UNIVERSITY OF EDUCATION, WINNEBA

ANALYSIS OF TOTAL QUALITY MANAGEMENT IMPLEMENTATION IN THE SMALL AND MEDIUM FASHION DESIGN ENTERPRISES IN PRODUCTION OF SLIT AND KABA IN THE ACCRA METROPOLIS, GHANA

CHARITY ABLA GOBODZO

2021

UNIVERSITY OF EDUCATION, WINNEBA

ANALYSIS OF TOTAL QUALITY MANAGEMENT IMPLEMENTATION IN THE SMALL AND MEDIUM FASHION DESIGN ENTERPRISES IN PRODUCTION OF SLIT AND KABA IN THE ACCRA METROPOLIS, GHANA

CHARITY ABLA GOBODZO

200027835

A Thesis Submitted to Department of FASHION DESIGN AND TEXTILES, Faculty of VOCATIONAL EDUCATION, School of Graduate Studies, University of Education, Winneba, in partial fulfilment of the requirements for the award of MASTER OF PHILOSOPHY in (Fashion Design And Textiles) degree.

MAY, 2021

DECLARATION

I, **CHARITY ABLA GOBODZO**, hereby declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole for another degree elsewhere.

SIGNATURE …….

DATE:……..

SUPERVISOR'S DECLARATION:

I hereby declare that the preparation and presentation of this work was supervised by me in accordance with the guidelines for the supervision of thesis laid down by the University of Education, Winneba.

SUPERVISOR: DR. WILLIAM KWESI SENAYAH

SIGNATURE …….

DATE:……..

DEDICATION

This work is dedicated to my family, my husband, Mr. Felix Mets and my children, Vera Etornam Mets and Kelvin Elikem Mets.

ACKNOWLEDGEMENT

My fervent thanks goes to my supervisor, Mr. William Kwesi Senayah for his relentless effort in supervising my work. I am thankful for his patience, love, guidance, comments and corrections which helped me to complete this work successfully.

I would like to express my sincere gratitude to the entire staff of the university of Education, Winneba- Kumasi campus for their support during the two semesters on campus. Again, my thanks go to Dr. Daniel Danso, Dr. Josephine Aboagyewa Ntiri, Dr. Ninette Afi Appiah and Mr. Isaac Abraham and all the lecturers at the department of Fashion, Design and Textile Education. It was through their support that I was able to go through the programme successfully. My appreciation also goes to all the small to medium garments enterprises for making it possible for me to use their trainees. God bless you all. I am also grateful to Hajia Lawal Zurlfao for holding the fort anytime I am away from office.

I also want to thank Mr. Seth for his tolerance and long suffering whilst typing the work. I cannot wait to acknowledge my friends and study mates who made it possible for the reviewing of this study. Last but not least, I am indebted to my family especially my mother, Elizabeth Attamah Agbeke for her financial support.

TABLE OF CONTENTS

Content **Page**

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

LIST OF ABBREVIATIONS

AGOA	The African Growth and Opportunity Act
AQL	Acceptable Quality Level
ASQ	American Society for Quality
CFO	Chief Financial Officer
CM	Cost of Making/Cut and Make/ Cost of Manufacturing
CMT	Cost of Making with Trimmings/Cut, Make & Trim
EFQM	European Foundation for Quality Management
FQM	Framework for Quality Management
GM	Garment manufacturing
ISO	International Organization for Standardization
K&S	Kaba and Slit
LCL	Lower Control Limit .
MDGs	Millennium Development Goals
PDCA	Plan, Do, Check, Act
PPC	Production Planning and control
QA	Quality Assurance
QC	Quality Control
QI	Quality Inspector
QIP	Quality Improvement Plan
QMS	Quality Management System
RMG	Ready Made Garments
SMEs	Mall and Medium Size Enterprises
SPI	Stitch Per Inch
SPL	Stitch per length

SPM	Stitches per Minute
SPT	Stitch per tack
ToC	Theory of Constraints
TQM	Total Quality Management
UCL	Upper Control Limit
WTO	World Trade Organization

ABSTRACT

The current study sought to empirically determine the feasibility of implementing TQM principles and finding out its effects on the production of Slit and Kaba in small to medium garment production enterprises. The mixed method research design was used to conduct the study. A total of 138 participants were purposively sampled from the population of small and medium scale fashion enterprises in the Accra metropolis. Both questionnaire and interview were used as the main data collection instruments. Descriptive statistics, inferential and thematic analysis were used to analyse the quantitative and qualitative data collected. From the study it was discovered that TQM is fundamental to the achievement of high-quality products and customer satisfaction and retention and that TQM results in an increase in sales, effective customer service coupled with cost reduction and improved production practices all will inure to the benefit and prospects of the production houses and that also, firms lack quality culture in the industry, lack of commitment towards the implementation of the concept into the operations of the firms in the industry as part of the TQM implementation procedure. It was therefore recommended that awareness concerning TQM must be created among industry players about the benefits and potentials of implementing TQM in their operations and also, government should introduce a policy to include contents on TQM as part of the curriculum of Higher Fashion Education in Ghana. There must be a persistent education and training for all workers to facilitate a shift in attitudes and working practice. Apparel manufacturing businesses in Ghana must focus their attention on satiating its clienteles by affording quality garment and services.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Discussing fashion requires that, an emphasis be basically placed on designer products, specifically garments which associate with elite status and created by recognised individuals who champion innovation. A second sphere exists, comprised primarily of a form of dress worn by a majority of Ghanaian women – the ***'Slit and Kaba'***. Slit and Kaba fashions are the most recognisable and visible form of women's clothing in Ghana. The diversity of styles and fabrics creates a colourful display of costume that is worn mostly by women, transforming traditional functions into informal runways for showcasing clothing novelty (Gott & Loughran, 2010).

Unlike most forms of fashion, the Slit and Kaba is an inherently egalitarian form of the outfit, worn equally from street vendors to first ladies in Ghana. The inclusion of Slit and Kaba fashions in this study is to formally recognise the importance of this dynamic form of dress mand further to illustrate the vibrancy and complexity of Ghanaian fashion culture. The Slit and Kaba is a fusion of international and local dress styles that signifies a distinctly Ghanaian identity. The Slit and Kaba is our national custom. It is our real Ghanaian dress (Gott, 2012). The Slit and Kaba are typically created from six yards of fabric, with two yards used for each of the garment's three integral elements – a blouse, a sewn or wrapped skirt, and an additional piece of fabric used primarily as a wrapper or shawl (Antubam, 1963).

As expounded by Gott et al., (2010), Ghana's distinctive three-piece Slit and Kaba was created when a European-inspired blouse was added to the existing wrapped ensemble of Ghanaian women's dress; the earliest illustration of this hybrid garment appeared in

the 1831 account of a British woman's travels along the coast of West Africa. Despite the popularity of the Slit and Kaba during the nineteenth century, by the early twentieth century, it became a mode of dress primarily associated with 'illiterates,' or women without formal schooling (Gott, 2010, p.10). Immediately before and following Ghana's independence in 1957 and encouraged by Nkrumah's exaltation of indigenous forms of dress, the status of the Slit and Kaba was restored; it quickly became a symbol of Ghana's national heritage and a form of dress that was debated, celebrated, and routinely worn by fashion-conscious Ghanaian women (Tranberg & Madison, 2013).

A Silent Heritage, the malleability of the Slit and Kaba has ensured its relevancy as a staple of Ghanaian female dress throughout the 20th and 21st centuries (Gyekye, 2003) often reflecting the political and cultural shifts of specific eras. Whereas immediately following independence, the Slit and Kaba were transformed into a form of elite, nationalist fashion, during the regime and presidency of John Jerry Rawlings (1981 – 2001) it functioned as a populist form of nationalist attire. The inclusion of recognised and powerful women wearing Slit and Kaba likely encouraged other Ghanaian women, both elite and non-elite, to don the iconic garment for a variety of contexts.

Due to its predominance, sewists and fashion designers alike Small to Medium garment production enterprises in Ghana are continually inventing variations of the Slit and Kaba, resulting in the creation and promotion of a dynamic and capricious system of dress. There have been many complaints from clients regarding the changing face of the outfit. These have manifested in the dress losing its originalityand thus generating some form of discomfort for users. This necessitates the implementation of Total QualityManagement (TQM) in the design and production of Slit and Kaba to

continuallyy creates and promote a dynamic and capricious system of Slit and Kaba in Ghana.

Total Quality Management (TQM) implementation in the apparel manufacturing industry has gained prominence in various countries including China, Bangladesh, India and Vietnam (Lu, 2018a; Rahman & Al Amin, 2016) and have unwaveringly remained the world's topmost four (4) leading exporters of garments in 2017. Most of these countries attained these successes because of the implementation of TQM in their manufacturing and other processes (Mottaleb & Sonobe, 2011). Furthermore, as a result of the rapid developments in international competition, apparel industries are obliged to employ innovative approaches to gain a competitive advantage. The limits of acceptable quality levels for the industry has fallen back down due to the effects of liberal policies in international markets (Lu 2018b; WTO 2017).

Total Quality Management (TQM) plays a vital role in improving productivity, product quality and reduces manufacturing cost by reducing rework and scrape (Jaeger & Adair 2016; Moccia 2016).

Total Quality Management (TQM) implementation has excellent applicability in the Ghanaian apparel manufacturing sector, specifically SMEs. Thus, product quality improvement can play a vital role in opening the doors of great opportunities for the country which necessitates a study of how TQM's principles can be successfully implemented in the apparel manufacturing industry in Ghana particularly in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis.

Garment manufacturing businesses in emerging economies such as Ghana are facing severe challenges (Quartey, 2006) from the domestic and international market competition because of their limited potential in embracing innovative approaches to

cope with the existing challenges in the business environment. Consequently, it is unlikely to see these businesses demonstrate any type of advancement in the dynamically shifting global economics. If such potential is not certified in these SMEs, the local economy will continue to be occupied by imported clothing. Thus, to empower local SME garment production businesses to advance their operations continuously, they must afford a high standard of products and services, and provide their workers with the appropriate tools and techniques, particularly those persons involved in the process of continual development.

Nevertheless, since stakeholders have not yet agreed on how to apply TQM principles and techniques meritoriously in the apparel manufacturing industry as indicated by Wickramasinghe & Perera (2016) and Balaji (2012), the need has emerged to conduct this study in the small to medium garment production enterprises in the Accra Metropolis. Due to the lack of TQM studies in Ghana and especially in the apparel manufacturing industry, this study will focus on understanding the process of implementation and examination of TQM in the garment manufacturing sector focusing specifically on the design and production of Slit and Kaba to offer recommendations to ensure an appropriate application of TQM principles, tools and techniques. Ghana is a developing country, and the apparel sector supports the economy of the country. Thus, it is imperative to assess the implementation of TQM principles in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis to determine whether these initiatives can improve their processes.

1.2 Statement of the Problem

Businesses mostly compete on three key issues; quality, price and delivery (Ho, 2010; Phan et al., 2011). If they chose to compete in the market based on the product price, then the level of competition is distinct; the low-cost provider wins. Conversely, businesses who decide on the low-cost approach can find themselves losing premium business to competitors while retaining the low-margin business in the long term (Kaynak & Rogers 2013). Hence, for small to medium garment production enterprises in the Accra Metropolis to survive and develop in the future, they must provide high-quality products.

Again, irrespective of the fact that the implementation of TQM has become popular in the manufacturing sector, not all industries have found it easy to efficiently implement and manage this package (Aamer et al., 2017). While some businesses are unable to correlate their business context with the type of TQM plans to be implemented, a few who do so are unable to sustain it (Abusa & Gibson 2013; Gherbal et al., 2012). There is, therefore, the need to ascertain whether TQM principles are being implemented in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis and if they are, to what extent and how is it being applied and how is its implementation affecting efficiency and improvement in their processes.

Furthermore, although TQM initiatives initially focused on reducing defects and errors (Lee et al., 2013) in products through the use of measurement, statistics, and other problem-solving tools, businesses began to identify that permanent enhancement could not be achieved without exceptional attention to the quality of management practices

used daily. Businesses are thus beginning to realise that the methods they employ to deliver services are the real enablers of quality, customer satisfaction, as well as business consequences (Flint et al., 2011). Nevertheless, the experience of other sectors that have implemented TQM has not always been positive (Mosadeghrad, 2014). Locally, at least in the Ghanaian context to date, little empirical studies appear in the relevant literature that assesses the implementation of TQM principles in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis.

Thus, identifying the critical features of successful implementation of TQM and the difficulties encountered by the implementation in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis is an essential area to be understood. The value of the current study is one of the primary steps towards reaching the needs of the Ghanaian apparel manufacturing sector that need to implement TQM in their processes. With an enhanced comprehension of these issues, it can be a foundation for the development of an appropriate TQM structure for the practical implementation of the sector.

1.3 Purpose of the Study

The primary intent of the current study is to determine the feasibility of implementing TQM principles and finding out its effects on the production of Slit and Kaba in small to medium garment production enterprises.

