

A STUDY ON INTERNAL CUSTOMER SATISFACTION TOWARDS MAINTENANCE OF EQUIPMENTS IN INDUSTRIES

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ABSTRACT

The paper reports a study on exploring the relationship between internal customer satisfaction and maintenance of equipments in industries. In this paper, the Research Scholar tries to answer such questions or issues as: How the service quality affects the internal customer's satisfaction in an industry? What are the various methods to monitor and measure customer satisfaction in an industry? What corrective actions are to be taken to eliminate causes of actual nonconformities of equipment maintenance in order to prevent their recurrence? How to reduce the internal customer dissatisfaction?

Keywords: Industries, Internal Customer Satisfaction, Maintenance Of Equipments, Service Quality.

I INTRODUCTION

Customer satisfaction should be dominant for any industry winning strategy. It is through satisfaction of customers that industries remain buoyant and prosper. Customers have become an important part of any industry especially those customers in the production control department of various industries, where the maintenance departments support the production control department. Customer satisfaction by means of service quality is a fine area of discussion in the service literature.

II PAPER'S AIMS AND OBJECTIVES

It is the question asked by everyone for many reasons that is through the lesson obtained from the past, forecasting the future or to solve a running problem. In this paper, it is an attempt to answer these questions or issues: How the work environment does affect service quality? How the internal service quality does affect the internal customer satisfaction? What is an equipment failure? How proper maintenance avoids failures? Should equipments are to be free from maintenance? What is the role of management to resolve internal customer dissatisfaction?

III CUSTOMER SATISFACTION

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Customer satisfaction is one of the performance measurements of the quality management system. Customer satisfaction information is reported and evaluated by the quality management system review. More over customer satisfaction is also to be measured to see that customers are enjoying by the trouble free operation of equipments because of quality maintenance of equipments in an industry. Keeping customers happy is of tremendous benefit to industries.

When internal customers visit a maintenance workshop, their satisfaction will be influenced by factors such as:

- 1) interaction with maintenance personnel,
- 2) internal and external maintenance facilities,
- 3) interactions with self-service maintenance equipment
- 4) Characteristics and behaviour of internal customers.

IV DIMENSIONS OF CUSTOMER SATISFACTION

Dimensions of customer satisfaction are Service Quality, Facilities, Reliability, additional Services, Product Quality, Value for money, Staff and Personnel service.

Sureshchandar et al., (2002), emphasized in a study that customer satisfaction is a multidimensional construct as in quality.

V WHAT IS INTERNAL SERVICE QUALITY?

As defined by customers, service quality is essential for product differentiation and for building customer loyalty. Heskett et al. (1994) point out that internal service quality is about equipping employees with the skills and power to serve consumers. In service profit chain frame work the internal service quality leads to employee satisfaction. Schneider and Bowen (1993) add to this by showing there is a positive relationship between employee satisfaction and internal service quality. Their study indicates that employee experiences are transmitted to consumers during the service encounter. Edvardsson et al. (1997) further highlight the significance of internal service quality. They identify internal service quality as significant in attaining overall service quality, as it effects the employees experiences positively.

VI CUSTOMER SATISFACTION AND SERVICE QUALITY

As per the figure 1 below it is seen that when predicted and perceived services match each other then there is customer satisfaction. Here service quality measures are the key factors that influence customer satisfaction.

Service quality and internal customer satisfaction are related from their definitions with other aspects in maintenance of industrial equipments. It has been proved in the past researches. Parasuraman et al., (1985) stated that when perceived service quality is higher than the expectations, then it will lead to increase in customer satisfaction.

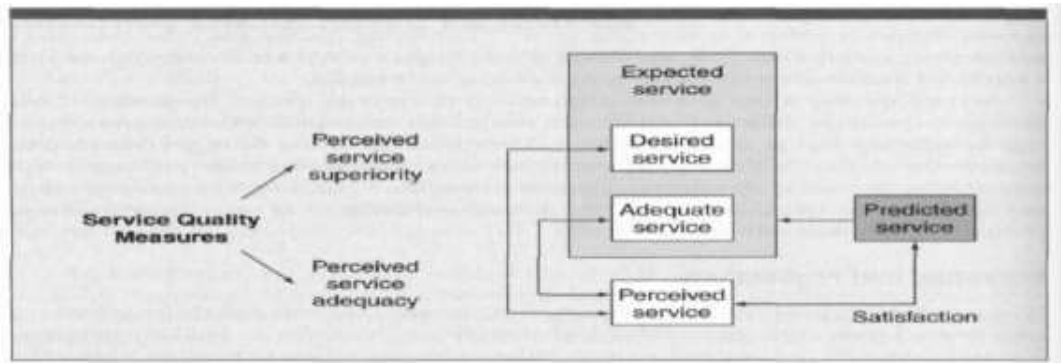


Figure 1

The below figure 2 shows the customer satisfaction, service quality and their relationship. Here the author included a tool to monitor and measure customer satisfaction. The service quality is a focused evaluation that indicates the dimensions of customer satisfaction.

