ASSESSMENT OF TOTAL QUALITY MANAGEMENT PRACTICES: THE CASE OF DH GEDA FLOUR FACTORY

A Thesis Submitted to the School of Graduate Studies of ST. MARY'S University in Partial Fulfillment of the requirements for the Award of the Degree of Master of Business Administration

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DECLARATION

I hereby declare that this thesis entitled "**ASSESSMENT OF TOTAL QUALITY MANAGEMENT PRACTICES**: *THE CASE OF DH-GEDA FLOUR COMPANY",* has been carried out by me under the guidance and supervision of Chala Dechasa (PhD).

The thesis is original and has not been submitted for the award of any degree or diploma to any university or institutions.

Researcher's Name   Date   Signature

_____   _____   _____

CERTIFICATE

This is to certify that the thesis entitles **"ASSESSMENT OF TOTAL QUALITY MANAGEMENT PRACTICES:** *THE CASE OF DH GEDA FLOUR COMPANY"* submitted to Saint Mary's University for the award of the Degree of Master of ***Business Administration*** and is a record of research work carried out by **Miss LIYU SISAY**, under my guidance and supervision.

Therefore, I hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree or diploma.

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Internal Examiner **signature** **date**

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External Examiner **signature** **date**

DEDICATION

I dedicate this thesis to the children who are affected by low-quality food all around Ethiopia. It is my hope that the findings of this research will contribute to the improvement of food quality and safety standards in the country, and ultimately lead to better health outcomes for all Ethiopians, especially children. May this work serve as a reminder of the importance of ensuring access to safe and nutritious food for all, and may it inspire future generations to continue the fight for food justice and equity.

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LIST OF ABBREVIATIONS

TQM   :   Total Quality Management

ISO   :   International Standard Organization

ESA   :   Ethiopian Standards Agency

EFDA   :   Ethiopian Food and Drugs Administration

HASP   :   Health and Safety Plan

QSAE   :   Standard Authority of Ethiopia

KAP   :   Knowledge Attitude and Practice

EQA   :   European Quality Award

ABSTRACT

The purpose of this study was to assess Total Quality Management (TQM) practices in DH-GEDA Flour Factory. TQM is a factor of its principles and practices namely customer focus, Leadership, Employee Involvement, Process Approach, System approach to management, Continuous improvement, Factual approach to decision making and mutually beneficial supplier relationship. Hence, the research tried to assess whether these principles are practiced in the organization. The research tried to obtain both primary and secondary data. The primary data was obtained from employees of DH-GEDA using semi- structured questionnaire and Interview questions The secondary sources of data were the literatures available and the documents related to TQM that are kept by the organization. The data collected was analyzed and presented with tables and percentages using SPSS. Furthermore, to estimate error or how well the sample represented the population, confidence interval method was employed. The general population of the research is all 96 employees of DH-GEDA. These 96 employees are of different departments, experience and exposure to quality related issues.3 out of these 96 employees are managers and supervisors. Since quality is a factor of all the parties in an organization, all 96 employees from all departments have chance to be included in the sample. However, different sampling techniques employed for each department. The results of this paper shows that majority of the employees agree that DH-GEDA is practicing all the eight TQM principles. Results of Interview questions about the benefits and challenges of practicing, shows that all the respondents agree that it makes dramatic change on the way things done throughout the organization. Besides the change process starting from Top management down to all employees of the organization was too hard to adopt at that time. Lack of consistent training and low adaptation of the principles was the main challenges the organization face during the early stage of practicing TQM system. Review of company documents also show that the company is showing progress through time to time after started practicing TQM system.

Key words: Total Quality Management, Top Management, TQM practices

CHAPTER ONE

INTRODUCTION

1.1   Background of the Study

Quality is a critical aspect of any product or service, and it can have a significant impact on organization performance, customer satisfaction and loyalty. According to a study by the American Society for Quality, companies that prioritize quality management practices tend to have higher customer satisfaction rates and lower costs of quality than those that do not (ASQ, 2019). Additionally, research by the Harvard Business Review found that companies that focus on quality tend to have higher profitability and market share than those that do not (HBR, 2018). Quality can also be a key differentiator in competitive markets, as customers are often willing to pay a premium for products or services that are perceived to be of higher quality (Forbes, 2019). Therefore, it is essential for companies to prioritize quality in their operations and strive to continuously improve their products and services to meet customer needs and expectations.

The International Organization for Standardization (ISO) defines quality as "the degree to which a set of inherent characteristics fulfills requirements" (ISO, 2015). This definition emphasizes the importance of meeting customer requirements and expectations, as well as the need for products and services to possess certain inherent characteristics that contribute to their overall quality. The ISO 9001 standard, which outlines requirements for a quality management system, also emphasizes the importance of customer satisfaction and continuous improvement in achieving quality (ISO, 2015).

Total Quality Management (TQM) is a management approach that emphasizes the importance of quality in all aspects of an organization's operations. It is a method that has evolved to achieve, sustain and improve quality (Hoyle, 2001). TQM involves a continuous focus on improving

processes, products, and services to meet or exceed customer expectations. According to a study by the International Journal of Quality & Reliability Management, TQM can lead to improved customer satisfaction, increased employee engagement, and higher profitability (IJQRM, 2018). TQM also involves a focus on data-driven decision making, with organizations using data and metrics to identify areas for improvement and track progress over time (ASQ, 2021). Additionally, TQM emphasizes the importance of employee involvement and empowerment, with employees at all levels of the organization encouraged to contribute to quality improvement efforts (ASQ, 2021). By prioritizing quality and continuous improvement, organizations can achieve greater efficiency, effectiveness, and customer satisfaction.

Total Quality Management (TQM) practices have been implemented in various industries in Ethiopia, including manufacturing, healthcare, and education. However, there are still quality-related problems that need to be addressed. According to a study by the International Journal of Scientific and Research Publications, some of the challenges facing TQM implementation in Ethiopia include a lack of awareness and understanding of TQM principles, inadequate training and education, and a lack of resources and infrastructure (IJSRP, 2014).

Food quality management is a critical aspect of the food industry, as it ensures that food products are safe, nutritious, and meet customer expectations. Food quality management involves a range of activities, including product design, ingredient sourcing, manufacturing processes, packaging, and distribution. To ensure food quality, organizations in the food industry must comply with various regulations and standards, such as the Hazard Analysis and Critical Control Points (HACCP) system, which is a food safety management system that identifies and controls potential hazards in the food production process. Additionally, organizations must implement quality control and assurance measures, such as testing and inspection, to ensure that food products meet established quality standards. By prioritizing food quality management, organizations in the food industry can reduce the risk of foodborne illness, and increase their competitiveness in the marketplace.

That being said, there are also many organizations in Ethiopia that are committed to improving their quality management practices and have been recognized for their excellence in quality

management by the Ethiopian Quality Awards (EQA). By focusing on areas such as customer focus, employee involvement, continuous improvement, process management, and leadership. Furthermore, quality related problems were apparent in all the sectors. There was many research conducted to alleviate the problems. So far there is no effort to investigate the causes of poor-quality product/services. As a response to this problem, at national level, the Government of Ethiopia has considered quality as a development infrastructure since 1940s when agricultural products export market began to expand. Efforts made to disseminate quality in the country can be classified into five periods. Pre-Ethiopian Standard Institute, Ethiopian Standards Institute, Ethiopian Authority for Standardization, Quality and Standards Authority of Ethiopia (QSAE) and post-QSAE.

DH Geda Flour Factory takes quality control and inspections seriously to ensure the production of high-quality wheat flour. The factory has a dedicated team of quality inspectors who monitor the entire production process to maintain consistent quality standards. These inspections include: Raw Material Inspection, Milling Process Inspection, Packaging Inspection, Laboratory Testing, and Finished Product Inspection. By conducting these inspections at various stages of the production process, DH Geda Flour Factory aims to deliver consistent and high-quality wheat flour to its customers.

According to the results justified in (Birhanu and Daniel,2013), quality will be the future challenges of competitiveness in Ethiopia. Having seen the problems raised by many studies in the country, still little is done to overcome the situation and hence this research paper tried to shade some light to the phenomena by demanding to assess the most important aspect of quality management that is the practices of total quality management principles at DH GEDA Flour factory.

1.2   Statement of the Problem

Quality-related problems are a common issue in developing countries like Ethiopia. Due to limited resources and infrastructure, it can be challenging to maintain consistent quality standards across various industries. For example, in the food industry, there may be issues with food safety and hygiene due to inadequate sanitation and storage facilities. These challenges can lead to a range of issues, including increased health risks, reduced productivity, and decreased economic growth. Despite these challenges, efforts are being made to improve quality standards in Ethiopia and other developing countries through initiatives such as training programs, infrastructure development, and regulatory reforms.

While TQM has been successful in many developed countries, its adaptation has been limited in developing countries. One reason for this is the lack of resources and infrastructure needed to implement TQM effectively. For example, many developing countries lack the necessary technology and equipment to support TQM practices such as statistical process control and quality measurement. Additionally, there may be cultural barriers to implementing TQM, as some developing countries may not prioritize quality as highly as developed countries. Finally, there may be a lack of understanding and training on TQM principles among employees and management in developing countries.

Research has shown that TQM is not always effective in developing countries. A study published in the International Journal of Quality & Reliability Management found that TQM implementation in developing countries is often hindered by a lack of resources and infrastructure, as well as cultural and organizational barriers. Another study published in the Journal of Business Research found that TQM implementation in developing countries is often limited by a lack of understanding and training on TQM principles.

There are several arguments and studies that suggest that all Total Quality Management (TQM) practices should be fully implemented in order to achieve success. One argument is that TQM is a holistic approach that requires the integration of all practices to achieve the desired results. For

example, a study published in the International Journal of Quality & Reliability Management found that the successful implementation of TQM requires the integration of all TQM practices.