1.4 Research Objectives

1. To analyse the prospects of TQM implementation in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis
2. To identify the basic pillars required for the implementation of TQM principles in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis.
3. To analyse the implementation of TQM in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis to improve productivity and product quality.
4. To find ways of improving TQM in small to medium garment production enterprises in the Accra Metropolis in the design and production of Slit and Kaba.

1.5 Research Questions

1. What are the benefits of TQM implementation in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis?
2. What are the basic pillars required for the implementation of TQM principles in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis?
3. How can TQM be implemented in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis to improve productivity and product quality?

4. What are the ways of improving TQM in small to medium garment production enterprises in the Accra Metropolis in the design and production of Slit and Kaba during the implementation of quality improvement initiatives?

1.6 Significance of the Study

The purpose of this study was to explore the implementation of TQM in the design and production of Slit and Kaba in small to medium garment production enterprises in the Accra Metropolis. The study is relevant for several reasons. The outcome would help policymakers formulate policies to enhance the operations of the key stakeholders in the industry.

It would also inform practitioners on quality practices that can be introduced into the garment production processes. Generally, it would help improve existing practices and also give credence to the garment manufactured in Ghana. It is hoped that countries elsewhere contending their TQM practices in garment manufacturing would find this study useful to review and improve the implementation of TQM in their garment manufacturing sector. The findings of this study will become building blocks of literature available to subsequent researchers.

1.7 Limitations

First, this study focused on only a minimal sample of Slit and Kaba producers in small to medium garment production enterprises in the Accra Metropolis only as a result of limited well-established garment manufacturing firms. These might affect the generalisation of the findings but might nevertheless provide valuable information on TQM implementing principles in the garment manufacturing industry in general.

Furthermore, there were difficulties with getting some of the businesses to offer the required information regarding their operations. Typically, organisations in Ghana are hesitant in offering information about their operations for fear of the information being used against them and for security reasons. This may further reduces the total number of garment manufacturing businesses that could have been selected for this study.

Again, quantitative data would be collected, and there is always an inherent problem associated with this data collection method. Notably, the issues of the adequacy of the response rate, whether the questions are interpreted in the way they were intended and whether there were sufficient questions to depict the information being sought. These are issues that arise as a result of using questionnaires as an instrument of primary data collection. First of all, the provision would be made for the non-response rate as part of the total questionnaires that would be distributed. Additionally, the researcher would ensure that the instrument developed would achieve validity and reliability.

1.8 Delimitation of the Study

The study was limited to small to medium garment production enterprises in the Accra Metropolis.

1.9 List of Abbreviations

AGOA	The African Growth and Opportunity Act
AQL	Acceptable Quality Level
ASQ	American Society for Quality
CFO	Chief Financial Officer
CM	Cost of Making/Cut and Make/ Cost of Manufacturing

CMT	Cost of Making with Trimmings/Cut, Make & Trim
EFQM	European Foundation for Quality Management
FQM	Framework for Quality Management
GM	Garment manufacturing
ISO	International Organization for Standardization
K&S	Kaba and Slit
LCL	Lower Control Limit .
MDGs	Millennium Development Goals
PDCA	Plan, Do, Check, Act
PPC	Production Planning and control
QA	Quality Assurance
QC	Quality Control
QI	Quality Inspector
QIP	Quality Improvement Plan
QMS	Quality Management System
RMG	Ready Made Garments
SMEs	Mall and Medium Size Enterprises
SPI	Stitch Per Inch
SPL	Stitch per length
SPM	Stitches per Minute
SPT	Stitch per tack
ToC	Theory of Constraints
TQM	Total Quality Management
UCL	Upper Control Limit
WTO	World Trade Organization

1.10 Organization of the Study

The study is organised into five chapters. Chapter one focused on the background of the study, Statement of the Problem, the Purpose of the Study, Objectives of the Study, among others. Chapter two comprises the Review of Literature. Chapter three describes the research methodology employed. This comprised the research design, target population, sample size, sampling procedures,research instruments, data collection procedures, and data analysis techniques. Chapter four focused on analysis and interpretation of the findings of the study, and chapter five consists of the Summary, Conclusions,Recommendations and Suggestions for Further Research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of the literature for the study and includes readings concentrating on the implementation of total quantity management (TQM) in the design and production of Slit and Kaba in small to medium garment production enterprises. It includes the argument of observed literature review for the research that defines the characteristics and terms that relate to the topic; the scope of the review focused on the main subject of the concept of total quality management; quality tools; pillars of total quality management implementation, cost of quality; the implementation of total management in the garment production sector; prospects and barriers to TQM implementation in garment production sector as well as the theoretical and conceptual frameworks among others.

2.2 Defining Quality

The definition of quality is contingent on the role of the individuals describing it. Most consumers have a challenge defining quality; however, they recognise it when they see it. The difficulty in defining quality exists regardless of the product or the service, and this is true for both manufacturing and service organisations (Reeves & Bednar, 1994). Complicating the matter is that the import of quality has transformed over time (Yu et al., 2020;Ryall & Kruithof, 2001). At present, there is no distinct general characterisation of quality. Some individuals interpret quality as performance to standards. Others understand it as meeting the customer's needs or satisfying the customer.

According to Randhawa and Ahuja (2017), quality is a philosophical concept that lacks a general theory in the literature. Mortimore and Stone (1991), for instance, identified four (4) uses of the term quality. According to them, quality is an attribute; a degree or relative value; a description of anything good or excellent, and a non-qualified trait. Ellis (1993) equated quality to standards that must be met to achieve particular purposes to the satisfaction of customers. Harvey and Green (1993) identified the following five (5) discrete but interrelated ways of appreciating quality.

1. ***Quality as exceptional***: This idea is similar to the traditional and elitist academic opinion that views quality as being unique and distinctive. In educational terms, it epitomises excellence, high-level performance and passing the least set of standards unattainable. In this view, quality is achieved if the standards are surpassed.
2. ***Quality as perfection:*** Quality, in this case, is seen as a consistent or flawless outcome. It centres on the specification of processes. The interrelated concepts of zero defects also culminate in and getting things right the first time. This idea is grounded on the premise that if consistency can be realised, then quality would be achieved as a matter of course. This dimension of quality is invariably applicable in manufacturing since they aim at delivering equal or defect-free products.
3. ***Quality as fitness for purpose***: The main issue here is, whose purposes are to be fulfilled? Conformity with institutional missions as well as the capacity to meeting customer's requirements is the primary viewpoint. There is widespread agreement on the critique that 'fitness for purpose' alone is too broad an interpretation of quality. Hence the need to complement it. The analysis of quality as the fitness of purpose linked to the adequacy of the

quality-related intentions of an organisation provides a check on fitness for purpose.

4. ***Quality as value for money***: This view identifies quality in terms of return on investment. This opinion embodies efficiency, effectiveness, and accountability. It focuses on how the process efficiently uses the inputs in a manner that they can produce the desired outputs.
5. ***Quality as transformation***: This relates to the notion that views quality in terms of the transformation of products from one state to a different state.

Also, there is an emerging debate in the literature with regards to quality as a culture (Harvey & Stensaker 2008). This view appreciates the value of the organisational view of quality as a process of change, where each entity is concerned with and recognises the significance of quality. This way of conceptualisation is related to the intrinsic traits of businesses in which quality is considered as a driving force behind what everybody does in an organisation. Harvey and Stensaker (2008) explain that quality culture is not likely to be constructed irrespective of the context in which it is located. From the above, it can be noted that quality is a construct, and its meaning is contextual. The various opinions on what constitutes quality are rooted in the values and assumptions of the different authors about nature, purpose and fundamental processes involved. Relative to a product such as appeal the ensuing has been established:

1. ***Conformance to specifications*** which measures how well the product meets the targets and tolerances determined by its designers. For instance, in garment manufacturing, the dimensions of a garment-facing may be detailed by its design engineers as 2.05 inches. This would imply that the target dimension is 2 inches; however, the dimensions can differ between 1.95 and 2.05 inches.

This instances demonstrate, conformance to specification and is directly measurable, although it may not be directly linked to the customer's indication of quality (Westphal et al., 1997).

2. ***Fitness for the use*** which emphasize how well the product performs its anticipated function or use. For instance, an 'A' shape and flared skirt both meet fitness for use description if one considers covering their nakedness as the projected function. Nevertheless, if the description becomes more precise and assumes that the envisioned use for wearing an evening occasion, the flared skirt has a superior fitness for use.
3. ***Value for price paid,*** which is a definition of quality that consumers frequently use for product or service practicality. This is the only description that amalgamates economics with customer standards. Value for price paid assumes that the meaning of quality is price sensitive. For instance, if one desires to sign up for a personal sewing workshop and realised that the same class is being trained at two different institutions at significantly different training rates. If one takes the less expensive workshop, they will think that one has received superior value for the price.
4. ***Support services*** which depend on how often the quality of a product or service is judged. Quality does not relate only to the product or service itself; it also relates to the individuals, processes, and organisational environment related to it. For instance, the quality of a garment manufacturing company is judged not only by the quality of staff and training but also by the efficiency and accuracy of sewing.
5. ***Psychological criteria*** which are a subjective description that centres on the judgmental assessment of what constitutes product or service quality. Varied

dynamics contribute to the assessment, including the atmosphere of the environment or the perceived stature of the product. For instance, garment sewn may be of average fit. However, a very welcoming salesperson may leave the imprint of high quality.

2.3 The Total Quality Management Concept

The quality management concept can be a mystifying conception due to distinct criteria based on roles in the sequence of events which are established on a person's standpoints within the value chain. Seawright and Young (1996) defined quality as the degree of excellence of something as measured against another comparable thing. Nevertheless, within the business setting, quality is connected to product and service features and consumer satisfaction (Sebastianelli & Tamimi 2002). It can differ according to diverse viewpoints, including customer and organisation perspectives, as inferred by Feigenbaum (1983) quality is the features through which a product or services meet the expectations of the shopper.

While quality encompasses product and service features (Reeves & Bednar 1995), quality management deals with the operation process and organisation, and then signifies the realisation of quality. Quality is considered to have three (3) key constituents, quality assurance, quality control and quality improvement. To Crosby (1979), quality management is grounded on a zero-defect philosophy. This philosophy focuses on averting unintended errors by understanding the high cost of quality defects and through thinking incessantly about where faults might arise to avert these errors if possible, to afford high quality and quantity products or services within the lowest budget, thus increasing customer satisfaction and improving firm reputation.

Total Quality Management is a management tactic that had become prevalent since the early 1980's when it turned out to be an influential technique of competitiveness. Consequently, Deming (1986) defined TQM as organisation events encompassing everybody in a corporation in an entirely systemic and combined effort toward refining performance at all levels. These integrations lead to improved customer satisfaction by controlling quality, costs as well as product developments. According to Yang (2008) and Sebastianelli and Tamimi (2002), TQM is based on a continuous achievement of consumer satisfaction, through the integration of management and worker commitment, preparation, continuous improvement and good supplier relations.

Total Quality Management is defined by Zairi (2013) as a continuous process of improvement for persons, groups of individuals and the entire organisation. A quality section in an organisation is based on incorporating all organisational functions. As well as focusing on satisfying customer requirements to realise organisational aims, which can be reached by affording personnel with the needed preparation towards being self-inspired and controlled to come up with innovative concepts and approaches to undertaking the work and dealing with customers to afford a high-quality service. Lari and Asllani (2013) infer that TQM is related to the organisation itself and is perceived as incorporation between the technical, social and human structures in any organisation. Thus, its impact on an organisation's status and client satisfaction.

Consequently, all sections have to amalgamate to advance the organisation's effectiveness, competitiveness, and structure. According to Dale and Wan (2002), there are several descriptions and clarifications of TQM due to the varied perceptions of quality; however, Dale and Wan specify that TQM is the shared co-operation of

everybody in an organisation and linked with business processes to offer value for money for products or services which meet and confidently surpass the requirements and expectations of consumers.

Dale and Wan suggests that TQM includes all facets of quality management for organisations, comprising suppliers, consumers and personnel, and their amalgamation with the crucial business process. Furthermore, TQM necessitates all organisations to apply TQM philosophies in every division and at every level, with an equilibrium between technical, people and managerial matters. Hence, all departments have to integrate to attain the necessary outcome of the TQM implementation.

Khan (2003) points to four (4) fundamental features on which the TQM philosophy is centred these include worker involvement, empowerment and ownership, continuous improvement, consumer focus and employment of management commitment, where TQM is the basis of numerous undertakings, including management and employee commitment, meeting consumer desires, improvement teams, decreasing development cycle time, worker involvement and empowerment as well as strategic planning. Oakland (2003) specifies that TQM is a management function targeted at refining effectiveness, competitiveness and litheness through strategic planning, management and worker involvement and process improvement.

TQM must be a way of thinking and carrying out a job, and this includes all persons within an organisation, by refining communication and employee involvement to influence and advance quality positively. To Alsughayir (2014) TQM is a technique by which management, as well as workforces, can be involved in continuous improvement of the production of goods or services. TQM is considered a

management philosophy, intended at decreasing losses and increasing business outcomes. Furthermore, TQM is based on an amalgamation of management tools and seeks to incorporate all organisational functions to emphasis meeting organisational aims and consumer expectations and requirements.

