



UNIVERSITY OF KWAZULU-NATAL

GRADUATE SCHOOL OF BUSINESS

The role and effectiveness of Total Quality Management in the value chain of a textile
manufacturing organisation:

Beier Envirotec Pty (Ltd)

by

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Business Administration in the Department of Business Studies, University of KwaZulu-
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Declaration

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January 2018

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Abstract

This study reports on the investigation of the role of a Total Quality Management system (TQM) in the Beier Envirotec textile manufacturing organization. The study focused on employees and their role in implementing effective TQM systems. The study looked at various factors, which affected employees and the limitations they had to deal with in implementing TQM systems. The study looked at elements such as teamwork, communication, training and development, leadership, and motivation.

These are key elements, which are essential for the effective implementation of a TQM system. The study employed a qualitative research method. The method analysed data directly in the fieldwork through observations, in-depth, open-ended interviews, and written documents. Qualitative researchers enquire and study real-world settings inductively to generate narrative descriptions in the formulation of case studies (Wyk, 2009: 11).

The study also explained the constructive worldview towards an approach to qualitative research.

The study was conducted on the Beier Envirotec site, with the acquiescence of the organization and the Business School. The participants who took part in the study were or to the organization.

The findings of the study and recommendations have been sent to the organization. One of the overall main findings was the lack of integration between departments as they operate in isolation which then hinders the proper implementation of TQM in the organization.

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CHAPTER ONE: INTRODUCTION

1.0 Introduction

Total Quality Management (TQM) is an integrated approach to improve quality at each level of the organization. This approach is process-centred and involves elements such as; customer-focus, Total Employee Involvement, teamwork, and communication (Evans & Lindsay, 2008: 67). TQM is aimed at structuring all divisions and departments to work cohesively by ensuring that everyone is aware of the overall goal and values of the organisation. Accordingly, these divisions will be promoted to work together following company processes and procedures by aligning themselves with the organisational culture and values (Black and Porter, 1996: 25).

Established manufacturers in the motor industry like Toyota have almost perfected the system, this has contributed towards the company's success over the past years. This system requires a trained and motivated workforce who works in an environment where the cultures and values of the organization are based on Quality (Evans & Lindsay, 2008: 67).

This study will investigate the role Total Quality Management plays in an organization such as Beier Envirotec that specializes in the manufacturing of textile products. Envirotec is a high-quality demand business where their customers demand nothing less than top-quality products. The company specializes in industrial textiles and is one of the biggest in KwaZulu Natal. The Beier Group has grown since its establishment in 1929.

The company operates from the South African-based head office of Beier Industries (Pty) Ltd in Pinetown, 15 km east of Durban, where Engineered Industrial Textile products are produced for a wide variety of industries. Beier Envirotec is one of the most notable producers of technical textiles, specialised media and filtration products in Southern Africa. Beier Envirotec continues to invest in equipment and people, therefore achieving quality of the highest standard, and performance second to none. Based in Durban, and with offices in Johannesburg, they are ideally situated with short supply chains and fast delivery.

One of the biggest quality challenges of this company, and many organisations, is maintaining quality standards in all facets of the organisation. This requires highly sophisticated systems and a well-trained workforce who buy into the organisation's quality vision and values (Jay and Barry, 2014: 248).

Beier Envirotec has come across challenges concerning the quality of some products at various stages, which have led to customer complaints and returns. Overall, this has raised concerns for management who are working tirelessly to improve the situation. This study aims to illustrate the gaps in the implementation of an effective TQM system (Envirotec, 2016)

This research study focuses on Beier Envirotec and on the role and effectiveness of quality on their entire value chain. The study will investigate whether or not employees see themselves as ambassadors of quality and how this can be improved.

The study will focus on four departments which play a pivotal role in the organization's overall quality. These are Human Resources, Testing Department, Production, and Sales. This requires everyone from top-to-bottom to be involved in implementing and executing TQM effectively. The approach assists in ensuring that the organisation's vision is achieved as a cohesive unit (Black and Porter, 1996: 25).

1.1 Background of the Study

Most established and sustainable organisations develop and improve their systems and processes by adapting to an ever-changing global environment. TQM requires a comprehensive approach which demands a buy-in by all employees who are empowered to add value to the organization (Jay and Barry, 2014: 250).

The study will also investigate the role TQM plays in achieving effective communication between all Beier Envirotec Departments, including internal and external customers. It will also check if there is a positive relationship between customers and the company.

The study will examine the role quality plays in contributing towards achieving that vision and the importance of quality in the whole value chain. It will look at and analyse the way in which quality is executed and implemented within the different departments and compare the relations and commonalities of the roles. This study will also investigate how quality integrates and facilitates all departments with their different tasks and functions so that they work together in achieving the company's vision.

While it is the vision of Beier Envirotec to deliver quality products to its customers on time, there are certain challenges and obstacles they face on a daily basis which are internal and external where TQM can assist. The research study will reveal these challenges and look at

all stakeholders involved and evaluate their contribution to creating them, and discover if they are aware of the impact of their behaviour and assess remedial measures that can be introduced in order to improve quality and to achieve continuous improvement within the organisation.

1.2 Statement of the Problem

Organizations may have systems and procedures which keep the core functions of the organization running. TQM looks beyond these and looks at the organization's culture towards quality and the people producing it (Evans & Lindsay, 2008: 75). It looks at the training and empowering of all employees and how this is aligned with the culture of quality in order to achieve and implement an effective TQM system. When one of the above-mentioned is lacking, this affects the implementation of TQM and the potential positive impact it can have on the organization (Deming, 1986: 27).

Beier Envirotec is a highly process-focused company and has effective and efficient process controls for each department to execute its activities in order to achieve results. Major improvements in response time may require significant simplifications of work processes and often drive simultaneous improvements in quality and productivity (Envirotec, 2017).

The problem that led to the motivation of conducting this study is that organizations rarely identify and deal with some of the symptoms which limit the implementation of a TQM system (Jay and Barry, 2014: 253). The study seeks to discover how the formulation and implementation of sound TQM will be able to assist the Beier Envirotec textile value chain in producing quality products.

1.3 Justification of the Study

Quality is a very complex subject, and there is no clear and precise definition of it. There has been a lot written on the topic, but, in order to achieve the final result of a good quality product, this demands a continuous process of improving systems and procedures (Johnson and Flynn, 2015: 200). Quality should not be seen as the sole responsibility of the Quality Department. It should be the responsibility of every stakeholder in the organization. A lot of emphasis is usually placed on quality during one period or process of the production stage while other stages are neglected. This can result in a poor quality product (Johnson and Flynn, 2015: 200).

This research study also aims to investigate whether the formulation and implementation of a sound Total Quality Management system improves effectiveness in Beier Envirotec textile value chain.

There has been increasingly more pressure towards the implementation of Total Quality Management by managers. Managers and employees need to be educated in TQM in order to achieve the objective of any business, small or large, through the proper application of total management techniques (Bruyn, 2003: 97).

1.4 Purpose of the Study

It has been found that quality can overcome a low price strategy. Customers are willing to pay more for a good quality product. This plays such a crucial role in any organisation. In manufacturing organisations, a lot of emphasis has been placed on improving quality, not only in the final product but with all company systems and procedures. We live in a global village where we trade and deal across international borders (Bruyn, 2003: 14). Therefore, organizations have to follow international standards to obtain world-class specifications for products, services, quality systems, safety, and efficiency. These standards are instrumental in facilitating international trade.

Beier Envirotec trades internationally and locally and they are, therefore, bound to comply with both the South African Bureau of Standards and International organizations concerning standards. A key factor which contributes to a good quality product and system is communication between the different divisions and the way their different tasks and systems are aligned with each other. Quality systems and processes are placed in organisations so that everyone is directed and aligned to work towards one goal (Gunasekarens, 1999: 11).

The design of quality also seems like a responsibility which is usually shifted between departments and creates the perception that it is the task or speciality of a specific department or other individuals. For quality to work it has to be part of the organisation's culture which is supported by the systems and processes in place (Bruyn, 2003: 9). Quality is a very complex subject, many companies strive for good quality, but, to create it, is a complex task and to implement it and realise it is not easy. Continuous improvement in its realisation is hampered by a number of factors such as poor communication, inconsistency in the application and execution of processes and systems and the culture of the company (Johnson and Flynn,

2015: 210).The purpose of the study is to discover whether or not TQM can improve the effectiveness of the value chain in the Beier Envirotec Company.

1.5 Research objectives

- To ascertain the effectiveness of TQM in the Bieier Envirotec.
- To investigate the role of quality with regards to communication, participation, teamwork within the organisation.
- To identify if there is a need for TQM in the organization.
- To recommend remedial measures that can be taken in order to improve quality and, therefore, increase the productivity of the company.
- To ascertain whether or not employees in the company of Beier Envirotec are fully equipped and trained to implement TQM.
- To assess if the effective implementation of TQM can improve the value chain of Bieier Envirotec.

1.6 Research Questions

- To what extent does TQM play an effective role in the Beier Envirotec Company?
- Is there evidence that TQM can lead to better communication amongst stakeholders and to better teamwork?
- Does the company Beier Envirotec need TQM applications in its processes?
- To what extent can the implementation of TQM measures lead to improvement of quality and productivity?
- Are employees in Beier Envirotec fully equipped and trained to implement TQM in the company?
- How can the effective implementation of TQM improve the value chain of Beier Envirotec?

1.7 Theoretical Framework

A conceptual framework is an analytical tool with many variations, assumptions, principles and contexts, which is designed to formulate a distinction and organise various ideas in the conceptual framework to create a broad concept (Labaree, 2013).

A theoretical framework is concerned with involving the theory of a subject or area of study rather than its practical application. The literature review in this study will be in the form of 'tell-a-story'. The literature will seek to investigate the importance of using TQM in the Beier Envirotec business (Labaree, 2013).

The theory of key elements and tools in TQM towards organization's strategy by James Evans will be used as the first theoretical framework (Evans & Lindsay, 1994: 69). The second theoretical framework on which the study will be based is the, 'The, Conceptual Model for the Implementation of TQM' by Gunasekarens. The third theoretical framework of the study will be Crosby Theory.

1.8 Delimitation

The Beier Group has over a thousand employees; samples will be taken by selecting two employees from each of the chosen Departments. The study will not test a customer sample because the result of the study will assist the organisation in the long term. Therefore, a customer sample should reflect the changes implemented (Labaree, 2013).

The study will not investigate micro details like the quality each machine in the factory produces, because the study involves the role and effectiveness of TQM and its impact on the organisations value chain. This study is more focused on people who execute processes while communicating with each other (Johnson and Flynn, 2015: 210).

1.9 Conclusion

The expected outcome of the study will give a clearer picture of the challenges concerning quality faced by Beier Envirotec. This company is very process-driven and this has contributed to the success and culture of the organisation. Part of the research questions of the study on Beier Envirotec are about how quality can help with effective communication and relationships between all the divisions and how employees see themselves and what role they play in being ambassadors of quality in the organisation for internal and external customers.

These questions involve a combination of effective quality procedures together with cultural and human factors.

The organisation's values are linked to producing quality for its customers. Therefore, as expected, they are very procedural which is why they are rewarded with various ISO standards. Even though international standards are very critical in contributing towards producing a quality product, it is very difficult to measure the culture of quality within the organisation, and to measure how employees see themselves as to what role they play in being ambassadors of the organisation by using ISO standards alone.

This study will give a clearer indication for Beier Envirotec as to how effective their communication and relationships through TQM will be and they will also see where their employees see themselves in the role of achieving, maintaining and improving quality within the organisation.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

Quality in organizations still focuses mainly on reducing defects and errors in products and services through the use of measurements, statistics, and other problem-solving tools. Organizations began to recognize that lasting improvements could not be accomplished without significant attention to the quality of the management practices on a daily basis. Managers also began to realise that the true producers of quality depends on how the company listens and responds to customers, how they interact with their employees, what initiatives they take to empower employees in order for them to add value to the organization (Evans & Lindsay, 2008: 66).

Quality of management is as important as the management of quality. That is where the notion of TQM comes in, rather than being a narrow engineering or production-based technical discipline. The notion of quality has evolved into the concept of performance excellence that aligns and integrates all business activities, and that result in delivery of an ever-improving value to customers and stakeholders and it also contributes to overall effectiveness and organizational sustainability (Jay and Barry, 2014: 253).

The Toyota Motor Company has recognised that the placement of quality systems and processes are key elements of production. This recognition has resulted in Toyota being one of the best motor industries in the world.

There are many grey areas in organisations in terms of the role quality plays in the value chain. Without efficient quality systems having been placed into the entire value chain, companies experience problems and challenges which could have been avoided.

The chapter will first seek to define quality and explain its role. It will also look into how stakeholders in the value chain can implement TQM in various Departments in the Beier Envirotec Company.

The literature review in this study will be in the form of ‘tell-a-story’. The literature will seek to investigate the importance of using TQM in the Bier Envirotec business (Labaree, 2013).

The chapter will then discuss theories in TQM like the Deming, Crosby, Joseph Juran, and Gunasekarens theory in conjunction with the conceptual framework of TQM, Evans and key

elements of TQM, Ishikawa's Theory and finally the Six Sigma. The study will look at challenges facing managers and employees in the implementation of TQM. .

After and future theories with current challenges have been discussed then there will be a selection of theories which will build the theoretical framework for the study to answer the research questions and objectives will be chosen out if the themes in the literature. The theoretical framework will also be guided by relevant themes selected in the literature.

2.1 Defining Quality

Quality, in its simplest basic definition, is meeting customer expectations. In an organization, there are processes involved in the meeting of customer expectations through quality so organisations must be involved in a broad definition of quality. It can be assuring that the entire quality systems involving suppliers and customers is controlled through the process of continuous production of services appropriately with totality of functions involved in the determination and achievement of quality through proper management (Hacker, 2014: 7-9).

2.1.1 The Role of Quality

Quality management involves moving from emphasising final inspection to assessing whether critical work processes are in control and giving guidance to the employees of the company in the techniques involved. The change of focus from inspecting production outputs to monitoring the variation in process during the process has significance in distribution and service industries (Mohammad and Rahman, 2011: 18).

Quality management over the last few decades has shifted from the factory floor to the Purchasing Department, on the one hand, and distribution on the other. Mistakes have been made, processes have become articles of faith and expectations have been raised too high for customers, employees and shareholders alike. There is an important collaboration role for sales and marketing with operations and personnel managers; to get the internal processes right (Mohammad and Rahman, 2011: 19).

2.1.2 Manufacturing-Based Perspective of quality

Beier Envirotec places a lot of focus on the manufacturing-based perspective of quality. This is a good thing because it defines quality as the desirable outcome of engineering and manufacturing practice, or conformance to specification (Envirotec).

Specifications are targets and tolerances determined by designers (Technical Department) of products and services. Targets are the ideal values towards which production strives. Tolerances are specified because designers recognize that it is impossible to meet targets all of the time in manufacturing (Jay and Barry, 2014: 249).

2.1.3 Integrating Perspective on Quality

Although product quality should be important to all individuals throughout the value chain, the way quality viewed may depend on one's position in the value chain, or whether one is the designer, manufacturer, service provider, distributor or customer. From observation it seems like the operators (manufacturers) have the perspective that the quality of the product is the responsibility of the lab and the Technical Department which depends on the operators to understand the quality requirements of the product and to execute their tasks constantly in such a way that they follow the required specification and tolerances and to understand the role they play in producing a quality product (Evans & Lindsay, 2008: 72).

Therefore, for production personnel, quality is described by the manufacturing-based definition as conformity to operational specifications. Therefore, one can say that a shift from a mainly manufacturing-based perspective to a more integrated perspective will not only improve the operators' skills, but will contribute to the continuous improvement of quality. Because individuals in different business functions speak different business 'languages', the need for different views of what constitutes quality at different points inside and outside an organization is necessary to create products of true quality that will satisfy customers' needs (Bourmeyer, 2003).

2.2. Theories in Total Quality Management

2.2.1 Deming Theory

The Deming theory uses 14 points to analyse the simple concept of continual improvement which can increase the quality of a certain product in any institution or company while decreasing costs involved in the value chain. This can be achieved by taking the manufacturing process as not a series of unrelated processes but as an entire integrated system to improve efficiency and productivity (Johnson and Flynn, 2015: 171).

There are 14 points which clearly explain the whole theory of the Deming approach towards Total quality Management (Neave, 1987: 564-574).

- i. Create constancy of purpose
- ii. Adopt the new philosophy
- iii. Stop dependencies on mass inspections
- iv. Don't award business based upon the price
- v. Aim for continuous production and service improvement
- vi. Bring in cutting-edge on the job training
- vii. Implement cutting-edge methods for leadership
- viii. Abolish fear from the company
- ix. Deconstruct departmental barriers
- x. Get rid of quantity-based work goals
- xi. Get rid of quotas and standards
- xii. Remove barriers that rob people in management and in engineering of their right to pride of workmanship
- xiii. Ensure everyone is trained and educated
- xiv. Make sure the top management structure supports the previous thirteen points

2.2.2 Crosby's Theory

Crosby theory is similar to the Deming theory, he emphasized a similar point to with regards to spending money on quality will come with great returns on profit and signals money well spent (Suarez, 1992: 3).

Crosby based his theory on four absolutes which also has the main 14 steps towards continuous quality which can be used by any institution or company. The four absolutes in the theory are:

- i. We define quality as adherence to requirements
- ii. Prevention is the best way to ensure quality
- iii. Zero Defects (mistakes) is the performance standard for quality
- iv. Quality is measured by the price of nonconformity

Then the fourteen points to the theory of Crosby are (Suarez, 1992:5):

- i. Attain total commitment from management
- ii. Form a quality improvement team
- iii. Create metrics for each quality improvement activity
- iv. Determine cost of quality and show how improvement will contribute to gains
- v. Train supervisors appropriately
- vi. Encourage employees to fix defects and keep issues logs
- vii. Create a zero-defects committee
- viii. Ensure that employees and supervisors understand the steps to quality
- ix. Demonstrate your company's commitment by holding a zero defects day
- x. Goals are set on 30, 60, or 90 day schedule
- xi. Determine root causes of errors, remove them from processes
- xii. Create incentives programs for employees
- xiii. Create a quality council and hold regular meetings
- xiv. Repeat from step one

2.2.3 Joseph Juran's Theory

Joseph Juran's theory focuses on the quality in planning, quality improvement and quality control which later became known as the quality trilogy. Joseph Juran's theory describes ten steps involved in improvement of quality management (Suarez, 1992: 4). The theory of Juran unlike others has ten steps to quality management to improve TQM. These steps are as follows:

- i. An awareness of the opportunities and needs for improvement must be created
- ii. Improvement goals must be determined
- iii. Organization is required for reaching the goals
- iv. Training needs to be provided
- v. Initialize projects
- vi. Monitor progress
- vii. Recognize performance
- viii. Report on results
- ix. Track achievement of improvements

2.2.4 Conceptual Model for the Implementation of TQM

Applying TQM effectively improves the organizations competitiveness which allows them to meet customer demands and offer quality goods at competitive prices. This can be achieved by improved communication and employee morale through these major enablers of TQM. Starting with the job as one of the enablers indicates that there is a need for employee involvement in any change process including the implementation of TQM (Gunasekarens, 1999: 11).