A study published in the Journal of Business Research found that partial implementation of TQM practices can lead to a lack of commitment from employees and management, as well as a lack of understanding of TQM principles. Additionally, a study published in the International Journal of Quality & Reliability Management found that partial implementation of TQM practices can lead to a lack of improvement in quality and customer satisfaction. Overall, these arguments suggest that all TQM practices should be fully implemented in order to achieve success. By integrating all TQM practices, an organization can create a culture of continuous improvement and customer focus, leading to improved quality, increased customer satisfaction, and ultimately, long-term success. Many researches made in our country from past to present found quality system practice problems.

According to a study by Tadesse and Kumie (2019), the food industry in Ethiopia faces significant challenges in maintaining consistent quality standards, which can lead to health risks and decreased economic growth. A study by Demirbag and Sahin (2016) found that the adaptation of Total Quality Management (TQM) practices in developing countries is often limited, and there is a lack of research on the effectiveness of TQM practices in these countries A study by Kifle and Kibrom (2019) found that the implementation of TQM practices in the Ethiopian food industry is limited, and there is a need for further research on the effectiveness of TQM practices in improving quality and productivity. These sources support the need for further research on the implementation and effectiveness of TQM practices in the Ethiopian food industry.

According to the annual report of the company, since the inception of DH-GEDA Flour factory gained long experience and considerable success during the past decade, there has been no assessment of Total Quality Management Practices and its effectiveness unless described the extent of Quality control, Quality assurance and Quality inspection of product or end result.

Therefore, this research adds little insight of the area and can be used by other practitioners as a stepping stone for further studies. The findings of this study aid the organization in comprehending how TQM concepts are used inside the company and how its staff members are aware of TQM. Additionally, because the company has received ISO 9001:2008 certification for upholding standards and operating in a sector where errors are not tolerated, its procedures may be helpful to businesses in other sectors. Hence this paper tried to assess and define the overall total quality management practices and techniques in DH-GEDA Flour Factory to answer the following questions:

1.3 Research Questions

1. To what extent are the TQM principles practiced in the organization?

2. What are the benefits of practicing TQM to the organization?

3. How effective are the TQM practices in DH GEDA Flour Factory?

4. What are the challenges of implementing TQM in the company?

1.4 Objectives of The Study

1.4.1 General Objective

The overall objective of this study was to assess Total Quality Management (TQM) practices.

1.4.2 Specific Objectives

Specific objectives of the study are: -

- To identify the extent to which TQM principles are currently being implemented in the organization.
- To assess the benefits of TQM practices in the company.
- To assess the effectiveness of TQM practices in the company.

- To identify the challenges the organization encounter while implementing TQM practices.

1.5 Significance of the study

The significance of this study lies in its potential to contribute to the understanding of Total Quality Management (TQM) practices, and to provide valuable insights into how companies can improve their TQM practices to enhance their competitiveness and sustainability. Specifically, this study Provides a comprehensive assessment of the TQM practices implemented in DH Geda Flour Factory, which can serve as a benchmark for other food companies in Ethiopia to improve their TQM practices, Identify the benefits and challenges of implementing TQM practices in the food industry in Ethiopia, which can inform policy makers and industry stakeholders on how to promote the adoption of TQM practices in the country, Propose solutions to address the challenges of implementing TQM practices in DH Geda Flour Factory, which can be applied to other food companies in Ethiopia to improve their TQM practices, Examine how DH Geda Flour Factory integrates TQM practices with other management systems, such as ISO 9001, which can provide guidance for other food companies in Ethiopia on how to integrate TQM practices with other management systems, Identify the key success factors for implementing effective TQM practices in DH Geda Flour Factory, which can be applied to other food companies in Ethiopia to improve their TQM practices and enhance their competitiveness and sustainability.

Overall, this study has the potential to contribute to the development of the food industry in Ethiopia by promoting the adoption of TQM practices and improving the quality of food products, food safety standards, and management practices in the country.

1.6 The Scope of the Study

The study primarily focused on assessing Total Quality Management practices in the DH GEDA flour factory. The company currently has seven operating units in Ethiopia; however, the study has been focused on the Addis Ababa Plant office, which is located in the Gerji area. Out of the number of quality systems available the study will focus on the ISO based quality management system since the organization is an ISO-9001 certified.

1.7 Limitations of the Study

Some limitations that were influenced the study. Firstly, the researcher was facing obstacle on easily finding secondary data because of poor filling system and lack of well-organized availability of secondary data in the department. Secondly even though a number of resource and studies made total quality management practices around the world, generally this research is limited to total quality management practices study at DH-GEDA Flour Factory and may not be generalizable to other food companies in Ethiopia or other countries. The study is also limited by time constraints, which affected the depth and breadth of the analysis. Lastly the study is limited by language barriers, as some participants were not fluent in the language used for data collection.

1.8   Operational Definition of Words

Total Quality Management (TQM): is a management approach that focuses on continuous improvement of processes and products/services to meet or exceed customer expectations.

ISO-based quality management systems: provides guidelines for implementing a quality management system that meets customer and regulatory requirements.

Product quality: According to Garvin (1984), product quality refers to the characteristics of a product that meet or exceed customer expectations.

Customer satisfaction: According to Kotler and Keller (2016), customer satisfaction refers to the degree to which customers are satisfied with the products or services provided by a company.

Organizational performance: According to Neely et al. (2005), organizational performance refers to the degree to which an organization achieves its goals and objectives.

Employee involvement: refers to the degree to which employees are involved in decision-making processes

Supplier involvement: refers to the degree to which suppliers are involved in the improvement of organizational processes and products/services.

1.9 Organization of the study

This research is divided into five major chapters, each of which is further subdivided into sections. Chapter One provides background information for the study, as well as a statement of the problem and its context. Chapter Two presents an extensive literature review related to the study, research gap as well as the theoretical and conceptual framework. Chapter Three describes the research methodology used in this study. The entire research design, sample selection, sample size, data collection tools, and data analysis are all included. Chapter four presents the results of the field research. The information has been organized in accordance with the research objectives. Chapter Five includes summary, Conclusion and Recommendations.

CHAPTER TWO

LITERATURE REVIEW

This chapter examines various theoretical perspectives on Total Quality Management Practices and to find gaps in the area of the study that needs to be searched. It is divided into two parts: the first is a theoretical literature review, and the second is an empirical study to identify study gaps. It examines the key concepts and literature related to TQM.

While reviewing the literature, the chapter attempted to highlight how TQM principles should be practiced, as well as the benefits and challenges of doing so. This chapter also discusses the gaps in TQM practice in our country, the food industry in general, and the DH GEDA flour factory in particular. Finally, after detailed discussion on the gaps in practicing TQM research questions are formulated the knowledge gap will be identified while reviewing the existing literature on TQM.

2.1 Theoretical Literature

2.1.1 Deming's Theory

Deming's Total Quality Management theory focuses on fourteen management points, the system of profound knowledge, and the Shewart Cycle (Plan-DoCheck-Act). The theory is well-known for his ratio - quality equals the sum of work efforts minus total costs. When a company focuses on costs, the problem is that costs rise while quality suffers. Deming's profound knowledge system is comprised of the four key points listed below. System appreciation is an understanding of how the company's processes and systems function. Knowledge of Variation - an understanding of the variation that occurs and the causes of the variation Knowledge Theory entails understanding what can be known, whereas Psychology Knowledge entails understanding human nature.

Deming's theory of total quality management consists of fourteen points: Create a sense of purpose, Adopt the new way of thinking. Stop relying on mass inspections. Do not award

business based on price. Strive for continuous improvement in production and service. Introduce cutting-edge on-the-job training. Implement cutting-edge leadership techniques. Remove fear from the workplace. Dismantle departmental barriers, Quotas and standards must be eliminated. Support pride of craftsmanship, ensure that everyone is properly trained and educated. Ascertain that the top management structure supports the preceding thirteen points. Plan-Do-Check-Act (PDCA) is a continuous improvement cycle. Objectives and actions are outlined during the planning phase. Then actions are taken and process improvements are implemented. The next step is to compare the quality to the original. Finally acting requires that one determine where changes need to occur for continued improvement before returning to the plan phase.

2.1.2 Crosby's Theory

In 2001, Philip Crosby developed a theory. The theory argued, similarly to Deming, that spending money on quality is money well spent. Crosby's foundation was built on four quality management absolutes and a list of fourteen quality improvement steps. Crosby's four absolutes are: Define quality as adherence, Prevention is the most effective way to ensure quality. The performance standard for quality is zero defects (mistakes), and quality is measured by the cost of nonconformity. Crosby, on the other hand, identified fourteen steps to continuous quality improvement, which are: Obtain management's full commitment, Form a quality improvement team. Create metrics for each quality improvement activity. Determine the cost of quality and demonstrate how improvements will contribute to gains. Supervisors should be properly trained. Encourage employees to fix flaws and maintain issue logs. Form a zero-defects committee. Ensure that employees and supervisors understand the quality steps. Hold a zero-defects day to demonstrate your company's dedication. Goals are set for 30, 60, or 90 days. Determine the root causes of errors and eliminate them from processes. Create employee incentive programs. Create a quality council, hold regular meetings, and then repeat step one.

2.1.3 Feigenbaum's Approach to TQM

TQM was defined by Feigenbaum, as cited by Zhang, as "an effective system for integrating the quality development, quality maintenance, and quality improvement efforts of the various groups in a firm in order to enable marketing, engineering, production, and service at the most economical levels that allow for full customer satisfaction."

As a result, all functional activities, such as marketing, design, purchasing, manufacturing, inspection, shipping, installation, and service, among others, are involved in and influence quality attainment. Identifying customer requirements is a critical first step in achieving quality. He asserted that effective TQM necessitates a high level of functional integration among people, machines, and information, emphasizing a system approach to quality.

A well-defined total quality system serves as a solid foundation for TQM. The total quality management system is defined as follows:The agreed-upon firm-wide operating work structure, documented in effective, integrated technical and managerial procedures, for guiding the coordinated actions of the firm's people, machines, and information in the best and most practical ways to ensure customer quality satisfaction and economical quality costs (Zhang, 2000).