Consequently, there is no single, explicit theoretical formalisation of TQM, as specified by Alsmadi et al., (2014). Nevertheless, Ishikawa (1985), Deming (1986), and Juran (1999) infer that organisations need a quality system and quality culture. They offer the fundamental assumptions of TQM as a discipline and philosophy of management which organises, plans and unceasingly advances activities in which management and personnel have to contribute to increasing processes and outputs.

Consequently, TQM is presented differently and from different standpoints. However, TQM descriptions differ from country to country, based on national as well as organisational culture and perception of quality, and the prerequisite of that culture. Generally, nonetheless, it is understood as a management philosophy, and the majority of scholars relate the core role of TQM implementation to the management level of commitment towards quality improvement.

Total quality management is a shared responsibility in an organisation intended at creating value-for-money products or services to meet and exceed consumer needs and expectations (Sila & Ebrahimpour 2005). It has been efficaciously applied in the manufacturing sector to control processes and circumvent insufficiencies, leading not only to savings in monetary terms and time but also to high levels of consumer satisfaction (Karatepe, 2013).

Few manufacturing processes are aimed at the production of single items whereas in Garment manufacturing, the work is considered to be repetitive and generally, garment specifications are altered with each assignment (Wickramasinghe & Perera 2016). Nonetheless, not only are garments necessarily repeated products which can be repeatedly enriched but, more significantly, the processes Garment manufacturing is itself recurrent in its basics from task to task.

Consequently, notwithstanding the task size, the majority of inputs into garment manufacturing are repeated. Much maintenance work also applies a repeat process. Therefore, the focus is not on the production of the garment alone but on designing and planning the production as well. Therefore, improvement tools that are presently being applied must be adapted and used in the industry. Nevertheless, defects and errors that arise during the Garment manufacture phases offer opportunities for learning and improvement. One of the key intents of TQM is to increase consumer satisfaction (Rahman & Al Amin, 2016). It necessitates a commitment to ruminate the consumer perspective in all processes.

Several concepts have been effectively applied in the manufacturing sector to realise continual improvement and ultimately, product quality. One of such concepts is the Juran Trilogy (Juran, 1992), which integrates three (3) characteristics; quality planning, quality control and quality improvement.

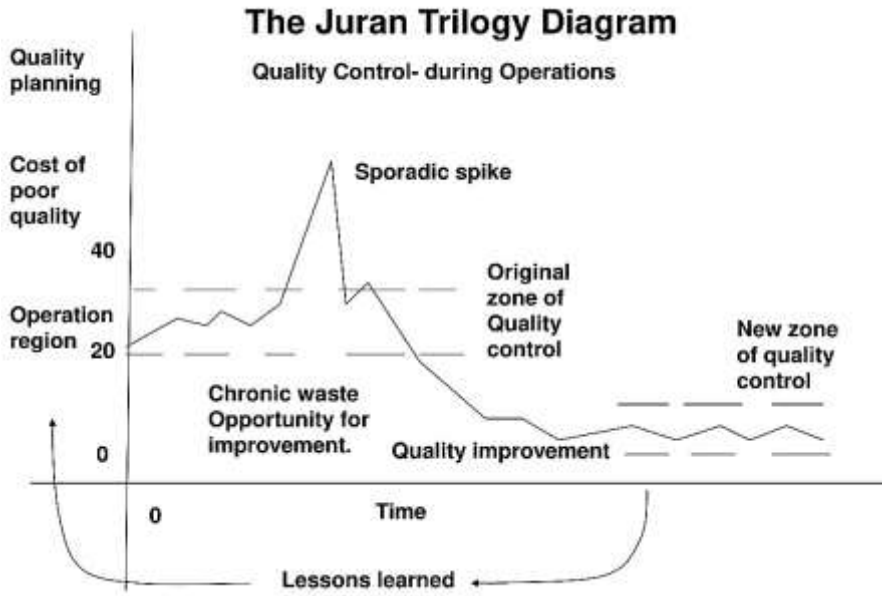

Figure 2.1 The Juran Trilogy

Source: Juran (1992 p.17)

According to Aamer et al., (2017), quality planning is the act of satiating consumers by developing products and processes that meet their requirements. To do so, a sequence of stages is charted. They includes setting up quality objectives, identifying consumer requirements, developing products that meet their demands, instituting process controls and assessing quality performance. The Juran Trilogy necessitates management to comprehend the ensuing three (3) crucial methodologies: (Juran 1992).

1. ***The Planning Methodology*** - This approach advances and puts in place the planned and strategic goals that must be realised to achieve financial, operational, as well as quality outcomes. Setting organisational goals is termed strategic planning. Next, there is the preparation of innovative goods or services, which must consider the needs of the consumer to attain customer satisfaction. This is referred to as quality planning, which symbolises the product and process design process. The umbrella word planning is applied to

denote the activities conducted in preparation to do something. Quality Planning institutes, among other things, precise standards and/or specifications for specific products and processes. Financial planning sets out the financial aims and the means to realise them.

2. ***The Control Methodology*** – The next management approach is employed to avert or correct undesirable or unanticipated change. This process is termed control. More specifically, control entails measuring actual performance, equating it to the target or standard, and taking the necessary action to correct the difference. Control preserves the standards and/or requirements outlined during the planning phase. Its goal is constancy and stability.
3. ***The Improvement Methodology*** - The third approach constructs a breakthrough system to generate planned, anticipated, and managed modification. This procedure is termed a breakthrough. Breakthrough is an intended change, a dynamic and influential movement to exceptional levels of organisational performance than are currently active in the strategy and upheld by existing controls. Breakthrough results in attaining higher targets, meeting competitive standards as well as specifications, decreasing waste, dipping cost, and affording superior products and services to consumers.

Considerable modifications in the culture and structure of the Garment manufacturing industry are required to allow the improvements in the project process that will provide high-quality garments (Rahman & Al Amin 2016; Mottaleb & Sonobe 2011). These include changes in working conditions (Talapatra & Rahman, 2016), skills and training, approaches to design, application of technology and relationships between companies. Furthermore, if Garment manufacturing industries are to share in the

benefits of value-added performance the aims and targets that it sets must be directly related to consumer's perceptions of performance (Mulat et al., 2018; Lee et al., 2013). This symbolises measures of improvement regarding predictability, cost, time, as well as quality (Nupur et al., 2018).

Consumers will then be able to recognise the improved value and reward businesses that deliver them. As inferred by (Talapatra & Rahman 2016) and Balaji (2012), targets must also be set for refining the quality and efficiency of manufacturing processes in terms of safety and labour productivity. Thus, corners are not cut and garment manufacturing businesses as well as their workforce share in the benefits of success to deliver continuous improvement. Nonetheless, in the current global competitive marketplace, the requirements, as well as expectations of consumers, are increasing as they desire enhanced quality products due to high competition which affords consumers more control over their choice (Lu 2018; Chowdhury & Haque 2013).

Additionally, due to globalisation and growing competition worldwide, businesses are expected to keep up with their competitors and increase their market share. Therefore, quality is perceived as the suitable technique to increase business competitiveness, sustainability, and performance as it emphases on the whole organisation and produces a relation between all participants and consumers in understanding their wants and desires (Ho 2010).

The effective implementation of TQM in the manufacturing sector in some countries such as Europe, USA and Japan (Peris-Ortiz et al., 2015; Phan et al., 2011) have led other corporations to implement TQM to advance their performance and consumer satisfaction. Thus, numerous enterprises have embraced quality management tools and

techniques without even comprehending the inevitability or benefits of quality management. These companies believe that devising quality management within an organisation may improve the business's status and position in the marketplace.

Nevertheless, the Garment manufacturing industry equated to other sectors is viewed as one with poor quality emphasis (Balaji 2012; Islam et al., 2006). Total Quality Management is more and more being embraced within the garment industry as an initiative for resolving quality concerns within the industry and to meet the incessant desires of consumers (Wickramasinghe & Perera, 2016).

According to Wickramasinghe and Perera (2016) and Karatepe (2013), TQM has the potential to advance business outcomes, worker involvement and accomplishment, more excellent consumer orientation and satisfaction, team working and improved management of workforces within the organisation, however, notwithstanding the innumerable benefits of TQM adoption, businesses have been recurrently struggling with its implementation, as it necessitates long time and cultural transformation (Mosadeghrad 2014).

As per the previous descriptions of TQM, it can be determined that TQM is initially perceived as a technique for reducing defects and, thus, to decrease costs and increase profit margins, while at the same time offer consumers high-quality products within the lowest budget. Manufacturing organisations manufacture tangible products that can be seen, touched, and directly measured, whereas, service organisations, they produce products that are intangible and cannot be seen or touched but experienced. Quality, thus, is more related to management, personnel and operational processes instead of the final products, though from consumers opinion, quality is directly linked

with the final product, since quality perceived by consumers is the difference between the pre-purchase anticipation and after acquisition performance (Kim 2016; Grigoroudis & Siskos 2010).

2.4 Quality Tools

Total Quality Management places a great deal of obligation on all workforces. If workers are to recognise and correct quality concerns, they require appropriate preparation Petliushenko et al., 2018; Kayna & Rogers 2013). Employees have to appreciate how to measure quality using a variety of quality control tools, how to interpret outcomes, and how to correct issues. The seven (7) tools of quality control which are easy to comprehend, hitherto very beneficial in identifying and examining quality concerns.

2.4.1 Cause-and-Effect Diagrams

Cause-and-effect diagrams are diagrams that identify possible causes for specific quality issues. They has frequently termed fishbone diagrams because they appear just like the bones of a fish. The head of the fish is the quality issue, like damaged zippers on clothing. The diagram is drawn such that the spine of the fish joins the head to the likely source of the problem. These causes may be linked to the machines, workers, measurement, suppliers, materials, and several other features of the manufacturing process.

Each of these likely causes may then have lesser “bones” that address specific concerns that relate to each cause. For instance, an issue with machines could as a result of a need for change, old equipment, or tooling issues. “Likewise, a problem with employees could be linked to the absence of preparation, inadequate supervision, or

exhaustion. Cause-and-effect diagrams are problem-solving tools usually applied by quality control teams. Precise causes of problems can be discovered through brainstorming. The advancement of a cause-and-effect diagram necessitates the team to think through all the potential causes of poor quality".

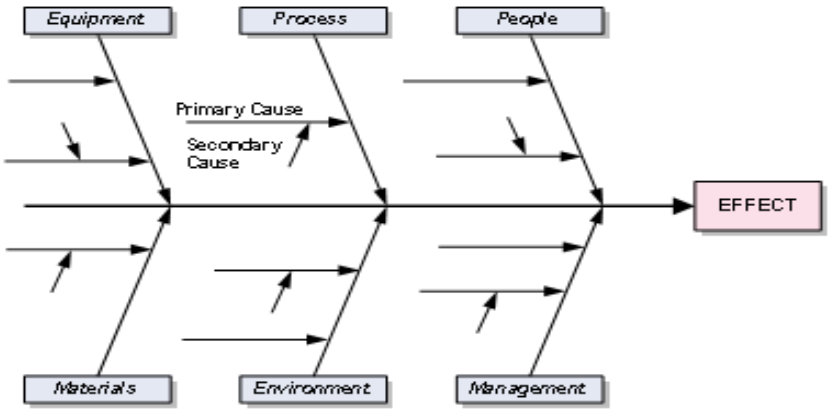

Figure 2.2 Cause-and-Effect Diagrams

Source: Ishikawa (1991)

2.4.2 Flowcharts

A flowchart is a schematic diagram of the sequence of stages involved in a process. It offers a graphic tool that is easy to apply and comprehend. By observing the phases involved in an operation, everybody develops a perfect representation of how the process works and where issues might arise.

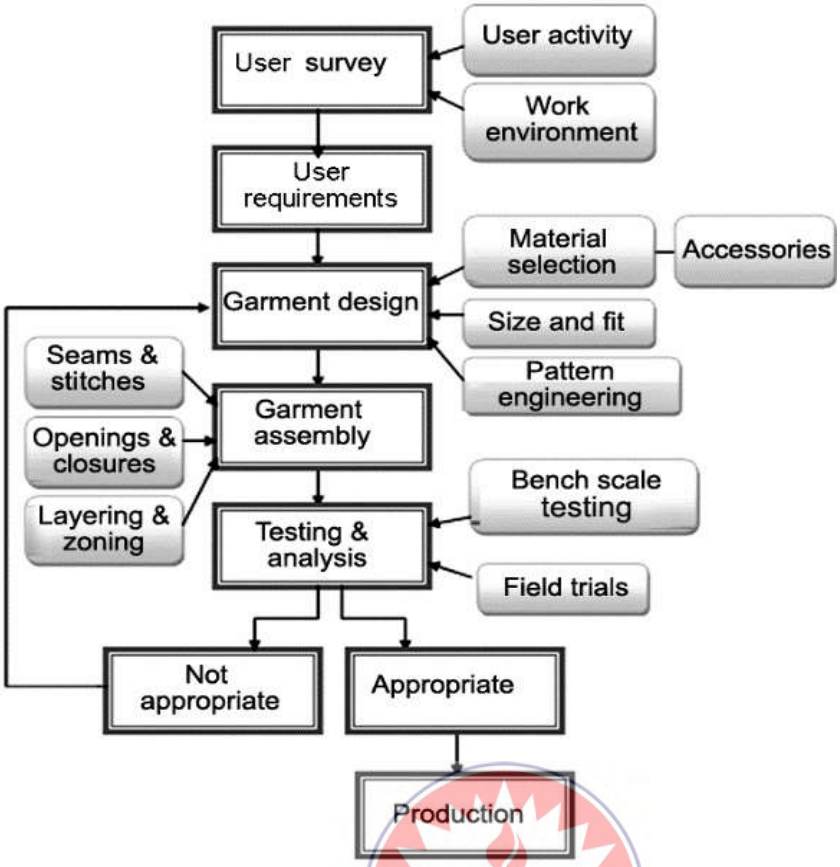

Figure 2.3 Flow chart depicting the stages in the design of functional clothing.