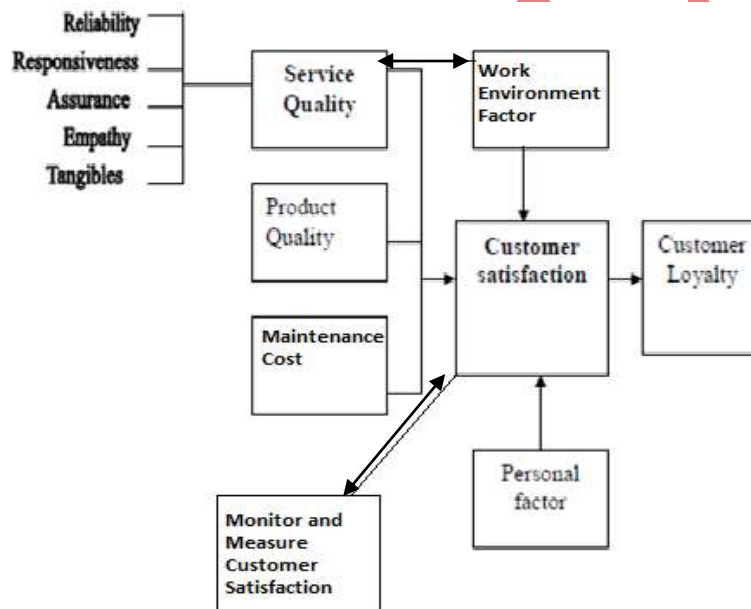


Figure 2

VII FAILURE OF EQUIPMENT

Failure of equipment may be defined as the state of failure of that equipment due to interruption / inability to do its performance as desired. The industrial equipments may fail due to any abnormalities such as insulation failure, overheating, broken seals and failure of coolants etc. Whereas in case of office equipments may fail due to fluctuations in the incoming power supply, malfunctioning of HVAC equipments and hanging of computer networks etc.

VIII EQUIPMENT MAINTENANCE

Equipment maintenance is the work undertaken in order to keep or restore equipment to an operational and acceptable condition.

8.1 Maintenance Requirements Determination

- 1) Requirements for planned, preventive, predictive, shutdown and post shutdown of the equipment/plant as prepared by the production department.
- 2) Mandatory, Statutory and regulatory requirements related to maintenance of the product.
- 3) Any other requirements advised by the Safety and Production departments of the industry.

8.2 Maintenance Plan

A specific maintenance plan that is carried out on a regular basis is a primary factor in preventing equipment problems and failures. And, when problems do arise and system shutdown is inevitable, a logical, step-by-step method of troubleshooting can save time and money. At the very least, the equipment's manufacturer maintenance schedule should be adhered to on all equipments.

Scheduled routine inspection and service will minimize motor problems. Frequency of routine service depends upon the application. It is usually sufficient to include equipments in the maintenance schedule for a general plant. If a breakdown could cause health or safety problems, severe loss of production, damage to equipment, or other serious losses, a more frequent maintenance schedule should be adopted. It is important to plan and document maintenance program which includes formats for recording such data as the date of inspection, name of the items inspected types of services performed, and general equipment condition. These records can help identify specific problems in an application and help avoid breakdowns and production losses. Routine inspection and service can usually be done without disconnecting or disassembling the equipments.

8.3 Equipment Maintenance Is Divided Into Four Major Categories

- 1) **Reactive maintenance (Run-to-failure)** – It is never accepted by any management since it is most cost effective to let equipment run unattended until it fails.
- 2) **Preventive Maintenance** – It is the task to be performed at regular intervals to maintain the equipment in operational condition that is to minimize equipment breakdown..
- 3) **Predictive Maintenance** – Based on the real-time running, data collected from the equipment, the predictive maintenance to be performed to ascertain the healthiness of the equipment.
- 4) **Proactive Maintenance** – It is to ensure that the equipment shall not fail without any unknown reasons by fixing all faults by knowing the root causes to minimize the risk of failures for critical systems.

IX WORK ENVIRONMENT

9.1 Human Factors

The work place social and psychological conditions of internal customers and maintenance personnel such as employee harassment, conflict resolution, interaction and communication between employees also affect the service quality of equipment maintenance. The HR Manager is responsible to develop appropriate workplace policies and they are to be implemented through counseling, training and awareness programs.