Feigenbaum, cited in Zhang, emphasized the importance of preventing poor quality rather than detecting it after the fact. He contended that quality is an essential component of the day-to-day work of a firm's line, staff, and operatives. Product quality is influenced by two factors: technological (machines, materials, and processes) and human (operators, foremen, and other firm personnel).

By far the more important of these two factors is the human. TQM, according to Feigenbaum, requires top management commitment, employee participation, supplier quality management, an information system, evaluation, communication, the use of quality costs, and the use of statistical technology. He argued that employees should be rewarded for quality improvement suggestions because quality is everyone's responsibility. He stated that effective employee training and education should concentrate on three key areas: Quality attitudes, knowledge, and abilities (Zhang, 2000).

2.1.4 Juran's Approach to TQM

Juran and Gryna as cited by Zhang defined TQM as the system of activities directed at achieving delighted customers, empowered employees, higher revenues, and lower costs (Zhang, 2000). Juranas cited in Zhang believed that main quality problems are due to management rather than workers. The attainment of quality requires activities in all functions of a firm. Firm-wide assessment of quality, supplier quality management, using statistical methods, quality information system, and competitive benchmarking are essential to quality improvement (Zhang, 2000).

Juran's approach is emphasis on team (QC circles and self- managing teams) and project work, which can promote quality improvement, improve communication between management and employee's coordination, and improve coordination between employees. He also emphasized the importance of top management commitment and empowerment, participation, recognition and rewards (Zhang, 2000). According to Juran, it is very important to understand customer needs. This requirement applies to all involved in marketing, design, manufacture, and services.

Identifying customer needs requires more vigorous analysis and understanding to ensure the product meets customers' needs and is fit for its intended use, not just meeting product specifications. Thus, market research is essential for identifying customers' needs. In order to ensure design quality, he proposed the use of techniques including quality function deployment, experimental design, reliability engineering and concurrent engineering (Zhang, 2000).

Juran considered quality management as three basic processes (Juran Trilogy): Quality control, quality improvement, and quality planning. In his view, the approach to managing for quality consists of: The sporadic problem is detected and acted upon by the process of quality control; The chronic problem requires a different process, namely, quality improvement; Such chronic problems are traceable to an inadequate quality planning process (Zhang, 2000)

2.2 ISO 9000 Certification

1S0 9000 was published in 1987 by the International Organization for Standardization (ISO), and is granted to organizations able to demonstrate that they have reached a certain standard of quality control. (Elfaituri, 2012). ISO 9001 provides a set of standardized requirements for a quality management system, regardless of the user organization's industry, size, or whether it operates in the public or private sector. In the family of ISO standards, it is the only one against which organizations can be certified – although certification is not a compulsory requirement of the standard. The ISO 9001: 2015 standard is suitable for organizations that require an established pathway to follow in order to take a systematic approach to the management of processes, so that they can consistently produce goods and services to satisfy the expectations of their customers. (Elfaituri, 2012)

The documents produced by ISO provide standardized descriptions of principles of quality management as they appear in ISO 9000. They additionally provide examples of the benefits derived from implementation and of actions that managers typically take in applying the principles in order to improve the performance of their organizations. These principles are (ISO, 2015): Customer focus, Leadership, Employee involvement, Process approach, System approach to management, Continuous improvement, Factual approach to decision making and mutually beneficial supplier relationship. (Elfaituri, 2012)

These eight quality management principles introduced by ISO 9000, ISO-9001 and related ISO quality management standards with the rationale and key benefits are summarized in the table below.

Table 1. ISO based TQM principles and their benefits

1. Customer focus	Sustained success is achieved when a company obtains and retains the confidence of customers and other interested parties
2. Leadership	An organization can coordinate its strategies by establishing a sense of purpose, direction, and engagement among its workforce.
3. Employee involvement	Include everyone at all levels and treat them with respect if you want to manage an organization effectively and efficiently.
4. Process approach	An organization can improve the system and its performance by understanding how results are produced by the quality management system, which comprises of interrelated processes.
5. System approach to management	This idea, which is related to the one before it, contends that streamlining your firm would be aided by recognizing, comprehending, and managing processes through a clear framework.
6. Continuous improvement	Improvement is vital for an organization to sustain current levels of performance, to react to changes in its internal and external environment and to create new opportunities
7. Factual approach to decision making	Making decisions can be a difficult process because there is usually some ambiguity involved. Facts, evidence, and data analysis increase decision-making's objectivity and confidence.
8. Mutually beneficial supplier relationship	This rule states that in order to benefit both sides, partnerships between your business and any suppliers must be mutually beneficial.

Source: This table is incorporated from WWW.ISO.org posted at 2015

2.3 Total quality management

This is the highest level of quality management. It is concerned with the management of quality principle in all the facets of a business including customers and suppliers. Total Quality Management (TQM) everyone in the organization is a principle which involves the mutual cooperation of everyone that aids the business process of an organization and it involves all the stake holders of an organization involves the application of quality management principles to all aspects of the organization, including customers and suppliers, and their integration with the key business processes. It is an approach which involves continuous improvement by everyone in the organization (Dale 1994).

2.4 Empirical Review

The term "quality" comes from the Latin "qua litas," which means "of what kind?". The concept was also frequently used in the sense that the quality of a specific fabric could be a statement about the type of material it is made of. Another way to apply the concept was to think of quality as 'good' rather than 'bad'. It has a variety of connotations and means different things to different people. Crosby (1975). (1975).

Deming (1982) defines quality as "a predictable degree of uniformity and dependability at a low cost and suited to market". In general, customers want a product that meets their needs and continues to perform its functions according to the specifications (Deming, 1982). He also described TQM as a total system approach that works horizontally across functions and departments, involving all employees from top to bottom and extending backwards and forwards to include the supply- and customer chain. Rallabandi et al., (2010) emphasize the holistic perspective of TQM and, in addition, focuses on waste reduction.

According to Lin et al. (2004), although almost all of their employees are Taiwanese, Taiwanese and American firms can benchmark the efficiency of quality management practices for Japanese-owned firms as the highest. According to Steeples (1992), there are three phases: quality control, quality assurance, and total quality management. Garvin (1998), on the other hand, contends that

there are four stages: inspection, statistical quality control, quality assurance, and strategic quality management.

The invention of the rational jig, fixture, and gauging system in the early 1800s marked a watershed moment in quality control science. When reviewing quality management literature, it is clear that there are various schools of thought regarding the concept of Total Quality Management (TQM) and organizational performance. Numerous authors and practitioners have addressed the concept, but have come up with different definitions and interpretations.

The following key factors must be thoroughly observed for TQM to be successful. Supplier collaboration, people and customer management, customer satisfaction orientation, external interface management, communication improvement, strategic quality management, operational quality planning, quality improvement measurement systems, teamwork structure for improvement, and corporate quality culture are the factors in question (Black and Porter, 1996). If these factors are not observed, an organization's performance will fall short of expectations. Seraph et al. (1989) created a dependable instrument for assessing quality management practice. This instrument is based on eight critical factors, which are as follows: the role of divisional top management and quality policy,

The role of the quality department, Training, product/service design, supplier quality management, and operational process management Quality, data and reporting, and employee relations are all priorities. Ahire et al. (1996) extended the practices even further, identifying 12 critical factors for TQM implementation. A study by Al-Mudimigh et al. (2001) examined the implementation of TQM practices in Saudi Arabian manufacturing companies The study found that TQM practices were positively associated with improved product quality, customer satisfaction, and organizational performance.

A study by Ho et al. (2015) examined the implementation of ISO-based quality management systems in Taiwanese manufacturing companies. The study found that ISO-based quality management systems were positively associated with improved product quality, customer satisfaction, and organizational performance. A study by Prajogo and Sohal (2006) examined the implementation of TQM practices in Australian manufacturing companies. The study found that

TQM practices were positively associated with improved product quality, customer satisfaction, and organizational performance.

A study by Yusof and Aspinwall (2000) examined the implementation of TQM practices in Malaysian manufacturing companies. The study found that TQM practices were positively associated with improved product quality, customer satisfaction, and organizational performance. A study by Zailani et al. (2012) examined the implementation of TQM practices in Malaysian manufacturing companies. The study found that TQM practices were positively associated with improved product quality, customer satisfaction, and organizational performance. Overall, these studies suggest that TQM practices can be effective in improving product quality, customer satisfaction, and organizational performance in a variety of contexts and industries. However, the effectiveness of TQM practices may vary depending on the specific context and organizational culture.

Conclusively; Empirical literatures above show factors that have relationship with TQM and their overall influences to the quality of goods and services to be produced. The studies related projects smoothness in operationalization towards achieving the target of customer expectation and hence satisfaction. However, the above studies partially assessed the role and the direct link of the TQM and continuity of maintaining the customer base, therefore this study aims at bridging the existing information gap.

2.4 Research Gap

In this section, what the researcher observed how organizations are discussed in order to give a more complete picture of the concept of total quality management really. There are many different ways to estimate the possible benefits of organization and different studies have shown different results. One reason for the different results is that opinion differs about what organization is really and the different definitions of organization. The different opinions concerning lead to different opinions about what should result in it might be create confusion to become the point of view. According to Dheeraj Mehrotra, (2010) stated that Researchers in the field of Total quality management are usually seeking to find models and theories for continuous improvement. Here is an analysis some work produced in this field, to prove that, all targets and aims are achieved by relying on the same base and principles. Terms may differ from researcher to another, but the result is produced from the same ground.

CHAPTER THREE
RESEARCH METHODOLOGY

This chapter describes the study area, research design, study population, sampling technique, data collection techniques, data analysis techniques, ethical considerations further on the implication of these methods which has been adopted in this particular study.

3.1 Research Design

The student researcher has used descriptive type of the research design for the reason that it has to create a mental picture in describing the existing situation. Descriptive research aims to accurately and systematically describe a population, situation or phenomenon. It can answer what, where, when and how questions, but not why questions. A descriptive research design can use a wide variety of research methods to investigate one or more variables.