Source: Gupta (2011)

2.4.3 Checklists

A checklist signifies a list of common defects and the number of observed incidences of these defects. It is an unpretentious hitherto operative factfinding tool that permits the employee to gather precise facts concerning the defects detected.

Defect Types	Total Defects	Running %
Uneven Point	45	16.48%
Width Irregular	35	29.30%
Bad Shape	34	41.76%
Improper Stch	32	53.48%
Slip of Stch	28	63.74%
Number Mistake	20	71.06%
Uneven Box	17	77.29%
Raw Edge	12	81.68%
Check Bias	11	85.71%
Open Stitch	9	89.01%
Sleeve Tuck Loose	7	91.58%
Back Show	5	93.41%
Pleat	5	95.24%
Broken stitch	5	97.07%
T/Tension	3	98.17%
Top Side Loose	3	99.27%
Over Stitch	2	100.00%
Skip Stch	0	100.00%
Sleeve Tuck Reverse	0	100.00%
Grand Total	273	

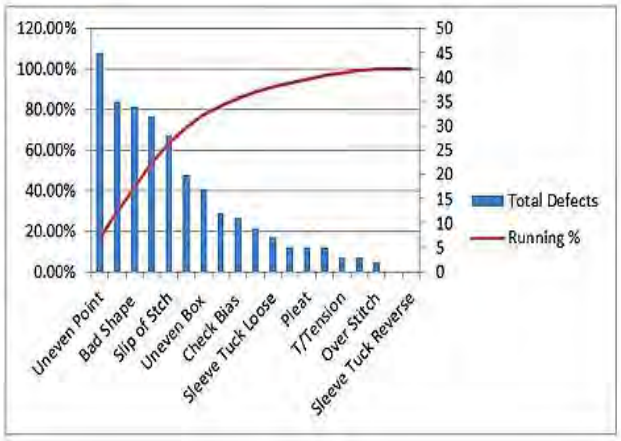

Figure 2.4 Checklists of common defects in placket sleeve

Source: ***Chowdhury and Haque (2013)***

2.4.4 Control Charts

Control charts are an essential quality control tool. These charts are applied to assess if a process is functioning within expectations regarding some measured value like weight, width, or volume. In the production process, it is used to check if operations are within expectations. To assess whether or not a process is in control, the variable is regularly measured and plotted on a control chart. The chart has a line down the midpoint signifying the average value of the variable being measured. Above and below the centre line are two lines, termed the upper control limit (UCL) and the lower control limit (LCL). As long as the perceived values fall within the upper and lower control limits, the procedure is in control, and there is no issue with quality. When a measured opinion falls outside of these boundaries, there is an issue.

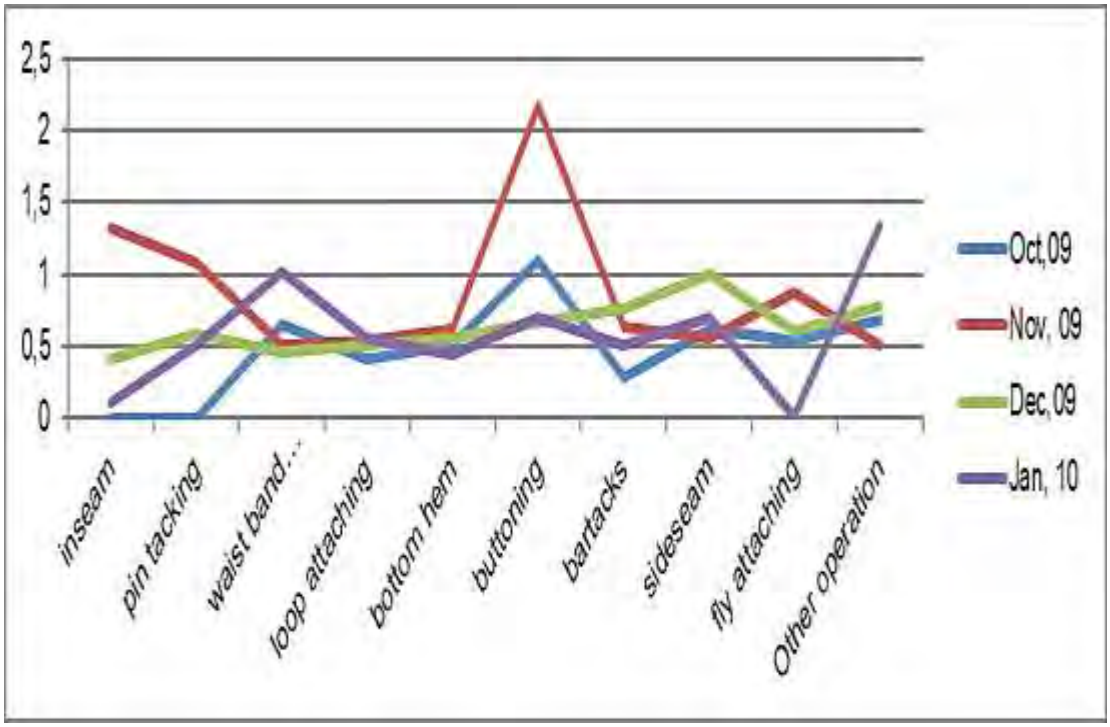

Figure 2.5 Control Charts

Source: ***Mulat et al., (2018)***

2.4.5 Scatter Diagrams

Scatter diagrams are diagrams that display how two (2) distinct variables are connected. They are predominantly beneficial in discovering the amount of correlation, or the degree of a linear relationship, between two (2) variables. Two variables may also be correlated negatively so that an increase in one of the variables is related to a reduction in the other. The higher the extent of correlation, the more linear is the observations in the scatter diagram. Conversely, the more scattered the annotations in the diagram, the less correlation occurs between the variables. Of course, other types of associations can also be perceived on a scatter diagram, such as an inverted.

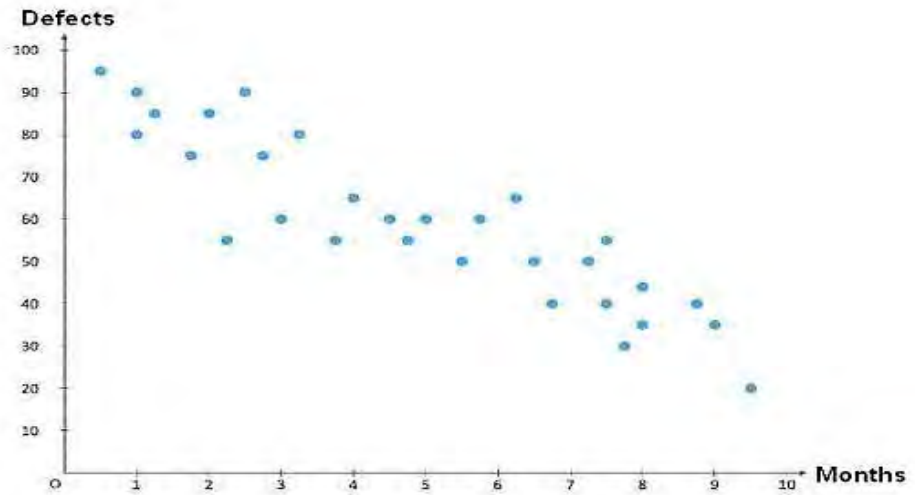

Figure 2.6 Scatter Diagrams

Source: ***Mulat et al., (2018)***

2.4.6 Pareto Analysis

Pareto analysis is a system employed to recognise quality issues based on their extent of significance. The reason behind Pareto analysis is that only a few quality issues are essential, whereas several others are not vital. The procedure was named after Vilfredo Pareto, a 19th-century Italian economist who established that only a small fraction of people controlled most of the wealth. This notion has often been termed the 80–20 rule and has been protracted to several fields. In Total Quality Management, the idea behind Pareto's principle is that most quality issues are a consequence of only a few causes. The trick is to recognise these causes.

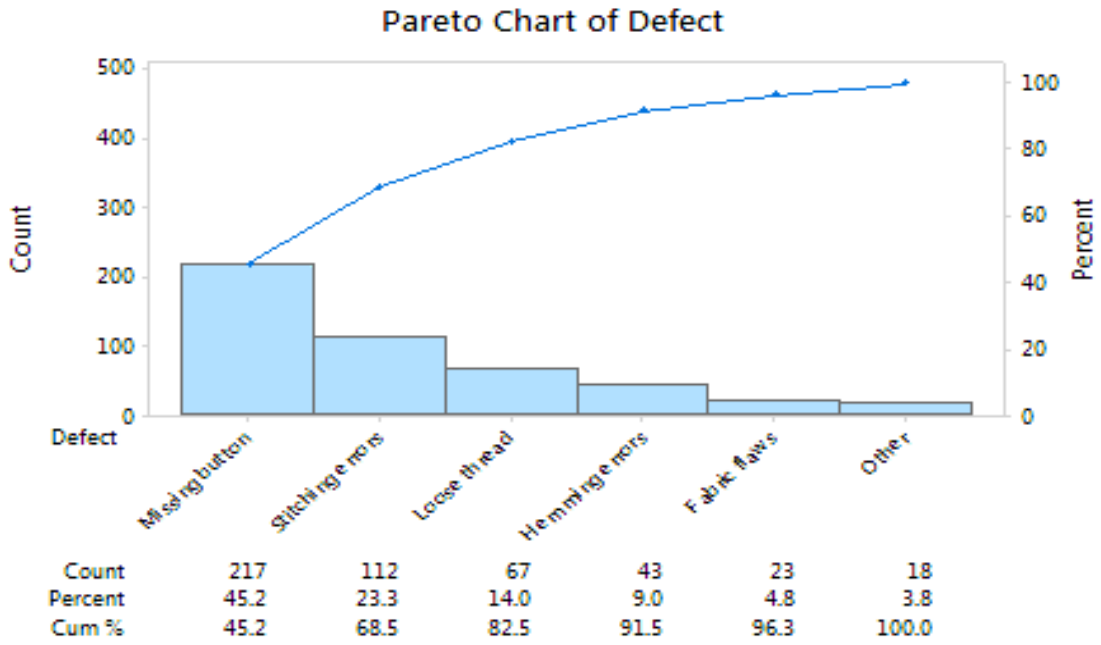

Figure 2.7 Pareto Analysis

Source: Mulat et al., (2018)

2.5 Implementation of Total Quality Management

Several studies including (Samir et al., 2018; Neyestani & Juanzon, 2016; Kaynak & Rogers, 2013) assert that the majority of TQM programmes are not capable of realising their specified objectives. They contends that there are fundamental defects in the TQM philosophy. Nevertheless, in contrast, the mainstream researchers are in favour of the argument that nothing is flawed regarding the TQM philosophy. Instead, organisations are not capable of implementing the approach successfully.

For instance, according to Mosadeghrad, (2014), TQM failures may be ascribed more to the failure to execute and manage them as a system and less from any fundamental faults in the system or its constituents. Oakland and Tanner (2007) concur with this argument. This demonstrates that how TQM is executed has to be considered. Thus, a

variety of strategies and frameworks on the actual implementation of TQM philosophy are obtainable in the literature. Numerous leading researchers, including Deming (1986), Crosby (1984), Juran (1989), Oakland (2001) and Dale et al., (2007), have addressed these characteristics. In the same way, models such as ISO 9001:2008 and the EFQM Excellence Model has further provided frameworks for the implementation of TQM philosophies.

Nonetheless, it is challenging to discover an agreement on the phases involved. Amid different frameworks, the sequence suggested by Deming (2000) is viewed to be a broad approach for the implementation of any transformation and improvement initiative. This sequence follows a coherent structure, which commences with the preparation of change, followed by the implementation of the change programme. Consequently, the outcomes of the implementation of the scheduled initiatives are revised and insufficiencies in the preparation stage are identified. In the final stage, a decision is made whether the change must be approved or not. Therefore, this cycle goes on recurrent.

Quality Planning: The structured procedure for designing products and services that meet innovative breakthrough objectives and guarantee that client needs are met.

Quality Control: **A** comprehensive managerial process for shepherding operations to offer stability to avoid adverse change and to uphold the status quo. Quality control may likewise be defined as a procedure for meeting the established objectives by assessing and equating actual performance and prearranged performance and acting on the difference.

***Quality Improvement*:** Quality Improvement: The procedure for generating breakthrough levels of performance by eradicating wastes and defects to reduce the cost of poor quality.