To try to motivate employees in TQM, there is a need to communicate the company's aims and objectives in a more open way in order to improve the understanding of employees and facilitate cross-functional teamwork. Training and education and empowerment are the key enablers of TQM in developing a learning organization together with technological support. All enablers support each other, leading to the overall job satisfaction of the employees and, at the same time, the total commitment and involvement of employees in the change process (Gunasekarens, 1999: 11). Total Quality Management has many benefits and can be extremely valuable to the organization if implemented correctly. Yet there are still many organizations that attempt different types of quality improvement efforts and find that they have not achieved any or most of the expected outcomes. The crucial factor in the success or failure of TQM is the genuineness of the organization's commitment to the cause (Johnson and Flynn, 2015: 205).

Often organizations look at TQM as another business change that must be implemented due to market pressure without really changing the values of their organization. It is important to note that TQM is a complete philosophy that has to be embraced with true belief, not just the theory and idea of it, which is discussed only with top management (Johnson and Flynn, 2015: 202).

Looking at TQM as a short-term financial investment is a sure recipe for failure. Another mistake is the view that the responsibility for quality improvement lies with the quality of people and the quality of the Department. It is a 'let the workers do it' mentality. A third common mistake is over- or under-reliance on statistical-process control (SPC) methods. SPC is not a substitute for continuous improvement, teamwork, and a change in the organization's belief system (Johnson and Flynn, 2015: 212).

However, SPC is a necessary tool for identifying quality problems. Some common causes for TQM failure are:

- Lack of a genuine quality culture;
- Lack of top management support and commitment; and
- Over- and under-reliance on statistical process control (SPC) methods.

Companies that have attained the benefits of TQM have created a quality culture (Johnson and Flynn, 2015: 223). It can be seen that there are many elements to achieving TQM in an organization and setting out good systems and processes is just part of what needs to be done in order to achieve it. For the implementation of an effective TQM system, the organizations values have to revolve strongly around culture. With this environment organizations must mobilise their staff force to be well trained, and highly motivated in order to implement successful TQM systems (Johnson and Flynn, 2015: 2078).

The benefits of TQM systems will have a positive effect on the organizations internal and external customers. External customers will be loyal and have a positive relationship with the organisation and this will enable the organization to grow and maintain their market share. Organizations will find themselves with a happy staff force that believes in the organization and are willing to go the extra mile because of that belief (Gunasekarens, 1999: 11).

In the model which follows below not all components will be discussed in the study like cross-functional teams, job satisfaction, technology and communication as they have already been discussed in some areas like the principles of TQM. Also as far as team-work is concerned, there is only a brief addition, as it has already been discussed.

The model below helps to tackle some of the failures which occur in the implementation of TQM.

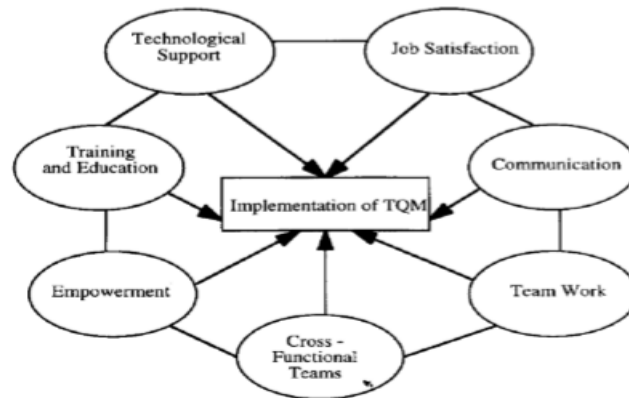


Figure 2.1: Conceptual Model for the Implementation of TQM

Source: Gunasekarens, 1999: 11

This model includes the major strategies and enablers for the successful implementation of TQM (Gunasekarens, 1999: 11):

- Job Satisfaction;
- Communication;
- Team Work;
- Cross-functional teams;
- Empowerment;
- Training and education; and
- Technological support

2.2.5 The theory of key elements and tools in TQM towards organization's strategy by James Evans

A focus on customers and stakeholders

Companies need to fully understand all product and service attributes that contribute to customer value and lead to customer satisfaction and loyalty. This is vital in order to meet or exceed customer expectations. Therefore an organization with the ambition of achieving TQ, should show their commitment to workers, and provide opportunities for development and growth, provide recognition beyond compensation, share knowledge and encourage taking risks (Evans & Lindsay, 2008: 81)

According to Evens, people still have the mind-set that the customer is the ultimate purchaser of a product or service. For example, the person who buys a motorcycle for personal use or

the guest who books in at a BNB is seen as an ultimate purchaser. These customers are referred to as consumers. Before a product reaches consumers, it will go through the value chain of various departments, each of which adds some value to the product.

One of the important factors of achieving customer satisfaction is to identify one's customers and acknowledge their expectations. This has caused a shift in thinking compared to the old organizational functional way of thinking. It allows employees to know their place in the larger system and their contribution to the final product. Total Quality is a people-focused management system that focuses on continuous improvement of customer satisfaction at efficient lower costs (Jay and Barry, 2014: 255).

It is a systems-approach which is not separate, but works across all functions of the business, and involves all employees from top to bottom and extends forwards and backwards to include the supply chain and the customer chain. Total quality requires continuous learning from all employees and this is the key to the organization's success (Jay and Barry, 2014: 594).

A Participation and teamwork by everyone in the organisation

Deming believed that businesses should not only exist for profit. He believed that they should realise that they are social entities who should serve their customers and employees. To fulfil this purpose, they must take a long-term view, invest in innovation, training, and research, and take responsibility for providing jobs and improving the firm's competitive position (Deming, 1986).

When managers equip their employees with various tools and freedom to express themselves and encourage them to make contributions, they create an environment where better quality products and production processes will be achieved, this is also supported by Khurram Hashmi Workers who are given the opportunity to participate both individually and in teams in decision-making can give a positive contribution to quality. This is a shift from the typical philosophy of senior management which is the view that the workforce should be "managed", meaning that their participation in decision-making is very limited (Hashmi, 2012).

According to Evans & Lindsay, unless quality is internalized at a personal level, it will never become rooted in the culture of an organization. Thus, quality must begin at a personal level. Today companies expect every employee to be the face and representation of the company internally and externally to the customers and they expect employees to work together as a team to achieve the organisation's objectives (Evans and Lindsay, 1999: 125). It is further

stated that employees are increasingly expected to take the initiative to bring about change in the organization. In some organisations the majority of employees do not believe that they can make a personal contribution to the success of the organisation (Ibrahim, 2013: 1).

These findings are significant because, even though employees are expected to take initiative, most organizations have not figured out how to translate those expectations into positive behaviour. Such behaviour reflects the personal values and attitudes of individuals. Employees who embrace quality as a personal value often go beyond what they are asked or normally expected to do to reach a difficult goal or provide extraordinary service to customers (Ibrahim, 2013: 3)

Although product quality should be important to all individuals throughout the value chain, the way quality is viewed may depend on one's position in the value chain, whether one is the designer, manufacturer or service provider, distributor or customer. From observation it seems like the operators (manufacturers) have the perspective that the quality of the product is the responsibility of the lab and the technical department, but the technical department depend on the operators to understand the quality requirements of the product and to constantly execute their tasks in such a way that they follow the required specification and tolerances and to understand the role they play in producing a quality product (Ibrahim, 2013: 5).

Process Focus and Continuous improvement

This principal of continuous improvement is also supported by Bourmeyer. Improved design of products and services comes from the understanding of customers' needs continual market surveys, other sources of feedback and understanding the manufacturing and service delivery process. Continuous improvement was not a traditional or common business practice in the past but, today, it is recognized as a necessary means of survival in a highly competitive business environment (Bourmeyer, 2003: 16).

Many organizations manage by numbers and workers may take short-cuts to reach goals which compromise quality to reach the goal. Once the goal is reached, little incentive remains for workers to continue production or improve quality; they will do no more than they are asked to do. Management must understand the system and continually try to improve it, rather than focus on short-term goals (Jay and Heizer, 2014: 255).

2.2.5 Six Sigma

A business improvement approach is one that seeks to find and eliminate causes of defects and errors in manufacturing and service processes by focusing on outputs that are critical to customers and a clear financial return for the organization (Eletronics, 1996). Six Sigma has been popular over the last decade because of its acceptance by big organizations. The concept is used by teams who are trained to provide fact-based information for decision- making.

For the company to implement TQM properly it must also be guided by Six Sigma to achieve its business objectives. Also the study at the findings stage will look into whether or not there is a correlation of the conceptual framework of TQM, the three core principles of TQM and Six Sigma after data has been collected. The objective would be to:

- Provide key business processes and customer requirements with a clear focus on overall strategic objectives;
- Focus on corporate sponsors responsible for championing projects, support team activities, help to overcome resistance to change, and obtain resources;
- Emphasize quantifiable measures;
- Ensure that appropriate metrics are identified early in the process and that they focus on business results, thereby providing incentives and accountability;
- Provide extensive training followed by project team deployment to improve profitability, reduce non–value added activities, and achieve cycle time reduction;
- Create highly qualified process improvement experts who can apply improvement tools and lead teams; and
- Set stretch objectives for improvement.

2.2.6 Ishikawa's Theory

Ishikwa’s theory is slightly different in its inception in the sense that it looks at quality from a human standpoint of view. The theory points out seven basic elements towards quality improvement for any organization or firm (Bowen, 2013).

These tools are:

- Pareto Analysis - Pareto analysis helps to identify the big problems in a process.
- Cause and Effect Diagrams - Cause and effect diagrams help to get to the root cause of problems.
- Stratification - Stratification analyses how the information that has been collected fits together.
- Check Sheets - Check sheets look at how often a problem occurs.
- Histograms - Histograms monitor variation.
- Scatter Charts - Scatter charts demonstrate relationships between a variety of factors.
- Process Control Charts - A control chart helps to determine what variations to focus upon.

2.3. Current and Future Challenges

With the evolution of global trade and international markets, organizations realise that the markets are becoming increasingly more competitive and that their survival depends on top quality (Mandvi, 2013: 5).

Many countries such as Korea and India are increasing quality awareness. Organizations and companies realised that empowering employees is key to achieving TQM. Approaches such as Six Sigma, require increased levels of training and education for managers and front - line employees alike and require the development of technical staff (Jay and Barry, 2014: 248)

Therefore, the key challenge is to allocate the necessary resources to maintain a focus on quality, particularly in times of economic down-turn. True quality requires persistence, discipline, and leadership committed to excellence. American society, a global leader in quality, identified six key forces that will influence the future of quality, this is according. There are many definitions of quality and professionals cannot come to one definition. This further illustrates how quality evolves and changes over time (Evans & Lindsay, 2008: 66).

The ASO further identified six elements which influence quality in the future:

- Globalization;
- Innovation/creativity/change;
- Outsourcing;
- Consumer sophistication;
- Value creation; and
- Changes in quality

2.4 Selection of theories which will build a theoretical framework to answer research objectives through conceptual framework

The theoretical framework of the study will be the theory of key elements and tools in TQM towards organization's strategy by James Evans. The second theoretical framework to support the study will be based on the conceptual model for the implementation of TQM by Gunasekarens. Theories of TQM were discussed in the study from variables which constructed relevant themes for the study as to choose the theories to form the theoretical framework.

The third theoretical framework of the study will be Crosby theory. There themes were reducing defects, interaction with customers, continuous improvement, returns from quality, planning for quality, communication, understanding customer value, perception of quality with participation and teamwork.

2.4.1 Crosby approach with stakeholders involved in TQM implementation in business departments

Objective one: To ascertain the effectiveness of TQM in the Beier Envirotec. Although there are fourteen points in the Crosby theory the theoretical will be based on elements in the organization and how they can use Crosby theory to achieve stated goals of TQM. Literature will be based on various authors who have related to Crosby theories in addressing the first objective of the study.

Traditional organizations typically manage according to the functions in vertical organizational charts. In some cases, when interactions occur among the parts of a system like among functions and departments in the organization, managers cannot manage the system well by simply managing the parts in isolation. They must understand the processes of

cross functional boundaries and align these processes toward a common vision or goal, and optimize their interaction (Deming, 1986: 15).

Some organizations find themselves in a situation of sub optimization culture (doing the best for individual components) which results in losses to everybody in the system. An example of poor management, according to Deming, of is to purchase materials or services at the lowest price or to minimize the cost of manufacturing if it is at the expense of the system. Deming believes that systems-thinking applies to managing people as well. Pitting individuals or departments against each other for resources, accolades, or appraisals is self-destructive to an organization (Deming, 1986: 18).

The individuals or departments must not perform to maximize their own expected gain at the expense of the entire firm. Therefore, optimizing the system requires internal co-operation. Similarly, using sales quotas or cost – reduction goals will not motivate people to improve the system and customer satisfaction; the people will perform only to meet the quotas or goals to optimize their individual rewards and recognition (Deming, 1986: 32).

2.4.1.1 Quality and Personal values

According to (Burthmann, 2009:11) unless quality is internalized at a personal level, it will never become rooted in the culture of an organization. Therefore, quality must begin at a personal level. Today companies expect every employee to be the face and representation of the company internally and externally to the customers. They expect employees to work together as a team to achieve the organisation's objectives. Burthmann further states that employees are increasingly expected to take the initiative to bring about change in the organization. In some organisations the majority of employees do not believe that they can make a personal contribution to the success of the organisation (Burthmann, 2009: 11).

These findings are significant because, even though employees are expected to take the initiative, most organizations have not figured out how to translate those expectations into positive behaviour. Such behaviour reflects the personal values and attitudes of individuals. Employees who embrace quality as a personal value often go beyond what they are asked or normally expected to do to reach a difficult goal or provide extraordinary service to customer (Burthmann, 2009: 15).

Personal quality may be thought of as personal empowerment. Most organisations that have the intentions of promoting quality, usually unintentionally make the error of promoting quality to employees, rather than something they do with employees.

2.4.2 Quality in Manufacturing

Traditionally, quality assurance systems in manufacturing focus primarily on technical issues such as equipment reliability, inspection, defect measurement, and process control. Well-developed manufacturing systems have existed in the manufacturing industry for some time, and Beier Envirotec have world-class systems and accreditations to go with it. The transition to a customer-driven business has caused changes in manufacturing practices, changes that are evident in areas such as product design, human resource management and supplier relations (Jay and Barry, 2014: 249). The company, through TQM implementation, can achieve its objectives in manufacturing which stipulates that it has small supply chains with shorter delivery times.

TQM and supply chain management are the two most important strategies which can be used by companies like Beier Envirotec manufacturing services. TQM has become a prerequisite for success in manufacturing for both small and large supply chains in order to gain a competitive advantage while strengthening organizational competitiveness. TQM and SCM act as important tools to achieve competitive advantage together with strengthening organizational competitiveness (Vanichchinchai and Igel, 2009: 255).

Product design activities, for example, now closely integrate marketing, engineering, and manufacturing operations. Human resource management practices are concerned with empowering employees to collect and analyse data, make critical operational decisions, and take responsibility for continuous improvement, thereby moving the responsibility for quality from the quality department onto the manufacturing floor (Black and Porter, 1996: 15).

2.4.3 Marketing and Sales

Some of the best marketing and sales tactics in the world are simply just supplying quality products or services to your customers, in turn gaining customers' trust and thereby building long-term sustainable relationships. Today marketing and sales staff have a crucial role to play as far as quality is concerned. These roles include learning the products and product features that the customer wants, and knowing the prices that customers are willing to pay for the products (Marketing Theory, 2017: 1).

This information enables the organization to define products that are fit for use and capable of being produced within the technological and technical capability and capacity of the organization. Sales departments can help to obtain feedback on product performance from customers and convey this information to the product designers and engineers. The aim is to provide unique value in chosen markets and make them sustainable over time.

Marketing and Sales emphasizes both quality and customer service and how these can be managed towards closing the quality gap between what the customer expects to what they get. In recent times there has been a shift in marketing practice involving the co-ordination of external (customer) markets and collaboration within internal (staff) markets in order to get the marketing mix right (Christopher, 1991: 35).

Many of the elements of TQM and its organisational values are being introduced in the customer service divisions of manufacturing companies. The big concern is the failure of marketing initiatives in meeting customer requirements on the one hand and the expectations of management and staff on the other hand. It is important to bring marketing activities together with new forms of collaboration and cross —functional coordination. Failure to do this could possibly result in no sustainable market —orientated performance improvement and also in no sustainable competitive advantage being gained (Christopher, 1991: 31).

The organization as a whole must understand the intangibility of exchange relationship between the organisation and its customers, or there can be no company – wide understanding of quality problems and customer service opportunities, and no continuous improvement. Marketing and Sales is concerned with the exchange relationships between the organization and customers. Customer service and Quality are key linkages in this relationship (Marketing Theory, 2017:1).

The challenge is bringing these critical areas into closer alignment. So often in the past they have been treated as being separate and unrelated thereby giving marketing management a hard time implementing marketing strategies. Relationship marketing is the focal point for integrating customer service and quality with a market orientation (Marketing Theory, 2017: 1).

2.4.4 Purchasing and Receiving

Purchasing departments have long been driven by cost minimization and competition among suppliers without regards to quality. Yet, by tradition, the purchasing manager's performance has been evaluated by costs. The cost of poor quality material can exceed the cost of saving perceived by purchasing (Accounting-Management, 2017: 1).

