Chapter 3  Management Techniques for improving quality of library services

Introduction

This work is an attempt to study the status of libraries of management institutes in University of Pune in terms of collection, facilities and services including networking related services provided to the users. The study also considered libraries of IIM’s for benchmarking purpose.

Therefore in the present chapter the benchmarking technique is discussed along with the other management techniques which are useful for improving the quality of library services.

3.1 Benchmarking: definitions, process and application

3.1.1 What is Benchmarking?

The word Benchmark as mentioned in Webster’s Dictionary is “something that serves as a standard by which others may be measured.”

In the words of Robert Camp “Benchmarking is the search for industries’ best practices that lead to superior performance.”

It involves the identification of organizations that have demonstrated superior performance in the area being benchmarked. The focus of definition is on achieving superior performance, by finding out and adapting the best practices.

The former chief executive officer of Xerox corporation David Kearns defined Benchmarking as- “the continuous process of measuring products, services, and practices against the toughest competitors or those companies recognized as industry leaders.”

The definition focuses on various aspects of benchmarking as

Continuous process:

Benchmarking is not a onetime project, but it is the continuous process of comparing the strategy, products and processes with those of the leaders and the best in class organizations in order to learn how they achieved excellence
and then setting out to match and even surpass it. Once started, there is a need to benchmark continuously against the “best practices” for obtaining continuous improvement.

**Measuring:**

The term benchmarking implies measurement. Measurement can be accomplished in two forms as qualitative and quantitative.

**Qualitative measurement:**

It consists of comparing the internal practices (Organization’s own practices) and external practices (practices of best in class organization) can be compared and the significant differences can be documented.

**Quantitative measurement:**

It consists of collecting quantitative data for identifying the gap between your organization and organization selected for benchmarking. In case of libraries, the collection, staff size ratio, expenditures can be measured under the quantitative head.

Benchmarking consists of selection of the best practices from the external environment. These best practices are known as benchmarks, which are translated into operational units of measure. These benchmarks always indicate the direction that must be followed by the organization for its future development.

**3.1.2 Processes and practices:**

As mentioned earlier in the literature review, benchmarking technique is implemented on a large scale in the corporate world. It is applied to all the facets of business. It is used for identifying the gap existed between the organizations by measuring their products, services and practices, hence focused on meeting the customer needs more effectively. It is a winning business strategy. It assists managers in identifying the best feasible and proven practices which can be adopted for building the new strategies to achieve the highest performance goals. Thus benchmarking is the key technique for achieving continuous improvement in the organization.

In today’s continuously changing environment of libraries, there is a need to monitor practices of others for uncovering the best practices, so that the best of them can be implemented which will result in achieving superior performance i.e. increased user
satisfaction. The library services and the internal library practices can be targeted for meeting the user needs more effectively by keeping the standard benchmark model in view.

3.1.3 Benchmarking: its goal

Foot(1998), writing for an audience of local authorities and libraries, defines benchmarking as “a process of measuring your service’s processes and performance and systematically comparing them to the performance of others in order to seek the best practice.”

This definition puts the emphasis on the useful concepts, systematic comparison, processes, and performance, and the search for best practice. This definition is more close to how benchmarking is used. In other words the purpose of benchmarking is to improve continuously against the ‘best practices’ for obtaining continuous improvement. It is a process of learning which helps the organizations in discovering how the services offered to their customers/users can be improved.

Holly Muir (1993) defined benchmarking as a total quality tool used to measure and compare your library’s work processes with those in other libraries. The goal of benchmarking is to increase your library’s performance by adopting the best practices of your library benchmarking partners. Since the best library practices are always evolving, benchmarking should be applied at least annually.

This definition viewed benchmarking as an essential tool of total quality management, further it also decides the periodic application of the same for getting continuous improvement.

Annette Gohlke mentioned that “as a total quality management tool, benchmarking is used in the libraries to measure and compare the work processes in your library with those in other libraries. The goal of benchmarking is to increase your library’s performance by (1) identifying libraries with the best practices as partners, (2) measuring and comparing a selected work processes with the “best practice” library, the one with the most efficient and effective work process against and (3) adopting or adapting, their best practices in your library.”
3.1.4 Origin and history of Benchmarking:

Benchmarking first arrived on the management scene in the late 1970s. Xerox corporation introduced the benchmarking process for their operations in 1979 as they were losing money and market share as a result of which they could not compete satisfactorily with their Japanese counterparts. Xerox Corporation woke up to the fact that its Japanese competitors were selling copiers at prices at which Xerox could sometimes, not manufacture. After realizing this, Xerox set out to understand why and to learn, from its competitors, concepts such as value engineering and tear down. Xerox was near disaster, but by 1990 it had turned itself around and into a different company. In 1984 revenues of Xerox were $8.7 billion, in 1990 they were $13.6 billion; 1987 return on assets was 9%, in 1990 it was 14.6%; most significant was Xerox’s market-share gain in installed machines, 12% in 1984 versus 19% in 1990. Thus Xerox started the trend of process benchmarking for all types of businesses that need improvement.