Figure 2.8 The quality Juran Trilogy

Source: Adapted from Juran and Godfrey (1999)

Likewise, Crosby (1984) established a fourteen step mainstays for quality improvement. They includes management commitment; quality improvement team; quality measurement; the cost of quality evaluation; quality awareness; corrective action; establish an ad hoc committee for the zero defects program; supervisor training; zero defects day; goal setting; error cause removal;recognition; quality councils and do it over again. Juran (1986) also suggests a more comprehensive and precise insight regarding the management of quality initiatives in his trilogy.

Juran defines three (3) stages for the effective management of quality. These stages are quality planning, quality control, and quality improvement. Table 2.3 illustrates the steps which need to be taken within these three phases. Juran argues that these three phases must be completed to minimise chronic waste. Furthermore, this cycle needs

to be repeated for continuous improvement. The trilogy diagram demonstrates how chronic waste varies from the quality control phase to the quality improvement phase. Juran and Godfrey (1999) emphasise that organisations should go through all these phases repeatedly for the elimination or minimisation of chronic waste and to improve the quality of their products.

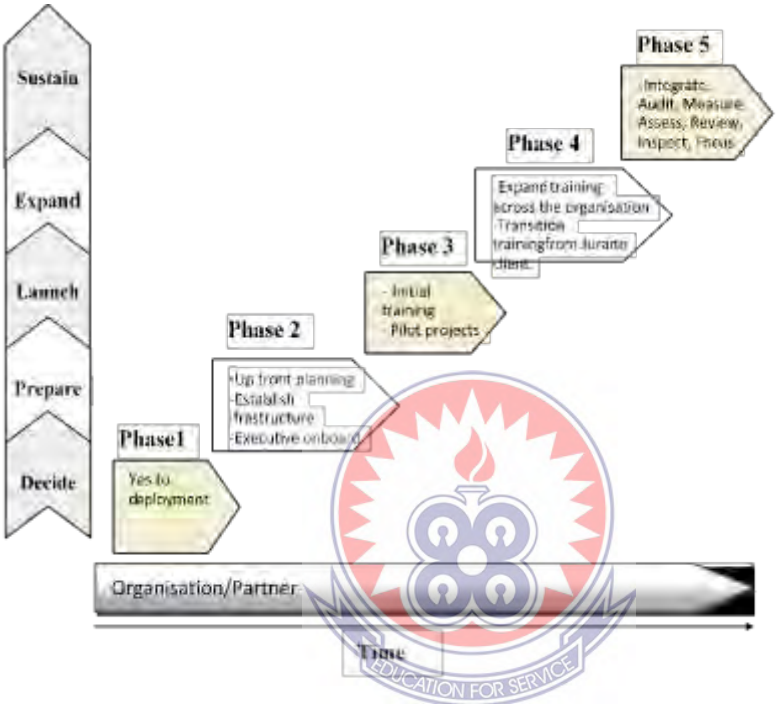

Figure 2.9 Jurans' quality planning and analysis

Source: Gryna et al., (2007)

Gryna et al., (2007) offer a roadmap for enterprise quality. The road map has some semblance to Deming's cycle and may be viewed as a comprehensive and extended form. The initial two stages in the Gryna et al., (2007) framework appear similar to Deming's cycle. Nevertheless, they divide up Deming's Plan phase into dual phases, *Decide* and *Prepare*. In the Decide stage, a member of the management team resolves to implement change and then gathers the best evidence regarding the change. Whereas

in the prepare stage, the infrastructure necessary for the change is established and all management is involved.

An aspect which is dissimilar from Deming's cycle is the deployment of the plan. According to Gryna et al., (2007) in the first stage of implementation, organisations must implement pilot projects. The lessons learned from the pilot project must be appropriately revised, and then these projects must be extended. The final three stages of Gryna et al. covers all the features cited in the *Study* and *Act* stages of Deming's cycle. The Gryna et al., framework further covers the majority of the fourteen (14) phases found in Crosby (1984).

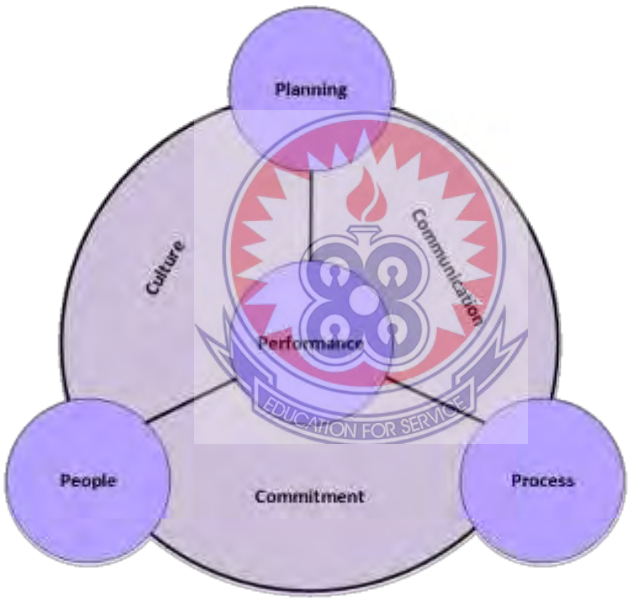

Figure 2.10 Framework For Quality Management

Source: Oakland (2004)

This model, planning, process and people play crucial roles in providing quality products and refining organisational performance. Oakland (2004) termed these four (4) constructs hard management necessities. Oakland upholds that transformation in the organisational culture, commitment of the top management and the formation of

communication channels are imperative as well. Oakland recommends that effective planning must be the initial stage in the implementation of quality management initiatives.

The review of the literature related to the implementation of total quality management highlights some crucial characteristics that have to be considered for the effective implementation of any TQM programme. These characteristics comprise top management commitment to total quality management; identification of clients and their desires, process review, gap analysis, workforce training and development, monitoring of the processes and measurement of the performance.

2.5.1 Top Management Commitment to Total Quality Management

One of the essential things recommended in the literature for the effective implementation of total quality management is top management commitment. Researchers such as Deming (1986), Crosby (1984) and Oakland (2004) approve that top management must lead the TQM implementation. According to Sony et al., (2020), the role of top management in the effective implementation of enrichment initiatives is essential. Aamer et al., (2017) assert that the implementation of the technical approaches and philosophies of TQM necessitates a quality of management variables such as managerial values, attitudes, skills, and behaviour which allow TQM to flourish over time.

2.6 Cost of Quality

The reason quality has attained such eminence is that organisations have reached an appreciation of the high price of poor quality. Quality influences all facets of the organisation and has profound cost consequences (Ehsan 2013; Castillo-Villar et al.,

2012; Sandoval-Chavez & Beruvides, 1998). The most apparent consequence transpires when poor quality makes disgruntled customers and ultimately leads to loss of business (Gershon & Christobe, 2006; Freiesleben, 2004). Nonetheless, quality has several extra costs, which can be divided into two (2) classes. The initial classification entails costs essential for realising high quality, which is termed quality control costs (Rasamanie & Kanapathy, 2011). These are of two (2) categories: prevention costs and appraisal costs. The next classification involves the cost consequences of poor quality, which is termed quality failure costs (Plunket & Dale 1988). These consist of external failure costs, as well as internal failure costs.

1. ***Prevention costs*** include all the costs acquired in the process of averting poor quality from happening. They comprise quality planning costs, like the costs of developing and implementing a quality strategy (Ravitz, 1991). Also incorporated are the costs of product and process design, from gathering consumer statistics to planning processes that realise conformance to specifications. Worker training in quality measurement is encompassed as a portion of this cost, and the costs of upholding records of information and data related to quality (Sandoval-Chavez & Beruvides, 1997; Porter & Rayner 1992).
2. ***Appraisal costs*** include costs incurred in the process of revealing defects. They comprises the cost of quality inspections, product testing, as well as performing audits to ensure that quality criteria are being met (Sansalvador & Brotons 2013). Also encompassed in this group are the costs of employee time expended measuring quality and the cost of equipment employed for quality assessment (Schiffauerova & Thomson 2006; Schneiderman, 1986).

3. ***Internal failure costs*** are related to determining poor product quality before the product gets to the consumer location. A unique category of internal failure cost is reworked, which is the cost needed for rectifying the defective article (Sedevich, 2012). Occasionally the item is so defective that it cannot be rectified and must be thrown away. This is called scrap, and its costs include all the material, labour, and machine cost spent in producing the defective product (Tye et al., 2011; Yang, 2008). Other categories of internal failure costs consist of the cost of machine downtime as a result of failures in the process and the costs of discounting faulty items for salvage cost.
4. ***External failure*** **costs** are connected with quality concerns that transpire relative to the consumer. These costs may be predominantly harmful because consumer faith and loyalty can be challenging to recapture (Karatepe, 2013). They comprise everything from consumer grievances, product retuns, and repairs, to warranty claims,recalls, and even litigation charges resultant from product liability problems. A final constituent of this cost is lost sales and lost clients (Kim 2016).

2.7 The Implementation of TQM in the Garment Manufacturing Sector

Implementing TQM in Garment manufacturing signifies a comprehensive transformation to every facet of the Garment manufacturing process. Some studies have proven that the process of transformation is challenging since the Garment manufacturing sector has been historically reluctant to implement change (Rahman & Amin, 2016; Lee et al., 2013). Again, studies including (Neyestani & Juanzon 2016; Gherbal et al., 2012; Seetharaman et al., 2006) have discoursed on the TQM's critical success factors, and some of these elements were common in most of these studies.

The Garment manufacturing sector plays a significant role in modern economies because of their role in clothing humanity as well as their flexibility and ability to innovate. In nearly every country, Garment manufacturing industries play a significant role in providing employment opportunities and supporting large-scale manufacturing of garments (Mottaleb & Sonobe 2011). It is essential, thus, for Garment manufacturing industries to remain competitive as they are considered the lifeblood of a modern economy because of the changing trends in world textile and Garment trade (Lu 2018a). Besides, Wickramasinghe and Perera (2016) suggest that Garment manufacturing sector do not only contribute to outputs and employment; they also affect the competitive power of the economy.

The garment manufacturing sector is often suppliers of Garment products to large retailers and consumers; consequently, a lack of product quality from Garment manufacturing industries could affect the competitiveness of these retailers (Cho & Kang 2001). TQM implementation, according to Nupur et al., (2018), is considered a way for Garment manufacturing industries to improve the quality of their products. Total quality management as a philosophy is of particular importance to Garment manufacturing industries operating in a developing country since it can foster continual improvement through a systematic, integrated, consistency.

The continuously growing competition in the marketplace has forced many garment manufacturing sectors to begin focusing on quality improvements and cost reduction to stay competitive (Balaji 2012). According to Syduzzaman et al., (2016), there is potential to improve the competitive performance of Garment manufacturing sector. Additionally, Total quality management has been widely applied for improving competitiveness around the world. Although the interest and use of total quality

management continue to be high among other organisations, Garment manufacturing industries still lack behind in quality management implementation (Syduzzaman et al., 2016).

Studies including Syduzzaman et al., (2016) and Mulat et al., (2018) has revealed that total quality management can be applied by Garment manufacturing industries with considerable success. An introduction of quality management to Garment manufacturing can assist sharpen garment manufacturing industries' market focus, to become more effectual, harness their human resources better, and advance their competitiveness. According to Wickramasinghe and Perera (2016), the importance, of quality and the adoption of quality management in Garment manufacturing industries is not restricted to their relationship with the consumer.

Also, the adoption of total quality management can help Garment manufacturing industries to manage the transfer from the incubation stage to maturity stage effectively because the implementation creates a much stronger focus on customer needs and expectations. Besides, total quality management creates effective and efficient business processes and the execution of skills to deliver low-cost, high-quality products (Islam & Haque, 2012b).

Balaji (2012) infers that Garment manufacturing industries have the advantage to adapt quality principles, since they have direct contact with consumer requirements, and managers have total power to decision-making. Furthermore, Garment manufacturing industries are believed to have an advantage over the other manufacturing organisation in implementing quality management, due to the flexibility of their structure, innovation ability, lack of hierarchy positions and healthy organisational culture. Additionally, TQM principles and techniques provide an excellent range of tools for

measuring, analysing, and improving the performance of a process (van Kemenade, 2018; Gimenez-Espin, 2013).

Garment manufacturing industries as inferred by Burris (2015) have some inherent advantages over other manufacturing organisations, such as being closer to the customer, being more flexible in their operations, being able to be innovative, have more workforce involvement and have more effective communication systems. Balaji (2012) opinion that the potential advantage for Garment manufacturing industries is their natural visibility and involvement of the managers, and if they are committed to driving the TQM effort, then their approach will be visible and apparent to all employees. However, Balaji, specifies that Garment manufacturing industries planning to implement TQM, need an approach better tailored for the small organisation context, and focused on changing process.

2.8 Pillars of Total Quality Management Implementation

The implementation of TQM in practice necessitates an organisational culture and climate. This takes time and endurance to finish the process (Petliushenko et al.,2018). The procedure does not happen overnight; the outcomes may not be appreciated for an extended period. Numerous stages must be taken in the process of shifting to quality management in an organisation. Jablonski (1994) acknowledged six (6) qualities for the successful implementation of a TQM program. They includes customer focus, process focus, prevention and inspection, worker enablement and compensation, fact-based decision making and receptivity to feedback.

