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Research Article

A STUDY ON TOTAL QUALITY MANAGEMENT PROCEDURES OF MANUFACTURING CONCERNS IN KANNUR DISTRICT

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ABSTRACT

A quality procedure is the most important factor for any organization and its success depends upon its resources. If human resource of organization is not happy with the organization, it will adversely affect its functioning. Total Quality Management (TQM) is a management philosophy that seeks to integrate all organizational functions to focus on meeting customer needs and organizational objectives. The scope of this study is to analyze the quality procedures followed at various manufacturing concerns, effect of TQM on employee's commitment in the company and identify the knowledge of employees on TQM implementation. The study is conducted in various manufacturing concerns in Kannur district, Kerala. In this study, F value is 5.567 between organization is quality conscious toward employees and employees are kept updated with changes in job skills, and it shows that there is significant relationship between these two. From this study, it was also found that majority of the concerns adopt TQM as a tool for improving efficiency and quality. So this study is helpful to measure the level of commitment towards work and to know the factor affecting the commitment level.

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INTRODUCTION

Improving quality (reducing bad quality and improving work processes) in a company requires reflection by both the management and all the employees in order to define the reachable goals in terms of quality that can be accepted by everyone. A quality policy is the general directives and goals in terms of quality that are laid out by a company's management and formalized in a written document. The quality policy defines the directives and stakes pursued in terms of beneficiary satisfaction. The term quality procedure refers to the approach and operational organization used to achieve the goals set by the quality policy.

Implementing a quality procedure often requires organizational changes; it must start off by involving the highest level of the hierarchy. Writing a commitment letter that is signed by management sets the procedure in stone and legitimizes a quality manager when operational changes are implemented. A quality procedure hinges on successive action plans that allow a company to pinpoint and formalize short-term goals and the means by which to meet them. Instituting a quality procedure above all involves establishing a new spirit that is shared by everyone in the company. Therefore, a successful project depends largely on the communication surrounding its

implementation. So, a communication campaign will allow employees to learn about the action that has been taken and find their place in the company's project.

Quality means fitness for use. Total quality means all the people of the organization are committed to product quality by doing right things right, first time, every time by employing organization resource to provide value to customer. Total quality management is the process designed to focus external/internal customer expectation preventing problems building, commitment to quality in the workforce and promoting to open decision making. Everyone associated with the company is involved in continuous improvement, in all functional area, at all levels.

Total Quality Management is a management approach that originated in the 1950s and has steadily become more popular since the early 1980s. Total Quality is a description of the culture, attitude and organization of a company that strives to provide customers with products and services that satisfy their needs. The culture requires quality in all aspects of the company's operations, with processes being done right the first time and defects and waste eradicated from operations.

Total Quality Management (TQM) is a method by which management and employees can become involved in the

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continuous improvement of the production of goods and services. It is a combination of quality and management tools aimed at increasing business and reducing losses due to wasteful practices. Some of the companies who have implemented TQM include Ford Motor Company, Phillips Semiconductor, SGL Carbon, Motorola and Toyota Motor Company (Gilbert G. (1992))¹.

Principles of TQM includes delight the customer, people based management, continuous improvement, strong leadership and so on. Total quality management has evolved from the quality assurance methods that were first developed around the time of the First World War. After the First World War, quality inspection became more common place 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. 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.

REVIEW OF LITERATURE

Thomas C. Powell *et al.*, (1995)² suggest that most features generally associated with TQM - such as quality training, process improvement, and benchmarking - do not generally produce advantage, but that certain tacit, behavioral, imperfectly imitable features - such as open culture, employee empowerment, and executive commitment - can produce advantage. The author concludes that these tacit resources, and not TQM tools and techniques, drive TQM success, and that organization that acquire them can outperform competitors with or without the accompanying TQM ideology.

Tom Noone E.C (2008)³ in his article, discusses about Deming's philosophy through his 14-principles which helps a service sector to attain quality. The principles indicate what management needs to do to ensure that they and their employees are able to deliver good service quality to its customers. The purpose of this paper is first, to select and describe six of the 14 principles and explain their implications for organizational management; and second, to highlight the relevance of these principles within higher education.