3.1.5 Benchmarking process

Benchmarking is not a onetime project, it is a continuous improvement strategy. Once started, there is a need to improve continuously against the best practices for obtaining continuous improvement. It is a process that establishes an external standard to which internal operations can be compared and thus provides an opportunity for new thinking about what are realistic or feasible targets. It does this by contributing information about what other organizations are able to accomplish in the same or similar operations. As mentioned by Brophy (1997) there are following stages of benchmarking -

Plan (What to benchmark)

The first step of benchmarking is planning. Under this, the activities that needs improvement or a process where earlier improvement attempts have failed are selected for benchmarking by keeping user in the mind. In the words of Annette Gohlke Any service or function in the library that takes certain inputs, acts upon them and produces an output. Thus library areas, number of books, number of journals, number of books circulated, quantity of materials bought, work
processes, interlibrary loan, document delivery, online searching services, acquisitions, circulation can be benchmarked.

**Analyze**

Analysis of the process is necessary to understand the present stage of the selected process and for knowing as much as possible about it, so that it can be focused easily. The flow charts, cause effect diagrams are also used for studying the processes and the gap between customer needs of the organization.

**Flow charts and Cause and effect diagrams**

Flow charts are used to identify the actual flow or the sequence of events in a process any product or service follows. While drawing a flow chart it is necessary to determine the process to be evaluated, and then define clearly where the process starts and ends, then to determine the steps in the process, brainstorm a list of all major activities, inputs, outputs, decision from the beginning to the end. Then we need to arrange the steps in the order they are carried out and then flow chart can be drawn by using the appropriate symbols.\(^{10}\)

Cause and effect (CE) Diagram, also sometimes called the “Fishbone” diagram, is a tool for discovering all the possible causes of a particular effect. The main purpose of the CE diagram is to act, as a first step, in problem solving by generating a comprehensive list of possible causes. The cause and effect diagram was developed by Kaoru Ishikawa\(^ {11}\) of Tokyo University, a highly regarded Japanese expert in quality management. He first used it in 1943 to explain to a group of engineers at Kawasaki Steel Works how a complex set of factors could be related to help understand a problem. Cause and Effect diagrams are often called Ishikawa Diagrams, after their inventor, or fishbone diagrams because the diagram itself look like a skeleton of a fish.
Figure 3.1 The Benchmarking wheel

Design the study and gather the information

In the third stage the team identifies organizations or departments as the benchmarking targets. These benchmarking targets can be leaders, partners who are also aiming to improve practice. The designing part consists of preparation of the questionnaire to be asked in the three key areas-

- General Organizational issues
- Process related issues
- Quantitative indicators

It is also recommended to gather as much as background information as possible about each of the organizations to be benchmarked so that time is not wasted on unnecessary preliminaries.

Compare (Mapping out the Milestones for further development)

For each of the organizations chosen, the comparison of the targets with the achievements of the organization has to be done for determining the gap between them. This stage identifies why the gap exist and what can be learned from them.

Source: Peter Brophy, Quality management and Library Science, year: page
**Design and Implement the Improved Activity**

After identifying the gaps, the new improved, achievable and realistic goals can be set for the concerned process. Since the benchmarking is a continuous process, the benchmarking wheel then can start again. The Figure 3.1 indicates the benchmarking stages.

Gregory Watson, author of the Benchmarking Workbook, use a model for benchmarking process as illustrated below (Figure 3.2) where the research stage in the process is mentioned where the benchmark team has to establish the criteria to evaluate the information collected, and metrics are developed to measure the relevant processes.

![Figure 3.2 Benchmarking Process](image)

**Source:** Susan Jurow, and Barnard Susan, Tools for measuring and improving performance, 1993:123.

### 3.1.6 Steps in Benchmarking

There are various versions of benchmarking steps used by various organizations. AT&T has 12, Xerox uses 10, Aloca has 6. Even though the steps are varied in number, and do have different terminologies, the principles are similar.