Another opinion about TQM includes customer-defined quality; top management direction; principal focus on strategic planning; worker responsibility at all levels of the organisation; emphasis on continuous quality improvement to realise strategic

goals; cooperative efforts amongst personnel and management; application of statistical process control as well as continuous improvement through teaching and training of the entire workforce. Nevertheless, this study discusses a few of the pillars necessary for TQM implementation.

2.8.1 Creation of Quality Management Environment

The beginning feature of the TQM philosophy must be the creation of a quality management environment for all workers to search for quality issues and correct them and that environment must exist through the implementation passé. Organisations have to devise clear vision and mission regarding TQM implementation (Islam & Haque 2012b; Sharma & Kodali, 2008). This must be disseminated to all personnel in the organisation. TQM is an organisation-wide issue that is everybody's challenge.

An organisation will not commence the change of TQM until it is aware that the quality of its product or service needs to be enhanced (Besterfield et al., 2009). Hence, an awareness program for TQM enactment is crucial to fashion organisation-wide positive environment. This can be done through discussions, conferences or workshops within the business. In the future, it can be conveyed through official training and education programs for the key personnel of the TQM implementation teams.

2.8.2 Development of Teamwork

Instead of continuous improvement, consumers' desires must be reliably measured and fulfilled (Mitreva & Prodanovska, 2013). A business must be organised to attain the required evidence for the identification of consumer requirements and to acquire

dependable and swift feedback on the quality levels of presently existing products or services. All personnel must consider the requirements of consumers' satisfaction. Consequently, it is essential to include front-line personnel in decision making. Establishing and appreciating the input of teams is the essential component of TQM (see Lee et al., 2010). The core of teamwork is the high price that is committed to teamwork. Teamwork can involve many partnerships and even comprise non-organizational associates such as suppliers.

Resolutions arrived at together are usually thought to be superior, more imaginative, and foster commitment to the eventual result. To recognise the rewards of collaboration, nevertheless, teams must sincerely enable the involvement and participation of members, overcome hierarchical power deference's, and end in the actual resolving of work complications (Islam & Haque 2012a). In numerous establishments that do not follow the TQM philosophy, directors are often on the rummage for somebody to blame for issues discovered.

This category of environment creates unwholesome pressure and dampens ground-breaking ideas and practices of personnel. The amalgamation of a team approach and quality measures signifies seeking to advance the system when issues arise (Islam & Haque 2012b). The reasons why teamwork becomes fruitful are litheness, commitment, synergistic reaction to challenges, enhanced work and focus.

2.8.3 The Practice of Quality Control Tools and Techniques

Total quality management places a great deal of duty on all workers. If personnel are to detect correct quality issues, they has to apply suitable tools and procedures (Islam & Haque 2012b). For refining product and service quality, Statistical Process Control is the best technical tool that encompasses seven (7) basic techniques including Pareto

diagram, a process flow diagram, cause-and-effect diagram, check sheets, histogram, control charts and scattered diagram as discussed previously. This technical tool can be applied to control the process and to advance the process capability (Besterfield et al., 2009). Consequently, the introduction of the Statistical Process Control tools to the workforces will be instrumental in implementing TQM in practice.

Moreover, the involvement of Statistical Process Control tools and its allied techniques for examining and deciphering problems can increase TQM implementation. Failure Mode and Effect Analysis is an investigative procedure that combines the technology and experience of individuals in detecting predictable failure modes of a product or process and planning for its removal (Besterfield et al., 2009). The implementation of design Failure Mode and Effect Analysis aids in establishing priorities based on estimated failures and severity of those failures and helps unearth omissions, errors and blunders with the aid of dipping development time and cost of the manufacturing process.

Conversely, process Failure Mode and Effect Analysis can identify probable process failure modes and aid to establish priorities according to comparative influence on both the internal and external customers (Islam & Haque 2012b). Consequently, by implementing the Failure Mode and Effect Analysis technique, a business can decrease the possible failures in its product and process, which is one of the targets of TQM implementation. Maintenance is essential to a product manufacturing system. The practice of Total Productive Maintenance keeps the existing plant and equipment at its maximum productive level through support of all areas of the organisation (Besterfield et al., 2009). It is directed towards the eradication of unintended equipment and plant

maintenance. Total Productive Maintenance is reflected as an extension of the TQM philosophy to the maintenance function.

2.8.4 Focus on Customer

Total quality management identifies that a faultlessly manufactured product has little worth if it is not what the consumer desires (Kim, 2016). Consequently, it can be said that quality is consumer-driven (Islam & Haque 2012b; Creech 1994). This means that the objective of customer satisfaction must be assimilated in the preparation processes and then continued day-to-day. For continuous improvement, customers' desires must be continuously measured and fulfilled (Sit et al., 2009; Nilsson et al., 2001). The firm must be organised to acquire the essential evidence for the identification of customer needs and to acquire consistent and swift feedback on the quality levels of presently available products/services (Grigoroudis & Siskos, 2010; Lam et al., 2004).

Workforce motivation plays an essential that focuses in customer satisfaction. An inspired worker can achieve more than the unmotivated ones (Hill *et al.,* 2007). Customer anticipations often differ from one customer to the other. Thus, organisations these days employ a planned system to detect and prioritise customer demands and then align an establishment's products or services to meet those priorities (Karatepe, 2013). To do this it employes adaptations of Quality Function Deployment, a strategic tool in which the opinion of the consumer is captured in a sequence of matrices that enable the analysis of product/service quality features, costs,reliability, and the usage of innovative conceptions and technologies for enhancement in light of consumer needs. The resolve of Quality Function Deployment thus is to guarantee that TQM efforts are customer-focused as well as aligned (Kim, 2016).

2.8.5 Focus on Supplier Relationship

Management has to allow adequate time for the procuring department to categorise some low cost, qualified suppliers and to examine the evidence they present (Lu, 2018). An unrealistic deadline can lead to poor selection based on incomplete information about supplier qualifications. Also, improved communication between purchasing and other departments, such as engineering and quality control, is needed when those departments must provide information to assess supplier qualifications and the suppliers manufacturing process (Loke et al., 2010). It is challenging to advance the level of creditability and faith desired to establish tight working relationships.

Businesses must apply appropriate tools, procedures and systems to make an appropriate relationship with suppliers. Most of these systems comprise procurement systems, advanced preparation and scheduling, and transport planning systems (Mitreva & Prodanovska 2013; Loke et al., 2010). Standard procurement structures can permit firms to compare the worth and performance competencies of different suppliers. Along these lines, it is conceivable to detect superior suppliers so that association can be established with them. The mundane transactions that transpire in the purchasing process can then be principally automated as the information technology is obtainable at the doorsteps.

2.8.6 Benchmarking

Benchmarking is a methodical technique by which businesses measure their performance against the most exceptional industry practice (Ahmad & Elhuni 2014). It is an implement for continuous improvement. Essentially, it is the process of copying concepts and adapting them to increase competitive advantage. The need for benchmarking may commence from the identification of the deviations from set

objectives of the current process and practices, and it may end with the realisation of anticipated improvements set according to the best practices (Vimal Kumar et al., 2018).

Since benchmarking is not a plan, nor is it anticipated to be business philosophy, it must be applied appropriately to gain estimated benefits. Benchmaking is time and cost-efficient since the process includes simulated and adaptation instead of the pure invention (Das et al., 2008; Harrington, 1996). Thus, an organisation implementing TQM can benchmark their strategies and procedures adopted by the benchmarked organisation.

2.8.7 Improvement of Processes

Process improvement can be done by the preparation of production personnel and adopting innovative technologies, if necessary. Process improvement can be the commencement of a quality program (Bahar *et al.*, 2016). Most authors support a 'zero defect' and a 'do it right the first time' approach towards quality programs, which necessitate zero-defect attitude of the workers (Mohammad et al., 2011). Refinement comprises undertakings that continually improve a process that is not shattered. It increases efficiency as well as effectiveness. All and sundry in the business can adopt this approach to do things just a bit faster, enhanced, easier or with less waste. Novelty and technological improvements are crucial factors in the strategy of renovation, which results in critical enhancements. To be efficacious in TQM implementation, refinement and renovation for process enhancement can play essential roles (Harrington 1991).

2.8.8 Involvement of Employee

Including workforces, authorising them and bringing them into the decision-making process afford the chance for continuous process improvement, which is what one of the goals of TQM implementation (Mendes 2012). It increases quality and improves productivity. It becomes evident that there is a need for employee involvement in any change process, including quality management practices (Alsughayir, 2014; Kim et al., 2012). Ascertaining the best element that inspires the team and scheming the compensation system thus can act as constructive feedback to keep TQM alive. The employee must be involved in the preparation and implementation of the acknowledgement and compensation program.

Rewards to teams and individuals must be delivered to demonstrate that their hard work and contributions are valued by management (Mendes, 2012). A primary compensation system based on team undertakings may be considered. To implement a well-established appreciation and reward system, performance appraisal is essential as it will make staffs discern how they are doing and will afford a basis for promotions, pay increase, counselling, and other determinations linked to a worker's future (Islam & Haque, 2012b; Mendes, 2012).

Empowerment is a situation in which individuals have the capacity, the self-assurance, as well as the commitment to take the obligation and ownership to advance the process and initiate required steps to satisfy consumer needs within well-defined boundaries to realise organisational values and objectives (Besterfield et al., 2009). All members involved in the total quality management implementation process must undergo training in group dynamics and communication skills, quality awareness, explicit problem-solving procedures including SPC, safety, and technical aspects of the job (Islam & Haque 2012b).

2.9 Barriers to TQM implementation in the Garment Manufacturing Sector

Nupur et al., (2016) acknowledged that unlike manufacturing organisations, Garment manufacturing industries have limited management capabilities and incentive resources. The primary challenge faced by Garment manufacturing industries in the implementation of total quality management is a scarcity of resources, including limited human resources, and the time required for the implementation. Nupur et al., (2011) indicate that the underlying barriers to total quality management implementation are inadequate human resource development and management, the absence of planning for quality, the absence of leadership for quality, insufficient resources and an absence of consumer focus. Lee et al., (2013) assert that the lack of education is also one of the reasons why TQM implementation will fail, in addition to corruption, negligence, and irresponsibility as critical issues to quality management success.

Resource limitations and resistance to change as specified by Rahman et al., (2016), can affect the introduction of total quality management within Garment manufacturing industries, which is attributed to workforces who believe that change will threaten their current positions. Huq (2005), offers four (4) key barriers to TQM in general:

1. ***Cultural barriers:*** The culture of Garment manufacturing industries may not be conducive to TQM.
2. ***Management awareness barriers:*** There is a broad acceptance that without full management commitment, successful TQM implementation is unlikely.
3. ***Financial barriers:*** Managers cite the cost of training and lost production time as a significant reason for not executing TQM.
4. ***Training barriers:*** Individuals who do not have any formal business credentials operate a significant portion of the processes. Such managers will

not value formalised learning, such as training so much as more highly educated people.

Negative attitudes arising from experience, according to Nicolaou and Kentas (2017) can be a significant barrier to the successful implementation of any change program. Also, language and culture represent a significant problem in communicating the principles of a TQM program, while older employees view TQM as the latest trendy fad. They infer that the ensuing can become barriers to TQM implementation:

1. The perceived threat to supervisor and manager roles.
2. Disinterest at the workforce level.
3. Lack of understanding of what TQM is at the employment level.
4. Geographically dispersed sites.
5. Much casual staff.
6. Fear of job losses.
7. Inadequate training.
8. Plans not clearly defined.
9. Employee scepticism.
10. Resistance to data collection
11. Likewise, Mosadeghrad (2014), offered the ensuing as barriers to quality management implementation:
12. The absence of long-term commitment and leadership for management.
13. Insufficient empowerment of workforces.
14. Lack of cross-functional, cross-disciplinary efforts.
15. Misdirected focus- emphasis on the many minor problems facing the company rather than a critical few.

16. The emphasis on the internal process to the neglect of external customer focus results
17. Lack of focus on training and coaching.
18. Lack of cost of quality measurements, performance reporting, and reward recognition system.
19. Emphasise the short-term solution instead of focusing on long-term improvements

2.10 The Benefits of TQM Implementation in the Garment Manufacturing Sector

The effective implementation of TQM in the garment manufacturing sector will increase customer satisfaction with service offerings (Jaeger & Adair, 2016). Quality enhances customer loyalty through satisfaction; this, in turn, can generate repeat business and lead to the attraction of new customers through positive word of mouth. The word mouth communication will help in cost reduction. This Ngwenya et al., (2016), noted will provide a competitive edge to the company. Quality improvement will result in increased market share and profitability.