Purchasing departments can help its organization by achieving quality by:

- Selecting quality-conscious suppliers;
- Ensuring that purchase orders clearly define the quality requirements specified by product design and engineering;
- Bringing together technical staffs from both the buyers and suppliers companies to design products and solve technical problems;
- Establishing long – term supplier relationships based on trust;
- Providing quality – improvement training to suppliers;
- Informing suppliers of any problems encountered with their goods; and
- Maintaining good communication with suppliers as quality requirements and design change occur

A purchasing agent should not only be responsible for low-cost procurement, but should maintain the importance of the quality of purchased goods and materials.

2.4.5 Production Planning and Scheduling

Objective Six: To assess if the effective implementation of TQM can improve the value chain of Beier Envirotec.

Poor quality results from time pressures caused by insufficient planning and scheduling. A production plan and schedule specifies long and short-term production needs for producing customer orders and meeting anticipated demands. The correct tools, equipment and material must be available at the proper places and time in order to maintain a smooth flow of production (Burthmann, 2009: 18).

2.4.6 Manufacturing and Assembly

Beier Envirotec places a lot of focus on the manufacturing-based perspective of quality. This is a good thing because it defines quality as the desirable outcome of engineering and manufacturing practice and or conformity to specifications. Specifications are targets and

tolerances determined by the designers (Technical Department) of products and services. Targets are the ideal values for which production strive. Tolerances are specified because designers recognize that it is impossible to meet targets all of the time in manufacturing (Burthmann, 2009: 23).

Technology and people are essential to high quality manufacturing. Burthmann further states that the role of manufacturing and assembly in producing quality is to ensure that the product is made correctly. Manufacturing cannot do its job without a good product, design and process technology. Once in production no defects should occur. If they do, every effort must be made to find the problem and eliminate it so that it does not occur again. Inspecting already-defected products is costly and wasteful (Burthmann, 2009: 25).

2.4.7 Finished Goods Inspection and Testing

The purpose of final goods inspection is to judge the quality of manufacturing, to discover and help to resolve production problems that may arise and to ensure that no defective items reach the customer. Companies employ dozens, or even hundreds, of people who inspect for quality on a full-time basis. The issue is when these systems are undermined to meet targets. Beier Envirotec has a lab where all material is tested before it is sent to the customers (Jay and Barry, 2014: 251).

2.4.8 Quality Assurance

Every manager is responsible for studying and improving the quality of the process for which he or she is responsible. Therefore, every manager is a quality manager. It must be noted that the quality assurance department cannot assure quality in the organization. Its role is to provide guidance and support for the firm's total effort toward this goal (Antonio, 2013).

2.5 Theory of key elements and tools in TQM towards organization's strategy by James

Quality management is moving from emphasising final inspection to assessing whether critical work processes are in control and giving guidance to the employees of the company in the techniques involved (Syed, 2008). The change of focus from inspecting production outputs to monitoring the variation in process during the process has significance in distribution and service industries. Quality management has shifted from the factory floor to the purchasing department on the one hand, and distribution on the other, over the last few decades (Syed; 2008).

Mistakes have been made, processes have become articles of faith, and expectations have been raised too high for customers, employees and shareholders alike. There is an important collaboration role for sales and marketing with operations and personnel managers to get the internal processes right.

The three core principles of TQM which are: a focus on customers and stakeholders, A Participation and teamwork by everyone in the organisation, and a process-focus supported by continuous improvement (Evans & Lindsay, 2008: 67).

2.5.1 Customer and Stakeholder Focus

Objective One: To investigate the role of quality with regards to communication, participation, teamwork within the organisation

For example, the purchasing department may purchase fibre for Beier, the non-woven department will use the fibre to make the material and send it to the lab for testing before sending it to Beers. (Jay and Barry, 2014: 248).

The IP Department will manufacture sandbags, which will go to the ultimate purchaser. In reality, the Fibre Company is the supplier to Non-Woven. The lab is a service provider to Non-Woven and Non-Woven is a supplier to IP. Non-Woven is thus a customer to the Fibre Company, and Non-Woven is thus a customer to the lab, and IP is thus a customer to Non-Woven. These customers are called external (Fibre supplier) and internal (Lab, Non-Woven) customers. Every staff member in a company has internal customers who receive goods or services from other employees within the company (Jay and Barry, 2014: 248). Therefore, the job of an employee should not only be to please their supervisor or manager; it is to satisfy the needs of a particular internal and external customer. Failure to meet the needs and expectations of internal customers can result in poor quality products. An Example is that, even though Non-Woven is a supplier to IP and IP is a customer to Non-Woven, there is a possible conflict of interest having the same manager for IP and Non-Woven., which may be a contributor to some of the quality and delivery issues, which were faced by IP (Burthmann, 2009: 19).

2.5.2 Participation and Teamwork

Objective Two: To investigate the role of quality with regards to communication and teamwork within the organisation. Organizations must define their values, mission, and vision in order to provide long-term direction for their management and employees. Beier

Envirotec has clear values and mission statement. One can debate whether these values and mission statement have been communicated to all employees and stakeholders who contribute to producing quality products and services (Evans and Lindsay,1999: 122).

Therefore, for production personnel, quality is described by the manufacturing-based definition. As far as conformance to operation specification is concerned, one can say that a shift from mainly manufacturing-based perspective to a more integrated perspective will not only improve the operators' skills but will contribute to the continuous improvement of quality. Because individuals in different business functions speak different languages, the need for different views of what constitutes quality at different points inside and outside an organization is necessary to create products of true quality that will satisfy a customer's needs (Ibrahim, 2013: 3).

Companies cannot survive if products of poor conformance quality or poor fitness for use leave their customers unhappy. Companies need to take a customer-driven approach based on mutual Cooperation between labour and management in a never-ending cycle of continuous improvement. To effectively focus on the customer's needs, everyone, from the boardroom to the stockroom, must learn the principles of quality and performance-excellence. Today many of these principles are ingrained in managers and front-line employees through training and the reinforcement of organizational values (Jay and Barry, 2014: 250).

People on the factory floor, and even in management, are sometimes treated as commodities. Factory workers are usually given monotonous tasks, provided with inferior machines, tools or material and are sometimes given orders to run defective items to meet sales targets and are obliged report to supervisors who know nothing about the job. Salaried employees are expected to work on weekends and evenings in order to meet targets and sometimes even because of the organisation's cost-cutting measures (Bruyn, 2003: 9).

Organizations find themselves with managers that give little direction, are very resistant to change, and do little to advance their people. How can employees then take pride in their work? Some cannot be certain that they will have a job next year. Empowering employees to make decisions that satisfy customers without limiting them with bureaucratic rules shows the highest level of trusts to achieve total quality; teamwork is vital within the organisation and with suppliers. Departments working in silos to achieve their own objections can have a negative effect on total quality (Black and Porter, 1996: 20).

2.5.3 Process Focus and Continuous improvement

Objective Three: To identify if there is a need for TQM in the organization.

Beier Envirotec is a highly process-focused company and has effective and efficient process controls for each department to execute its activities in order to achieve results. Major improvements in response time may require significant simplifications of work processes and often drive simultaneous improvements in quality and productivity (Envirotec, 2016).

The three principles of total quality are infrastructure, a set of management practices and a set of tools and techniques, Beier Envirotec subscribe to these three principles, but, to achieve quality, they must all work together (Jay and Barry, 2014: 255).

2.5.4 Components of the three core TQM principles

Objective Four: To recommend remedial measures that can be taken in order to improve quality and, therefore, increase the productivity of the company.

The three core principles, which have been discussed in the study, need certain components for them to be successfully implemented by the company as a base of infrastructure. What infrastructure refers to are the basic management systems required to achieve Total Quality (Evans & Lindsay, 2008: 69).

These elements or components are as follows:

- Customer relationship management;
- Leadership and strategic planning;
- Human resources management;
- Process management; and
- Information and knowledge management

In Beier Envirotec, reviewing annual performances is a leadership practice, training and determining staff satisfaction should become a Human Resource practice and the manufacturing of material according to set-out specifications is a process-management practice. Tools and techniques include a variety of statistical methods of collecting and analysing data and the planning of work activities. This is usually handled by the Technical Department (Envirotec, 2016).

2.5.5 Customer relations and sales

The Sales Department is highly involved in customer relationship management, which is part of the infrastructure elements of achieving TQM. Understanding customers' needs is crucial for the future of the organisation, particularly differences among key customer groups. This must correlate with the organization's strategic planning, product design, process improvement, and workforce-training activities (Evans, 1999: 123).

2.5.6 Leadership and strategic planning

Deming recognized that one of the biggest impediments to improvement was a lack of leadership. The job of management is leadership, not supervision. Supervision is overseeing and directing work while leadership means providing guidance to help employees execute their work more clinically and with less effort (Scherkenbach, 1994: 89).

In most companies supervisors do not know more than their staff operating on a daily basis on the machines. Their main concern is to get the product out of the door. Supervision should provide the link between management and workforce. Good supervisors are not police or paper pushers, but rather coaches, helping employees to do a better job and to develop their skills. Leadership can help to eliminate the element of fear from the job and encourage teamwork (Scherkenbach, 1994: 92)

No system can work without the mutual respect of managers and workers. Workers may be afraid to report quality problems because of fear. Managers are also afraid to co-operate with other Departments, because the other manager might receive higher performance ratings and bonuses. Fear encourages short-term thinking. Managers fear losing. Fear within an organization is a cultural issue and creating a culture without fear is a slow process that can be destroyed in an instant in various ways like transition in leadership and a change in corporate policies. Therefore, modern managers must be sensitive to the impact that fear can have in the organization (Scherkenbach, 1994: 95).

Quality is not an easy thing to achieve. In modern business you need leaders who can inspire individuals to take pride in and strive for quality. Even if all systems are in place to achieve quality, it still requires individuals to go beyond their call of duty to continuously improve the quality of the product, process, or systems. Uninspired individuals are the product of poor leadership, who usually come to work just to do what they have to do and nothing more (Christopher, 1991: 36).

Leadership is vital for TQM. It allows individuals to be inspired to go further and it opens doors for innovation which, in turn, opens doors for communication. An effective leadership system respects the capabilities and requirements of employees and other stakeholders and sets high expectations for performance and performance improvements (Christopher, 1991: 38). An important part of the leadership system is governance, which is the system of management and controls exercised in the stewardship of an organization.

2.5.7 Human resource management

Traditionally, HR practices focused on individuals' contribution to self-centeredness, rivalries, competition and favouritism which work against accomplishing the true mission of an organization which is to serve its customers. To achieve quality within the organization is not an individual effort, but a collective team effort with all personnel involved from different Departments (Gunasekarens, 1999: 11).

Research shows that the effectiveness of supervisors and subordinates alike is positively related to co-operation and negatively towards competitiveness. Traditionally, organizations were formed around task or work groups and the focus of teams and team work has taken on a new meaning in an environment of performance-excellence (Gunasekarens, 1999: 11). Teamwork breaks down barriers among Departments, individuals, front-line and staff functions. This is an action which is prescribed by one of Deming's 14 points (Deming, 1996: 15).

Quality of a product or service has been linked to workers dedication and application of skills, which is enhanced by task identity and a feeling of task significance. Quality of work is enhanced by a job design that incorporates autonomy, communication and feedback relating to quality characteristics. The key outcome of high job satisfaction and a feeling of belonging and purpose will result and reinforce excellent quality (Electronics, 1996).

For organizations to meet their quality goals, it requires a collective effort from the whole organization who that is well-trained and motivated in an environment which promotes quality as its culture and values. Front-line workers like the sales and operations department need the skills to listen to customers. Manufacturing workers need specific skills to develop more efficient working procedures or creative processes or technologies; they need the skills to read and understand the operation's specifications set out by the Technical Department;

they also need the skills to know how to use the different machines in the factory (Christopher, 1991: 42).

All the employees need to understand how to use data and information to drive continuous improvements. This can only be done through the design and management of work systems, reward and recognition approaches, education and training approaches and a healthy, safe and motivating work environment. A major challenge for the Human Resource Department is the integration of human resource practices with management's strategic plan and change processes (Electronics, 1996).

2.5.8 Process management

Process management is the design of processes to develop and deliver products that meet customers' needs. Daily controls are in place so that the products perform as required by the customers and continuous improvement is always worked for. Process management activities place a strong emphasis on prevention and organizational learning because the costs of preventing problems at the design stage are much lower than the costs of correcting problems that occurs downstream (Gunasekarens, 1999: 11). Keeping up with competition requires simplification of processes and the ability to make rapid changeovers from one process to another.

2.5.9 Information and technology

The company places a lot of emphasis on quality, It is unyielding in its focus on the fact that technological innovation and excellence are the key to the future (Envirotec, 2016).Technology is the key (successful) tool, or component, towards TQM effectiveness. Computers and quality management practices have been used to develop electronic systems in the value chains like, for example, the materials requirements systems (Shauka and Lim, 2006: 195)

2.6.0 Conceptual Model for the Implementation of TQM by Gunasekarens

Objective Five: To ascertain whether or not employees in the company of Beier Envirotec are fully equipped and trained to implement TQM.

2.6.1 Empowerment of employees

In some organizations you find employees who are unmotivated and come to work to do what they have to do with the least effort possible and this has a detrimental effect on the quality of

the products or service which, in turn, will have a negative effect on customer satisfaction. There is no such thing as an unmotivated employee, but the system within which people work can either seriously impede motivation or enhance it. It also does not help the situation when you have 'toxic' managers within the system (Kanji, 2013).

It has been found that, in most organizations, there is what is called 'toxic' managers, who are capable of making the working environment seem like a war zone. Further findings state that these managers can complicate work, drain energy, compromise sanity, derail projects and destroy careers. It is important for organizations not to ignore the signs of toxic managers within the organization because this will affect motivation which will affect quality (Lubit, 2004: 8).

It has been found that organizations that are able to recognize toxic managers quickly and understand what makes them tick will be in the best position to protect employees. Difficult managers are a fact of life and how they affect the organization depends on the culture of the organization and the systems they develop to deal with them. The issue is not simply a matter of individual survival. Toxic managers divert people's energy from the real work of the organization, destroy morale, impair retention, and interfere with co-operation and information sharing (Lubit, 2004: 10).

Their behaviour, like a rock thrown into a pond, can cause ripples which distort the organization's culture. Senior management and HR can improve an organization's culture and functioning by taking various steps to find and contain those individuals who are most destructive. Leadership can spare an organization serious damage by learning how to recognize problematic personality traits quickly. (Lubit, 2004: 11).

Placing difficult managers in positions in which their behaviour will do the least harm, arranging for coaching for those who are able to grow, and knowing which managers are time-bombs that need to be dismissed is all part of the HR's responsibility. Some organizations underestimate how much damage to the system, or culture that toxic managers have on employees and on the overall quality of the organization. Unmotivated employees have no care for their work as they are working just for a pay cheque and survival in the organization. This causes quality of products and services to decline even though certain systems like ISO standards may have been implemented (Lubit, 2004: 9).

The systems work when you have a motivated workforce with members that are willing to contribute to the organization. Deming insists that motivation should be intrinsic (internal) and was distant and suspicious of external forms of motivation such as incentives and bonuses. Although much research has been conducted in the study of motivation it is still a very complicated issue, which has not yet been, understood fully (Scherkenbach, 1994: 47).

As managers in high-performing organizations take on the roles of coaches and facilitators, their skills in motivating employees become very important. One definition of motivation for organizations is the art of creating conditions that will allow every employee to get their work done at their own peak level of efficiency (Scherkenbach, 1994: 75).

Empowerment is giving people authority; so that they are able to make decisions based on what they feel is right, have control over their work, take risks, learn from mistakes and is able to promote change. The need to empower the entire workforce in order for quality to emerge has long been recognized. Therefore, quality control should, as much as possible, be delegated to the workforce (Syed, 2011).

Five of Deming's 14 points relate directly to the notion of empowerment (Johnson and Flynn, 2015: 171):

- Point 6: Institute training;
- Point 7: Teach and institute leadership;
- Point 8: Drive out fear. Create trust. Create a climate for innovation;
- Point 10: Eliminate exhortation for the workforce; and
- Point 13: Encourage education and self-improvement for everyone

These points mean involving employees more in decision-making processes, giving them the security and confidence to make decisions, and to provide them with the necessary tools and training. To encourage empowerment may require changes in the work systems. For example (Johnson and Flynn, 2015: 171):

- Employees should be provided with education, resources, and encouragement;
- Policies and procedure should be in place to allow employees to take part in decision making;

- An atmosphere of trust must be fostered rather than resentment and punishment for failure;
- Information should be shared freely rather than closely guarded as a source of control and power;
- Workers should feel that their efforts are desired and needed for the success of the organization; and
- Managers should be given the required support and training to adopt a hands-off leadership style

Empowerment means that managers and leaders should relinquish some of the power that they previously held. This shift in power often results in management fearing that workers will abuse this privilege. Empowerment gives managers the responsibility of hiring and developing people capable of handling empowerment, to encourage risk taking, and to recognize achievements. A manager at the Eastman Chemical plant in Taxes supplied operators with a daily financial report that showed workers how their decisions affected the bottom line (Syed, 2008: 6).

Empowerment involves vertical teamwork between management and labour. It gives confidence to workers by showing them that the company has confidence in their ability to make decisions on their own. It generates pride and dedication. It gives employees experience and an opportunity to advance their careers (Mohammad and Rahman, 2011)

Many attempts to improve quality focused on behavioural change. It is assumed that most quality problems are due to human behaviour and that workers can improve simply through motivational methods. Workers become frustrated when they cannot improve and are disciplined for their defects. Motivational approaches overlook the major source of many problems – the system (Mohammad and Rahman, 2011).

2.6.2 Team work

Team work is any activity where employees participate in work-related decisions and improvement in job descriptions, with the objective of co-ordinating the creative energies of all employees and improving their motivation. Employee involvement can range from simply sharing information or providing input into work-related issues and into making suggestions concerning responsibilities such as setting goals, making business decisions, and solving problems, often in cross-functional teams (Mungel, 2012).

Advantages of employee involvement:

- Replaces intimidation and fear with trust and co-operation;
- Develops the individuals skills and leadership capabilities, creating a sense of purpose;
- Increases employee morale and commitment to the organization;
- Encourages creativity and innovation;
- Helps people understand quality principles and instils these principles into the organization's culture;
- Allows employees to solve problems immediately at the source: and
- Improves quality and productivity

2.6.3 Training and Education

Employees are the organization's most valuable resource. They usually want to do a good job, but just don't know how Management must take responsibility for helping them. Not only does training result in improvements in quality and productivity, but it adds to worker morale, and shows an indication to workers that the company is dedicated to helping them and investing in their futures. In addition, training reduces barriers between workers and supervisors, giving both more incentive to improve further (Mohammad and Rahman, 2011).

Well-trained and satisfied employees who are motivated intrinsically usually show enthusiasm in their work and show initiative in the quality of the product and customer demands. Training is one of the largest initial costs in achieving quality. Not surprisingly, it is one in which many organizations are reluctant to invest. Training lets the employees know that they are valuable to the organization; it equips them with the necessary tools to take on the challenges of quality provision. Employees feel valuable when trained and usually want to add value and contribute to the organization as they feel growth in the organization through training (Mohammad and Rahman, 2011). Training and education is always beneficial to an organization as it invests in the growth of the employees, which, in turn, will eventually prove to be beneficial.

Training and education can have more of an impact if the training is directly linked to what the organization is trying to achieve. If the organization has ambitions to improve overall quality continuously then it should invest in training programmes linked to quality (Mungel, 2012).

Trained staff allows employees to engage with each other on a technical and intellectual level in order to find solutions to a quality problem. Training also allows employees to develop their leadership skills which are part of their growth. Leadership is very important in achieving TMQ and continuously improving quality in the organization (Mungel, 2012).

Training generally includes leadership, quality awareness, project management, communication, teamwork, problem-solving, meeting customer requirements, interpreting and using data, process analysis, process simplification, waste reduction, cycle time reduction and error-proofing . These issues and others might affect employees' effectiveness, efficiency and safety. In a total quality environment, it is important for employees in the organization to understand the goal of customer satisfaction, to be given the training and responsibilities to achieve this goal and to feel that they do make a difference (Mohammad and Rahman, 2011). Recognizing training opportunities and implementing them is a key business process.

2.7 Conclusion

It has been noted that where you find companies with quality challenges, this is usually linked to all the different divisions in the company not communicating effectively, which almost inevitably leads to a silo mentality and, in some cases, this poor communication can lead to a poor quality product delivered to the customer (Syed, 2008: 8).

This mind-set also gives the perception that quality is the sole responsibility of a Quality Department. Poor communication between the Departments and this mind-set (that quality is the sole responsibility of the Quality Department) makes it difficult to improve quality continuously (Gunasekarens, 1999: 17).

Every manager is responsible for studying and improving the quality of the process for which he or she is responsible. Therefore, every manager is a quality manager. It must be noted that the Quality Assurance Department cannot assure quality in the organization (Antonio, 2013). Its role is to provide guidance and support for the firm's total effort toward this goal. Managers must focus on continuous improvement of customer satisfaction at efficient lower cost.

It is a systems approach which is not separate but works across all functions of the business, and involves all employees from top to bottom and extends forwards and backwards to include the supply chain and the customer chain. Total Quality requires continuous learning from all employees and this is the key for the organizational success (Mungel, 2012).

In this chapter theories of TQM were discussed and variables from literature were taken to build themes which later contributed to the building of the theoretical framework of the study to address research objectives and questions. The first theoretical framework was based on Evans theory of key elements in TQM, the second theory was based on the conceptual model in the implementation of TQM by Gunasekarens and the third theoretical framework to support the above was based on the Crosby theory. Quality was also broadly defined with its role identified while an explanation of the stakeholders' involvement in a business to implement TQM was discussed.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter discusses the method and the techniques that will be used to conduct a research. Methodology is defined as the analysis of the principles, rules and postulates employed by a discipline (Oxford Dictionary, 2012). This chapter will discuss the need for the study and outline the objectives and the research questions. It will also explain the constructive world view towards an approach to qualitative research.

The objectives and research questions of the study will be discussed in the following chapters, especially chapter six. A sample will be chosen and then reasons for this choice will be explained. Also, a detailed explanation of how data will be collected and presented will be given.

The chapter will seek to also explain why the chosen research method was chosen with also providing limitations to the study. The research methodology used in the study is qualitative which will help the study reveal various research objectives and, more particularly, it will help reveal questions that cannot just simply be quantified.

3.1.1 The Constructivist World View

Constructivism is typically seen as an approach to qualitative research. Social Constructivists believe that individuals seek understanding of the world around them in which they work and live. Individuals develop subjective meanings of their experiences in life, Meanings which are directed towards certain objects and things (Lauckner, Paterson, & Krupa, 2012: 15). Constructivist researchers often address the process of interaction among people. Constructivist researchers also focus on the specific contexts in which people work and live in order to understand the historical and cultural setting of the participants (Lauckner et al., 2012: 17).

3.1 Objectives, Need for the study and Research Questions

Quality is a very complex subject and, therefore there is no clear precise definition for it. There has been a lot written about it, but this has been in a continuous process of improving systems and processes in order to achieve the final result of a good quality product (Bruyn, 2003: 9). Quality should not be seen as the responsibility of the Quality Department and should be the responsibility of every stakeholder in the organization. A lot of emphasis is usually placed on the Quality Department during one period or process of the production

stage and other stages are neglected and this can result in a poor quality product (Bruyn, 2003: 9)

Can the formulation and implementation of sound TQM improve effectiveness in the Beier Envirotec textile value chain? This study seeks to answer this question.

Research objectives:

- To ascertain the effectiveness of TQM in the Beier Envirotec.
- To investigate the role of quality with regards to communication, participation, teamwork within the organisation.
- To identify if there is a need for TQM in the organization.
- To recommend remedial measures that can be taken in order to improve quality and, therefore, increase the productivity of the company.
- To ascertain whether or not employees in the company of Beier Envirotec are fully equipped and trained to implement TQM.

Research Questions

- To what extent does TQM have an effective role to play in the Beier Envirotec Company?
- Is there evidence that TQM can lead to better communication amongst stakeholders and to better teamwork?
- Does the company Beier Envirotec need TQM applications in its processes?
- To what extent can the implementation of TQM measures can lead to improvement of quality and productivity?
- Are employees in the Beier Envirotec fully equipped and trained to implement TQM in the company?

3.2 Methodology

As mentioned before, the research methodology used in the study is qualitative which will help the study to uncover various research objectives. More particularly, it will help uncover questions that cannot just simply be quantified. It will answer certain questions and give clarity to objectives and research questions that need deeper clarity. This method is supported

by Botes (2009: 132). Qualitative methods support the use of small samples which makes this method ideal for the study.

The distinction between qualitative research and quantitative research is that the former uses words (qualitative) rather than numbers (quantitative). Qualitative research is a way of understanding and exploring the meaning of individuals or groups ascribed to a social or human problem (Wyk, 2009: 3).

3.2.1 Research instruments

The collection of data will be done through face-to-face interviews, guided by an interview schedule which makes it possible to collect data according to the research objectives. It will also answer some research questions. Telephonic interviews will be avoided because this would make it difficult to interpret facial expressions and sometimes would lead to misinterpretations of individuals' attitudes towards the questions (Sekaran and Bougie, 2010: 186).

3.2.2 Data Collection

In-Depth Interviews

There are various forms of interviews that can be used to retrieve valuable data when using a qualitative investigational approach. A semi-structured face-to-face interview process will be used for the study. An interview schedule was designed and aligned with the research objectives so that all of the research questions may be answered. (Wyk, 2009: 11). The participants will be asked the same questions, but the questions will be worded in such a way as to get the respondents to participate and to give their true feelings.

Advantages and Disadvantages of an In-Depth Interview

There are a number of advantages and disadvantages in conducting face-to-face interviews (Opdenakker, 2006: 2).

Advantages

- When the interviewer is present it allows the opportunity of complex question to be explained;
- Interviews may take longer than self-completion process, because participants are not taking much note of the length;
- There is more room for open-ended questions to be answered, rather than when they are written down. This makes it possible to place more depth into the answers the interviewees gives.
- Visual aids can be used in face-to-face interviews; and
- The interview can be controlled in terms of the context and the environment of the interview.

Disadvantages

- The cost and time of the face-to-face interview can limit the size and geographical coverage of the survey.
- There can be biased results as the researcher can be persuaded in supporting a particular study.
- Generalization cannot be reliable as small samples are chosen with random sampling not being used (Nguyeni, 2014).

3.2.3 Data Analysis

This section explains how the data was collected and analysed from the interviewees at Beier Envirotec. Firstly the interviews were taped with the permission of the participants. The information collected from the interviews was transcribed in order to assist with the evaluation of the participants' responses. The process used to conduct the analysis from the data obtained from the interviews was the Thematic Content Analysis process. (Anderson, 2007: 7).

The data was categorised, and themes identified and placed into clear categories in order to summarise and give clarity of the data obtained. According to the Thematic Content Analysis, this method is a descriptive presentation of qualitative data. He continues to state that this method presents the thematic content of the interviews by providing common themes for analysis (Anderson, 2007: 8).

According to Braun et al., (2006: 35) there are six phases for Thematic analysis:

- Familiarising oneself with the data;
- Generating initial codes;
- Searching for themes;
- Reviewing themes;
- Defining and naming themes; and
- Producing the report

3.3 Limitations of Study

The company Beier Envirotec is based in Pinetown in the province of KwaZulu-Natal. The study will only be based on this one company in the textile industry.

3.4 Ethical procedures

Ethics are concerned with doing well with good intentions and avoiding harm to the participants. Therefore, this section will show all the ethical considerations followed for this study and verify its validity and credibility in avoiding harm to all the participants (Sekaran and Bougie, 2010: 220).

3.4.1 Ensuring that participants have given consent

Informed consent is one of the major issues when it comes to research. This means that the participants must knowingly, willingly, intelligently and voluntarily participate in the study and have the right to withdraw at any stage. A letter was drafted which explains the participation of the participants, and ensured them of their protection in the research (Sekaran and Bougie, 2010: 222). A letter of this nature was drafted with the acknowledgment of the institution and the organization, and was signed by all participants involved.

3.5 Research Design

Research design provides a practical overview of central issues involved in the design of social and economic research, covering a theoretical research. A research design is, therefore, a plan of action for getting from where one is to where one wishes to go; where the initial point is the primary set of questions to be answered and the destination is the set of conclusions or answers (Sekaran and Bougie, 2010: 101).

Because the study was initiated by the research problem, objectives and questions, a qualitative research design was chosen and employed. This design is appropriate when the inquirer makes knowledge-claims based primarily on constructivist perspectives that reveal multiple meanings of individual experiences that are socially and historically constructed (Sekaran and Bougie, 2010: 102).

The purpose or rather intention could be to develop a theory or pattern and participatory perspectives, which can include issue-oriented, collaborative or change-oriented approaches. The qualitative research design also uses strategies of inquiry such as narratives, phenomenology, ethnographies, grounded theory studies and case studies. The researcher uses open-ended questions for respondents and the primary intent of emerging data is to develop themes that help address the research problem (Creswell, 2009: 20).

Research design can be seen as the approach taken to data. It is how data is collected, measured and analysed according to the research questions of the study. Research design gives you the purpose of the study through various options like exploration, description and hypothesis--testing. Research design gives you different research strategy options, like experiments, survey research, observation, case studies, grounded theory, action research and mixed methods. Research design gives you different data collection methods like interviews, observations, questionnaires and physical measurements (Creswell, 2014: 25).

Exploratory research was chosen because it is known to be necessary when some of the facts are known but need more clarity and development. Even though the literature shows known facts, the study will uncover the data needed to implement effective Total Quality Management in the organization. This is why exploratory research relies on a literature review (secondary data) (Sekaran and Bougie, 2010: 103). There are two main research philosophies available to conduct the study, positivists quantitative and phenomenological qualitative (Sekaran and Bougie, 2010: 306).

3.6.1 Target Population

Population refers to the number of people required to meet a certain criteria (Sekaran and Bougie, 2010: 262). Based on the study, the target group required for the research objectives was twelve employees. These were two supervisors with one manager to make three respondents from each of the four Departments in the company Beier Envirotec, which are Humana Resources, Sales, Production and Quality-Testing Departments. The Departments

have seventy employees with ten from each of the first three and 40 from the Production Department. The sample chosen was twelve with a population of twelve (Sekaran and Bougie, 2010: 262).

The reason why two supervisors with one manager from each department were chosen in the sample is because the others had relevant qualifications in management and supply chain and are responsible stakeholders in the implementation of TQM in the company. Other employees do not have relevant qualifications and management experience to; enable them to have knowledge of TQM tools implementation. This population satisfies the identified aggregate required to meet the criteria of the study (Sekaran and Bougie, 2010: 263).

3.7 Research approach

There are two main research approaches, mainly a deductive research approach and an inductive research approach. The deductive research approach tests the validity of theories and assumptions while the inductive approach tests new theories and generalizations (Dudovskiy, 2016: 69).

The deductive approach is seen to investigate the formulated hypothesis of the study, which needs to be confirmed or rejected during the research process. The inductive research approach does not formulate a hypothesis but aims to achieve and answer the research questions and objectives. Therefore, an inductive approach is seen to be suitable for this study (Dudovskiy, 2016: 70).

3.8 Sampling Strategy

A sample is a subset containing the larger characteristics of the population selected to participate in the study, It is important that the samples selected for the study represent the population chosen. The major group of sample designs are probability samples and non-probability samples (Teddlie and Yu, 2007: 77).

There are two types of probability samples, non-probability and probability sampling. For the purpose of this study, which is based on qualitative research, the sampling strategy chosen is non-probability sampling (Teddlie and Yu, 2007: 78).

As this is a qualitative study, a non-probability sampling strategy was used. A purposive sampling method was used to identify the representatives required for the study. Through the non-probability strategy and purposive method, the representatives will be able to meet the

research objectives which are to gauge how effective TQM is in improving the effectiveness of the value chain in Beier Envirotec Company (Teddlie and Yu, 2007: 82).

The choice of the purposive sampling method is supported by the fact that it is used mainly for qualitative research when selecting specific units such as groups, individuals or institutions in order to answer the research questions of the study.

This research is using a qualitative approach and a purposive sampling method. Therefore, the sample size selected for the study is eight employees who are supervisors in the four departments in the company out of a population of 70 employees. Samples were selected to represent the population of each department (Teddlie and Yu, 2007: 85).

3.9 Pilot Study

A pilot study is a small scale investigation to see or decide whether a full scale investigation is needed (Shuttleworth, 2013). Reasons for conducting a pilot study:

- Testing the efficiency and reliability of research instruments;
- The collecting of preliminary data;
- The design of a research protocol;
- The estimation of verifying the outcomes in order to determine the sample size;
- The assessment of the data analysis techniques to uncover potential problems;
- Convincing various stakeholders that the main study is worth supporting; and
- The development of research questions and research plans

A pilot study was completed with two interviewees of the representative sample of eight employees who are supervisors from each department. This was to test the efficiency and reliability of the research instruments and this was judged through the following criteria:

- Was the interview too long?
- Did the interview produce answers needed to answer the research questions?
- Did the respondents get confused with any of the questions so that they had to be rephrased?
- Were the questions understood by all respondents?
- Could the data lead to new insights?

After conducting the pilot study of the two interviews, the researcher was satisfied that the interviews answered all of the above questions, with no reason or indication for fundamental changes.

3.10 Trustworthiness and Credibility of the study

There are various criteria used for identifying the trustworthiness of a study (Shenton, 2004: 63).

- **Credibility:** Searle states that one of the best ways of establishing credibility is through member checks. This is done by showing interviewees transcripts of the data collected to get their agreement or disagreement on the way their responses were presented (Searle, 2002: 104).
- **Transferability:** Shenton states that the difficulty of conducting qualitative research is showing that the result of the research can be applied to a wider population. Transferability is also achieved by providing a detailed rich description of the research setting so that the readers can compare this setting to other settings that they know (Shenton, 2004: 63).
- **Dependability:** Dependability of the study can be done through an audit. The auditing of methods, instruments, and setting are just examples of an audit procedure which can be used (Shenton, 2004: 63).
- **Confirmability:** It is stated that confirmability is the same as objectivity. The study must show that the information presented is that of the participant's views. It should not reflect the views of the researcher (Shenton, 2004: 64).

It is important to make the respondents feel at ease so that they can give truthful answers without fear of any adverse consequences. Stating the purpose of the interview and assuring complete confidentiality about the source of the responses will make respondents feel more at ease and ensure that the study has a higher probability for valid and reliable data (Shenton, 2004: 65).

3.11 Conclusion

This section has covered the research design and methodology used for the study. It has shown how the data was collected and analysed, and it also shows which sampling method was used to represent the population. This section has explained the ethical issues surrounding the study and how participants were assured of anonymity and confidentiality.

Most importantly, the study was undertaken in such a way that the participants were protected from any harm.

The data collected in this literature review focuses on other studies views on TQM and, it will look at functional relationships between the Departments of the organization and what it will take for them to work together in order to achieve TQM. It will also touch on elements which can affect TQM in a negative way. The data collected in this study will show similar features of a manufacturing environment which can be related to Beier Envirotec.

The main method used in gathering data will be interviews with managers, focussing on customer complaints linked to poor quality, poor communication and systems which may not be aligned with other divisions. The results of the study will be presented to the company and it is hoped, if implement that it will help the Quality Department and the organisation as whole to execute quality more efficiently and on a consistent basis. The study could possibly pave the way to improve, or may change, certain systems in order to better the quality from the outset. The next chapter will look at results, interpretations and findings of the study.

CHAPTER FOUR: RESULTS, INTERPRETATION OF FINDINGS AND DISCUSSION

4.0 Introduction

This chapter will focus on analysis of the data collected at the Beier Envirotec Company. There were two supervisors with one manager to make a selection of three respondents from each of the four Departments in the company Beier Envirotec, which are Humana Resources, Sales, Production and Quality-testing Departments as mentioned in the study earlier. The sample was twelve. Also mentioned earlier in the study was that the Departments in total had seventy employees with ten from each of the first three and forty from the Production Department.

The chapter will present the transcription of the interviews conducted in the Beier Envirotec Company it will have a section of aligning interview questions, research questions and objectives with responses. It will also have a section of aligning the theoretical framework with respondents from the interviews.

4.1 Interview Process

A total of twelve random employees were interviewed. Three respondents made out of two supervisors and one manager was chosen from each Department as mentioned before in the study for the qualitative research process. The interview was a structured interview and the questions were structured in such a way so that they were linked to the literature review and research objectives in order to answer the research questions.

The interview questions are found in **Annexure 1**.

4.2 Aligning Interview Questions, objectives and research questions with Responses

The central question to the study is: How can the formulation and implementation of sound TQM improve effectiveness in the Beier Envirotec textile value chain?

It was of great importance to ensure that there was alignment between the research questions, research objectives, conceptual framework and research tools used. This will be discussed in this chapter. The interview questions were constructed to get responses from the employees. This is shown in **Annexure 2**.

Annexure 3: Showed how responses fulfilled the research questions, objectives and how they aligned with the literature review and theoretical framework of the study.

Annexure 3 shows the research questions, which will, consequently, fulfil the research objectives. It shows the tabulated link of the interview questions which are aligned with the research questions and objectives.

Figure 2: indicates that HR and Sales seem to have answered the questions given to them positively. This also indicates that those Departments are further ahead compared to the other two Departments as they have the required tools to execute TQM effectively. The bar graph indicates that the Production and Testing Departments are further behind than the other two Departments because the answers they gave were negative compared to the Sales and HR Departments. This indicates that they need to address the negative answers given in order to be on a level to execute TQM effectively.

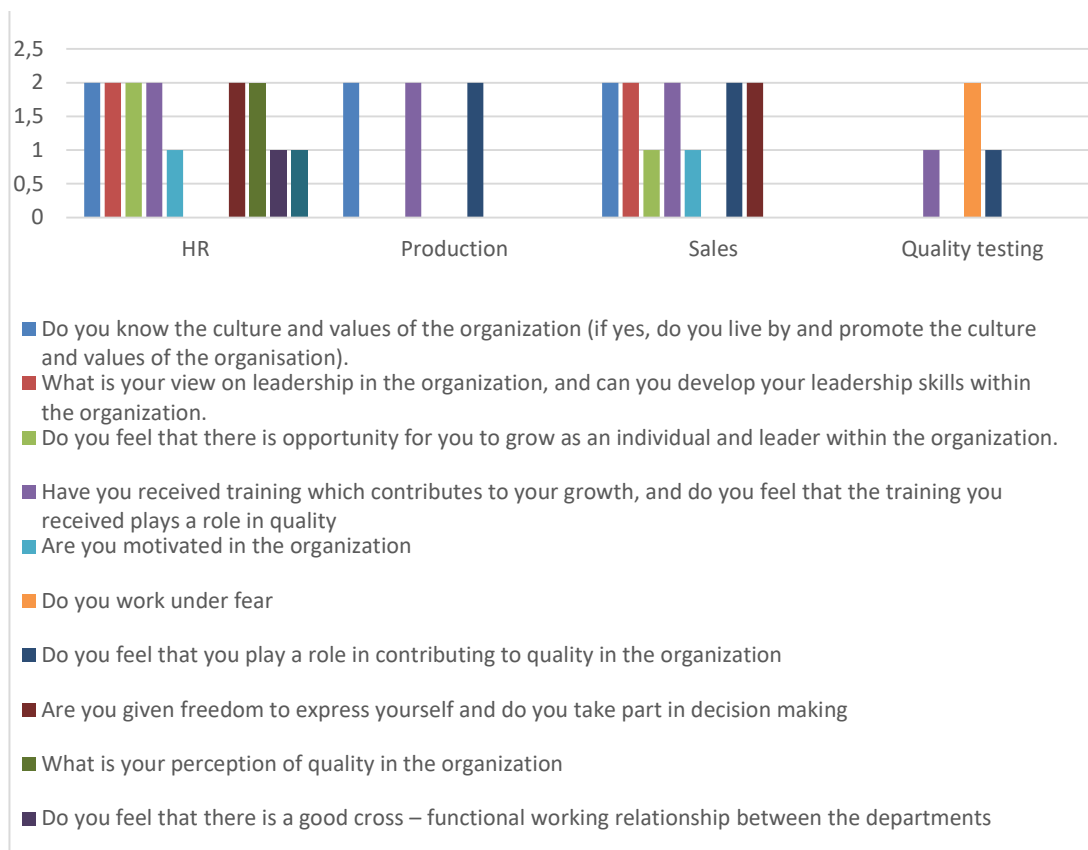


Figure 4.1: Representation of Interviewed Samples

4.3 Overall Interpretation of Data

The data were obtained from a total sample of twelve, who were selected by taking three supervisors from each Department, because they are knowledgeable in TQM. These Departments were Human Resources, Production, Sales and Quality testing. Interviews were conducted in a private setting where individuals could feel comfortable during the interview.

From data collected from the interviewing process, it seems that only Human Resources and Sales were confident enough to state that they know the cultures and values of the organization. Only one individual from Production was confident enough to state that they know the cultures and values of the organization. A second individual from Production was not sure what the culture and values of the organization are. Two individuals from the Quality Testing Department were unfamiliar with the culture and values of the organization.

Those from Sales and Human Resources felt that leadership was positive within the organization. Three samples from Human Resources felt that they can still develop their leadership skills within the organization whilst only one from Sales felt that they could still develop their leadership skills within the organization. All those from Production and Quality testing had negative views on leadership within the organization and nobody from the Production and Quality Testing Department believed that they could still develop their leadership skills within the organization.

Two employees who are supervisors from Human Resources feel positive about potential growth within the organization in the near future whilst two employees who are supervisors from Sales did not respond negatively about potential growth, but stated that they were frustrated with the lack of communication concerning this from leadership. All the respondents from Production and Quality testing were negative about potential growth for the future. They stated that they see no growth as individuals in the organization.

Two supervisors from Human Resources have received training that contributes to their growth. However, they do not see how their training contributes directly to the quality service and products of the organization. Two supervisors from Sales have received training and feel that their training contributes to the quality of the organization. Two supervisors from Production who have received training feel that this training contributes to the quality of the organization. Two supervisors from Quality testing have received training, but both feel that

they did not receive training on the day-to-day tasks which they have to execute in the organization.

There is only one supervisor, from Sales and one from Human Resources, who are motivated. The rest of the respondents, including the ones from the other Departments, are de-motivated within the organization. Most of the respondents do not work under the influence of fear except for both individuals from the Quality Testing Department.

Two supervisors from Human Resources do not feel that they play a role in producing quality within the organization. The rest of the respondents from the other Departments feel that they do play a role in quality with the organization. All the respondents from Sales and Human Resources feel that they are given freedom to express themselves and do take part in decision-making. All the respondents from Production and Quality testing feel that they are not given the freedom to express themselves and they do not take part in any decision-making.

Two respondents from Human Resources have a positive perception of quality within the organization. All the respondents from the other Departments have a negative perception of quality within the organization. Two respondents from Human Resources feel that the cross-functional relationship between the Departments is satisfactory, but that it should be improved. Two respondents from Sales feel that they have a poor relationship with Production and they also feel that the relationship between Sales and Human Resources is non-existent and that the relationship between Quality Testing and Sales could be improved.

Two supervisors from Production have a poor relationship with Sales and Quality testing. One from Production feels that the relationship between themselves and Human Resources is non-existent. However, the other individual from Production feels that the relationship between Sales and Human Resources is good. Two supervisors from Quality testing feel that they have a poor relationship with Production, and both feel that they have a good relationship with Sales and Human Resources Departments. Two supervisors from Human Resources feel that communication can be improved between the Departments. Those from sales feel that communication is poor between the Departments.

4.4 Findings

4.4.1 Introduction

It has been noted that all the Departments had some similarities and some differences in their responses and some Departments had more similarities than others. There are many factors contributing to this, and one of them could be that different managers have different managing styles in the respective Departments. Organization's culture and values is the core which should drive all the Departments to have more similarities than differences.

Samples of twelve supervisors were selected from four Departments; three from each Department. The words employees, supervisors and respondents will be used as synonyms in this section to avoid multiple repetition of the same word in sentences and paragraphs.

4.4.2 Human Resource Findings

Respondents from HR (Human Resources) seem to know the cultures and values of the organization. They are positive about the leadership in the organization and they see themselves developing their leadership roles and growing within the organization. They feel that they have been given the freedom to express themselves and they also take part in decision-making. However, it has been noted that HR seem not to be in touch with the other Departments on the ground. The study has not dealt with the relationship between management staff and, therefore, the findings are based on employees' perspectives and perceptions only.

Human Resources feel that they are not really involved enough in the quality side of the organization's operations, which is the reason why they feel that they are not as in touch with this side of the operation as are other Departments. Similarly, this was stated in the literature review. It also seems that these respondents are unaware that the other Departments do not feel their presence or their contributions are necessary to achieving quality within the organization.

This may be due to poor communication and a weak relationship with the other Departments on the ground. Human Resources seem to be isolated from the other Departments' perspectives. They themselves, feel separate from the rest of the departments. Employees in Human Resources don't really feel that they are involved in the following practices to accomplish the following tasks:

4.4.3 Human resources techniques to achieve effective implementation of TQM

- Communicate the importance of each employees contribution to total quality;
- Stress quality–related synergies available through teamwork;
- Empower employees to make a difference;
- Reinforce individual and team commitment to quality with a wide range of rewards and reinforcement; and
- Identify training needs which will help improve quality in the organization.

This means that they do not see the importance of their role in the whole TQM system and that they are isolated from the other Departments. This has a negative effect on the result of quality because, if employees do not execute the above tasks, it makes TQM more difficult to achieve. This will basically leave the operational side of the organization isolated without crucial service and assistance from Human Resources.

4.4.4 Sales

Supervisors from sales department have an understanding of the cultures and values in the organization, they are positive about its leadership. But do not see growth or any further leadership experience there at this stage. They do not seem as motivated as they were when they initially started, but still feel that they are given the freedom to express themselves and also do take part in decision-making.

They were very open about the bad communication and relationship they have with Production which makes their work difficult. The individuals feel that Human Resources are non-existent, but that they have a good relationship with Quality Testing. However, they also feel that there is still room for improvement. Their perception of quality in the organization is poor and they seem to place the reason for this on Production.

It is noted that the respondents from Sales seem to separate themselves from the quality issues, which, they feel, is negative due to Production issues. Their frustration with Production is a possible indication that the two Departments may have different goals and that the two Departments' values may not be in sync. It is possible that the two Departments have not defined the cultures and values on how to work together.

Their low motivation also prevents the implementation of TQM. Employees with low motivation will not have the drive to push and work on TQM systems; they usually just arrive

at work to do what they have to do from their side. TQM requires a team effort for it to be effective, and even though the different Departments work together, there seems to be no team effort between them and the possibility of the values of working together have not been defined. This makes it even more difficult to improve the communication and working relationship between the two Departments.

4.4.5 Quality Testing Department

The three respondents from the Quality-testing Department have a very low motivation level. This Department conducts tests on all the products before they go to the customer. They see what is wrong with the product on a daily basis; they work under fear, and do not have a positive view of the leadership. They see no growth in the future and state that they have a poor relationship with Production (Envirotec, 2017).

They are not given any freedom to express themselves and do not take part in any decision making even though they test the product on a daily basis. These respondents do not have the training which can help pick up the issues which could potentially help solve some of the quality issues they come across in the products.

The supervisors do not know the cultures and values of the organisation and their low motivation makes it hard to implement TMQ. Even though they test the products on a daily basis, they do not have the required training to make a valuable contribution to solving the problem of products which do not conform to quality. Because they are not given the freedom to express themselves, they will be silent on many issues where they could add innovative contribution, even though they test the product daily.

Not taking part on any decision-making makes their contribution feel worthless in the organization even though they play a very important part in quality within the organization. Their poor relationship with Production means that they will not communicate with them on issues and patterns they see regularly. This means much valuable information will be lost due to the issues and challenges the respondents from the Testing Department face.

4.4.6 Production

The Production Department seems like the enemy from the view and perception of Sales and the Testing Department. The respondents in Production seem to be the least motivated out of all the Departments as they also have a poor relationship with the Testing Department and more with Sales. Respondents in Production feel that they are given very little freedom to

express themselves and do not regularly take part in any decision-making. Respondents from Production are in the engine room where the production of the products takes place and have little motivation and will just do what they have to do when executing their duties. TQM requires high motivation from employees and an open environment where employees can express themselves and take part in decision-making. Low motivation affects teamwork and communication.

There is no teamwork between Production and other departments. They feel that too much is expected of them and Sales do not understand the difficulties they go through. They seem to be an isolated Department with the weight of the world on their shoulders. It seems like they work under very difficult conditions and have time constraints. On top of that they do not have belief in their leadership and see no further growth opportunities for themselves within the organization. When the employees in the engine room of production have low motivation with a low level of training and do not understand or live by the culture and values of the organization on top of all the other external and internal challenges they face on a regular basis, this creates room for poor quality in that engine room and this will have negative end results

4.5 Conclusion on Findings

The respondents' responses do not represent the views and perceptions of management and these may be different from the random samples collected from employees on the ground. Therefore, the views and findings of this study represent the views and perceptions of employees on the ground.

The Department seems to work in silos and this may be due to the fact that the different Departments have their own goals and values when they work together on in their own Departments. This will cause poor communication between Departments and has resulted in poor relationships between the Departments. There seems to be ignorance of the issues and challenges faced by the other Departments and between Departments which makes them ineffective in the implementation of TQM. Teamwork with other Departments does not exist on the ground. Instead you find employees with low motivation who feel limited as to the contribution and potential value they can add to their Departments and to the organization. Employees, especially in Production and Quality Testing, feel that they do not have on-the-job-training or further training which could potentially improve motivation and quality within the organization.

The implementation of TQM requires a well-trained and motivated staff force who knows the culture and values of the organization which promote quality. Teamwork between the different Departments is essential for effective communication and a good working relationship.

The next chapter will look at the conclusion and recommendations of the study.

4.6 Conclusion

The chapter focused on the data analysis of the data collected. It showed how the sample was chosen from the population of the company Beier Envirotec. Samples of twelve supervisors were selected from each of the four Departments. The departments comprised of seventy employees but those with an understanding of TQM and supply chain management through relevant qualifications were selected. Findings of each department of the company with respective respondents were discussed. An overall conclusion on findings was then provided.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

Chapter five presents the findings of the investigations through the analysis of the role quality plays in the different Departments of the organization. This analysis is based on the degree of communication and teamwork between the Departments.

Conclusions will be drawn from the role TQM plays in the different Departments and where the gaps are, in terms of the culture and values of the organization, the level of empowerment and training needed to support TQM, the teamwork and communication between the Departments and the level of motivation for the employees to implement an effective TQM system. Recommendations will be made from the findings which will be supported by the literature review.

The chapter will provide the conclusions and recommendations on the research questions and objectives of the study. The chapter will provide recommendations for the future and will provide an overall conclusion for the study.

5.1 Research questions

The findings in this section are aimed at responding to the research questions. The findings are also aligned to the literature review.

5.1.1 Research question one

- **To what extent does TQM have an effective role to play in the Beier Envirotec Company?**

TQM has to be personalized through the culture, values and environment of the organization (Johnson and Flynn, 2015: 165). The primary research showed that there is inconsistency in the values and culture of the organization with all the individual participants. Some of the respondents showed knowledge of the culture and values of the organization, but could not explain them comfortably. This showed signs of uncertainty. Some participants, particularly those from Sales, were confident in explaining the culture and values of the organization. The key finding is that there was uncertainty concerning the cultures and values of the organization, particularly from the Human Resources, Production and Testing Departments.

5.1.2 Research question two

- **Is there evidence that TQM can lead to better communication amongst stakeholders and to better teamwork?**

The only Department that feels that they play a role in contributing to quality is Production. The other departments are uncertain about the role they play in contributing to quality. TQM is a collective effort method through communication and teamwork (Mungel, 2012). Therefore, everyone in the organization should be aware that they have a role to play as far as the quality of the final product is concerned.

5.1.3 Research question three

- **Does the company Beier Envirotec need TQM applications in its processes?**

Motivation, training and education are critical factors in the implementation of effective TQM. Primary research showed that there is low motivation with little training to equip managers with TQM in the company's organisation. This is mainly due to intrinsic motivation rather than extrinsic (Mohammad and Rahman, 2011). Participants do not feel empowered nor are they given the opportunities to take part in decision-making and are unable to use their creative effort to add value to the organization.

Some participants are not trained and motivated enough to be future leaders through developing leadership skills. Leadership should equip stakeholders with relevant information and motivation to implement TQMT (Scherkenbach, 1994: 89). Primary research also shows that there is uncertainty with regard to the organization's future growth.

5.1.4 Research question four

- **To what extent can the implementation of TQM measures can lead to improvement of quality and productivity?**

Training and education are keys to the implementation of an effective TQM system. The system requires continuous improvement; therefore the training of employees is essential in order to add value to the continuous improvement. Training also improves the motivation of employees. It makes them feel valued and they become encouraged as they start to see a bright future within the organization (Mohammad and Rahman, 2011).

Primary research shows that there is not enough training of employees within the organization. Some participants have indicated that they have received some sort of training, but not training relevant to the job they do that contributes towards the effective total management system. An example given by one employee is the informal training he received from a fellow employee without receiving the formal training as to how to operate a machine that he needed to know how to operate. (Bourmeyer, 2003: 17).

While informal training is important, it is also important that employees receive formal training in order to fully understand, not just how to operate a machine, but how to effectively and fully operate the machine and to know when the machine must be serviced, together with other relevant knowledge concerning the machine such as safety operating routines and specific knowledge which may not be received through informal training.

5.1.5 Research question five

- **Are employees in the Beier Envirotec fully equipped and trained to implement TQM in the company?**

Teamwork and communication between the different divisions of the organization is essential for an effective TQM system. It is further stated that the different Departments need to have the same values and culture in order to have an effective working relationship. Teamwork is crucial as it is necessary for colleagues to work well together trying their best in any circumstances. Team work means that people will try to co-operate, using their individual skills and providing constructive feedback, despite any personal conflict between individuals (Evans and Lindsay, 1999: 123).

Primary research shows that the employees feel that the relationship between the Departments has plenty of room for improvement. The primary research also shows that there is conflict and high tension between the Sales Department and the Production Department. This is due to Sales not having trust in Production, and Production not appreciating that Sales does not understand the amount of pressure and limited resources they have in order to execute customers' orders. Therefore it is necessary that the culture of teamwork is inculcated within the organisation to enable various parts of the organisation to work together in order to meet customer needs that can seldom be fulfilled if employees of one Department are limited concerning the knowledge and functions of the other Department(s).

5.2 Summary on research objectives of the study

The conclusions of the study are presented in line with the research aims and research objectives of the study.

5.2.1 The first objective: To ascertain the effectiveness of TQM in the Beier Envirotec.

TQM varies from one Department to the other and is based on the role the Department plays in the company. The literature review stated what role quality plays in each respective Department. The primary research shows that the only Department which recognizes the importance of contributing to quality is the Production Department. Other Departments are still in doubt about their role in contributing to quality. It is necessary that all Departments work as a unity in contributing to total quality management. It is therefore necessary that all Departments understand their crucial roles in implementing an effective TQM system.

5.2.2 Objective two: To investigate the role of quality with regards to communication, participation, teamwork within the organisation.

The literature review shows that effective teamwork between the divisions is required for effective TQM. The definition of TQM revolves around a collective and cohesive effort from everyone in the organization for the implementation of an effective TQM system. The primary research shows there is conflict amongst the Sales Department, Production Department. The other participants feel that relations between the Departments can be improved.

The organization needs to find programmes to make sure that everyone in the organization is working with the same values and that everyone in the organization understands its culture and values. . The existence and sustainability of this organisation depends on the value it attaches to the quality of the final product that must reach the customer. The importance of understanding the working of each Department by all employees is, therefore, necessary in order to meet the needs of the customer on time and with the right quality.

5.2.3 Objective three: To identify if there is a need for TQM in the organization.

Motivation and training is a critical element in TQM. Employees are usually de-motivated because of the system and the environment of the organization (Evans and Lindsay, 1999: 122). Toxic managers exist in most organizations and are capable of making the organization seem like a war zone. This also contributes to low motivation in staff members (Lubit, 2004: 10).

Primary research shows that staff members have low motivation within the organization due to poor training in TQM techniques and poor leadership. This is due to various factors such as the feeling of no further growth, the limited ability to be empowered and take part in decision-making and the limited trust in leadership within the organization. All humans have a need to feel respected and this includes the need to have self-esteem and self-respect. This need presents the typical human desire to be accepted and valued by others.

The research showed that there is a high need by junior employees for recognition by their seniors. They feel neglected and that their contributions are not valued. Deming further agrees, in his 14 points, that empowerment training and motivation are crucial for effective TQM. Quality is a continuous improvement process. Therefore employees need to be trained in order to continuously improve in the process. Training also contributes to the level of motivation of the employees. It also empowers employees and contributes to their growth in the organization (Johnson and Flynn, 2015: 171).

5.2.4 Objective four: To recommend remedial measures that can be taken in order to improve quality and, therefore, increase the productivity of the company.

The successful implementation of TQM programmes depends on employees who are motivated and trusted. This means that worker empowerment is very important for keeping employees satisfied and productive. Workers should be allowed to be comfortable with change. They should be allowed to take charge of their own personal growth and satisfaction.

This will result in them feeling that they have more control over their careers and their lives as they are given opportunity to share more responsibility and, consequently, reap the benefit of improved motivation and morale. In this way the organisation will benefit from motivated employees who will be feeling that management cares about them as people.

5.2.5 Objective five: To ascertain whether or not employees in the company of Beier Envirotec are fully equipped and trained to implement TQM.

The primary research has identified gaps which need remedial action and measures. The recommendations will be clearly stated out in section 5.4 of this chapter.

5.3 Conclusion on secondary literature

The literature review in chapter two is discussed in relation to the research questions of the study. The focus of the study, as stated, is about the role TQM plays in the value chain of an organization such as Beier Envirotec.

The study looked at specific research objectives which would make it possible to answer the research questions of the study. It looked at the role of teamwork and communication between the different Departments of the organization and how this is important for TQM. The study looked at the level of motivation of employees, their perception of what role they believe they play in achieving quality within the organization, why this is important for effective TQM and how it would benefit the organization. The study also focused on the empowerment of employees, especially through training and other opportunities such as encouraging their contribution towards adding value to the organization.

TQM is "a system of management based on the principle that every member of staff must be committed to maintaining high standards of work in every aspect of a company's operations" (Westcott, 2013: 267). Unless quality is internalized at a personal level, it will never become rooted in the culture of an organization. Therefore quality must begin at a personal level.

Modern companies expect every employee to be the face and representation of the company, internally and externally, to the customers and they expect employees to work together as a team to achieve the organisation's objectives. Employees are increasingly expected to take the initiative to bring about change in the organization. This literature states that none of the objectives can be achieved unless quality is internalised at a personal level. This would require organizations to empower and train their employees.

Empowerment is giving people authority to make decisions based on what they feel is right, have control over their work, take risks and learn from mistakes and promote change. There should be systems in place which focus on motivation as it is a key element towards effective TQM. The need to empower the entire workforce in order for quality to succeed has long been recognized. Therefore, as much control as possible over quality should be delegated to the workforce (Scherkenbach, 1994: 48).

Training is one of the largest initial costs in achieving quality. Not surprisingly, it is one in which many organizations are reluctant to invest. Training allows the employees to know that they are valuable to the organization and equips them with the necessary tools to take on the

challenges of quality. Employees feel valuable when trained and usually want to add value and contribute to the organization as they feel that, through training, they are growing in the organization. Training and education is always beneficial to an organization because, when it invests in the growth of the employees, in the long-run, it will reap the rewards of this (Mungel, 2012).

Training and education can have more of an impact if the training is directly linked to what the organization is trying to achieve. If the organization has ambitions to improve overall quality continuously then it should invest in training programmes linked to quality (Mungel, 2012).

In some organizations you find employees who are unmotivated and come to work to do what they have to do with the least effort as possible, this has a detrimental effect on the quality of the products or service which will have a negative effect on customer satisfaction.

There is no such thing as an unmotivated employee, but the system within which people work can either seriously impede motivation or enhance it. It also does not help the situation when you have toxic managers within the system. It is important to have a motivated staff force for the implementation of an effective TQM system (Lubit, 2004; 10).

It further states that you cannot implement a TQM system if the culture and values of the organization, including its environment, do not motivate employees. One of the research objectives of this study was to investigate the level of motivation employees have and what perception they have on their role in achieving quality (Kanji, 2013).

One of Deming's 14 points is that teamwork helps breakdown the barriers between Departments and individuals. Barriers between functional areas occur when managers fear losing power. He further states that creating an environment where Departments are competing against each other is detrimental to the effective implementation of TQM. When there is no teamwork between Departments, this affects effective communication between the Departments (Johnson and Flynn, 2015: 171).

5.4 Primary Research Findings

5.4.1 *The role quality plays in each of the selected Departments of the study*

- **Production**

Beier Envirotec focuses on the manufacturing-based perspective of quality. This is a good thing because it defines quality as the desirable outcome of engineering and manufacturing practice, or conformance to specification. Specifications are targets and tolerances determined by the designers (Technical Department) of products and services. Targets are the ideal values for which production is to strive; tolerances are specified because designers recognize that it is impossible to meet targets all of the time in manufacturing (Rosenthal and Skall, 2002: 11).

- **Human Resources**

Human Resource Management consists of those activities designed to provide for and coordinate the people of an organization. Human Resource management's objectives are to build a high performance workplace and maintain an environment for excellence in quality in order to enable employees and the organization to achieve strategic objectives and adapt to change (Gunasekarens, 1999).

Human Resource Practices work to accomplish the following tasks to:

- Communicate the importance of each employee's contribution to total quality;
- Stress quality-related synergies available through teamwork;
- Empower employees to make a difference; and
- Reinforce individual and team commitment to quality with a wide range of rewards and reinforcement (Gunasekarens, 1999).

- **Sales**

In this literature review it was found that marketing and sales emphasize both quality and customer service and how these can be managed towards closing the quality gap between what the customer expects to get what they really get. In recent times there has been a shift in marketing practice involving the co-ordination of external (customer) markets and collaboration within internal (staff) markets in order to get the marketing mix right (Marketing Theory, 2017: 1).

Many of the elements of TQM and its organisational values are being introduced in the customer service divisions of manufacturing companies. The big concern is the failure of marketing initiatives in meeting customer requirements, on the one hand, and the expectations of management and staff on the other hand. It is important to bring marketing activities together with new forms of collaboration and cross-functional co-ordination. The failure to do this can possibly result in no sustainable market-orientated performance improvement and also no sustainable competitive advantage (Christopher, 1991: 33).

The organization as a whole must understand the intangibility of the exchange relationship between the organisation and its customers, or there can be no company-wide understanding of quality problems and customer service opportunities and no continuous improvement. Marketing and Sales is concerned with the exchange relationships between the organization and customers. Customer service and Quality are key linkages in this relationship. The challenge is bringing these critical areas into closer alignment (Christopher, 1991: 34).

So often in the past they have been treated as separate and unrelated, this has caused marketing management to have a hard time implementing marketing strategies.

- **Quality Testing Department**

The testing Departments of organizations have the following role to play:

- They provide confidence for internal management and other employees that quality requirements are being fulfilled and that improvement is taking place;
- They provide confidence for customers and other stakeholders that quality requirements are being achieved in the delivered product;
- Provide confidence that quality system requirements are fulfilled (Johnson and Flynn, 2015: 178); and
- The standards prescribed that documentation for all processes affecting quality suggest that compliance through auditing leads to continuous improvement. Beier Envirotec have acquired certain ISO standards which they document and audit on a regular basis. Having ISO standards has motivated businesses to maintain and improve quality assurance to the customer therefore ensuring confidence in the products produced by the company (Johnson and Flynn, 2015: 172).

5.5 Chapter Summaries

5.5.1 Chapter one summary

Chapter one gave an overview of the whole study. It introduced the study as to how the company Beier Envirotec can improve TQM based on quality performance can lead to better communications, relationships between departments in the company. This also extends to internal and external role players in the value chain of the company.

5.5.2 Chapter two summary

The chapter discussed theories of total quality management with also challenges facing companies when implementing. The chapter looked at quality and its importance on organization in general. Variables and themes were taken from literature were selected to build the theoretical framework of the study which was the Evans theory of key elements in TQM. The second theory was based on the conceptual model in the implementation of TQM by Gunasekarens and the third theoretical framework to support the above was based on the Crosby theory.

The theoretical frameworks were used to answer the research objectives and research questions through the conceptual framework of the study. The chapter then concluded.

5.5.3 Chapter three summary

The chapter focused on research methodology and research design. The chapter showed how data was collected and which methods were used. The chapter showed limitations of the study, it showed the sampling strategy and how participants were chosen for data collection. The chapter then concluded.

5.5.4 Chapter four summary

The chapter was based on the interpretation of results. It showed how the sample was chosen from the company. The chapter also gave an overall conclusion on findings for the study.

5. 6 Recommendations of the study

5.6.1 Programs and workshops

The company must conduct programs and workshops to educate employees on the values and culture of the company. These values and culture should be linked to supply chain management strategy and how to fully implement TQM in the company. The managers and supervisors should be the educators in such programs and also they should attend separate programs to greatly understand the implementation of TQM and supply chain management. Managers and supervisors should make sure there is a safe and healthy environment for employees with continuous training with empowerment programs.

5.6.2 Promote interdependence amongst departments in the company

In the company there must be interdependence between stakeholders in the company internally and externally. Most importantly, the internal integration between the internal departments in the company. This needs great attention to improved communication amongst employees, senior management, departments and customers of the company. There must also be long-term relationships between the company and suppliers.

5.6.3 Motivation and leadership needs to be improved

Managers and supervisors should make sure that employees are highly motivated to implement TQM. Empowerment of employees comes from good leadership which makes staff feel they are important and have a certain value given to them through decision making regardless of where they are in the value chain. They should be motivated in the sense that they live and breathe the implementation of TQM in the company and good leader's continuously evaluate progress and do not destroy employees but strictly build them to reach targets.

Managers and supervisors should be able to handle conflict without favor or fear amongst departments, stakeholders and especially employees in the company. Also managers and supervisors should be able to handle conflict between customers and employees when it comes to queries about the product, lead times, and service delivery and perceived quality standards.

5.6.2 Continuous research and development of customers and products

Customers can be complicated in terms of judging quality. Some customers see quality through the price charged, some through fabric, and some through design and some through the company which sells the product and other factors. The company must conduct research and development through designing products and offering them in the desired quality by its segments and future target population. The company must have consumer oriented research into understanding the perception of consumers and how they perceive quality.

5.6.3 Participation and Teamwork

Team work and participation summarizes a lot of attributes into one which the company has to be good in when implementing TQM. There should be quality in team work in the production of goods and services, procurement, advertising, selling of products to customers. Leadership requires planning with certain other personnel through joint communication channels to promote quality products through quality working conditions by the company.

Team work and participation promotes having the ability to lead and also being led. It promotes better solving problems skills as one brain is greatly assisted by different views and thoughts from different schools of thoughts but linking to one common goal of implementing TQM in the company and having quality products for customers.

5.7 Recommendations for future research

Using a Joint Problem-Solving Method

This is a method which can be used in line with the recommendations in addressing the problems which affect TQM in the future of the business. Beier Envirotec is a strong believer in using JPS when addressing issues in the organization. There is an example below of what JPS is about and how it can be used in line with the recommendations to address the issues uncovered in the study and which might be problematic to the creation of quality in the future of the business.

Introduction

According to the findings from the previous chapter, Joint Problem Solving would be an ideal way to recommend as a method to face the challenges found from the results of the qualitative research and also to tackle expected problems in the future which were not anticipated by the firm. This concept is taken from Misselhorn, who has dedicated his life

researching this concept and has found it to be effective when used in organizations (Misselhom, 1978: 66).

What is Joint Problem Solving?

Joint problem solving is simply what we are already doing whenever we have a problem or situation affecting others, at home, at work and in our social life etc. Joint problem solving is finding better answers, with others, to difficult problem situations. It is inviting others to share their ideas concerning a possible answer to a problem (Misselhom, 1978: 61).

Four Principals behind JPS:

- Principal of teamwork;
- Principal of communication;
- Principal of leadership; and
- Principal of sound thinking (Misselhom, 1978: 61).

Principal of teamwork

The Joint problem solving offered here will help the organization towards better teamwork, better leadership and better communication. It is a comprehensive tool that contributes directly to the quality of teamwork, the quality of leadership thinking and planning and the quality of communications with others. It is simply finding better answers with others to difficult problem situations. Problem solving with others is all about relating to others, communicating with them and either being led by or leading them.

Principal of communication

Communication is not only about talking. It is a two-way process of talking and listening. It is the listening that presents the biggest challenge in communication. People are so busy trying to get their point across that they don't give the other person a chance to respond or share their point of view.

Principal leadership

Most people have experienced leaders or managers, who don't impress or convince them, or to whom they may have to listen and do what the managers say when they don't really want to. Leadership is getting the job done with and through others. It is a way of getting the best from individuals without having to force them to comply or to offer some sort of incentive.

Principal of sound thinking

Sometimes the thinking of people in general is clear, rational and creative, and at other times people think so poorly that they come up with biased and narrow-minded answers. Good thinking can accompany leadership, teamwork and communication.

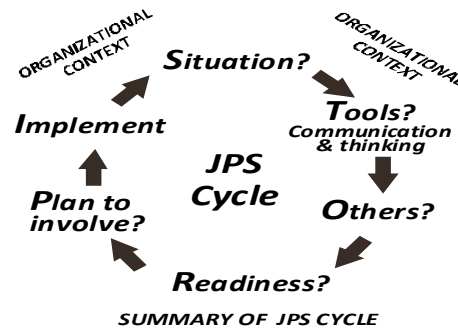


Figure 5.1: How Joint Problem-Solving works

Source: Misselhorn, 1978: 63

5.8 Overall Conclusion of the study

TQM has the potential to play a vital role in each Department and in the organization as a whole. Achieving quality is a very difficult task to achieve. Beier Envirotec has world-class systems and accreditations which acknowledge their on-going quest to continuously improve quality. This study shows that the implementation of a successful TQM system requires a collective team effort from the entire organization. This requires effective communication from the all the Departments within the organization and a well-trained and highly motivated workforce who operate in an environment which promotes the culture and values of quality (Yusof and Aspinwall, 1999: 1). The result of an effective TQM system is satisfied customers who receive quality products and services from the organization and a well-run value-chain system with a well-trained and satisfied workforce.

The studies within the literature which were in the form of “tell a story” looked at theories of TQM. Theories were discussed and variables from literature were taken to build themes which later contributed to the building of the theoretical framework of the study to address research objectives and questions. The first theoretical framework was based on Evans theory of key elements in TQM, the second theory was based on the conceptual model in the implementation of TQM by Gunasekarens and the third theoretical framework to support the above was based on the Crosby theory. Quality was also broadly defined with its role

identified while an explanation of the stakeholders' involvement in a business to implement TQM was discussed.

Recommendations that come from the study are aligned with the research objectives and research questions. It is important to note that all the participants want to contribute to achieving quality in the organization. There are a number of identified challenges which limit employees to make full use of their potential in implementing TQM systems in the organization. Future recommendations of the study were also recommended with joint problem solving method.

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Annexures

Annexure 1

1.1 Interview Questions

- **Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation?)**

This question was chosen because the culture and values of the organization must promote quality for TQM systems to work effectively. Managers see quality as an ideology or philosophy that determines and defines the culture of the entire organization. Culture is an organization of value systems and a collection of guiding principles. It is reflected in the management policies and the actions that a company practises, which is why organizations that believe in the principles of total quality are more likely to implement the practices successfully. Actions set the culture in motion, which is why some companies have their culture theoretically in the form of the in the company's mission and vision statements. But, often, their actions are the opposite of this. When total quality practices are used routinely within the organization, people learn to believe in the principles and cultural change can occur. Culture is a powerful influence on behaviour because it is shared widely and because it operates without being talked about, often without being thought of. This question will give an insight into whether or not employees are aware of the cultures and values of the organisation and their attitude towards them.

