and with varying objectives.

It is in this background, the present study viz., “The influence of Total Quality Management in Information Technology Environment in the University Libraries in Andhra Pradesh” is taken-up. There are 23 universities functioning in the state. As mentioned earlier, these universities were set up at different periods of times and for different purposes. Out of the 23 universities, 15 universities have been taken up for this study.

List of the Universities in Andhra Pradesh:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the University Library</th>
<th>Location</th>
<th>District</th>
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<tbody>
<tr>
<td></td>
<td>University Name</td>
<td>City</td>
<td>District</td>
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<tr>
<td>1</td>
<td>OSMANIA UNIVERSITY</td>
<td>HYDERABAD</td>
<td>HYDERABAD</td>
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<tr>
<td>2</td>
<td>ANDHRA UNIVERSITY</td>
<td>VISAKHAPATNAM</td>
<td>VISAKHAPATNAM</td>
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<tr>
<td>3</td>
<td>SRI VENKATESWARA UNIVERSITY</td>
<td>TIRUPATI</td>
<td>CHITTOOR</td>
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<tr>
<td>4</td>
<td>A.N.G. RANGA AGRICULTURAL UNIVERSITY</td>
<td>HYDERABAD</td>
<td>HYDERABAD</td>
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<tr>
<td>5</td>
<td>JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY</td>
<td>HYDERABAD</td>
<td>HYDERABAD</td>
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<tr>
<td>6</td>
<td>CENTRAL INSTITUTE OF ENGLISH &amp; FOREIGN LANGUAGE</td>
<td>HYDERABAD</td>
<td>HYDERABAD</td>
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<tr>
<td>7</td>
<td>CENTRAL UNIVERSITY OF HYDERABAD</td>
<td>HYDERABAD</td>
<td>HYDERABAD</td>
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<tr>
<td>8</td>
<td>KAKATIYA UNIVERSITY</td>
<td>WARANGAL</td>
<td>WARANGAL</td>
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<tr>
<td>9</td>
<td>NAGARJUNA UNIVERSITY</td>
<td>GUNTUR</td>
<td>GUNTUR</td>
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<tr>
<td>10</td>
<td>SRI KRISHNADEVARAYA UNIVERSITY</td>
<td>ANANTAPUR</td>
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<tr>
<td>11</td>
<td>B.R. AMBEDKAR OPEN UNIVERSITY</td>
<td>HYDERABAD</td>
<td>HYDERABAD</td>
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<td>12</td>
<td>SRI PDMAVATI MAHILA VISHVAVIDYALAYAM</td>
<td>TIRUPATI</td>
<td>CHITTOOR</td>
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<tr>
<td>13</td>
<td>POTTI SREERAMULU TELUGU UNIVERSITY</td>
<td>HYDERABAD</td>
<td>HYDERABAD</td>
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<td>14</td>
<td>N.T.R UNIVERSITY OF HEALTH SCIENCES</td>
<td>VIJAYAWADA</td>
<td>KRISHNA</td>
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<td>15</td>
<td>RASTRIYA SANSKRIT VIDYAPEETH</td>
<td>TIRUPATI</td>
<td>CHITTOOR</td>
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<td>16</td>
<td>NIMS</td>
<td>HYDERABAD</td>
<td>HYDERABAD</td>
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<td>17</td>
<td>SRI SSIHL</td>
<td>PUTTAPARTHI</td>
<td>ANANTAPUR</td>
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<td>18</td>
<td>S.V. INSTITUTE OF MEDICAL SCIENCES</td>
<td>TIRUPATI</td>
<td>CHITTOOR</td>
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<td>19</td>
<td>MOULANA AZAD NATIONAL URDU UNIVERSITY</td>
<td>HYDERABAD</td>
<td>HYDERABAD</td>
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<td>20</td>
<td>IIIT</td>
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<td>21</td>
<td>NALSAR</td>
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<td>HYDERABAD</td>
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<tr>
<td>22</td>
<td>NIT</td>
<td>WARANGAL</td>
<td>WARANGAL</td>
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</tbody>
</table>
### Categorywise List of Universities in Andhra Pradesh under study:

<table>
<thead>
<tr>
<th>Category</th>
<th>Name of the University</th>
<th>Nature</th>
</tr>
</thead>
</table>
| I.       | 1. Andhra University, Visakhapatnam  
           2. Osmania University, Hyderabad.  
           3. Sri Venkateswara University, Tirupati. | Traditional Universities having more than 50 years of existence. |
| II.      | 4. Kakatiya University, Warangal  
           5. Nagarjuna University, Guntur  
           6. Sri Krishnadevaraya University, Anantapur | Traditional Universities having more than 25 years of existence. |
| III.     | 7. Acharya N.G. Ranga Agricultural University, Hyderabad  
           8. Jawaharlal Nehru Technological University, Hyderabad  
           9. N.T.Rama Rao University for Health Sciences, Hyderabad | Universities offering professional courses |
| IV.      | 10. Sri Padmavathi Mahila Viswa Vidyalayam, Tirupati.  
           11. Potti Sree Ramulu Telugu University, Hyderabad.  
           12. Dr. B.R. Amebedkar Open University, Hyderabad | Serving specific needs of different groups. Meant for regional growth and development in Andhra Pradesh State. |
           15. Rashtriya Sanskrit Vidyapeeth, Tirupati | Established and managed by the Central Government, Promoting education of Sanskrit, English, Foreign Languages and advanced courses in Science and Technology |

It is very clear that these universities are successfully functioning with their set of objectives and the people in the state are well served with them.

**Study Design:**
In order to achieve the set goals or to make useful and valid inferences basing on the observations, the study is planned in a systematic manner. A well designed research study by employing appropriate research methodology is applied to bring out reliable observations from the sample.

Usually in the case of research surveys, two types of approaches are followed. One is the complete coverage and the other one is a sample study. The first type or the complete coverage is quite appropriate where the groups to be covered are small. On the other hand, surveys covering larger groups should invariably resort to sampling procedures in view of their cost and time effectiveness.

In the present study, the university libraries to be covered are only 15 in the state of Andhra Pradesh. Hence, complete coverage system has been followed.

Methodology:

There are different survey research methods used for eliciting needed information in the field of social science research. Of all these methods, questionnaire and interview methods are the most popular and are widely used. The same methods have been followed for obtaining the needed information in the present study.

‘Questionnaire Method’ has been employed to collect relevant data. All questions are factual and are intended to obtain correct information about the conditions of which the respondents have been presumed to have knowledge. Questionnaire method has its usual limitations such as respondents' negligence to answer questions and giving irrelevant answers, thus, lowering response rate to questions. These limitations have been minimized by supplementing the questionnaire method with interviews. Most of the respondents were interviewed in order to elicit their personal opinions. Questionnaire has been designed for three categories of
respondents namely (1) university librarian / librarian in-charge; (2) library professionals working in the university libraries; and (3) readers.

Literature relevant to the study has been collected from various sources such as published articles from national and international journals and also from the books on the research topic by visiting various libraries namely Documentation Research Training Centre (DRTC) Library, Indian Institute of Management (IIM) Library, Bangalore, the Osmania University Library, University of Hyderabad Library, Hyderabad the Andhra University Library, Visakhapatnam etc. Also relevant data was collected from numerous subject experts and other knowledgeable persons in the field of Library & Information Science (LIS) and management studies so as to achieve fruitful results in the study.

(i) Questionnaire-I: For the Librarian/Librarian in-charge

Background information about the library, finance/budget, building, collection development, readers and their usage of the library, staff position, views of the librarian/library in-charge on various issues related to human resource management, dimensions of quality management, quality management and information technology and opinions on quality improvement and Total Quality Management – are the areas on which information has been elicited.