TQM is a management philosophy which emphasises the devolution of authority to the front-line workers. It ensures the participation of everyone in the decision-making process through activities such as quality cycles and teamwork (Wei et al., 2019; Beshah & Berhan, 2017). The question is, does this devolution of authority leads to workers' satisfaction or not? Motivations theories indicate that two significant forms of motivation exist –intrinsic and extrinsic motivation. While some will argue that the best form of motivation is a monetary incentive, others argue for self-fulfilment and recognition. The motive behind the intrinsic reward is to provide the employee with

some autonomy which empowers him to make decisions that affect his job, thus making him responsible and accountable. This is said to increase the employee's level of job satisfaction (Georgiev & Ohtaki, 2019).

The implementation of TQM ensures that every worker in the business does his work with quality the first time, thus improving the efficiency of operation and avoiding some cost associated with waste. This, in turn, will offer more value to customers in terms of price and service quality, thus making them satisfied. Implementation of TQM further ensures that businesses change how they perform activities to eliminate inefficiency, improve customer satisfaction and achieve the best practice (Gavareshki et al., 2019). Arslan (2019) noted that constant improvement in the effectiveness of operation is essential but not a sufficient factor for the organisation to be profitable. According to Wei et al., (2019), TQM helps in improving the quality of products and also reduces the scrap, rework and the need for buffer stock by establishing a stable production process. They further argued that TQM would reduce the cost of production and time of production. Continuous improvement, which is a feature of TQM, is said to reduce the product cycle time, thus improving productivity (Sraun & Singh, 2017). Many other TQM practices such as training, information system management, relationship with suppliers etc. have a positive impact on operational performance.

The efficient management handling of these practices will improve efficiency, and no doubt affect the profitability of the firm. TQM endorses the total quality approach in creating customer satisfaction. The total quality approach creates an integrated method of analysing operation by focusing on the processes of production on customer satisfaction. Thus, it requires that quality be built into all the processes to be efficient in the overall operation (Beshah & Berhan, 2017; Jaeger & Adair, 2016). Operational

effectiveness is thus a function of how well the various units of business conduct their functions with quality.

2.11 The Design and Production of Slit and Kaba in Ghana

When discussing fashion, the emphasis is typically placed on designer fashions, specifically garments associated with elite status and created by recognised individuals who champion innovation. Designer fashions are only part of Ghana's dynamic fashion culture (Essel, 2019; Kuma-Kpobee et al., 2007). A second sphere exists, comprised primarily of a form of dress worn by a majority of Ghanaian women – the 'Slit and Kaba'. Slit and Kaba fashions are the most recognisable and visible form of women's clothing in Ghana (Dogbe, 2003). The diversity of styles and fabrics creates a colourful display of costume that is worn mostly by women, transforming traditional functions into informal runways for showcasing clothing novelty.

Plate 2.1 Ghanaian Women in Slit And Kaba

Unlike most forms of fashion, the Slit and Kaba is an inherently egalitarian form of the outfit, worn equally from street vendors to first ladies in Ghana (Kuma-Kpobee,

2009). The inclusion of Slit and Kaba fashions in this study is to formally recognise the importance of this dynamic form of dress and further to illustrate the vibrancy and complexity of Ghanaian fashion culture. The Slit and Kaba is a fusion of international and local dress styles that signifies a distinctly Ghanaian identity. The Slit and Kaba is our national custom. It is an authentic Ghanaian dress (Kuma-Kpobee, 2013).

The Slit and Kaba are typically created from six yards of fabric, with two yards used for each of the garment's three integral elements – a blouse, a sewn or wrapped skirt, and an additional piece of fabric used primarily as a wrapper or shawl. As expounded by Gott et al., (2010), Ghana's distinctive three-piece Slit and Kaba was created when a European-inspired blouse was added to the existing wrapped ensemble of Ghanaian women's dress; the earliest illustration of this hybrid garment appeared in the 1831 account of a British woman's travels along the coast of West Africa.

Notwithstanding the popularity of the Slit and Kaba during the nineteenth century, by the early twentieth century, it became a mode of dress associated mainly with 'illiterates,' or women without formal schooling (Gott, 2010, p.10). Immediately before and following Ghana's independence in 1957 and encouraged by Nkrumah's exaltation of indigenous forms of dress, the status of the Slit and Kaba was restored; it quickly became a symbol of Ghana's national heritage and a form of dress that was debated, celebrated, and routinely worn by fashion-conscious Ghanaian women.

Plate 2.2 Ghanaian Women in Slit and Kaba Designs

The earliest and most comprehensive documentation of a specific Slit and Kaba fashion focused on the rise and fall of the jaguar. The Kaba's post-independence revival as a form of fashion was fueled by Ghanaians. Although a silent heritage, the malleability of the Kaba has ensured its relevancy as a staple of Ghanaian female dress throughout the 20th and 21st centuries, often reflecting the political and cultural shifts of specific eras (Essel, 2019; Abraham & Howard, 2018). Whereas immediately following independence, the Kaba was transformed into a form of elite, nationalist fashion; it functioned as a populist form of nationalist attire.

During the 1990s, the Kaba experienced a renaissance similar to that of the 1950s; the Sunday Mirror repeatedly featured photographs of Ghanaian women, particularly women in official government positions, wearing a diverse and elaborate array of Kaba designs. The inclusion of recognised women wearing Kaba likely encouraged other Ghanaian women, both elite and non-elite, to don the iconic garment for a variety

of contexts. The most significant proponent for wearing Kaba fashions was Former First Lady Nana Konadu Agyeman Rawlings and others.

Plate 2.3 Former First Lady Nana Konadu Agyeman Rawlings

Plate 2.4 First Ladies And Second Lady of Ghana

Mrs Rawlings made a concerted effort to wear Kabas regularly, a sartorial choice that lasted for the duration of her husband's career as both Head of state and the President of Ghana.

2.12 Theoretical and Conceptual Framework

2.12.1 Theory of Constraints

The Theory of Constraints (TOC) is an approach for recognising an essential restraining factor (constraint) that stands in the way of realising a goal and then methodically refining that constraint until it is no longer the restraining factor (Cox & Schleier, 2010; Goldratt & Cox, 1992; Goldratt 1990). Theory of Constraints takes a methodical approach to enhancement. It postulates that every multifaceted system, (Gupta et al., 2010) including manufacturing procedures, involves several related activities, one of which works as a constraint on the entire system.

The Theory of Constraints affords a dominant array of tools for facilitating. Eliyahu Goldratt (1992; 1984) conceived the TOC and presented it to a large audience through his bestselling 1984 novel, TOC has persistently to evolve and is currently a substantial feature within the world of management most excellent practices. One of the alluring characteristics of TOC is that it intrinsically prioritises development activities (Gupta et al., 2013). The topmost priority is always the existing constraint. In circumstances where there is a persistent need to advance, TOC affords a highly motivated methodology for generating swift improvement (Naor et al., 2013; Jones & Dugdale 1998).

2.12.1.1 The Core Concept of TOC

The fundamental concept of the TOC is that every process has a single constraint and that the entire process throughput can only be enhanced when the constraint is enhanced. A necessary consequence to this is that spending time improving non-constraints will not afford noteworthy benefits; only advances to the constraint will promote the goal (Ronen & Spector, 1992). Consequently, TOC attempts to offer a specific and continual focus on refining the existing constraint until it no longer restricts throughout, at which point the emphasis shifts to the next constraint (Tulasi & Rao, 2012; Spector, 2011).

The fundamental influence of TOC comes from its capacity to produce an extremely resilient focus towards a single goal and to eliminating the major impediment, which is the constraint to realising more of that goal. Goldratt considers focus to be the core of TOC (Goldratt 1990). Thus, as indicated previously, TOC is founded on the existence of constraints that limit establishments' from efficaciously realising their goals. It is these constraints that prescribe how much a business can produce. TOC presumes that every business process consists of dependent procedures that are connected and which behave like a chain.

The power of the whole chain is reliant on the weakest link which is the constraints and hence if the weakest link breaks down, the entire structure is affected (Ray et al., 2010; Kalina-Kaminsky 2005). Additionally, management must ascertain and emphasis of the weakest link, as the entire chain is hinged on this link (Ray et al., 2008). Thus,relative to TOC, this weakest link is acknowledged as a 'constraint'.

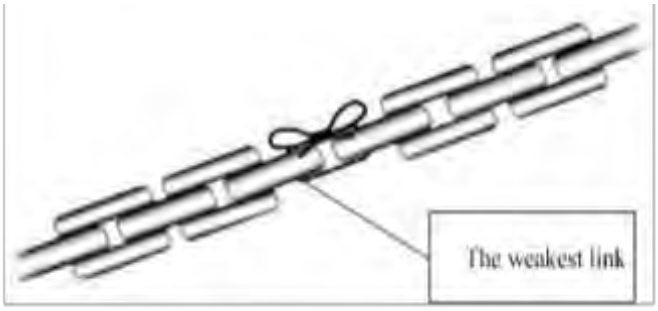

Figure 2.11 A System as A 'Chain' Concept

Source: Dettmer, (2007)

By concentrating on "making the constraint operation more proficient and aligning it with other resources, to support it, an organisation can function at an advanced level. When limitations are removed, it will surge the businesses' performance toward its objective. However, any new constraint must then be recognised, as TOC claims that all organisations have at least one constraint in play at all times (Cox & Schleier, 2010). TOC presents five (5) simple phases to the management of constraints. They includes: identify, exploit, subordinate, elevate, and repeat if the constraint is broken."

2.12.1.2 The Five Focusing Steps of TOC Explained

The five focusing steps of TOC is grounded on the notion that businesses are networked and consist of an array of interrelated links of activities. The five focusing steps of TOC affords a theoretical framework as well as the tools to recognise constraints incessantly and to use them as a process for continuing development as indicated below (Gupta et al., 2013; Cox and Schleier, 2010; Ioannou & Papadoyiannls, 2004; Goldratt & Cox 1992; Golratt, 1984):

Identifying the constraints

Because a system is a chain of reliant events, to advance the system regarding its goals, businesses must identify the weakest link - the constraint - in the scheme of things, which is restraining the organisation's capacity to realise its objectives efficaciously. It is the weakest link that defines how far an organisation can go to attain its objectives. Systems will not be developed until there is an enhancement in the weakest link. It is essential to realise that this stage suggests that an evident appreciation of the central objective of the organisation exists and that measures of that objective have been defined.

Constraints may be physical or a policy. Physical constraints may be recognised effortlessly within an organisation; for instance, there is typically a considerable amount of work in process in front of a resource constraint waiting to be managed. Thus,resource constraints are just one of the categories of physical constraints that may exists. Policy constraints, on the other hand, are more challenging to discover since they are not physical objects that can be straightforwardly observed. Thus,removing policy constraints may be more problematic, as individuals can actively support them within the organisation.

According to Bell (2006), policy constraints must be identified before physical constraints. Bell asserts that the critical position where policy constraints manifest as undesirable is frequently at the physical constraint, and thus, the former can be a useful starting point for the detection of negative policy. According to Bell (2006),removing policy constraints may result in a higher amount of system improvement than removing physical constraints. Theory of Constraints further identifies constraints

within the non-manufacturing system as being a central conflict, which elucidates the principal reason that the system does not function well.

This is the root cause of unwanted effects within the system. Dettmer (2007), infers that policy constraints are incredibly challenging and difficult to identify and break since they necessitate inspiration to advance the system; knowledge regarding the subject and the change agent must possess some degree of influence, to initiate the transformation further, they must appreciate how to apply the TOC process. Bell's (2006) propositions appear problematic and challenging without including these three (3) principles, as recommended by Dettmer (2007). It may be applicable to identify physical constraints first, however, once the physical constraint is identified one can trace back to understand if there is a policy that instigated such a constraint to occur in the first place.

Determining how the constraints can be exploited

This phase aids the judgement on how to acquire as much of the constraint's capability, without requiring possible investments. 'Exploit' denotes maximising the constraints' capacity to produce objective units, so that it is more operational than before'.

Subordinate the whole lot to the above choices

Once exploitation has been made to increase capacity, subordinate everything else to the above decision. This phase is taken to harmonise non-constraint resource undertakings with constraint resource activities, so that the constraint may work at its optimum capacity. All non-constraints in the system must be applied to help exploit the output of constraints. Nevertheless, this harmonisation can also be challenging,

since subordination means non-constraints must be 'relegated' to reinforcing the role of the constraint.

This may be problematic, as most individuals working with non-constraints may resist taking the needed actions to subordinate the rest of the system to the constraint. Consequently, the administration requires more individuals at every level to assent to behaviour modification and to accept that they are part of a full system. Management may redefine the intents of every process in the system, through the formation of the required situations desirable to support the constraint and consequently realise the organisation's ultimate objectives, since the entire system is contingent on constraints to produce output.

Elevation of the constraints

When the constraint is still not producing outputs to meet demand, the alternative technique is to elevate the constraint. This is a phase where key variations occur to remove the constraint if it is practically and economically defensible. The goal is to increase the existing capability of the constraint. This may necessitates extra resources, including individuals and/or machinery. Occasionally, there may be the need to also modify the policy by permitting overtime or rotation.

Nevertheless, before thinking of elevating the existing constraints, management must reflect on the question of where will the next constraint be? It can be likely that the subsequent constraint might be challenging to achieve, compared to the prevailing constraint. Thus, this might decrease the margin for control over the system. The capacity to continuously have control over the constraint may aid the organisation to realise an improved performance after elevation.