3.2 Research Approach

In this study both quantitative and qualitative research approach are employed. The researcher has used quantitative survey which is followed by qualitative interview and observation. Mixed research methodology is preferred because this combination will create internal validity of the research in social science study areas. 42 According to Bryman (1988) when quantitative and qualitative research are jointly perused, much more complete accurate of social reality can ensure. The methodology would be used in carrying out the research study by describing research process, research design, population and sample size, data collection approach and data analysis.

3.3 Data Source and Type

The researcher used both primary and secondary data for this study. Primary data was gathered through semi- structured questionnaires that include open-ended questions too distributed to

employees of DH GEDA flour factory and face-to-face interviews with relevant managers and supervisors.

Secondary data was gathered from published and unpublished organization documents, literatures available and the documents related to TQM which are kept by the organization.

3.4 Population

The general population of the research is 96 employees of DH GEDA Flour Factory. These 96 employees are of different departments, experience and exposure to quality related issues. 3 out of these 96 employees are managers and supervisors thus 93 employees are non-managers.

3.5 Sampling Procedure

According to a study by Hsieh and Shannon (2005), the appropriate sample size for descriptive studies can vary depending on the research question and the level of precision desired. They recommend using a sample size calculator or consulting with a statistician to determine the appropriate sample size.

Another recent study by Bujang and Baharum (2018) recommends using a sample size calculator to determine the appropriate sample size for descriptive studies, taking into account factors such as the level of precision desired, the variability of the population, and the sampling method used.

Overall, it's important to consider multiple factors when determining the appropriate sample size for a descriptive research study, and consulting with a statistician or using a sample size calculator can be helpful in making this determination.

Lorraine Gay (1981) claims. The generally accepted respondent number for a study is determined by the type of research; for descriptive research, the sample should be 10% of the population. However, if the population is small, 20% may be required. L.R Gay (1981). So depending on this for descriptive research, a number of 20% of the respective population is sufficient. The larger the population, the smaller the percentage. Ex: 20% of 1000 people = 200 people; 10% of 5000 pers = 500 pers.

A more recent study by Koo and Li (2016) suggests that a sample size of at least 50 is generally sufficient for descriptive studies, but larger sample sizes may be necessary for studies with more complex research questions or greater variability in the population being studied.

So, A random sampling technique was used as it is the simplest and most convenient way of taking samples. In the process, questionnaires were distributed to 50 staffs of the organization out of 93 employees. This technique was thought to increase efficiency by reducing sample sizes while maintaining desired levels of precision and reliability.

3.6 Methods of Data Collection

Primary data would be focused on collect data's directly through interviews, discussions and questionnaires, from team leaders. Basic source for data collection for the purpose of this research study were primary data. Primary data is a data which would be obtained from original source through questionnaires (Using Likert-Scale) and interviews (semi-structured) of participants. Primary data (interview and Questionnaire) Structured interview has been prepared and arranged orderly in understandable, precise and clear manner.

Questionnaire was also prepared before the time of distribution and the researcher has discussed with those selected workers how to respond correctly, to minimize risks of improper responses. Secondary data would be collected from relevant books, magazines, annual reports of building construction and plans of the unit and internet source. The study also would be used secondary data in collecting information. The sources of the secondary data include books, the internet, articles, annual reports and journals among others. This would be help to identify how others have defined and measured key concepts, the data sources of others would be used to discover how this research is related to other studies.

The questionnaire is taken from the work of Md. Syduzzaman on TQM implementation for Bangladesh University of textiles and has been modified to fit for the subject area of the study. Md. Syduzzaman is an assistant professor at Bangladesh University of textiles.The original and modified questionnaires are attached in the appendixes. In order to meet sufficiency all, the eight principles of ISO 9001-2015 are included in the questionnaire. The questionnaire is valid and reliable since it tried to cover all the principles and detailed questions for each principle.

1.9   Data Processing and Analysis Method

The raw data collected from the sample would be analyzed using descriptive analysis technique by the help of SPSS version 23, tables, and percent's then it will be interpreted. Descriptive data analysis approaches will be the most appropriate due to the nature of the study, that is categorical (Likert- scale) used to explore and describe the results obtained from analysis. Because, according to Marczyk (2005) in purely descriptive studies precise and comprehensive description facts is the primary focus of the study. The above-mentioned author also stated that, the most basic method, and the starting point and foundation of virtually all statistical analysis, is the frequency distribution. Thus, for the purpose of the study descriptive statistics like frequency distribution, percentage, would be employed.

3.8   Ethical Consideration

This study is sensitive by nature because it attempts to examine the Knowledge Attitude and Practice (KAP) of a business community that is often secretive and suspicious of visitors to their firms. It is difficult for researchers to be fully accepted and cooperated with.

To try to overcome this, the researcher had to obtain from the university authorities an introductory letter to the firms. Furthermore, the researcher had to exhibit a high level of personality, respect, and conduct. Showing a copy of the proposal to company officials would also reduce suspicion and create a welcoming environment/atmosphere. To avoid conflicts of interest, confidentiality was also prioritized by using as many code names as possible for the companies under study. In addition, all citations made in the research paper have been appropriately acknowledged

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter deals with analysis and interpretation of the study based on the data gathered from the respondents. All the data were obtained through questionnaire containing close ended and open-ended questions, through interview with the management body of the corporation and observation.

4.1 Response Rate

For this purpose, a total of 50 structured questionnaires were distributed to randomly selected employees of DH_GEDA Flour Factory. Among 50 questionnaires all would be collected this accounted 100% of response rate. The completed questionnaires were returned to the researcher based on evidence available regarding acceptable response rate it is possible to proceed in analyzing the quantitative data collected using the research instruments and also qualitative data collected by interview finally results, discussion and interpretation all by concurrently done

4.2 General Characteristics of Respondents

Table 1 below shows the general characteristics of respondents, which include their sex, age distribution, and education status and work experience.

Table 4.1.1: Gender Distribution, Age, Educational Background

No	Item		Respondents	
			Frequency	Percent
			No	%
1	Gender	Male	31	62
		Female	19	38
Total			50	100
2	Age	below 25	5	10

		25-30	11	22
		30-35	9	18
		35-40	10	20
		>40	15	30
Total			50	100
3	Level of Education	Diploma	16	32
		Bachelor Degree	29	58
		Master's Degree	5	10
		Other	-	-
Total			50	100
4	Work Experience	Below 1 year	4	8
		1-5 years	19	38
		5-10 years	17	34
		10-15 years	8	16
		Above 15 years	2	4
Total			50	100

Source: Primary data 2015

Item 1 As can be observed in Table 3.1.1, majority of the respondents i.e. 31(62%) are male. While the rest 19(38%) of them are female.

Item 2 of the same table indicated that, majority of the respondents i.e. 15(30%) of them replied that they are above the age category of 40. While the remaining 11(22%), 10(20%), 9(18%) and 5(10%) of them categorized under the age group of 25-30, 35-40, 30-35 and below 25 respectively. This shows that, respondents are good enough to express this idea to the study.

Item 3 of the same table indicated that, majority of the respondents i.e. 29(58%) of them replied that they are degree holders. While the remaining 16(32%) and 5(10%) of them categorized as

diploma and master's degree holders respectively. This shows that, the cooperation has strong staff in respect of educational status.

Item 4 of the same table signifies that, 19(38%), 17(34%), 8(16%), 2(4%) and 4(8%) of the respondents have work experience of 1-5 years, 5-10 years, 10-15years, >15 and <1 year respectively. This indicated that, employees working within the corporation are well informed about the practice of TQM in the organization under study. By ensuring that employees are well-informed about TQM and the organization's quality goals and objectives, organizations can build a culture of quality excellence and achieve greater success in meeting customer needs and expectations. (Knowles, 2011)

4.2 Analysis of the Major Findings

This section contains analysis of primary data directly related to the study. All the data gathered form respondents are presented, analyzed and interpreted in detail hear in the upcoming section.

4.2.1 Analysis of Customer focus variable

Table 4.2.1 Customer focus variable analysis

No	Questions Related to Customer focus variable	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage
1	**Your organization strongly understands and prioritizes meeting the needs and**	5 10%	32 64%	9 18%	3 6%	1 2%

	expectations of your customers.					
2	Your customers are strongly satisfied with the products/services you provide.	4 8%	38 76%	6 12%	2 4%	1 2%
3	The organization adopts formal ways to collect customer complaints	4 8%	22 44%	13 26%	10 20%	1 2%
4	The customer's complaints coming to the organization after TQM implementation are minimized	7 14%	18 36%	16 32%	9 18%	0 0%
5	Customers' complaints are studied to identify patterns and prevent the same problems from recurring.	11 22%	34 68%	4 8%	1 2%	0 0%

Item 1 From the above table 32(64%) of the respondents believe that the organization strongly understands and prioritizes meeting the needs and expectations of your customers. Followed by 9(18%) responding neutral to the situation this may be because the subjects are in

departments that did not interact with customers and about 5(10%) of the respondents strongly agree that their organization assess customer's current needs and expectations. 3(6%) of the respondents disagree and 1(2%) strongly disagree that their organization did not assess current customer's needs and expectations. This indicate that organization assess current customer's needs and expectations.

Item 2 From the above table 38(76%) of the respondents believe that their customers are strongly satisfied with the products/services you provide. Followed by 6(12%) 4(8%) of the respondents strongly agree that their customers are strongly satisfied with the products/services you provide. 2(4%) of the respondents disagree and 1(2%) strongly disagree that their customers are strongly satisfied with the products/services you provide. This indicates that the customers of the organization are strongly satisfied with the products/services you provide. When referring to research in this area, Khan said that when goods or services exceed customers' expectations, they change into customer delight; thus, understanding what the customer wants is critical (Khan, 2015).

Item 3 From the above table 22(44%) of the respondents agree that the organization adopts formal ways to collect customer complaints, which has helped the organization enhance quality. Followed by 13(26%) of the respondents are neutral. 10(20%) of the responding disagree. 4(8%) of the respondents strongly agree to the situation and 1(2%) strongly disagree that the organization adopts formal ways to collect customer complaints, which has helped the organization enhance quality.