Xerox, the pioneer of Benchmarking uses 10 steps in Benchmarking process which are given as follows

1. Identify what is to be benchmarked
2. Identify comparative organizations
3. Determine data collection method and collect data
4. Determine current performance Gap
5. Project future performance levels
6. Communicate benchmark findings and gain acceptance
7. Establish functional goals
8. Develop action plans
9. Implement specific actions and monitor progress
10. Recalibrate Benchmarks

The diagrammatic presentation of the steps in the form of a flow chart is mentioned in the Figure 3.3.

**Figure 3.3 Steps in Benchmarking Process**

*Source: Robert Camp, Benchmarking: search for industry best practices that lead to superior performance, 1989:17*
The International Benchmarking Clearinghouse \textsuperscript{13} (previously American Productivity and Quality Centre) followed “four phased approach”. The four phased approaches are

- Plan
- Collect
- Analyze
- Adapt

The four phased approach is mentioned in the Figure 3.4

Figure 3.4 APQC’s Benchmarking Methodology

![Four Phased Approach Diagram](http://www.apqc.org/portal/apqc/site

This four phased approach uses planning, data collection, data analysis and reporting and adaptations of study findings.

3.1.7 Types of Benchmarking

There are five types of benchmarking as mentioned by Brockman\textsuperscript{14} and colleagues.
• Competitor (comparing with leading Organizations in the same sector);
• Generic (comparing similar business processes, regardless of industry);
• Internal (comparing internal operations within the organization);
• Functional (comparing similar functions within the same industry);
• Customer (comparing extent to which meet or exceed customer expectations)

3.1.8 What is benchmarking and what it is not

• Benchmarking is not a resource reduction mechanism. It is not targeted to reduce the resources. Meeting the customer requirements and obtaining customer satisfaction is targeted in benchmarking process, while obtaining those, resource reductions may occur or it may require increasing the resources.

• Benchmarking is not a onetime program, on the other hand it is an ongoing process that requires constant updating the collection and implementation of external best practices at all levels of the organization.

• Benchmarking is not a cookbook process that requires only looking up ingredients and using them for success. Benchmarking is a discovery of process and learning experience. It requires observing what the best practices are and projecting what performance should be in future. It is a tool for gathering the information which gives direction in setting the realistic performance goals in the context of external environment for incorporation of best, feasible and proven practices in the organization.

3.1.9 Benchmarking in Libraries: way of application

Why Benchmarking?

In the libraries, benchmarking is used, mainly focused on

(i) data collection and comparison- it includes comparing budgets, numbers and values of acquisitions, and numbers of professional staff, reference transactions, and now also the electronic services.
(ii) Process benchmarking which is concerned with analyzing functions, and processes, in collaboration with one or more similar institutions, usually with the intention that all participants will benefit from the exercise, and learn from each other.\textsuperscript{15}

The benchmarking is used primarily as a diagnostic tool. The process benchmarking approach is used for identifying the best practice. Process benchmarking is carried out through a process of peer view. With one or more institutions, it can also be carried out by independent consultants who bring knowledge of other institutional practices with which to compare, or from which to derive models of best practice.

Stephen Town, Director of Information services, Cranfield University\textsuperscript{16} mentioned that “Benchmarking is a method which can be applied in libraries and probably a desirable method for those libraries strongly committed to quality and with effective frameworks for change and improvements”.

3.1.10 Benefits of Benchmarking

Improves library’s performance

It helps to improve the library to better meet the needs of the users and to make it operate more efficiently and effectively. By identifying best practices the current resources of the library can be maximized. It can also be used to explore a new service or product that a library may want to adopt. It provides a methodology for constant examination and review.

Increase User satisfaction

As the library is performing more effectively and efficiently the customers will be satisfied.

Gain/improves upper management support

It can be used to help in gaining or improving the support of upper management. Benchmarking makes everyone to be proactive, and helps the library in solving its own problems which may result in getting increased resources.

Build professional relationships and learning culture
It assists in creating a sense of professionalism among the participants which can be helpful in the long term. It also plays an important role in the development of the learning culture in the library. It encourages training and sharing ideas and fosters teamwork.

**Proves library’s value**

Lastly it helps in proving the value of a library resources and staff in the organization.

The benchmarking process is mainly originated and implemented on a large scale in the corporate world. Corporate India’s man of destiny in the New Millennium, N R Narayan Murthy, Chairman Infosys says that “We must Benchmark ourselves against the best in world.”