- **What is the view on leadership in the organization, and can the leadership skills within the organization be developed?**

Leadership plays a big role in contributing to quality. The implementation of effective TQM systems requires effective leadership starting from the top of the organizations structure all the way to the bottom of the organization's structure. Deming recognized that one of the biggest impediments to improvement was a lack of leadership. The job of management is leadership, not supervision. Supervision is overseeing and directing work; leadership means providing guidance to help employees execute their work more clinically with less effort. In most companies supervisors do not know more than their staff members that are operating the machines on a daily basis. Their main concern is to get the product out of the door. Supervision should provide the link between management and workforce. Good supervisors are not police or paper pushers, but rather coaches, helping employees to do a better job and

to develop their skills. Leadership can help to eliminate the element of fear from the job and encourage teamwork.

- **Is there a feeling that there is opportunity for growth as a person and leader within the organization?**

This question shows if employees feel valued and they see a good future and relationship with management within the organization. Employees who feel valued by the organization usually go beyond the call of duty to add value to the organization. This will also contribute to motivation. Intrinsic motivation is a very powerful tool for effective TQM systems. Employees will be determined through the leadership of management to implement the processes and systems the organization requires. This question will give an indication of where employees see themselves at this point in the organization.

- **Have the employees received training which could contribute to their growth, and is it felt that the training they received plays a role in the creation of quality?**

Employees are the organization's most valuable resource; they usually want to do a good job but just don't know how. Management must take responsibility for helping them. Not only does training result in improvements in quality and productivity, but it adds to worker morale, and shows an indication to workers that the company is dedicated to helping them and is investing in their futures. In addition, training reduces barriers between workers and supervisors, giving both more incentive to improve further. A well-trained and satisfied employee who is motivated intrinsically usually shows enthusiasm and shows initiative in creating the quality of the product the customer demands. This question will not only discover if employees have received training, but if they have seen value in the training they have received, and whether or not it contributed to their role in improving quality.

- **Are the employees motivated in the organization?**

Quality is a continuous process, which constantly needs improvement in order to carry on giving customers quality products and services. Unmotivated employees come to work to do what they have to do just to secure their job and receive their pay check at the end of the week or month. In some organizations you find employees who are unmotivated and come to work to do what they have to do with the least possible effort and this has a detrimental effect on the quality of the products or service which will have a negative effect on customer

satisfaction. There is no such thing as an unmotivated employee, but the system within which people work can either seriously impede motivation or enhance it. It also does not help the situation when you have toxic managers within the system. This question will give an indication of the level of motivation within the organization.

- **Do the employees work under fear?**

No system can work without the mutual respect of managers and workers. Workers may be afraid to report quality problems because of various fearful reasons. Managers are also afraid to co-operate with other Departments because the other managers might receive high performance ratings and bonuses. Fear encourages short-term thinking. Managers fear losing. Fear within an organization is a cultural issue and creating a culture without fear is a slow process that can be destroyed within an instant in various ways like transition in leadership and a change in corporate policies. Therefore modern managers must be sensitive to the impact that fear can have in the organization. This question will determine if employees work under fear which can have a negative effect on quality.

- **Can the employees feel that they are able to play a role in contributing to quality in the organization?**

Employees need to know their role in the organization and how it contributes to the company's vision and mission statement, the culture and values of the organization. They need to know how they contribute to quality in the organization. This question will give an indication as to where the employees believe they fit in within the organization.

- **Are the employees given freedom to express themselves and take part in decision making?**

When managers give employees the tools and freedom to express themselves and encourage employees to make contributions, they guarantee that better quality products and production processes will be likely to be achieved. This is a shift from the typical philosophy of senior management which is the view that the workforce should be 'managed', meaning that their participation in decision-making is very limited. Empowering employees to make decisions that satisfy customers, without limiting them with bureaucratic rules, shows the highest level of trust. To achieve total quality teamwork is vital within the organisation and with suppliers.

Departments working in silos to achieve their own objectives can have a negative effect on total quality.

- **What is the perception of quality in the organization?**

This question will indicate what the employees think of the role quality plays in the organization and will reveal their attitude towards this. The fact that they have a perception of this role, means that they are aware of what is going on and this question will reveal their opinion as to why they think the quality of service and products is good or bad in the organization.

- **Is it felt that there is a good cross–functional working relationship between the departments?**

Teamwork helps break down the barriers between Departments and individuals. Barriers between functional areas occur when managers fear losing power. To try and motivate employees in TQM, there is a need to communicate the company’s aims and objectives in a more open way in order to improve the understanding of employees’ and to facilitate cross–functional teamwork.

- **Is there good communication between the different Departments?**

The implementation of an effective TQM system requires effective communication between all the Departments of the organization. This can be helped if everyone knows the culture and values of the organization and understands its overall common goals.

Annexure 2

2.1 Aligning interview questions with responses

Respondent No: One

Interview Questions	Interview Responses
<p>Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?</p>	<p>Respondent No: 1. Seemed to have only little knowledge of what the cultures and values of the organization are.</p>
<p>What is your view on leadership in the organization, and can you develop your leadership skills within the organization?</p>	<p>Respondent No: 1. Believes that leadership from the top is good. Respondent No: 1. Also believes that he/she has developed their leadership in the organization and believes that they can still develop their leadership within the organization.</p>
<p>Do you feel that there is opportunity for you to grow as an individual and leader within the organization?</p>	<p>Respondent No: 1. believes that there is opportunity to grow as an individual and as a leader within the organization.</p>
<p>Have you received training which contributes to your growth and do you feel that the training you received plays a role in quality?</p>	<p>Respondent No: 1. Has received training, and does believe that the training received contributes to the role they play in the organization and will also help them grow within the organization. Respondent 1 however does not see how their training is involved or what role it plays in the outcome of the quality of the final product or service.</p>
<p>Are you motivated in the organization?</p>	<p>Respondent No: 1. Is not motivated because of frustration at what he/she feels the reality to be. Whilst they may believe that there is an opportunity to grow. Participants feel that in reality</p>

	it does not seem like it's going to happen any time soon.
Do you work under fear?	Respondent No: 1. does not work under fear.
Do you feel that you play a role in contributing to quality in the organization?	Respondent No: 1. Does not feel that they play a role in contributing to the final quality of the product, since they are not involved in the manufacturing of the product which is why respondent 1 does not see how they are involved in the product
Are you given freedom to express yourself and do you take part in decision making?	Respondent No: 1. Does feel that they are given the opportunity to express themselves and does take part in decision making.
What is your perception of quality in the organization?	Respondent No: 1. Perception of quality in the organization is good, but he/she also stated that they are not involved in the quality of the product and services.
Do you feel that there is a good cross-functional working relationship between the Departments?	Respondent No: 1. Believes that the working relationship between the other Departments is ok but believes that it can be improved.
Is there good communication between the different Departments?	Respondent No: 1. Feels that the communication between the Departments is not as good as he thinks it should be and could also be improved.

Respondent No: Two

Interview Questions	Interview Responses
Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	Respondent No: 2. States that they are aware of the cultures and values of the organization and live by and promote them every day in the organization.
What is your view on leadership in the organization and can you develop your leadership skills within the organization?	Respondent No: 2. Has a positive view on leadership in the organization, and believes that the leadership is well structured and approachable; Sample 2 believes that they can see themselves developing their leadership skills in the organization.
Do you feel that there is opportunity for you to grow as an individual and leader within the organization?	Respondent No: 2. Sees an opportunity for their growth in the organization.
Have you received training which contributes to your growth and do you feel that the training you received plays a role in quality?	Respondent No: 2. Has received training, but feels that they are not really involved in the quality side of the organization. The respondent feels that quality is the responsibility of other Departments
Are you motivated in the organization?	Respondent No: 2. Is very motivated due to the leadership of the Department.
Do you work under fear?	Respondent No: 2. Does not work under fear.
Do you feel that you play a role in contributing to quality in the organization?	Respondent No: 2. Feels that they are not directly involved in quality, but is aware that there is role that is supposed to be played indirectly.
Are you given freedom to express yourself and do you take part in decision making?	Respondent No: 2. Feels that they are given the freedom to express themselves but feels that they do not take part in decision making.

What is your perception of quality in the organization?	Respondent No: 2. States that they are not really involved in quality but believes that quality in the organization is good.
Do you feel that there is a good cross-functional working relationship between the Departments?	Respondent No: 2. Believes that the cross-functional relationship between the Departments can be improved.
Is there good communication between the different Departments?	Respondent No: 2. Feels that the communication between the Departments is ok but that it can be improved.

Respondent No: Three

Interview Questions	Interview Responses
Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	Respondent No: 3. Is not sure of the culture and values of the organization. Respondent 3 states that the culture and values of the organisation is not something that is often spoken about in the organization.
What is your view on leadership in the organization and can you develop your leadership skills within the organization?	Respondent No: 2. Feels that they are not inspired by the leadership and does not see themselves developing their leadership skills in the organization.
Do you feel that there is opportunity for you to grow as an individual and leader within the organization?	Respondent No: 3. Believes that they have grown from initially starting in the organization, but now feels that they cannot see themselves growing any further from at their current stage.

<p>Have you received training which contributes to your growth and do you feel that the training you received plays a role in quality?</p>	<p>Respondent No: 3. Has received training, and does feel that this has contributed to their role in quality creation; Respondent 3 also states that even though he/she received training, there are many tasks that play a critical role in quality promotion that they had to learn through observation and trial and error on many occasions.</p>
<p>Are you motivated in the organization?</p>	<p>Respondent No: 3. Is not motivated. The reason is linked to the previous questions answered</p>
<p>Do you work under fear?</p>	<p>Respondent No: 3. Works under constant fear; fear of losing their job.</p>
<p>Do you feel that you play a role in contributing to quality in the organization?</p>	<p>Respondent No: 3. Feels that they play a role in contributing to quality, but also feels that besides just following procedures they have no influence on the outcome of the final product and the improvement of quality.</p>
<p>Are you given freedom to express yourself and do you take part in decision making?</p>	<p>Respondent No: 3. Feels that he/she is not given freedom to express himself/herself, and does not take part in any decision making.</p>
<p>What is your perception of quality in the organization?</p>	<p>Respondent No: 3. Feels that quality in the organization is 50/50; it is good at stages and bad at some stages.</p>
<p>Do you feel that there is a good cross – functional working relationship between the Departments?</p>	<p>Respondent No: 3. Believes that the working relationship between certain Departments is good. They have a good working relationship with the Sales Department, but the relationship with HR is non-existent. The relationship with Production is poor.</p>

<p>Is there good communication between the different Departments?</p>	<p>Respondent No: 3. Believes that the communication through the structured procedures is ok, but is limited outside the structured procedure which would contribute to addressing many quality issues.</p>
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Respondent No: Four

<p>Interview Questions</p>	<p>Interview Responses</p>
<p>Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?</p>	<p>Respondent No: 4. Is not sure of the culture and values of the organization, but states that the culture and values of the organisation is not something that is often spoken about in the organization.</p>
<p>What is your view on leadership in the organization, and can you develop your leadership skills within the organization?</p>	<p>Respondent No: 4. Is not inspired by his leadership, and does not feel that he can develop his leadership skills in the organization.</p>
<p>Do you feel that there is opportunity for you to grow as an individual and leader within the organization?</p>	<p>Respondent No: 4. Does not see any further growth for themselves in the organization and in any leadership role</p>
<p>Have you received training which contributes to your growth, and do you feel that the training you received plays a role in quality creation?</p>	<p>Respondent No: 4. Has received training, but states that none of the training he has received has anything to do with his role in the company and does not contribute to quality creation.</p>
<p>Are you motivated in the organization?</p>	<p>Respondent No: 4. Is not motivated in the organization, but is demotivated instead.</p>
<p>Do you work under fear?</p>	<p>Respondent No: 4. Works under constant fear, because he is not sure of his future in the company.</p>

<p>Do you feel that you play a role in contributing to quality in the organization?</p>	<p>Respondent No: 4. Feels that he plays a big role to contributing to quality but has no influence on the outcome of quality products.</p>
<p>Are you given freedom to express yourself and do you take part in decision-making?</p>	<p>Respondent No: 4. Is not given the freedom to express himself, and does not take part in any decision making.</p>
<p>What is your perception of quality in the organization?</p>	<p>Respondent No: 4. Feels that he is highly involved in the quality process but he has noted that the quality of the products needs work.</p>
<p>Do you feel that there is a good cross-functional working relationship between the Departments?</p>	<p>Respondent No: 4. Believes that there is a good working relationship with Sales and HR, but that with the working relationship with Production is not efficient.</p>
<p>Is there good communication between the different Departments?</p>	<p>Respondent No: 4. Feels that lack of communication is the reason for the bad working relationship with Production.</p>

Respondent No: Five

Interview Questions	Interview Responses
<p>Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?</p>	<p>Respondent No: 5. Is aware of the culture and values of the organization, and he also feel that he lives by and promotes the culture and values of the organization.</p>
<p>What is your view on leadership in the organization, and can you develop your leadership skills within the organization?</p>	<p>Respondent No: 5. Feels inspired by the leadership in the organization and feels that there is still more room to develop leadership skills within the organization.</p>
<p>Do you feel that there is opportunity for you to grow as an individual and leader within the organization?</p>	<p>Respondent No: 5. Feels that there is opportunity to grow within the organization, but also feels even though he can see the opportunity, in reality he does not feel that there is a succession plan at this stage in the organization.</p>
<p>Have you received training which contributes to your growth and do you feel that the training you received plays a role in quality production?</p>	<p>Respondent No: 5. Has received training that has contributed to growth in the organization, and feels that training does play a role in quality promotion.</p>
<p>Are you motivated in the organization?</p>	<p>Respondent No: 5. Is motivated but frustrated at the same time, mainly because of no succession plan communicated to them.</p>
<p>Do you work under fear?</p>	<p>Respondent No: 5. Does not work under fear.</p>
<p>Do you feel that you play a role in contributing to quality in the organization?</p>	<p>Respondent No: 5. Is aware of the role he plays in contributing to quality</p>
<p>Are you given freedom to express yourself and do you take part in decision making?</p>	<p>Respondent No: 5. Feels that they are given freedom to express themselves and they do take part in decision making.</p>

What is your perception of quality in the organization?	Respondent No: 5. Perception of quality in the organization is that it needs a lot of work.
Do you feel that there is a good cross-functional working relationship between the Departments?	Respondent No: 5. Feels that the cross-functional relationship is very weak with Production, and non-existent with HR, and good with the Quality Testing Department but also feels that there is still room for improvement
Is there good communication between the different Departments?	Respondent No: 5. Feels that the communication is very weak with Production and non-existent with HR and good with the Quality Testing Department but also feels that there is still room for improvement.

Respondent No: Six

Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	Respondent No: 6. Knows the culture and values of the organization, and also promotes and live by those values everyday
What is your view of leadership in the organization, and can you develop your leadership skills within the organization?	Respondent No: 6. Feels that even though there is good leadership at the top, there is no opportunity for staff to further develop their leadership roles within the organization.
Do you feel that there is opportunity for you to grow as an individual and leader within the organization?	Respondent No: 6. Does not feel that he/she can grow any further than the role he/she currently executes in the organization.
Have you received training which contributes to your growth and do you feel that the training you received plays a role in quality?	Respondent No: 6. Has received training, and feels that the training he received does play a role in quality promotion.

Are you motivated in the organization?	Respondent No: 6. States that he needs to self-motivate in order to add value in the organization but that he is not motivated most of the time.
Do you work under fear	Respondent No: 6 does not work under fear.
Do you feel that you play a role in contributing to quality in the organization?	Respondent No: 6. Feels that he does play a role in contributing to quality promotion but feels like the role can be improved.
Are you given freedom to express yourself and do you take part in decision making?	Respondent No: 6. Feels that he is given the freedom to express himself and that he does take part in decision making but only to a certain extent.
What is your perception of quality in the organization?	Respondent No: 6. Feels that the quality in the organization is average.
Do you feel that there is a good cross-functional working relationship between the Departments?	Respondent No: 6. Feels that the working relationship with Production is bad and non-existent with HR and good with the Quality Testing Department.
Is there good communication between the different Departments?	Respondent No: 6. Feels that the communication with Production is bad and non-existent with HR and good with the Quality Testing Department.

Respondent No: Seven

Interview Questions	Interview Responses
Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	Respondent No: 7. Knows the culture and values of the organisation, and also promotes and lives by those values.

<p>What is your view on the leadership in the organization, and can you develop your leadership skills within the organization?</p>	<p>Even though Respondent No: 7 feels that there is poor leadership, he/she acknowledges the fact that they were given an opportunity to develop their leadership in the organization.</p>
<p>Do you feel that there is opportunity for you to grow as an individual and leader within the organization?</p>	<p>Respondent No: 7. Feels that his/her growth has stagnated and cannot see any further leadership development or growth within the near future.</p>
<p>Have you received training which contributes to your growth and do you feel that the training you received plays a role in quality?</p>	<p>Respondent No: 7. promotion.</p>
<p>Are you motivated in the organization?</p>	<p>Respondent No: 7. Is no longer motivated and feels that the leadership has demotivated him</p>
<p>Do you work under fear?</p>	<p>Respondent No: 7. Does not work under fear</p>
<p>Do you feel that you play a role in contributing to quality in the organization?</p>	<p>Respondent No: 7. Believes that he plays a major role in the contribution to quality in the organization</p>
<p>Are you given freedom to express yourself and do you take part in decision- making?</p>	<p>Sample 7 Feels that they are not given freedom to express themselves and they do not take part in decision making.</p>
<p>What is your perception of quality in the organization?</p>	<p>Respondent No: 7. Feels that quality has dropped in the organization.</p>
<p>Do you feel that there is a good cross-functional working relationship between the Departments?</p>	<p>Respondent No: 7. Feels that there is no good cross-functional relationship between Sales and Production, He also feels that there can be an improvement with the Quality Testing Department and believes that they have a good relationship with Human Resource Management.</p>

Is there good communication between the different Departments?

Respondent No: 7. feels that there is not good communication between Sales and Production; Also he feels that there can be an improvement in communication with the Quality Testing Department.