Kato M.M (2010)⁴ in his paper seeks to shed some light on the importance of Japanese-style management and TQM in higher education institutions. This paper begins by describing management concepts and relates these concepts to Japanese-style management and TQM in universities. Then review on the

Japanese-style management and TQM, management in higher education institutions with the implementation of ISO 9000 is discussed. This paper also examines the role of management system in universities in shaping their mission and vision, and concludes with suggestions that can facilitate awareness from staff in the organization that would promote their cooperation for successful implementation of ISO 9000.

Chowdhary J.N (2012)⁵ in his article, talks about higher education sector that is characterized by diversity, students and course profiles are different and how universities help to develop students with distinct characteristics and attributes. Universities are required to work in developing employability skills in their students by providing academic staff with relevant support and resources, integrating these skills into curriculum and course design, providing students with work placements and exposure to professional settings and providing advice and guidance through career services. The article also brings to notice the importance to set strategies related to programs so that employment skills are formulated and monitored religiously, then the vision of India of being a developed country will be achieved in the true sense.

Objectives of the Study

- To study the Quality Procedure as adopted by manufacturing concerns in Kannur district
- To analyze the implementation and effectiveness of Total Quality Management
- To study the different operational techniques implemented in manufacturing concerns and optimize it for the maximum throughput.
- To identify the perception of employees towards the benefits and challenges in implementing TQM.

Hypothesis

1. H_0 -There is no significant relation between TQM assists in alignment of company's goal as well as individual goals and awareness about TQM among employees.
2. H_0 -There is no significant relation between organizations is quality conscious toward employees and employees are kept updated with changes in job skills.

METHODOLOGY

The study is designed as an empirical one based on the survey method. The samples under this study are taken from various leading manufacturing companies in Kannur district of Kerala state. The study was conducted during the month of September, 2017. Total numbers of samples are 100, selected on convenient sampling basis. The study is primarily based on the primary data collected from the respondents. The secondary data has been collected mainly from various publications of Government of India, Government of Kerala, journals and periodicals and articles in connection with the study. The collected data are, statistically analyzed and interpretations are made.

Findings

- Majority of the respondents feel that the organization implements good and proper quality procedures.
- 84 percent of the respondents are aware of the importance of quality management.

- 55 percent of the respondents agree that quality procedures made the company one of the well known.
- 67 percent of the respondents agree that the organizations are quality conscious towards to employee.
- 52 percent of the respondents agree that TQM help in improving the work efficiency of employees.
- 79 percent of the respondents think quality control is very essential for organization.
- 64 percent of respondent think that company has a documented procedure to ensure that scrapped parts are returned to the customer or mutilated beyond repair and 36 percent of respondent don't think like that.
- 68 percent of respondent think that the proper quality procedure is followed while accepting the raw material in annual.
- Majority of the respondents feels that TQM helps in reducing waste and improve productivity.
- There is significant relation between organizations is quality conscious toward employees and employees are kept updated with changes in job skills.
- There is no significant relation between TQM assists in alignment of company's goal as well as individual goals and awareness about TQM among employees.

Suggestions

- It is very important to provide the opportunity to the employees of the organization to express their ideas or whatever they want to express.
- Management may properly clear their vision, mission and goals towards the employees in the organization.
- Management shall involve the workers representatives in managerial activities so that the transparency could be maintained and through this they can win the confidence of the employees.
- Management shall give due importance to mental relaxation and social cultural development of an employees who strives hard for the company.
- Employees shall be properly kept updated with changes in job skills and job design.
- Total Quality procedures shall focus on the interaction of the external customers, suppliers and society at large in the organization itself.
- There shall be regular and effective inspection for measuring the quality of the service.