(ii) Questionnaire – II: For library professionals

Besides obtaining information about the background of the library professionals working in different cadres, their opinion on the physical facilities available in the library, status and general recognition, administrative status, professional recognition/job satisfaction, views on recruitment policies, welfare programmes, quality improvement in performance, training facilities, information technology, staff commitment, performance, motivation and morale for quality development and quality service, deputation for seminars, conference etc. their
relationship with top management, peers, subordinates and with the readers or users – are the main aspects on which information has been sought.

(iii) Questionnaire – III: For readers/users

Along with the background information of the users, their level of satisfaction with regard to the adequacy of the library collection, different infrastructural facilities, different services provided, automation and also the main problems (in their opinion) the university library is facing – are the major aspects on which the questions were structured and information was elicited.

All the three questionnaires were pre-tested and the needed modifications were made. Then these were distributed to different kinds of respondents in the 15 university libraries included in the present study. Details of the responses or coverage particulars are given in the following chart:

<table>
<thead>
<tr>
<th>Name of the University</th>
<th>Librarian/Librarian In-charge (Q.I)</th>
<th>Library Professionals (Q.II)</th>
<th>Readers/Users (Q.III)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Distributed</td>
<td>Received</td>
<td>Coverage (%)</td>
</tr>
<tr>
<td>Andhra University</td>
<td>1</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Osmania University</td>
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<td>100</td>
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<tr>
<td>Sri Venkateswara Univesity</td>
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<td>Achraya N.G. Ranga Agricultural University</td>
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<td>Jawaharlal Nehru Technological Univesity</td>
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As the coverage is 100 percent for the questionnaire – I and it is more than 80 percent in the case of library professionals (Questionnaire – II) and readers/users (Questionnaires – III), it can be said that any observations made or inferences drawn from the analysis of this data will have logical justification.

Analysis of Data:

The data thus obtained has been entered into the Personal Computer and was analyzed, keeping in mind the objectives of the study. The data was analyzed using the SPSS software package. The observations have been presented in neatly labeled tables using Anova and Chi-squire test wherever necessary. So also Bar diagrams and Pie diagrams are used to illustrate the data for more clarity

1.14 Limitations of the Study:

The libraries attached to the universities in the country are all functioning through the guidelines of the University Grants Commission (UGC). Hence, all university libraries in the country carry uniform objectives, rules and regulations. Further the pattern of budget and human resource management are also uniform in all
university libraries, therefore, the jurisdiction of this study is limited to Andhra Pradesh. There are 23 universities/institutions of higher education approved by the UGC located in the state of Andhra Pradesh. Since few university libraries are maintained by single staff they are deleted from the study. As such, this study is limited to 15 university libraries located in different parts of the state.

1.15 Plan of the Study:

The study has been divided into five chapters as detailed below:

Chapter-1: This chapter deals with introduction, the concept, definitions, principles and characteristics of Total Quality Management and also the need for TQM for libraries. It also discusses the objectives, hypotheses, methodology and limitations of the study.

Chapter-2: This chapter presents review of literature pertaining to Total Quality Management. It discusses concept of quality, TQM, principles and characteristics of TQM, objectives, contributions of TQM Gurus etc., relations to Total Quality Management. It also highlights TQM for service organisations and implementations of it.

Chapter 3: This chapter highlights growth and development of university libraries in India and in particular, Andhra Pradesh. It presents the role of university libraries in electronic environment. It discusses the need and purpose of TQM for libraries including advantages and methods of application of TQM in libraries.

Chapter 4: It comprises analysis of the study. The first section of this chapter presents a brief account of university libraries in Andhra Pradesh. The second section deals with the analysis of data obtained through questionnaire no. 1. The third section describes the analysis of data pertaining to questionnaire no. 2 and the fourth section presents the analysis of the data relating to questionnaire no. 3.
Chapter-5: The first section of this chapter contains findings derived from the study. The second section offers suggestions drawn from the study. At the end of the thesis Bibliography and Questionnaire are affixed as Annexure I and II.

1.16 References:


