



THE ROLE OF TOTAL QUALITY MANAGEMENT IN IMPROVING SUPPLY CHAIN EFFICIENCY AND PRODUCT QUALITY

¹Mr. S. SREENIVASULU, ² SAI NAVYA YAPERLA

¹Assistant Professor, ²MBA Student

Department of MBA

SVR Engineering College, NANDYAL

ABSTRACT

Total Quality Management (TQM) is a comprehensive management approach focused on continuous improvement of organizational processes, products, and services to achieve long-term customer satisfaction. It involves the participation of all employees at every level of the organization in improving quality and enhancing overall performance. TQM emphasizes teamwork, effective communication, employee involvement, and a customer-centered approach to ensure consistent quality standards.

The main principles of Total Quality Management include continuous improvement, customer focus, process orientation, and data-driven decision making. Organizations implementing TQM adopt systematic methods such as quality control, benchmarking, and performance measurement to identify problems and improve efficiency. By integrating quality into every stage of operations, TQM helps organizations reduce waste, minimize errors, and improve productivity.

Overall, Total Quality Management plays a vital role in enhancing organizational competitiveness, increasing customer satisfaction, and achieving sustainable growth. It encourages a culture of quality, accountability, and continuous learning, enabling organizations to adapt to changing market demands and maintain high standards of excellence.

I. INTRODUCTION

Total Quality Management (TQM) is a comprehensive and structured approach to organizational management that seeks to improve the quality of products and services through continuous refinements in response to continuous feedback. It integrates all organizational functions such as marketing, finance, design, engineering, production, customer service, and human resources to focus on meeting customer needs and organizational objectives.

TQM is not merely a quality control technique but a management philosophy that emphasizes long-term success through customer satisfaction. It requires the active involvement and commitment of top management and the participation of all employees at every level of the organization. Quality is viewed as the responsibility of everyone, not just the quality control department.

The concept of TQM evolved from the works of quality pioneers such as W. Edwards Deming, Joseph Juran, and Philip B. Crosby. Their philosophies emphasized continuous

improvement, defect prevention, employee involvement, and customer-oriented quality standards. Deming introduced the PDCA (Plan–Do–Check–Act) cycle, Juran focused on quality planning and control, while Crosby promoted the concept of “Zero Defects.”

TQM gained worldwide recognition after its successful implementation in Japanese industries during the post-World War II period. Japanese companies adopted quality improvement techniques and became global leaders in manufacturing excellence. Later, Western organizations also adopted TQM practices to remain competitive in the global market.

In today’s competitive business environment, customers demand high-quality products at reasonable prices with timely delivery. TQM helps organizations reduce defects, minimize waste, lower costs, improve productivity, and enhance customer satisfaction. It promotes a culture of teamwork, data-based decision-making, and systematic problem-solving.

TQM focuses on the following core aspects:

- Customer-driven quality



- Continuous process improvement
- Employee empowerment
- Leadership commitment
- Fact-based decision-making
- Integrated organizational system

Unlike traditional management approaches that focus on short-term profits, TQM emphasizes long-term organizational sustainability. It encourages preventive measures rather than corrective actions and promotes doing things right the first time.

SCOPE OF STUDY

The scope of the study on Total Quality Management (TQM) encompasses the comprehensive analysis of quality practices adopted within an organization and their impact on overall performance and customer satisfaction. The study examines how TQM principles such as customer focus, continuous improvement, employee involvement, leadership commitment, and process orientation are implemented across different functional areas like production, marketing, finance, and human resources. It evaluates the effectiveness of quality tools and techniques such as the PDCA cycle, quality circles, benchmarking, and statistical quality control methods in improving operational efficiency and reducing defects. The scope also includes assessing employee training programs, teamwork initiatives, and communication systems that support a quality-driven culture. Furthermore, the study analyzes performance indicators such as productivity, cost reduction, customer retention, and profitability to measure the success of TQM implementation. Overall, the scope is confined to understanding how TQM contributes to organizational excellence, long-term sustainability, and competitive advantage within the selected organization or industry.

OBJECTIVES OF THE STUDY

1. To examine the nature of Total Quality management prevailing in **Heritage Foods (India) Limited**.

2. To identify the nature of Total Quality management in the **Heritage Foods (India) Limited**.
3. To measure the effectiveness of Training Programs implemented and Performance Appraisal techniques used in the organization.
4. To analyze the prevailing practices of worker's participation in Management and Study the relation between Management and Employees.

NEED OF THE STUDY

The need for the study on Total Quality Management (TQM) arises from the increasing competition in the global market and the growing expectations of customers for high-quality products and services at reasonable prices. Organizations today face constant pressure to improve efficiency, reduce costs, minimize defects, and enhance customer satisfaction. In such a dynamic business environment, traditional management approaches are no longer sufficient to ensure long-term success. Therefore, it becomes essential to study and understand the principles and practices of TQM as a strategic tool for continuous improvement.

This study is needed to examine how quality management practices influence organizational performance, productivity, employee morale, and customer loyalty. It helps in identifying gaps in existing systems and suggests improvements in processes, communication, and teamwork. The study also enables organizations to understand the importance of leadership commitment, employee involvement, and data-based decision-making in achieving quality objectives.

II. RESEARCH METHODOLOGY

The methodology adopted for this study deserves a special mention. Firstly, the research studied various secondary sources of information. Then after discussed with the company's managerial personnel, the mode and nature of the data collected is explained in the following lines.



PRIMARY DATA:

The lectures given by the staff were used as the basics for the project. by observing various departments in HRD system.

SECONDARY DATA:

The information related to company and industry is obtained through secondary sources such as company's annual reports.

TOOLS AND SAMPLING METHOD:

The data was collected from the company website and the other data is collected from other websites and employees in that organization.

Sample size of 100.

LIMITATIONS OF THE STUDY:

1. Conservative attitude of top management shouldn't exist.
2. Having the surplus staff is also one of the limitations.
3. The data given by a company is not full at times.
4. The data given by the organization is not reliable.

III. REVIEW OF LITERATURE

Total quality management

TQM and Six Sigma

The Six Sigma process improvement originated in 1986 from Motorola's drive towards reducing defects by minimizing variation in processes through metrics measurement. ^[3] Applications of the Six Sigma project execution methodology have since expanded to include practices common in Total Quality Management and Supply Chain Management, such as increasing customer satisfaction, and developing closer supplier relationships.

The main difference between TQM and Six Sigma (a newer concept) is the approach. TQM tries to improve quality by ensuring conformance to internal requirements, while Six Sigma focuses on improving quality by reducing the number of defects and impurities. Total Quality Management (TQM) is a management approach to long-term success through customer satisfaction.

In a TQM effort, all members of an organization participate in improving

processes, products, services and the culture in which they work.

The methods for implementing this approach come from the teachings of such quality leaders as Philip B. Crosby, W. Edwards Deming, Armand V. Feigenbaum, Kaoru Ishikawa and Joseph M. Juran.

Origins of TQM

Total quality management has evolved from the quality assurance methods that were first developed around the time of the First World War. The war effort led to large scale manufacturing efforts that often produced poor quality. To help correct this, quality inspectors were introduced on the production line to ensure that the level of failures due to quality was minimized.

After the First World War, quality inspection became more commonplace in manufacturing environments and this led to the introduction of Statistical Quality Control (SQC), a theory developed by Dr. W. Edwards Deming. This quality method provided a statistical method of quality based on sampling. Where it was not possible to inspect every item, a sample was tested for quality. The theory of SQC was based on the notion that a variation in the production process leads to variation in the end product. If the variation in the process could be removed this would lead to a higher level of quality in the end product.

After World War Two, the industrial manufacturers in Japan produced poor quality items. In a response to this, the Japanese Union of Scientists and Engineers invited Dr. Deming to train engineers in quality processes. By the 1950's quality control was an integral part of Japanese manufacturing and was adopted by all levels of workers within an organization.

By the 1970's the notion of total quality was being discussed. This was seen as company-wide quality control that involves all employees from top management to the workers, in quality control. In the next decade more non-Japanese companies were introducing quality management procedures that based on the results seen in Japan. The



new wave of quality control became known as Total Quality Management, which was used to describe the many quality-focused strategies and techniques that became the center of focus for the quality movement.

Principles of TQM

TQM can be defined as the management of initiatives and procedures that are aimed at achieving the delivery of quality products and services. A number of key principles can be identified in defining TQM, including:

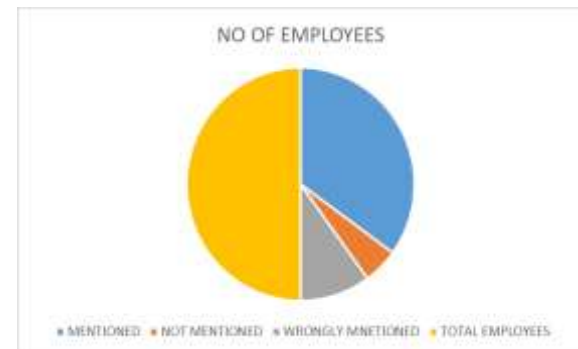
- Executive Management – Top management should act as the main driver for TQM and create an environment that ensures its success.
- Training – Employees should receive regular training on the methods and concepts of quality.
- Customer Focus – Improvements in quality should improve customer satisfaction.
- Decision Making – Quality decisions should be made based on measurements.
- Methodology and Tools – Use of appropriate methodology and tools ensures that non-conformances are identified, measured and responded to consistently.
- Continuous Improvement – Companies should continuously work towards improving manufacturing and quality procedures.
- Company Culture – The culture of the company should aim at developing employees ability to work together to improve quality.
- Employee Involvement – Employees should be encouraged to be pro-active in identifying and addressing quality related problems.

IV. DATA ANALYSIS & INTERPRITATION

DATE OF BIRTH

DATA	NO OF EMPLOYEES
MENTIONED	70

NOT MENTIONED	10
WRONGLY MNETIONED	20
TOTAL EMPLOYEES	100



Interpretation

Out of Sample Size of 100 Employees, 70 mentioned date of birth correctly, 10 of them did not mention date of birth at all, 20 of the employees mentioned wrong date of birth.

Correct mentioning of birthday would facilitate correct date of retirement

DATE OF CONFIRMATION

DATA	NO OF EMPLOYEES
MENTIONED	70
NOT MENTIONED	20
WRONGLY MENTIONED	10
TOTAL EMPLOYEES	100



Interpretation

Out of Sample Size of 100 Employees, 70 mentioned date of confirmation. Correctly, 20 of them did not mention date of confirmation at all, 10 of the Employees mentioned wrong dates of confirmation.

QUALIFICATION

DATA	NO OF EMPLOYEES
MENTIONED	60
NOT MENTIONED	20
WRONGLY MENTIONED	20
TOTAL EMPLOYEES	100



Interpretation

Out of Sample Size of 100 Employees, 60 mentioned qualification details correctly, 20 of them did not mention Qualification at all, 20 of the employees mentioned wrong Qualification details.

Correct mentioning of Qualification would facilitate correct information on Employee

PREVIOUS EXPERIENCE

DATA	NO OF EMPLOYEES
MENTIONED	40
NOT MENTIONED	40
WRONGLY MENTIONED	20
TOTAL EMPLOYEES	100

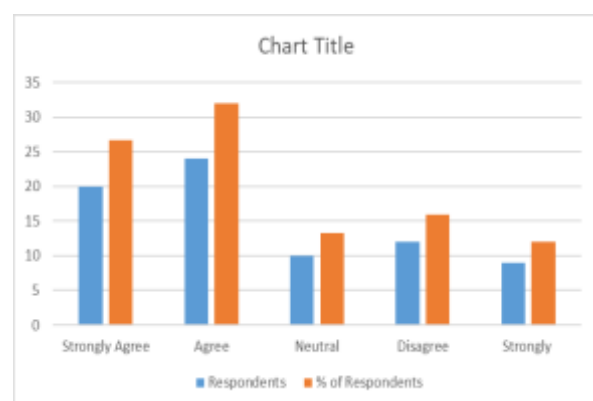


Interpretation

Out of Sample Size of 100 Employees, 40 mentioned Previous Experience, 40 of the did not mention Previous Experience, 20 of the employees mentioned wrongly.

Correct mentioning of previous experience would facilitate on Employees Performance Appraisal & Career Growth Job provides scope to achieve goals?

Response	Respondents	% of Respondents
Strongly Agree	20	26.67
Agree	24	32
Neutral	10	13.33
Disagree	12	16
Strongly	9	12



Interpretation

From the above table, it is clear that, 32 % of employees agree that there is scope for achieving goals and 26% of them are strongly are agreed.



V. FINDINGS, SUGGESTIONS, CONCLUSIONS

FINDINGS

- Morality of the respondents has freedom to take decisions. This shows TQM effects the organization.
- Employees feel that they are very important person in the department, which shows their level of commitment.
- Employees in **Heritage Foods (India) Limited** Can see themselves in a better position in near future which indicates the carrier growth on the company.
- Company successful in providing good working conditions.
- Megacity of the respondents feels that they are under paid.
- Employees in the **Heritage Foods (India) Limited** have good relationship with their peers, superiors and sub-ordinates.
- All most all the employees have positive attitude of the management towards security as employees feel highly secured in **Heritage Foods (India) Limited**.

SUGGESTIONS

- Since majority of the people feel that they are not underpaid, this causes dissatisfaction. To avoid that company may introduce different assertive schemer through which pay and productivity can be minimized.
- As employees feel that they don't have freedom to take decision which affects job satisfaction adversely, employees should have some degree of freedom decisions at their workplace.
- Some employees have low level of commitment has they feel they are not much important in the dept they can explained how important there in the department.

- Some of the employees felt that their skills are not utilized completely; proper measure can be taken job design and placement.
- As more than half of the people not satisfy their personal development, company may provide carrier development programmers were people can achieve their personal and profit zonal goals.

CONCLUSIONS

- Half of the Employees are not satisfied with the personal development.
- Employees in **Heritage Foods (India) Limited** are satisfied with the company policies and procedures.
- Employees in all dept are well planned while performing their activities.
- On the whole employees in **Heritage Foods (India) Limited** have Job Satisfaction the contributing factors for their satisfaction are good relationship, working conditions, Company polices and other benefits.

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