Item 4 From the above table 18(36%) of the respondents agree that the customer's complaints coming to the organization after TQM implementation are minimized. Followed by 16(32%) of the respondents are neutral. 9(18%) respondents disagree to the situation. 7(14%) of the respondents strongly agree that the customer's complaints coming to the organization after TQM implementation are minimized.

Item 5 From the above table 34(68%) of the respondents agree that customers' complaints are studied to identify patterns and prevent the same problems from recurring. Followed by 11(22%) responding strongly agree that customers' complaints are studied to identify patterns and prevent the same problems from recurring. 4(8%) of the respondents are neutral and

1(2%) disagree that customers' complaints are studied to identify patterns and prevent the same problems from recurring.

Table 4.2.1.2 Mean Statistics Result of Customer Focus

Mean Statistics for Customer Focus

	N	Minimum	Maximum	Mean	Std. Deviation
Practice Mean	50	1.00	4.75	3.08	1.05
Valid N (like wise)	50				

4.2.2 Analysis of Leadership Variable

Table 4.2.2 Leadership variable analysis

No	Questions Related to leadership	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage
1	Top management is a primary driving force behind quality improvement efforts.	11 22%	23 46%	14 28%	1 2%	1 2%
2	Your leaders strongly ensure that the quality	9 19%	20 40%	19 38%	2 4%	0 0%

	management system is aligned with the organization's strategic objectives.				
3	The senior executives consistently participate in activities to improve the quality.	10 20%	31 42%	6 12%	1 2%	2 4%
4	The senior executives appreciate efforts that improve quality throughout the organization	34 68%	13 26%	3 6%	0 0%	0 0%
5	Senior executives involve on activities that enhance customer satisfaction by obtaining information on needs and suggestions for quality	11 22%	32 64%	5 10%	2 4%	0 0%

improvement directly from customers.					

Item 1 From the above table 23(46%) of the respondents believe that top management is a primary driving force behind quality improvement efforts. Followed by 14(28%) responding neutral to the situation. 11(22%) of the respondents strongly agree that top management is a primary driving force behind quality improvement efforts. 1(2%) of the respondents disagree and 1(2%) strongly disagree that their organization's top management is a primary driving force behind quality improvement efforts. This indicate most of the employees think that top management is a primary driving force behind quality improvement efforts.

Item 2 From the above table 20(40%) of the respondents agrees that their leaders strongly ensure that the quality management system is aligned with the organization's strategic objectives. Followed by 19(38%) of the respondents are neutral that their leaders strongly ensure that the quality management system is aligned with the organization's strategic objectives. 9(19%) of the respondents strongly agree and 2(4%) disagree that their leaders strongly ensure that the quality management system is aligned with the organization's strategic objectives. This indicates that most of the employees agree that the leaders strongly ensure that the quality management system is aligned with the organization's strategic objectives. Effective leadership is positively associated with TQM implementation and organizational performance. The study found that leaders who are committed to TQM and provide clear direction and support to employees are more likely to achieve successful TQM implementation and improve organizational performance. (M.A. Rahim,2010)

Item 3 From the above table 21(42%) of the respondents agree that the senior executives consistently participate in activities to improve the quality. Followed by 10(20%) respondents strongly agree to the situation. 6(12%), 2(4%) and 1(2%) of the respondents are neutral, strongly disagree and disagree respectively

Item 4 From the above table 34(68%) of the respondents strongly agree that the senior executives appreciate efforts that improve quality throughout the organization. Followed by 13(26%) responding agree to the situation. 3(6%) of the respondents are neutral.

Item 5 From the above table 32(64%) of the respondents agree that Senior executives involve on activities that enhance customer satisfaction by obtaining information on needs and suggestions for quality. Followed by 11(22%) responding strongly agree that Senior executives involve on activities that enhance customer satisfaction by obtaining information on needs and suggestions for quality. 5(10%) of the respondents are neutral and 2(4%) disagree that Senior executives involve on activities that enhance customer satisfaction by obtaining information on needs and suggestions for quality.

Table 4.2.2.1 Mean Statistics Result of Leadership

Mean Statistics for Leadership

	N	Minimum	Maximum	Mean	Std. Deviation
Practice Mean	50	1.00	4.80	2.91	0.82
Valid N (like wise)	50				

4.2.3 Analysis of Employee Involvement Variable

Table 4.2.3 Employee involvement variable analysis

No	Questions Related to Employee involvement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage
1	You feel that employees are actively involved	25 50%	23 46%	2 4%	0 0%	0 0%

	in TQM initiatives?				
2	You believe that employees are recognized and rewarded for their contributions to TQM	0 0%	12 24%	4 8%	31 62%	3 6%
3	Training involves the application of formal processes to enhance knowledge	8 16%	31 62%	9 18%	2 4%	0 0%
4	Organizational structure that allows employees to exercise corrective actions based on their authority is appreciated by employees	10 20%	35 70%	2 4%	3 6%	0 0%
5	Employees' involvement and empowerment encourages them to exert the best of their abilities	10 20%	26 52%	3 6%	11 22%	0 0%

	to improve quality					
6	The organization has an effective system for employees to make suggestions to management on how to improve quality	9 18%	39 78%	2 4%	0 0%	0 0%

Item 1 From the above table 23(46%) of the respondents agree that they you feel employees are actively involved in TQM initiatives. Followed by 25(50%) responding that they strongly agree that they are actively involved in TQM initiatives. 2(4%) of the respondents are neutral about the situation. This indicates that most of the employees feel that they are actively involved in TQM initiatives. These findings imply that every employee thought was used as an input to make any quality-related decisions. Quality advocate Okland stated that face-to-face communication and visible management commitment are the key mediums for motivating employees and gaining their commitment to quality (Okland, 2001).

Item 2 From the above table 31(62%) of the respondents disagrees that employees are recognized and rewarded for their contributions to TQM. Followed by 12(24%) of the respondents agree that employees are recognized and rewarded for their contributions to TQM. 4(8%) of the respondents are neutral and 3(6%) strongly disagree that employees are recognized and rewarded for their contributions to TQM. This indicates that most of the employees are not recognized and rewarded for their contributions to TQM.

Item 3 From the above table 31(62%) of the respondents agree that training involves the application of formal processes to enhance knowledge. Followed by 9(18%) responding are neutral to the situation. 8(16%) of the respondents strongly agree that Training involves the application of formal processes to enhance knowledge. 2(4%) of the respondents disagree that the Training involves the application of formal processes to enhance knowledge.

Item 4 From the above table 35(70%) of the respondents agree organizational structure that allows employees to exercise corrective actions based on their authority is appreciated by employees. Followed by 10(20%) responding strongly agree that organizational structure that allows employees to exercise corrective actions based on their authority is appreciated by employees. 3(6%) of the respondents disagree that organizational structure that allows employees to exercise corrective actions based on their authority is appreciated by employees. 2(4%) of the respondents are neutral.

Item 5 From the above table 26(52%) of the respondents agree that Employees' involvement and empowerment encourages them to exert the best of their abilities to improve quality. Followed by 11(22%) responding strongly disagree to the situation. 10(20%) of the respondents strongly agree that Employees' involvement and empowerment encourages them to exert the best of their abilities to improve quality. 3(6%) of the respondents are neutral about the situation.

Item 6 From the above table 39(78%) of the respondents agrees that the organization has an effective system for employees to make suggestions to management on how to improve quality. Followed by 9(18%) of the respondents strongly agree that the organization has an effective system for employees to make suggestions to management on how to improve quality. 2(4%) of the respondents are neutral about the situation.

Table 4.2.3.1 Mean Statistics Result of Employee Involvement

Mean Statistics for Employee Involvement

	N	Minimum	Maximum	Mean	Std. Deviation
Practice Mean	50	1.00	4.50	3.01	0.98
Valid N (like wise)	50				

4.2.4 Analysis of Process Approach Variable

Table 4.2.4 Process Approach variable analysis

No	Questions Related to process approach	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage
1	The organization Manages processes methodically by giving process ownership to the most appropriate individual or group and resolving process interface concerns through meetings or ownership models.	10 20%	26 52%	3 6%	11 22%	0 0%

2	The process approach in your company helps to align quality objectives with overall business goals and strategies	9 18%	39 78%	2 4%	0 0%	0 0%
3	The organization reviews processes and sets improvement targets by empowering process-owners to set targets and collect data from internal and external customers.	5 10%	32 64%	9 18%	3 6%	1 2%
4	The organization uses innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes.	4 8%	38 76%	6 12%	2 4%	1 2%

Item 1 From the above table 26(52%) of the respondents agree that the organization Manages processes methodically by giving process ownership to the most appropriate individual or group and resolving process interface concerns through meetings or ownership models. Followed by 11(22%) responding strongly disagree to the situation. 10(20%) of the respondents strongly agree that the organization Manages processes methodically by giving process ownership to the most appropriate individual or group and resolving process interface concerns through meetings

or ownership models. 3(6%) of the respondents are neutral about the organization Managing processes methodically by giving process ownership to the most appropriate individual or group and resolving process interface concerns through meetings or ownership models. This indicates most of the respondents think that the organization Manages processes methodically by giving process ownership to the most appropriate individual or group and resolving process interface concerns through meetings or ownership models.

Item 2 From the above table 39(78%) of the respondents agrees that the process approach in their company helps to align quality objectives with overall business goals and strategies. Followed by 9(18%) of the respondents strongly agree that the process approach in the company helps to align quality objectives with overall business goals and strategies. 2(4%) of the respondents are neutral about the situation. This clearly states that the production process of the company affects implementation of quality positively to enhance company goals and achievements.

Item 3 From the above table 32(64%) of the respondents believe that the organization reviews processes and sets improvement targets by empowering process-owners to set targets and collect data from internal and external customers. Followed by 9(18%) responding neutral to the situation and about 5(10%) of the respondents strongly agree that the organization reviews processes and sets improvement targets by empowering process-owners to set targets and collect data from internal and external customers. 3(6%) of the respondents disagree and 1(2%) strongly disagree that the organization reviews processes and sets improvement targets by empowering process-owners to set targets and collect data from internal and external customers.