Xerox Corporation, USA (1980) introduced the benchmarking process for their operations as they were losing money and market share as a result of which they could not compete satisfactorily with their Japanese counterparts. in early 1980’s Xerox was near disaster, but by 1990 it had turned itself around and into a different company. In 1984 revenues of Xerox were $8.7 billion, in 1990 they were $13.6 billion; 1987 return on assets was 9%, in 1990 it was 14.6% most significant was Xerox’s market- share gain in installed machines, 12% in 1984 versus 19% in 1990. Xerox started the trend of process benchmarking for all types of businesses that need improvement.

**3.2 Management Techniques Used to cope up with change**

During the last several years a number of management techniques were proposed and many have acclaimed to be effective and result oriented.

Some of the popular techniques are Total Quality Management(TQM), KAIZEN, Reengineering, ERP (Enterprise Resource Planning), Benchmarking, Certification ISO 9000 standards. The Figure 3.5 shows the popular change management techniques that are currently in practice. All these techniques automatically lead a helping hand to cope with the change.
3.2.1 Kaizen:

Kaizen the Japanese word suggests gradual and unending improvement, doing “little things “ better, setting and achieving even high standards. Masaaki Imai was the chairman of Cambridge Corporation an integral management consultancy firm, brought together management theories as a single concept “Kaizen”\(^1\). Kaizen favors continuous improvement for a system, and is a Japanese name. It focuses on the continuous efforts for improvement within the framework of existing structures.

After world war II, most of the Japanese companies had to start literally from the ground up. Every day brought new challenges to the managers and workers. So the kaizen in Japan has become a way of life. It gives message that not a day should go by some kind of improvement being made somewhere in the company. The Japanese use the word “Kaizen” to describe the ongoing process of unending improvement –the setting and achieving of ever higher goals.
3.2.2 Total Quality Management (TQM):

The meaning of quality is expressed by many people in many ways. Deming called quality as “continuous improvement”, Juran expressed it as “fit for use”, Crosby uses the phrase as “Conformance of requirements”.

TQM involves a never ending process of continuous improvement that covers people, equipment, suppliers, materials and procedures. The basis is to improve every aspect of an operation in the organization.

TQM is a holistic, disciplined and continuous system approach. It requires continuous improvement of all operations and activities in the organization.

3.2.3 ERP

Enterprise Resource Planning (ERP) deals with streamlining the business transaction processing in the organization. ERP offers a seamless integration of business transactions based information across various functions in the organization.

3.2.4 ISO9000

ISO refers to the International Standards Organization, located in Geneva Switzerland. In the 1980’s members of European community (now called European Union (EU), a free consortium of nations, created the ISO 9000 series standard as an International benchmark for companies worldwide that wanted to do with business with the EU. The popularity of ISO 9000 grows and the numbers of countries are now adopting them. When a country or any organization adopts ISO 9000, it is tactically accepting the standards of ISO 9000.

3.2.5 Service Quality

Donobedian, A (1982) coined the concept of quality of services earlier in 1982. Quality means different things to different people. Gavin (1988) eight dimensions of quality that could serve as a useful framework to address quality issues in an organization. These are performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality.

The various attributes of service make it difficult to apply knowledge of product quality management to service quality management. Firstly due to
intangibility of service, it cannot be displayed, physically demonstrated or illustrated. Secondly, service cannot be standardizing. As services cannot be inventoried, performance is dependent, to some extent, on the level of demand. Thirdly, there is a high degree of customer involvement in the delivery of service. These characteristics make it difficult for a service organization to control and provide a consistent level of service.

Zeithaml, Parasuraman and Berry\(^23\) (1990) worked with three focus groups in each of four sectors using market research based methodologies to established the criteria used by customers in accessing the quality of services. The sectors chosen for the study were retail banking, credit cards, securities brokerage and product repair and maintenance. After analyzing the data from the focus groups, they identified ten dimensions of service quality as tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication, understanding the customer. They went on to analyze and provided a set of five key issues as reliability, assurance, tangibles, empathy, responsiveness. On the basis of 5 key issues they introduced the SERVQUAL model Figure 3.6. The model can be used to measure the service quality gap. The gap indicates the difference between a customer’s expectation and the actual organizations service quality performance.
Application of SERVEQUAL:

The SERVEQUAL model asks the respondents to indicate their agreement or disagreement on 7-point or 5-point Likert scale with 22 statements related to respondents expectations of any service of the type studied. Then using the same 22 statements the respondent indicates his or her perceptions of a particular service being studied. Thus each statement evaluating expectation in the first section is paired with statement evaluating perception.