9.2 Physical Factors

The extreme environmental conditions could impact even routine performance of personnel and result in product non-conformities. Plant Managers and Production Managers are responsible for identifying those functions where safety limits of exposure and/or mitigating measures to be defined and implemented for these functions.

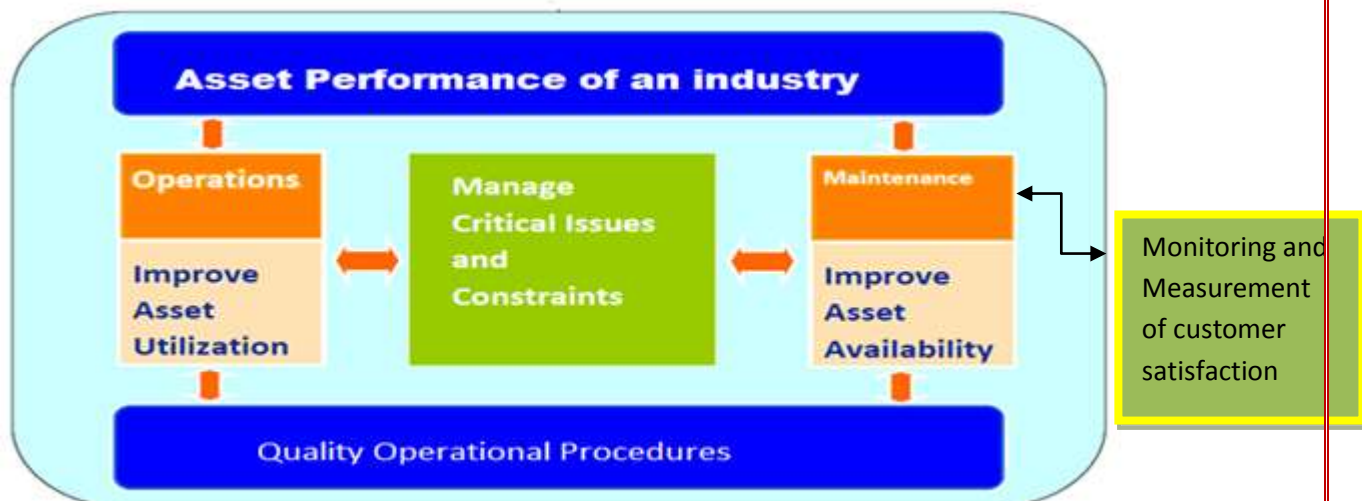


Figure 3

X MEASUREMENT OF INTERNAL CUSTOMER SATISFACTION

It is necessary to carry out the survey with high reliability. Careful review of the international service quality literature and of customer satisfaction and the measurement of these constructs has to be under-taken. The SERVQUAL model approach questionnaire consists of the level of expectation and perception of internal customers to whom service is to be provided along with the dimensions of customer satisfaction.

The top level management is responsible to find out suitable methods/ guidelines for obtaining and using this internal customer satisfaction data and for monitoring the internal customer perception so as to confirm whether the industry has met the internal customer requirements.

The internal customer satisfaction data is collected and compiled from the following sources:

- 1) Internal customer complaints/suggestions
- 2) Spontaneous expressions of internal customer satisfaction and feedback

- 3) Internal customer satisfaction surveys
- 4) Warranty claims
- 5) Repeat customers

XI CONCLUSION

Since service quality is “the collective effect of service performances which determine the degree of satisfaction of a user of the service”, the author suggests to monitor and maintain the end-to-end services for the internal customers.

It is the key to success for any organization i-e maintaining and monitoring the condition of all operational equipment is to avoid any accidents, losses and unnecessary downtime. Therefore measurements were developed to enable the maintenance managers to follow progress towards providing customer satisfaction, improving quality and meeting competition so on. Hence by ensuring that if there is a good maintenance management system in place, the top level managers can be sure that there is constant evaluation and monitoring of the asset performance of the industry.

By suitably monitoring and measuring internal customer satisfaction with the help of service quality management, we will be able to find out the following:

- 1) The impact of internal customer satisfaction on the performance of maintenance of equipments in industries.
- 2) The dimensions of service quality which have caused internal customers to be satisfied or dissatisfied.
- 3) The effects of internal customer satisfaction on the current operations of the industry and the effect on the asset performance of the industry because of internal customer satisfaction or dissatisfaction.
- 4) The necessary corrective and preventive actions shall be taken up for suitable remedial action on the up keeping of equipments.

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