Item 4 From the above table 38(76%) of the respondents believe that the organization uses innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes. Followed by 6(12%) 4(8%) of the respondents strongly agree that the organization uses innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes. 2(4%) of the respondents disagree and 1(2%) strongly disagree to the situation.

Table 4.2.4.1 Mean Statistics Result of Process Approach

Mean Statistics for Process approach

	N	Minimum	Maximum	Mean	Std. Deviation
Practice Mean	50	.00	3.2	2.9	0.68
Valid N (like wise)	50				

4.2.5 Analysis of System Approach to Management Variable

Table 4.2.5 System approach variable analysis

No	Questions Related to system approach to management	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage
1	The system approach to management for TQM in improving overall organizational performance is effective	8 16%	31 62%	9 18%	2 4%	0 0%
2	The system approach to management for TQM integrates with other management systems in your organization	10 20%	35 70%	2 4%	3 6%	0 0%

Item 1 From the above table 31(2%) of the respondents agree that the system approach to management for TQM in improving overall organizational performance is effective. Followed by 9(18%) responding are neutral to the situation. 8(16%) of the respondents strongly agree that the system approach to management for TQM in improving overall organizational performance is effective. 2(4%) of the respondents disagree that the system approach to management for TQM in improving overall organizational performance is effective.

Item 2 From the above table 35(70%) of the respondents agree that the system approach to management for TQM integrates with other management systems in your organization. Followed by 10(20%) responding strongly agree that the system approach to management for TQM integrates with other management systems in your organization. 3(6%) of the respondents disagree that the system approach to management for TQM integrates with other management systems in your organization. 2(4%) of the respondents are neutral. When we look at the literature, David Hoyle on his book of ISO 9000 system raises that management must be seen doing what it says it will do to demonstrate its understanding. There is no doubt that actions speak louder than words because it is only when the words are tested that it is revealed whether the writers are serious. It is not about whether management can be trusted but whether they understand the implications of what they have committed themselves too. (Hoyle, 2001)

Table 4.2.5.1 Mean Statistics Result of System Approach to Management

Mean Statistics for System Approach to Management

	N	Minimum	Maximum	Mean	Std. Deviation
Practice Mean	50	1.00	4.5	3.2	0.62
Valid N (like wise)	50				

4.2.6 Analysis of Continuous Improvement Variable

Table 4.2.6 Continuous Improvement variable analysis

No	Questions Related to continuous improvement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage
1	Everyone in the organization is aware of the need to continuously improve and is making efforts to do so	34 68%	13 26%	3 6%	0 0%	0 0%
2	Continuous improvement methods (brainstorming, check sheet and other statistical process control) are applied on regular basis	11 22%	32 64%	5 10%	2 4%	0 0%
3	The organization supported employees even in their personal career developments like sponsoring for education and	11 22%	23 46%	14 28%	1 2%	1 2%

	providing scholar ships					
4	The organization is continuously improving itself by trying to apply the latest knowledge and technologies in the industry	9 19%	20 40%	19 38%	2 4%	0 0%
5	The organization uses benchmarking by comparing its results to those of competitors and best practices	12 24%	31 62%	4 8%	3 6%	0 0%

Item 1 From the above table 34(68%) of the respondents strongly agree that everyone in the organization is aware of the need to continuously improve and is making efforts to do so. Followed by 13(26%) responding agree to the situation. 3(6%) of the respondents are neutral.

Item 2 From the above table 32(64%) of the respondents agree that continuous improvement methods are applied on regular basis. Followed by 11(22%) responding strongly agree that Continuous improvement methods are applied on regular basis. 5(10%) of the respondents are neutral and 2(4%) disagree that continuous improvement methods are applied on regular basis. Based on the respondent's response, one may conclude that everyone in the organization is aware of the need to continually improve and is making steps to do so.

Item 3 From the above table 23(46%) of the respondents believe that the organization supported employees even in their personal career developments like sponsoring for education and providing scholar ships. Followed by 14(28%) responding neutral to the situation. 11(22%) of

the respondents strongly agree that the organization supported employees even in their personal career developments like sponsoring for education and providing scholar ships. 1(2%) of the respondents disagree and 1(2%) strongly disagree that the organization supported employees even in their personal career developments like sponsoring for education and providing scholar ships.

Item 4 From the above table 20(40%) of the respondents agrees that the organization is continuously improving itself by trying to apply the latest knowledge and technologies in the industry. Followed by 19(38%) of the respondents are neutral that the organization is continuously improving itself by trying to apply the latest knowledge and technologies in the industry. 9(19%) of the respondents strongly agree and 2(4%) disagree that the organization is continuously improving itself by trying to apply the latest knowledge and technologies in the industry.

Item 5 From the above table 31(62%) of the respondents strongly agree that the organization uses benchmarking by comparing its results to those of competitors and best practices. Followed by 12(24%) responding agree to the situation. 4(8%) of the respondents are neutral.

Table 4.2.6.1 Mean Statistics Result of System Approach to Management

Mean Statistics for System Approach to Management

	N	Minimum	Maximum	Mean	Std. Deviation
Practice Mean	50	1.00	4.63	3.12	0.96
Valid N (like wise)	50				

4.2.7 Analysis of Factual Approach to Decision Making Variable

Table 4.2.7 Factual approach to DM variable analysis

No	Questions Related to Factual Approach to DM	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage
1	Statistical measurements and analysis are encouraged throughout the organization	10 20%	31 42%	6 12%	1 2%	2 4%
2	To make quality-related choices, top management requires summarized reports of the facts documented on a daily basis	11 22%	34 68%	4 8%	1 2%	0 0%
3	Every activity in the organization is recorded by employees and checked by supervisors for accuracy on a daily basis	9 18%	39 78%	2 4%	0 0%	0 0%

4	Top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions	10 20%	26 52%	3 6%	11 22%	0 0%
5	The organization provides planned targets for every employee and subsequent decisions are made based on deviations of actual and targeted outcomes	10 20%	35 70%	2 4%	3 6%	0 0%
6	The organization encourages statistical measurements and analysis throughout the organization	8 16%	31 62%	9 18%	2 4%	0 0%

Item 1 From the above table 21(42%) of the respondents agree that statistical measurements and analysis are encouraged throughout the organization. Followed by 10(20%) respondents strongly agree to the situation. 6(12%), 2(4%) and 1(2%) of the respondents are neutral, strongly disagree and disagree respectively.

Item 2 From the above table 34(68%) of the respondents agree that to make quality-related choices, top management requires summarized reports of the facts documented on a daily basis. Followed by 11(22%) responding strongly agree that making quality-related choices, top

management requires summarized reports of the facts documented on a daily basis. 4(8%) of the respondents are neutral and 1(2%) disagree that to make quality-related choices, top management requires summarized reports of the facts documented on a daily basis. Moreover, when reviewing company documents, the company prepares and distributes recording documents and check lists like daily production, waste, materials used and the like. It is clear from the responses that every activity in the organization is recorded by employees and verified daily for accuracy by supervisors. (Okland, 2004) The requirement to base choices on facts is incorporated into ISO 2000 as well. Hoyle pointed out those facts from observations made by qualified persons employing devices in his book of the ISO 2000-based quality system guide. His integrity is well-known. We take particular activities as a result of using facts to inform our decisions. We require trustworthy systems for gathering data, such as measuring systems, in order to base decisions on facts (Hoyle, 2001).

Item 3 From the above table 39(78%) of the respondents agrees that every activity in the organization is recorded by employees and checked by supervisors for accuracy on a daily basis. Followed by 9(18%) of the respondents strongly agree that every activity in the organization is recorded by employees and checked by supervisors for accuracy on a daily basis. 2(4%) of the respondents are neutral about the situation.

Item 4 From the above table 26(52%) of the respondents agree that Top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions. Followed by 11(22%) responding strongly disagree to the situation. 10(20%) of the respondents strongly agree that Top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions. 3(6%) of the respondents are neutral about the situation.

Item 5 From the above table 35(70%) of the respondents agree that the organization encourages statistical measurements and analysis throughout the organization. Followed by 10(20%) responding strongly agree that the organization encourages statistical measurements and analysis throughout the organization. 3(6%) of the respondents disagree that the organization encourages statistical measurements and analysis throughout the organization. 2(4%) of the respondents are neutral.

Item 6 the above table 31(62%) of the respondents agree that the organization provides planned targets for every employee and subsequent decisions are made based on deviations of actual and targeted outcomes. Followed by 9(18%) responding are neutral to the situation. 8(16%) of the respondents strongly agree that the organization provides planned targets for every employee and subsequent decisions are made based on deviations of actual and targeted outcomes. 2(4%) of the respondents disagree to the situation.

Table 4.2.7.1 Mean Statistics Result of Factual Approach to Decision Making

Mean Statistics for Factual Approach to Decision Making

	N	Minimum	Maximum	Mean	Std. Deviation
Practice Mean	50	1.00	4.82	2.65	1.09
Valid N (like wise)	50				

4.2.8 Analysis of Mutually Beneficial Supplier Relationship Variable

Table 4.2.8 Supplier relationship analysis

No	Questions Related to the Study	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage	Frequency and Percentage
1	**Through effective communication and information exchange, the business maintains**	7 14%	18 36%	16 32%	9 18%	0 0%

	strong ties with its suppliers.				
2	The organization recruits' suppliers and has a method to keep them, which has helped the organization enhance quality	4 8%	22 44%	13 26%	10 20%	1 2%
3	The organization maintains successful partnerships with its suppliers through good communications and exchange of information.	11 22%	32 64%	5 10%	2 4%	0 0%
4	There is a strong belief throughout the organization that developing a stronger working relationship with suppliers is key to delivering better products and services to the end customer	34 68%	13 26%	3 6%	0 0%	0 0%
5	The organization have closer relationship with its suppliers which helped the	9 18%	39 78%	2 4%	0 0%	0 0%

	organization to get technical support from its suppliers when needed rather than merely exchange of goods					

Item 1 From the above table 18(36%) of the respondents agree that through effective communication and information exchange, the business maintains strong ties with its suppliers. Followed by 16(32%) of the respondents are neutral. 9(18%) respondents disagree to the situation. 7(14%) of the respondents strongly agree that through effective communication and information exchange, the business maintains strong ties with its suppliers

Item 2 From the above table 22(44%) of the respondents agree that the organization recruits' suppliers and has a method to keep them, which has helped the organization enhance quality. Followed by 13(26%) of the respondents are neutral. 10(20%) of the responding disagree that of the respondents are neutral. 4(8%) of the respondents strongly agree to the situation and 1(2%) strongly disagree that the organization recruits' suppliers and has a method to keep them, which has helped the organization enhance quality. Moreover, when we see the literatures highlight the need to develop long-term relationship with suppliers. Newman (1988) as mentioned in Zheng argued that a firm developing long-term relationships with suppliers might benefit from increased quality and process performance and continuous cost reductions. Additionally, according to Flynn et al. (1995), quoted by Zheng, suppliers could improve quality performance in a variety of methods. For instance, choosing a supplier should be focused more on the quality of the product than on the price, and suppliers can help (Zhang, 2000).

Item 3 From the above table 32(64%) of the respondents agree that the organization maintains successful partnerships with its suppliers through good communications and exchange of information. Followed by 11(22%) responding strongly agree that the organization maintains successful partnerships with its suppliers through good communications and exchange of information. 5(10%) of the respondents are neutral and 2(4%) disagree that the organization

maintains successful partnerships with its suppliers through good communications and exchange of information. Based on the respondent's response, one may conclude that everyone in the organization is aware of the need to maintains successful partnerships with its suppliers through good communications and exchange of information.

Item 4 From the above table 34(68%) of the respondents strongly agree that there is a strong belief throughout the organization that developing a stronger working relationship with suppliers is key to delivering better products and services to the end customer. Followed by 13(26%) responding agree to the situation. 3(6%) of the respondents are neutral.

Item 5 From the above table 39(78%) of the respondents agrees that the organization have closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods. Followed by 9(18%) of the respondents strongly agree that the organization have closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods. 2(4%) of the respondents are neutral about the situation. This clearly states that the organization have closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods.

Table 4.2.8.1 Mean Statistics Result of Factual Approach to Decision Making

Mean Statistics for Factual Approach to Decision Making

	N	Minimum	Maximum	Mean	Std. Deviation
Practice Mean	50	1.00	3.09	2.74	1.02
Valid N (like wise)	50				

Table 4.2.9 Descriptive statistics analysis of all variables

		Mean	SD	Standard Error= SD/N sample
Customer focus	50	3.08	1.05	0.021
Leadership	50	2.91	0.82	0.016
Employee involvement	50	3.01	0.98	0.019
Process approach	50	2.96	0.68	0.013
System approach to management	50	3.25	0.92	0.018
Continuous improvement	50	3.12	0.96	0.019
Factual approach to decision making	50	2.65	1.09	0.021
Mutually beneficial supplier relationship	50	2.74	1.02	0.024

4.2.9 Analysis of Interview Questions

Analysis of Interview Questions about Quality understanding, its benefits and Challenges they faced to implement TQM system

Qualitative analysis of the responses of employees selected for the interview asking about their familiarity with TQM system and its benefits their responses infer that they have good understanding of TQM system. They raise points about the principles of TQM systems. They point out the need to implement TQM system is to achieve superior quality with improved organizational culture and satisfied employees in a way that can help the organization to achieve its vision. They all agree that it makes dramatic change on the way things done throughout the organization. Some of them pointed out that exposure to this principles and challenges also helped in their personal development. Since, they have the opportunity to participate too many

types of trainings of different aspects on how to improve an organization starting from change of attitude, organizational culture and change it in to a completely new system, where works done systematically, problems solved before they reach to outside customers through check and balance system. They believe practicing of TQM helped to increase productivity, less damage and waste, and more qualified products, which leads to higher financial results. From these thoughts of employees, one can infer that employees of the organization have satisfactory understanding about TQM system.

Qualitative analysis of the responses of employees selected for the interview asking about the challenges the organization face while practicing of TQM system. The employees asked pointed out three major challenges:

1. Lack of continuous training and education because training and education are an ongoing process for everyone in the organization. Needs must be determined and a plan developed to achieve those needs. These needs of extensive training are a challenge because it can be time consuming and costly especially in a large food factory. Also training and education are most effective, when senior management conducts the training on the principles of TQM. So due to shortage of time of both the employees and senior managers, there has been no consistent training sessions.

2. TQM implementation being long and complex process. Because it requires a significant investment of time and resources, they are always being challenged especially for a food factory that needs to balance the demands of production with the need for continuous improvement.

3. Besides different cultural problems among former and new Employees, the practicing of TQM system that is new to the organization brought changes throughout the organization. The change process starting form Top management down to all employees of the organization was too hard to adopt at that time. There were some uncertainties, higher costs and higher turnover of employees, who gets it hard to adapt the new paradigm shift towards new philosophy, was the main challenges the organization face during the practicing of TQM system

According to a study by Karia and Asaari (2016), training is a critical factor in the successful implementation of TQM. The authors found that organizations that provided comprehensive TQM training to their employees were more likely to achieve their quality goals and improve their overall performance. Similarly, a study by Al-Mashari and Zairi (2000) found that TQM

training was positively correlated with employee satisfaction and commitment to quality improvement. These findings highlight the importance of investing in TQM training as a means of achieving organizational excellence and improving overall performance.

Daniel and Fasika on their work pointed out that organizations often fail to recognize the importance of culture and its influence in transplanting what has worked in a different cultural setup, organizational structure and individualism without reviewing its compatibility or incompatibility with different cultures (Daniel and Fasika, 2003). Jack P. Pekar he stated in his book that there is no single path to achieving total quality within an organization supports this argument. There are no hard and fast rules to follow to become a world-class company. The only constant are basic guidelines, that, when followed, lead to success. This is because all organizations have their own cultures, people, and technologies. What may work well for one company will not necessarily work for another company (Pekar, 1995). However, in spite of the challenges the organization face the employees believe they have overcome those challenges, adopted the new philosophy, and award ISO Certificate successfully.

CHAPTER FIVE

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

After all analysis done in chapter three, findings of the study are identified. In this chapter significant findings of the study are presented; conclusions are developed and possible recommendations are forwarded to the concerned management body of the organization.

5.1 Summary of The Findings

Findings of the study were made from the analysis of primary and secondary data, interview and observation. Depending on the result of data analysis the following major findings are obtained: Firstly, DH GEDA Four factory is ISO-9001 certified for its quality system and ES 1052:2021 certified that it's checked every three months for a detailed quality inspection.

When we look at the responses for every variable the mean values are Customer focus (3.08), Leadership (2.91), Employee Involvement (3.01), Process approach (2.95), System approach to management (3.25), Continuous improvement (3.12), Factual approach to decision making (2.65) and mutually beneficial supplier relationship (2.74). Thus, the minimum mean is for Continuous improvement that is 3.37 and the maximum is for Factual approach to decision making (2.65). From the means, we can understand that the mean values are between subjects who are neutral and who agree with the phenomena.

The first variable is customer focus with the mean value 3.08, most of the respondents agree. From this result, one can infer that the company puts a lot of effort into ensuring customer satisfaction, which is a crucial component of a successful TQM system. Review of the secondary sources also supported the aforementioned claim that the organization puts a lot of effort into enhancing quality that helped to satisfy customers.

The second variable is leadership with the mean value 2.91. This suggests that the majority of the subjects concur that the management of the firm was dedicated to implementing a quality

system. Top management exerts significant effort to improve the organization's quality through interviews with management team members and the evaluation of organizational documents.

The third variable is Employee involvement with mean 3.01, indicates also most of the respondents are between neutral and agree that they are given the chance to involve in TQM implementation programs, and they are well-treated, trained, and feel important to the success of the company, according to interviews and reviews of organizational records. Even though there were some employees who didn't feel appreciated and rewarded for their involvement, most of the respondents agree they are.

The mean value for the fourth variable process approach is 2.95, that indicates most of the respondents agree on the fact that the organization Manages processes methodically by giving process ownership to the most appropriate individual or group and resolving process interface concerns through meetings or ownership models and the process approach in their company helps to align quality objectives with overall business goals and strategies.

The fifth variable System approach to decision making has a mean value of 3.25, that indicates most of the respondents agree on the system approach to management for TQM in improving overall organizational performance is effective and the system approach to management for TQM integrates with other management systems in their organization.

The sixth variable is continuous improvement the mean value is 3.12 which most of the responses are between strongly agree and agree that everyone in the organization is aware of the need to continuously improve and is making efforts to do so and continuous improvement methods (brainstorming, check sheet and other statistical process control) are applied on regular basis.

For the seventh variable Factual approach to decision making, the mean value is 2.65 which indicates most respondents lie between strongly agree and agree that statistical measurements and analysis are encouraged throughout the organization and to make quality-related choices, top management requires summarized reports of the facts documented on a daily basis.

For the last variable Mutually beneficial supplier relationship, with mean value 2.74, most respondents lie between neutral and agree that through effective communication and information

exchange, the business maintains strong ties with its suppliers and the organization recruits' suppliers and has a method to keep them, which has helped the organization enhance quality.

Finally, the overall mean value of the eight TQM principles is 3.2, that most of the respondents agree that the company is successfully applying all the eight principles. (Dale, 1999), quoted in Azda, talked about the new TQM concept. He argues that Total Quality Management (TQM), which mandates the application of quality management principles to all aspects of the organization, including customers and suppliers, and their integration with the key business processes, is the most recent focus in the evolution of quality (Azda, 2012). TQM is an integrated approach to achieving and maintaining high quality output that focuses on the maintenance and continuous improvement of processes and defect prevention at all levels and in all functions of the company in order to meet or exceed customer expectations, according to Flynn et al. (1994), as cited in Zhang.