For example:

<table>
<thead>
<tr>
<th>Sample Expectation Statement (E)</th>
<th>Making library resources available through website Your Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Perception Statement (P)</td>
<td>Our Library resources are available through website Your Perceptions</td>
</tr>
</tbody>
</table>
The SERVQUAL model is criticized by marketing experts. Francis Buttle\textsuperscript{24} critiques SERVQUAL in the article "SERVQUAL: review, critique, research agenda" on a number of theoretical and operational bases. He particularly notes that SERVQUAL’s dimensions (Reliability, Assurance, Tangibility, Empathy, and Responsive) are not universals, and that the model fails to draw on established economic, statistical and psychological theory. Although SERVQUAL's face and construct validity are in doubt, it is widely used in published and modified forms to measure customer expectations and perceptions of service quality. Even though, the instrument is popular in many service organizations. The libraries are not exceptional for that.

Based on SERVEQUAL, Association of Research Libraries(ARL) developed LIBQUAL+, a web-based survey tool in 2001 to measure service quality in Libraries. Modified version of SERVEQUAL and LibQUAL+ developed by ARL.

Like SERVQUAL, it measures the difference between customer expectations of service and their perceptions of satisfaction.

**Application of the technique:**

The users are asked to assign a value to the level of service they desire, as well as their perceptions of how well their library meets their needs.

In the library context LibQUAL+ measures three areas:

1. “Affect of Service” or how users perceive library staff;
2. “Information Control”, or how users perceive the quantity and accessibility of information sources;
3. “Library as a place” or how users perceive the physical environment of the library.

These dimensions are assessed through the core 22 questions. Each dimension is assessed through asking at least 5 questions for ensuring the validity of the responses. Apart from these 22 core questions, local questions can be added. General satisfaction questions are also asked for getting information regarding the overall satisfaction of the users. The open ended comment’s box is also to be added for getting the open ended suggestions from the users.

All these techniques lend a helping hand to cope with the change.
3.2.6 Why Management of Change?

Changes occur in an organization because of the nature of relationship with external environmental changes. These are mainly caused by governmental decisions, customers, suppliers, general public and technological developments. Changes occur within the organization due to aging equipments and buildings deteriorate with the change of time, human beings grow old, and skills become outdated.  

According to Hellriegal, Slocum and Woodman (1989) pressures for change in organizations come from the following:

- Changing technology
- The Knowledge Explosion
- Rapid product obsolescence
- Changing nature of the workplace
- The quality of working life
The impact of all above mentioned factors in a more or less manner we are observing around us in every field of knowledge and the library field is not exceptional for that.

Presently the information and communication technologies (ICT) are used on a widely in every field of knowledge. The librarians are facing the challenges thrown by the rapidly changing technology and to look for new opportunities. New generation of skilled and knowledgeable information technology users exerting pressures on libraries for performing as never before.

Millison-Martula and Menon commented (1995)\(^27\) that the continued success of a service organization such as an academic library depends upon the organization’s ability to adjust its products and services to correspond to user needs. Academic librarians need to realize that student and faculty needs do change. The change may be radical or monumental. Further they added: However, even in case of subtle or evolutionary change it remains incumbent for librarians to (1) be aware that needs are changing (2) Understand the nature of changes and (3) reconfigure services to ensure that they remain relevant to the recently develop needs.

Therefore library is a service organization. In services, what counts is the quality as it is perceived by the customer. That is the customer is the sole judge of quality (Berry, 1980)\(^28\). In case of library, users are the customers and judge of the library services. Today, there is a tremendous impact of information technology (IT) on the library and library users. Library users are not depend only on the libraries, but also using the other ways of information such as internet and intranet resources. It has become necessary for the librarians to cope up with the changes taking place because of the internet revolution, web publishing and to cope up with the changing demands of the users.

Anderson and Barker\(^29\) (1998) reported that by successfully adapting and adopting change, the result oriented enterprise can not only change but can also continue to grow and flourish. Therefore the successful adaption and adoption of change is the way for growth and improvement. The changes can be clearly seen in various areas including libraries. The libraries are facing tremendous impact of ICT. The functions, way of preserving information, therefore the way of delivering the services are changing tremendously and also will continue to change. Thus changing scenario is exerting the challenging situation in front of librarians. The challenge is to manage the
changes in the nature of work is mainly, due to impact of IT and changing attitudes of tech savvy users.

Therefore it has become necessary to use the techniques of change management which will give a strategic framework for improving the library functions and services in a right way. It assists in sustaining success as well as progress of the organization.

The next chapter presents profile of the Management Institutes in University of Pune responded to the study as well as the respondent IIM’s in India.

3.3 References


8. Peter Brophy, Quality management and Library Science. (New Delhi: Jaico Publication, ), .


   http://en.wikipedia.org/wiki/SERVQUAL