Table 1 Proper quality procedure and awareness about the importance of quality management

Variable	Category	Percentage
Proper quality procedure	Yes	77
	No	73
	Total	100
Awareness about the importance of quality management	Yes	84
	No	16
	Total	100

Source: Field study

Table 2 Well known for quality and Good production response

Variable	Category	Percentage
Well known for quality	Strongly Agree	6
	Agree	49
	Neutral	23

Good production response	Disagree	22
	Total	100
	Strongly Agree	16
	Agree	33
	Neutral	23
	Disagree	28
Total	100	

Source: Field study

Table 3 Benefits of TQM and Assist in achieving goals

Variable	Category	Percentage
Benefits	Improve Productivity	22
	Improve Morale	25
	Less Waste	26
	Less Rework	22
	Increase Market Share	4
	Less Paper	1
Total	100	
Assist in achieving goals	Yes	49
	No	51
	Total	100

Source: Field study

Table 4 Positive effects to the organization

Category	Percentage
Yes	53
No	47
Total	100

Source: Field study

Table 5 Improvement of morale of employees and updation with changes

Variable	Category	Percentage
Improve morale of employees	Strongly Agree	32.0
	Agree	42.0
	Disagree	15.0
	Strongly Disagree	11.0
Total	100.0	
Updated with changes	Strongly Agree	13
	Agree	37
	Neutral	19
	Disagree	25
	Strongly Disagree	6
Total	100	

Source: Field study

Table 6 Opinion and reasons for adopting TQM

Variable	Category	Percentage
Opinion about adopting TQM	Strongly Agree	49
	Agree	11
	Neutral	12
	Disagree	24
	Strongly Disagree	4
Total	100	
Reasons for adopting TQM	Customer Requirement for Supply	32
	Competitive Pressure	30
	Shorter lead times	15
	To achieve world class status	23

Source: Field study

Table 7 Opinion about whether TQM improve efficiency

Category	Percentage
Strongly Agree	26
Agree	26
Neutral	19
Disagree	20
Strongly Disagree	9
Total	100

Source: Field study

Table 8 Quality conscious towards employees

Category	Percentage
Strongly Agree	33
Agree	34
Neutral	13
Disagree	10
Strongly Disagree	10
Total	100

Source: Field study

Statistical analysis

Hypothesis

H₀-There is no significant relation between TQM assists in alignment of company’s goal as well as individual goals and awareness about TQM among employees.

H₁-There is a significant relation between TQM assists in alignment of company’s goal as well as individual goals and awareness about TQM among employees.

Table 9 Anova

	Sum of Squares	Degree of Freedom	Mean Square	F value	Significant value
Between Groups	0.053	1	0.053	0.206	0.651
Within Groups	24.938	98	0.254		
Total	24.990	99			

Source: Field study

Inference

From the above table it is found that F value is 0.206, the significant value is 0.651 it is greater than F value, so the null hypothesis is accepted. Hence, there is no significant relation between TQM assists in alignment of company’s goal as well as individual goals and awareness about TQM among employees.

Hypothesis

H₀-There is no significant relation between organization is quality conscious toward employees and employees are kept updated with changes in job skills.

H₁-There is a significant relation between organization is quality conscious toward employees and employees are kept updated with changes in job skills.

Table 10 Anova

	Sum of Squares	Degree of Freedom	Mean Square	F value	Significant value
Between Groups	31.710	4	7.928	5.567	.000
Within Groups	135.290	95	1.424		
Total	167.000	99			

Source: Field study

Inference

From the above table it is found that F value is 5.567 the significant value is 0.000, it is less than F value, so the null hypothesis is rejected. Hence, there is significant relation between organizations is quality conscious toward employees and employees are kept updated with changes in job skills.

CONCLUSION

The quality profession is at a critical juncture and must be viewed for its value proposition in the globally competitive environment, and its fundamental intent for its existence. Qualities are very essential for success of an organization. It is require improving the quality of each and every employee in the organizations. Then only an organization can achieve success. TQM is one of the techniques adopted by the management for achieving the success. From the study it is found that TQM helps to increase efficiency and morale of employees. It reveals that majority of the concerns adopt TQM as a tool for improving efficiency and quality. Every employee in the organization raise positive attitude towards TQM, but there is no significant relation between TQM assists in alignment of company’s goal as well as individual goals and awareness about TQM among employees.

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