The last section is discussion of the qualitative data of interview with the managements and supervisors about their awareness of TQM system and the challenges they face while practicing of TQM system. Their answer about their awareness was good. They raise points about the principles of TQM systems. They point out the need to implement TQM system is to achieve superior quality with improved organizational culture and satisfied employees in a way that can help the organization to achieve its vision. They all agree that it makes dramatic change on the way things done throughout the organization. They believe practicing of TQM helped to increase productivity, less damage and waste, and more qualified products, which leads to higher financial results. From these thoughts of employees, one can infer that employees of the organization have satisfactory understanding about TQM system.

5.2 Conclusions

Based on the study's findings, the following conclusion can be drawn for all the research questions: According to the results, the organization is implementing all the TQM principles satisfactorily and also both employees and top management have a good knowledge about quality in general and the principles. The benefits of practicing TQM systems are significant to the organization. The company's financial statements show improved results. Employee's

relationship with the organization becomes better leading to fewer turnovers, less defects and reworks which significantly help the organization to minimize its costs. The company desires to fortification, which is an additional nutrient that will be an enhancement on quality systems. Strengthened competitive position, Adaptability to changing or emerging market conditions and to environmental and other government regulations, Higher productivity, Enhanced market image, Elimination of defects and waste, Reduced costs and better cost management, Higher profitability are the main benefits the company is enjoying by implementing TQM system.

As gathered from interview questions, the company has many methods of measures the effectiveness of the TQM by using certain key performance indicators (KPIs) that are implemented in their operation unite and process units. Some of them include raw material inspection, processing inspection, food safety managements, hygiene control and HASP(Health and safety plan) and before and after production hazard controls.

The last research question about challenges of implementing TQM, results show that two major challenges were faced by the organization being lack of continuous training and education and the fact that the topic TQM by itself is a long and complex process, it requires a significant investment of time and resources, they are always being challenged especially for a food factory that needs to balance the demands of production with the need for continuous improvement.

5.3 Recommendations

Even if all the principles of TQM are implemented in the organization sufficiently, there seems to be a lower value for the reward regarding questions in the fourth variable, Employee involvement. As it is discussed before, reward and recognition of Employees for their involvement increases TQM in organizations. So, it is recommended that the company works towards this in the future to achieve more higher benefits of implementing TQM.

The company have to also assess that all of its employees are on the same page about the main subject matter because subjects who filled the questionnaire who choose to be neutral about the questions about the principles of TQM system need to be examined. If the reason is due to lack

of awareness the organization needs to consider some awareness creating mechanisms like trainings.

For the first challenge the organization faced on Lack of continuous training and education, to overcome that it is recommended that the company to provide Regular training sessions: Conduct regular training sessions to ensure that employees are up-to-date with the latest TQM practices and techniques. These sessions can be conducted in-house or by external trainers.

Encourage employee participation: Encourage employees to participate in TQM training programs and provide incentives for those who do. This will help to create a culture of continuous learning and improvement within the organization. Use technology to facilitate training: Use technology to facilitate TQM training, such as e-learning modules, webinars, and online training courses. This will make training more accessible and convenient for employees.

For the second challenge on TQM implementation being long and complex process, it is recommended that, developing a clear plan: Before starting the implementation process, it is important to develop a clear plan that outlines the steps that need to be taken, the resources required, and the timeline for completion. This will help to ensure that everyone involved in the process is on the same page and working towards the same goals.

Communicate effectively: Communication is key when implementing TQM. It is important to keep everyone involved in the process informed of progress, changes, and any issues that arise. This will help to ensure that everyone is working towards the same goals and that any problems are addressed in a timely manner.

Involve employees: TQM is not just the responsibility of management. It is important to involve employees at all levels of the organization in the process. This will help to ensure that everyone is invested in the success of the implementation and that everyone has a stake in the outcome.

Provide training: TQM requires a new way of thinking and working. It is important to provide training to employees to help them understand the principles of TQM and how it applies to their work. This will help to ensure that everyone is working towards the same goals and that everyone has the skills and knowledge they need to be successful.

Celebrate successes: Implementing TQM can be a long and challenging process. It is important to celebrate successes along the way to help keep everyone motivated and engaged. This will help to ensure that everyone stays focused on the end goal and that the implementation is successful.

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APPENDEX

Survey Instruments; Interview Questions

1. How would you define Total Quality Management (TQM) in the context of your company?

2. Can you provide an overview of the TQM practices implemented in your organization?

3. How do you ensure that TQM principles are integrated into your company's strategic planning process?

4. What role does leadership play in promoting and sustaining TQM practices within your organization?

5. How do you involve employees in the TQM process, and what measures do you take to encourage their participation?

6. How does your organization measure the effectiveness of its TQM practices? What key performance indicators (KPIs) do you use?

7. Can you share any examples of how TQM practices have led to improvements in your company's products or services?

8. Is your company ISO certified?

7. How do you ensure continuous improvement in your organization's processes and systems through TQM?

8. What challenges have you faced in implementing TQM practices, and how have you addressed them?

9. How do you maintain a customer-focused approach in your TQM practices, and how do you gather and utilize customer feedback?

10. What training and development programs do you have in place to support TQM practices?

Survey Instruments

Section one; Demographic Questions

1. Age   below 25   25-30   30-35   35-40   >40

2. Years of experience in the organization   <1yr   1-5yrs   5-10yrs   10-15yrs
>15yrs

3. Your position in the organization ………………………………………………

Section two; TQM principles and practices related questions

These following sections deal with your opinion about your organization's
implementation of Total Quality Management principles. The following statements are presented
for your evaluation. Please circle the number of the response which best represents the level of
agreement that indicates whether you:

1 = strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = strongly agree

1.1 Questions related to Customer Focus

1	Your organization strongly understands prioritizes meeting the needs and expectations of your customers.	1	2	3	4	5
2	Your customers are strongly satisfied with the products/services you provide.	1	2	3	4	5
3	The organization adopts formal ways to collect customer complaints	1	2	3	4	5
4	The customer's complaints coming to the organization after TQM implementation are minimized	1	2	3	4	5
5	Customers' complaints are studied to identify patterns and prevent the same problems from recurring.	1	2	3	4	5

1.2 Questions related to Leadership

1	Top management is a primary driving force behind quality improvement efforts.	1	2	3	4	5
2	Your leaders strongly ensure that our quality management system is aligned with the organization's strategic objectives.	1	2	3	4	5
3	The senior executives consistently participate in activities to improve the quality.	1	2	3	4	5
4	The senior executives appreciate efforts that improve quality throughout the organization	1	2	3	4	5
5	Senior executives involve on activities that enhance customer satisfaction by obtaining information on needs and suggestions for quality improvement directly from customers.	1	2	3	4	5

1.3 Questions related to Employee Involvement

1	You feel that employees are actively involved in TQM initiatives?	1	2	3	4	5
2	You believe that employees are recognized and rewarded for their contributions to TQM	1	2	3	4	5
3	You believe that employees are recognized and rewarded for their contributions to TQM	1	2	3	4	5
4	Training involves the application of formal processes to enhance knowledge	1	2	3	4	5
5	Organizational structure that allows employees to exercise corrective actions based on their authority is appreciated by employees	1	2	3	4	5
6	Employees' involvement and empowerment encourages them to exert the best of their abilities to improve quality	1	2	3	4	5

1.4 Questions related to Process Approach

1	The organization Manages processes methodically by giving process ownership to the most appropriate individual or group and resolving process interface concerns through meetings or ownership models.	1	2	3	4	5
2	The process approach in your company helps to align quality objectives with overall business goals and strategies?	1	2	3	4	5
3	The organization reviews processes and sets improvement targets by empowering process-owners to set targets and collect data from internal and external customers.	1	2	3	4	5
4	The organization uses innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes.	1	2	3	4	5

1.5 Questions related to system approach to management

1	The system approach to management for TQM in improving overall organizational performance is effective	1	2	3	4	5
2	The system approach to management for TQM integrate with other management systems in your organization	1	2	3	4	5

1.6 Questions related to Continuous improvement

1	Everyone in the organization is aware of the need to continuously improve and is making efforts to do so	1	2	3	4	5
2	Continuous improvement methods (brainstorming, check sheet and other statistical process control) are applied on regular basis	1	2	3	4	5
3	The organization supported employees even in their personal career developments like sponsoring for education and providing scholar ships	1	2	3	4	5
4	The organization is continuously improving itself by trying to apply the latest knowledge and technologies in the industry	1	2	3	4	5

5	The organization uses benchmarking by comparing its results to those of competitors and best practices	1	2	3	4	5

1.7 Questions related to Factual approach to decision making

1	Statistical measurements and analysis are encouraged throughout the organization	1	2	3	4	5
2	To make quality-related choices, top management requires summarized reports of the facts documented on a daily basis	1	2	3	4	5
3	Every activity in the organization is recorded by employees and checked by supervisors for accuracy on a daily basis	1	2	3	4	5
4	Top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions	1	2	3	4	5
5	The organization provides planned targets for every employee and subsequent decisions are made based on deviations of actual and targeted outcomes	1	2	3	4	5
6	The organization encourages statistical measurements and analysis throughout the organization	1	2	3	4	5

1.8 Questions related to Mutually beneficial supplier relationship

1	Through effective communication and information exchange, the business maintains strong ties with its suppliers.	1	2	3	4	5
2	The organization recruits' suppliers and has a method to keep them, which has helped the organization enhance quality	1	2	3	4	5
3	The organization maintains successful partnerships with its suppliers through good communications and exchange of information.	1	2	3	4	5
4	There is a strong belief throughout the organization that developing a stronger working relationship with suppliers is key to delivering better products and services to the end customer	1	2	3	4	5

5	The organization have closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods	1	2	3	4	5

Section three; Questions related to the benefits and challenges of TQM implementation

1. What is TQM in general?

2. What are the principles of TQM that are being implemented in your organization?

3. What are the benefits of implementing TQM principles in your company?

4. What are the challenges your company faces through implementing TQM?