Respondent No: Eight

Interview Questions	Summarised Interview Responses
Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	Respondent No: 8. Knows the culture and values of the organization and also lives by and promotes the culture and values of the organization.
What is your view of leadership in the organization, and can you develop your leadership skills within the organization?	Respondents No: 8. Believes that there is poor leadership in the organization because supervisors do not take responsibility. Respondent 8 has developed self-leadership skills within the organization but feels that he/she has not advanced in any leadership position within the organization
Do you feel that there is opportunity for you to grow as an individual and leader within the organization?	Respondent No: 8. Does not feel that there is an opportunity to grow within the organization.
Have you received training which contributes to your growth, and do you feel that the training you received plays a role in quality promotion?	Respondent No: 8. Has received training which does contributed to quality promotion, but during his experience in the company, he feels that the company does not give enough training to improve quality.
Are you motivated in the organization?	Respondent No: 8. Is not motivated in the organization due to leadership issues.
Do you work under fear?	Respondent No: 8. Does not work under fear.
Do you feel that you play a role in contributing to quality in the organization?	Respondent No: 8. Believes that they play a major role in contributing to quality
Are you given freedom to express yourself and do you take part in decision-making?	Respondent No: 8. Feels that he is not given freedom to express himself and he does not take part in any decision making even though he has much experience to offer.

What is your perception of quality in the organization?	Respondent No: 8. Perception of quality in the organization is poor
Do you feel that there is a good cross–functional working relationship between the Departments?	Respondent No: 8. Believes that there is a poor relationship between Production all the other Departments
Is there good communication between the different Departments?	Sample 8 Believes that there is poor communication between Production and all the other Departments.

Respondent No: Nine

Interview Questions	Summarised Interview Responses
Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	Respondent No: 9. Yes I know the culture and values of the organization and we do our utmost best to promote them.
What is your view of leadership in the organization, and can you develop your leadership skills within the organization?	Respondent No: 9: For example, I am a manager and I have to provide leadership to the supervisor under me but also provide leadership to other employees. As a person I think it's always good to continue learning and improving so leadership skills are not different from that.
Do you feel that there is opportunity for you to grow as an individual and leader within the organization?	Respondent No: 9. Yes, when I applied for the post of a supervisor, I grew in terms of product, offering and understanding of the markets we operate in and that is why I am a manager today and as I have said earlier, I continue to learn and grow.

<p>Have you received training which contributes to your growth, and do you feel that the training you received plays a role in quality promotion?</p>	<p>Respondent No: 9. Most of the time we are the ones who conduct training programs but sometimes we get people from outside to teach us about our products and educate us on quality and supply chain management.</p>
<p>Are you motivated in the organization?</p>	<p>Respondent No: 9. I am pretty much motivated in where I work.</p>
<p>Do you work under fear?</p>	<p>Respondent No: 9: We have securities, Ha! Ha! Ha! laughing, yes I do not work under fear; the working conditions are just fine.</p>
<p>Do you feel that you play a role in contributing to quality in the organization?</p>	<p>Respondent No: 9. Yes, because when there is a drop in sales we are given task to present on how we can improve our products in general so that the consumer can see them as quality products.</p>
<p>Are you given freedom to express yourself and do you take part in decision-making?</p>	<p>Respondent No: 9. Yes but in certain platforms.</p>
<p>What is your perception of quality in the organization?</p>	<p>Respondent No: 9. Our customer respond greatly to our products and we do not have to charge low prices to increase sales, that is quality there my friend.</p>
<p>Do you feel that there is a good cross–functional working relationship between the Departments?</p>	<p>Respondent No: 9. There is all those sometimes we face delays beyond our control at times with the paper work with procurement when we have ordered from suppliers wanting to achieve lower lead times.</p>
<p>Is there good communication between the different Departments?</p>	<p>Respondent No: 9. There is.</p>

Respondent No: Ten

Interview Questions	Summarised Interview Responses
Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	Respondent No: 10. Yes and we try and promote them every day to staff and customers.
What is your view of leadership in the organization, and can you develop your leadership skills within the organization?	Respondent No: 10. The leadership is good on scale of 65% but good as still we as women have a small percentage in senior management but I believe I can grow.
Do you feel that there is opportunity for you to grow as an individual and leader within the organization?	Respondent No: 10. Yes, laughing... similar question to the previous.
Have you received training which contributes to your growth, and do you feel that the training you received plays a role in quality promotion?	Respondent No: 10. Yes, we get some form of training.
Are you motivated in the organization?	Respondent No: 10. Yes, I am very motivated and I think most workers are motivated too.
Do you work under fear?	Respondent No: 10. Not at all!
Do you feel that you play a role in contributing to quality in the organization?	Respondent No: 10. A major role!
Are you given freedom to express yourself and do you take part in decision-making?	Respondent No: 10. Yes, we are given freedom to express ourselves and involved in decision making, I think there question should be are our points taken seriously or implemented as individuals.
What is your perception of quality in the organization?	Respondent No: 10. A good product understood by customer through meeting their needs and of course selling in the markets.

Do you feel that there is a good cross–functional working relationship between the Departments?	Respondent No: 10. Yes, I do, I work well with them, do not know others though.
Is there good communication between the different Departments?	Respondent No: 10. Yes there is good communication.

Respondent No: Eleven

Interview Questions	Summarised Interview Responses
Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	Respondent No: 11. Yes I do promote them.
What is your view of leadership in the organization, and can you develop your leadership skills within the organization?	Respondent No: 11. The ability to lead people fairly with less complaints of biasness.
Do you feel that there is opportunity for you to grow as an individual and leader within the organization?	Respondent No: 11. Yes, I have already grown. (He slightly smiles)... and laughs slowly...
Have you received training which contributes to your growth, and do you feel that the training you received plays a role in quality promotion?	Respondent No: 11. Yes we go to seminars and conferences.
Are you motivated in the organization?	Respondent No: 11. Yes!
Do you work under fear?	Respondent No: 11. No!
Do you feel that you play a role in contributing to quality in the organization?	Respondent No: 11. Yes a big one.
Are you given freedom to express yourself and do you take part in decision-making?	Respondent No: 11. Yes I am given freedom to express myself.
What is your perception of quality in the organization?	Respondent No: 11. Selling the best products and customers loving it.
Do you feel that there is a good cross–functional working relationship between the Departments?	Respondent No: 11. I.....would say yes.

Is there good communication between the different Departments?	Respondent No: 11. I would say yes again, no problems, are you done? I mean was that the last question.
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Respondent No: Twelve

Interview Questions	Summarised Interview Responses
Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	Respondent No: 12.
What is your view of leadership in the organization, and can you develop your leadership skills within the organization?	Respondents No: 12.
Do you feel that there is opportunity for you to grow as an individual and leader within the organization?	Respondent No: 12.
Have you received training which contributes to your growth, and do you feel that the training you received plays a role in quality promotion?	Respondent No: 12.
Are you motivated in the organization?	Respondent No: 12.
Do you work under fear?	Respondent No: 12.
Do you feel that you play a role in contributing to quality in the organization?	Respondent No: 12.
Are you given freedom to express yourself and do you take part in decision-making?	Respondent No: 12.
What is your perception of quality in the organization?	Respondent No: 12.
Do you feel that there is a good cross-functional working relationship between	Respondent No: 12.

the Departments?	
Is there good communication between the different Departments?	Respondent No: 12.

Table 9

Overall Picture of Sample data

0 = NO 1 = UNCERTAIN 2 = YES

Product	HR	Production	Sales	Quality testing
Do you know the culture and values of the organization (if yes, do you live by and promote the culture and values of the organisation)?	2	2	2	0
What is your view on leadership in the organization, and can you develop your leadership skills within the organization?	2	0	2	0
Do you feel that there is opportunity for you to grow as an individual and leader within the organization?	2	0	1	0
Have you received training which contributes to your growth, and do you feel that the training you received plays a role in quality?	2	2	2	1
Are you motivated in the organization	1	0	1	0
Do you work under fear?	0	0	0	2

Do you feel that you play a role in contributing to quality in the organization?	0	2	2	1
Are you given freedom to express yourself and do you take part in decision making?	2	0	2	0
What is your perception of quality in the organization?	2	0	0	0
Do you feel that there is a good cross-functional working relationship between the Departments?	1	0	0	0
Is there good communication between the different Departments?	1	0	0	0

Annexure 3

3.1 Aligning Research Questions, Objectives with interview questions

Research Questions	Research Objectives	Interview questions
<p>Does total quality management have an effective role in the company and to what extent is it effective?</p>	<p>To ascertain the effectiveness of Total Quality Management in the Beier Envirotec and to what extent is this effective?</p>	<p>Respondent No: 2. Is very motivated due to the leadership of the Department.</p> <p>Respondent No: 3. Feels that they are not inspired by the leadership and does not see himself developing his leadership skills in the organization.</p> <p>Respondent No: 4. Is not given the freedom to express himself, and does not take part in any decision making.</p> <p>Respondent No: 5. Does not work under fear.</p> <p>Respondent No: 5. Feels inspired by the leadership in the organization and feels that there is still more room to develop their leadership skills within the organization.</p> <p>Respondent No: 5. Feels that they are given freedom to express themselves and they do take part in decision making.</p> <p>Respondent No: 5. Is aware of the role he plays in contributing to quality promotion.</p> <p>Respondent No: 6. Feels that he is given the freedom to express himself and he does take part in decision making but only to a certain extent. Sample 6 does not work under fear.</p> <p>Respondent No: 6. Knows the</p>

		<p>culture and values of the organization, organization; he also promotes and lives by those values everyday every day.</p> <p>Respondent No: 7. Does not work under fear.</p> <p>Respondent No: 7. Knows the culture and values of the organisation; he also promotes and lives by those values.</p> <p>Respondent No: 7. Believes that he plays a major role in contribution to quality in the organization.</p> <p>Respondent No: 7. Is no longer motivated and feels that the leadership has demotivated him.</p> <p>Respondent No: 8. Does not work under fear.</p> <p>Respondent No: 8. Does not feel that there is an opportunity to grow within the organization.</p> <p>Respondent No: 8. Believes that they play a major role in contributing to quality.</p>
<p>Is there evidence that Total Quality Management can lead to better communication, amongst stakeholders and teamwork?</p>	<p>To investigate the role of quality with regard to communication, participation and teamwork within the organisation</p>	<p>Respondent No: 1. Does not feel that they play a role in contributing to the final quality of the product, since they are not involved in the manufacturing of the product which is why respondent 1 does not see how his involved can affect the product.</p>

		<p>Respondent No 1. Perception of quality in the organization is good, but also stated that he is not involved in the quality product and services.</p> <p>Respondent No: 2. Feels that the communication between the Departments is ok but can be improved.</p> <p>Respondent No: 2. States that he is aware of the culture and values of the organization and lives by and promotes them every day in the organization.</p> <p>Respondent No: 2. Has a positive view of leadership in the organization and believes that leadership is well structured and approachable.</p> <p>Respondent No: 2. Believes that he can see himself developing his leadership skills in the organization.</p> <p>Respondent No: 3. Works under constant fear. Fear of losing his/her job.</p> <p>Respondent No: 3. Feels that he/she is not given freedom to express himself/herself, and does not take part in any decision making.</p> <p>Respondent No: 3. Believes that the communication through the structured procedures are communication through the structured procedures is ok, but is limited outside the structured procedure which would contribute to addressing many quality issues.</p>
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Respondent No: 3. Feels that he/she are not directly involved in quality, but is aware that there is role that is supposed to be played indirectly.

Respondent No: 4. Believes that there is a good working relationship with Sales and HR, but that the working relationship with Production is not efficient.

Respondent No: 4. Feels that poor communication is the reason for the bad working relationship with Production.

Respondent No: 5. Is motivated but frustrated at the same time, mainly because of the fact that no succession plan has been communicated to them.

Respondent No: 6. Feels that he does play a role in contributing to quality but feels like the role can be improved.

Respondent No: 6. Feels that the communication with Production is bad and non-existent with HR and good with the Quality Testing Department.

Respondent No: 7. Feels that he is not given freedom to express himself and he does not take part in decision making.

Respondent No: 8. Believes that there is poor communication between Production and all the other

		Departments.
<p>To ascertain whether or not employees in the company of Beier Envirotec are fully equipped and trained to implement Total Quality Management.</p>	<p>Are employees in the Beier Envirotec fully equipped and trained to implement Total Quality Management in the company?</p>	<p>Respondent No: 1. Seemed to have only little knowledge of what the culture and values of the organization are.</p> <p>Respondent No: 1. Has received training, but does believe that the training received contributes to the role he plays in the organization and will also help him to grow within the organization.</p> <p>Respondent No: 1. However does not see how his training is involved or what role it plays in the outcome of the quality of the final product or service.</p> <p>Respondent No: 2. Has received training, but feels that he was not really involved in the quality side of the organization. He feels that quality is the responsibility of other Departments.</p> <p>Respondent No: 3. Is not sure of the culture and values of the organization.</p> <p>Respondent No: 3. States that the cultures and values of the organisation are not something that is often spoken about in the organization.</p> <p>Respondent No: 3. Has received training, and does contribute to quality promotion.</p> <p>Respondent No: 3 also states that even though he/she received training, there are many tasks that play a</p>

		<p>critical role in quality that he/she had to learn through observation and trial and error on many occasions.</p> <p>Respondent No: 4. Has received training, but states that none of the training received has anything to do with his/her role in the company and does not contribute to quality.</p> <p>Respondent No: 4. Is not inspired his leadership, and does not feel he can develop his leadership skills in the organization.</p> <p>Respondent No: 5. Has received training that has contributed to his growth in the organization, and that his training does play a role in quality promotion.</p> <p>Respondent No: 6. Feels that even though there is good leadership at the top, he feels that there is no opportunity for him to further develop his leadership role within the organization.</p> <p>Respondent No: 6. Does not feel that he can grow any further in the organization.</p> <p>Respondent No: 6. Has received training, and feels that the training he received does play a role in quality promotion.</p> <p>Respondent No: 7. States that he has received training and that his training does contribute to quality promotion.</p>
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<p>How can the effective implementation of Total Quality Management improve the value chain of Beier Envirotec?</p>	<p>To assess if the effective implementation of Total Quality Management can improve the value chain of Beier Envirotec.</p>	<p>Respondent No: 1. Believes that there is an opportunity for him to grow as an individual and as a leader within the organization.</p> <p>Respondent No: 1. Feels that the communication between the Departments is not as good as he thinks it should be and that it could also be improved.</p> <p>Respondent No: 2. States that he was not really involved in quality but believes that quality in the organization is good.</p> <p>Respondent No: 2. Sees the</p>

		<p>opportunity for growth in the organization.</p> <p>Respondent No: 2. Believes that the cross-functional relationship between the Departments can be improved.</p> <p>Respondent No: 3. Feels that he plays a role in contributing to quality, but also feels that besides just following procedures he has no influence on the outcome of the final product and the improvement of quality</p> <p>Respondent No: 3. Believes that he has grown from initially starting in the organization, but now feels that he cannot see himself growing any further.</p> <p>Respondent No: 4. Works under constant fear, because he is not sure of his future in the company.</p> <p>Respondent No: 5. Feels that the cross-functional relationship is very weak with Production and non-existent with HR, HR and good with the Quality Testing Department but he also feels that there is still room for improvement.</p> <p>Respondent No: 5. Feels that the communication is very weak with Production and non-existent with HR and good with the Quality Testing Department but also feels that there is still room for improvement.</p> <p>Respondent No: 6. Feels that the working relationship with Production is bad and non-existent with HR and good with the Quality Testing</p>
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		<p>Department.</p> <p>Respondent No: 7 Feels that there is not a good cross-functional relationship between Sales and Production. He also feels that there can be an improvement with the Quality Testing Department and believes that they have a good relationship with Human Resource Management.</p> <p>Respondent No: 7. feels that there is not good communication between Sales and Production; He also feels that there can be an improvement in communication with the Quality Testing Department.</p> <p>Respondent No: 8. Has developed self-leadership skills within the organization but feels that he not grown in any leadership position within the organization.</p> <p>Respondent No: 8. Perception of quality in the organization is poor</p>
<p>Can Total Quality Management improve productivity in the organization?</p>	<p>To identify if there is a need for Total Quality Management in the organization. Can it address the gaps and recommend remedial measures that can be taken in order to improve quality and therefore increase the productivity of the company.</p>	<p>Respondent No: 1 Does feel that he was given the opportunity to express himself and he does take part decision making.</p> <p>Respondent No: 1. One believes that the working relationship between the other Departments is ok but believes that it can be improved.</p> <p>Respondent No: 2. States that he is</p>

		<p>aware of the culture and values of the organization and he lives by and promotes them every day in the organization.</p> <p>Respondent No: 3. States that the culture and values of the organisation is not something that is often spoken about in the organization.</p> <p>Respondent No: 3. feels that quality in the organization is 50/50.</p> <p>Respondent No: 3. Believes that the working relationship between certain Departments is good, they have a good working relationship with the Sales Department, but the relationship with HR is non-existent. The relationship with Production is poor and gets bad sometimes.</p> <p>Respondent No: 4. Is not motivated in the organization, but rather demotivated.</p> <p>Respondent No: 4. Does not see any further growth for themselves in the organization and in any leadership role.</p> <p>Respondent No: 4. Feels that he is highly involved in the quality process but he has noted that the quality of the products needs work.</p> <p>Respondent No: 5. Perception of quality in the organization is that it needs a lot of work.</p> <p>Respondent No: 6. States that he needs to be self-motivated in order to add value to the organization when</p>
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		<p>they are not motivated most of the time.</p> <p>Respondent No: 6. Feels that the quality in the organization is average.</p> <p>Respondent No: 7. Feels that his growth has stagnated and cannot see any further leadership development or growth within the near future.</p> <p>Respondent No: 7. Feels that there is poor leadership; he acknowledges the fact that they were given an opportunity to develop their leadership in the organization.</p> <p>Respondent No: 7. Feels that quality has dropped in the organization.</p> <p>Respondent No: 8. Knows the culture and values of the organization and also lives by and promotes the culture and values of the organization.</p> <p>Respondent No: 8. Believes that there is a poor relationship between Production all the other Departments</p> <p>Respondents No: 8. Believes that there is poor leadership in the organization because supervisors do not take responsibility.</p> <p>Respondent No: 8. Is not motivated in the organization due to leadership issues. Has received training which does contributed to quality, but during his experience in the company, he feels that the company does not give enough training to improve quality.</p>
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