Repeat Step One

As this is an unceasing improvement process, if the four (4) stages are implemented efficaciously, the constraints will or eventually move to someplace else. Check if the existing physical constraint has shifted, or policy may become a hindrance and no longer be valuable to the whole system. Consequently, the system must be re-evaluated, to identify the position of the new constraint, by repeating the first step, to discover those constraints. This constant repetition process takes place as part of a process of continuous improvement.

2.12.2 Conceptual Framework

The conceptual framework of this study (see Figure 2.12) shows the relationship between TQM implementation practices and the performance of small to medium garment production enterprises through exploring the combined direct effects of seven TQM implementation practices on three different levels of small to medium garment production enterprises' performance, i.e. quality, business and organisational performance.

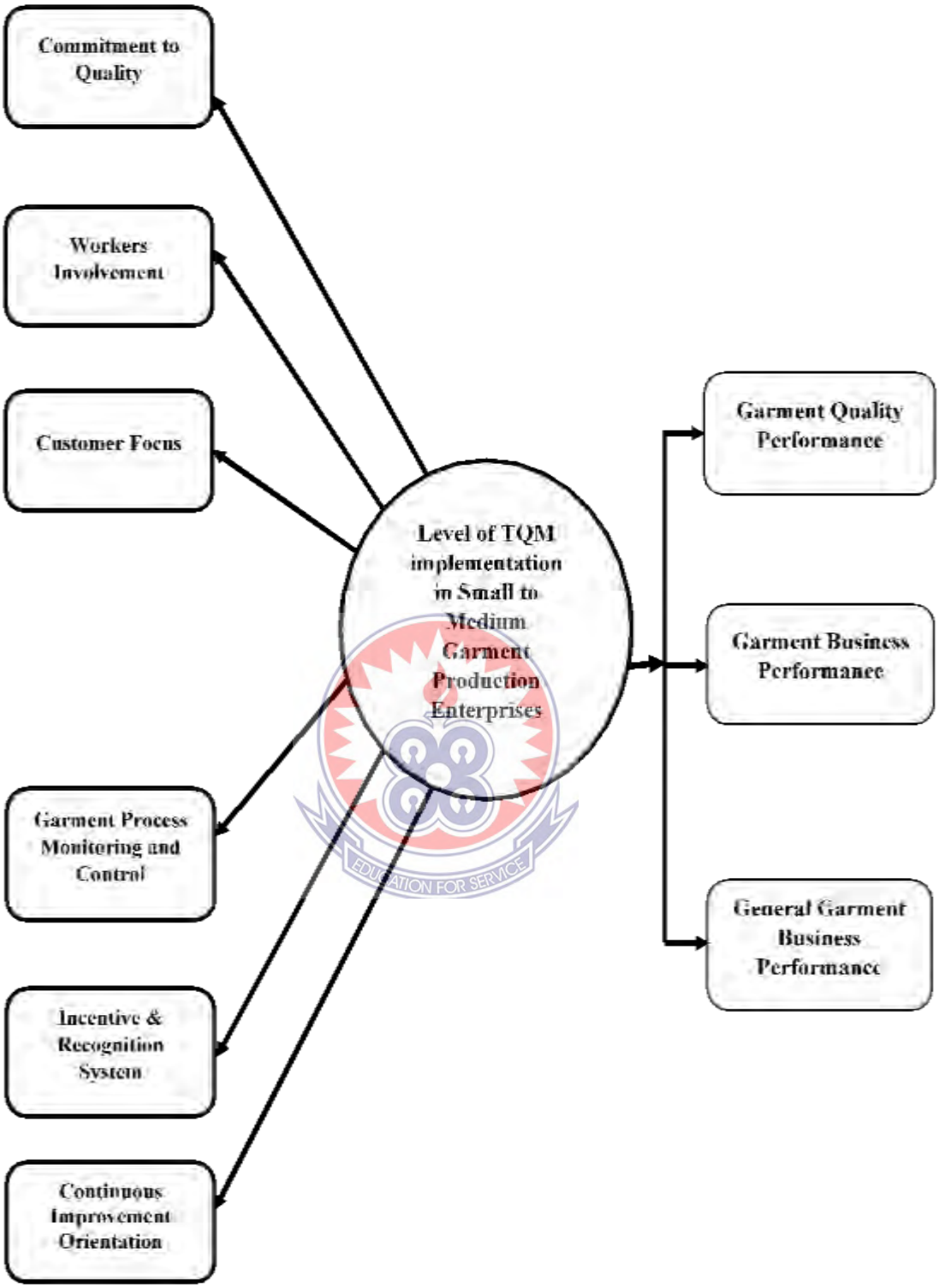

Figure 2.12 Conceptual Framework of the Study

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter details the research processes used in conducting the study. Using the Accra Metropolitan area as a case for investigation, the study explored the implementation of TQM in the design and production of Slit and Kaba in small to medium garment production enterprises in Ghana. The primary intent of the current study is to determine the feasibility of implementing TQM principles and finding out its effects on the design and production of Slit and Kaba in small to medium garment production enterprises. This chapter thus dealt with the research design, sampling procedures, and the steps taken in collecting and analyzing the data.

3.2 Research Design

A research design, according to Rahi (2017), is the overall plan for obtaining answers to the questions being studied and for handling some of the difficulties encountered during the research process. Ghauri et al., (2020) infered that appropriate research design is critical in determining the type of data, the data collection technique, the sampling procedure, the schedule and the budget. Similarly, Gaus (2017) indicated that an appropriate research design helps to align the planned methodology for the research problems.

Since different research designs attempt to answer different types of research problems, Khalid et al., (2012) asserted that the choice of research design must be grounded on the nature of the research, it's setting, the possible limitations and its underlying paradigm that informs the study. Also, Stone-Romero and Rosopa, (2008) describe research design as a logical model of proof that allows the researcher to draw

inferences concerning causal relations among the variables under investigation. According to Leavy (2017), the various issues involved in the research design concern the purpose of the study, the type of investigation, the type of the sample, which will be used, the methods by which the required data will be collected, as well as the process that will be followed for the analysis. When a phenomenon is being studied, it is understandable that research is needed to describe it, to explain its properties and inner relationships (Huczynski and Buchana, 1991). The object of descriptive research is to portray an accurate profile of persons, events or situation (Robson, 1993). In academic research, descriptive research is more rigid than explorary research.

As opposed to exploratory research, descriptive research should define questions, people surveyed and the method of analysis prior to the beginning of data collection. In other words, the who, what, where, why and sometimes how aspects of the research should be defined. Such preparation allows one the opportunity to make any required changes before the process of data collection has begun. However, for the purposes of this study the mixed method approach was adopted. The mixed method approach combines both the quantitivate and qualitative approaches in the same study. This allows the researcher to achieve triangulation where the the weaknesses of one approach is compensated by the strengths of another approach.

3.3 Population

According to Levy and Lemeshow (2013), population refers to a full set of groups from which a sample is taken. The target population for this study was small to medium garment production enterprises in the Accra Metropolis. The small and medium scale garment production enterprises in the Accra Metropolis were included because they

form the basis of the study. Small and Medium scale garment production enterprises in Accra were considered the population due to their proximity and convenience afforded the researcher who is a resident of the geographic area.

Since there is no clearly defined and specific total number of small to medium garment production enterprises operating in the Accra metropolis; however, for the purposes of this study, it was estimated that there are about 1,500 small and medium enterprises operating in the metropolis.

3.4 Sampling Technique and Sample Size

According to Sharma (2017), sampling cannot be avoided in research because it is impracticable to survey the entire targeted population due to budget and time constraints. This study used a non-probability sampling method. Vehovar et al., (2016) note that non-probability sampling methods provide a range of alternatives in terms of techniques that can be used by the researcher. The purposive sampling technique was used. Purposive sampling is where participants of a study are selected based on the judgement of the researcher

Typically, purposive sampling tends to be a favoured sampling technique as it is incredibly prompt, uncomplicated, and economical. In many cases, members are readily approachable to be a part of the sample. The purposive sampling often helps to overcome many of the limitations associated with research. Purposively selecting a case is a deliberate decision of the researcher; thus, the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by their knowledge or experience (Etikan & Bala, 2017). No extant data is specifying the total number of small to medium garment production enterprises

operating in the metropolis hence the use of a non-probability sampling technique makes it more apparent.

The researcher based on the sample determination strategy proposed by Alreck and Settle (2011) who determined that an ample maximum sample size is usually 10% as long as it does not exceed 1000. From this point of view the study applied 10% as suggested to determining the sample for the study. Using the purposive sampling technique, a total of 160 fashion houses in the metropolis were selected to participate in the study. For the current study, the researcher purposively approached any fashion house in sight that opened its doors to this form of project. Fashion houses in areas such as Alajo, Dzorwulu, Accra Central, Madina and Abelempe.

3.5 Data Collection Techniques

Data collection was done through both secondary and primary sources. The study used questionnaires as the research instrument to collect primary data for the study. A self-administered questionnaire was distributed to respondents (Appendix A). Also, the study made use of an interview guide to conduct an interview for qualitative analysis. The interview was conducted on phone.

3.5.1 Questionnaire

A questionnaire is a data collection instrument consisting of a series of questions and other prompts to gather information from respondents. Most often, it is designed for the statistical analysis of the responses (Rahi et al., 2019). According to Krosnick (2018), a questionnaire is a pre-formulated written set of questions to which respondents records their answers, usually within instead of closely defined alternatives.

A questionnaire was structured for this research (Appendix 1) and was administered to respondents. The choice of the questionnaire as a means of gathering data is borne out of the fact it does not require as much effort from the questioner as verbal or telephone surveys, not time-consuming and often have standardised answers that make it easy to collect data. It allows the respondents to provide confidential responses (Gillham, 2008). The questionnaire consists of major parts, which focused on the areas of interest in the research. Then again, the main pulse of the questionnaire development was based on the objectives of the study. This was done in such a way that answers or responses to the items were directly related or answered the research questions of the study. A total of 150 questionnaires were distributed to fashion house workers/apprentices in the study area.

3.5.2 Interview

Interviewing is a method which provides opportunity to cross examine the respondent face to face to get detailed and sensitive information from the interviewee. This is normally used to supplement information secured by issuing questionnaire. Deep perception and feelings of the interviewee on the subject under study is gotten through interviews. Also interviewing method ensures that rich and detailed information regarding individual understanding and experience are collected. Due to the issue of comfort and confidentiality, each respondent was attended to individually.

Because of the emergence of COVID-19, the researcher resorted to phone calls to conduct the interview instead of face-to-face interview. The concern of the interview was sought for the call to be recorded and transcribed for further analysis. In all, 10 fashion house owners were interviewed.

3.6 Reliability and Validity

3.6.1 Reliability of Data Collection Instruments

Reliability refers to a degree to which measurements used can yield suitable results because they are free from errors. This study used Cronbach's alpha to assess the reliability of the data collection instrument. According to Cypress (2017), Cronbach's alphas of the sub-scales ranged from 0.690 to 0.925 which indicate an acceptable internal consistency and reliability measures for the questionnaire suggesting that if the results exceed the minimum alpha of 0.690, the constructs measures were deemed reliable.

Tables 3.1 Reliability Statistics of Items

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.690	.691	99

From table 2, the test for internal consistency for the scale above produced a reliability statistic using Cronbach's alpha (**α**) of .690, which indicates a moderate reliability suggesting a moderate level of internal consistency for the scale used for the analysis. This means that the participants are moderately likely to give the same set of responses to the items should the questionnaire be administered again.

In all 138 questionnaires were retrieved out of the 150, representing 92% valid response rate indicating that the responses were sufficient to draw conclusions. This was because some of the questionnaires were partially responded to whereas some were could barely be read. Those were discarded from the final figure.

3.6.2 Validity of Data Collection Instruments

Validity is about having some level of similarity in the original idea of research and the actual idea after getting the results. According to Mohajan (2017) the concept of validity measures whether the findings in the research are really about what they appear to be about and check the relationship between variables. To ascertain the validity of the instruments, the supervisor went through the instrument to ensure that the items duly measured what it is intended to measure by matching the items with their corresponding research questions. The feedback indicated that certain questions were double-barrelled whereas others did not point to any objective of the study. These were deleted from the instrument leaving out those that had significant relevant to the study

3.7 Data Analysis and Presentation

With regards to the quantitative analysis, the data gathered through the questionnaire were cleaned, coded and analysed using data analysis application IBM's Statistical Package for Social Sciences (SPSS) version 21. Descriptive statistics was used to analyse the data collected. Results were presented in the form of tables and figures. Interpretations of the findings was made using descriptive tools such as percentages. Standard deviations and frequencies.

However,regarding the qualitative analysis the data collected through recorded phone call interview was first transcribed, which is followed by the analysis of the transcript. The transcript helped to identify and categorization of issues that emerged from the data. Key findings under each main theme or category were reported using appropriate verbatim quotes to illustrate those findings.

3.8 Ethical Considerations

According to Greenwood (2016), ethics are the standards or criteria for conduct that differentiates between right and wrong. They assists in discovering the discrepancy between satisfactory and unsatisfactory behaviours. Levitt et al., (2017) suggest that the Belmont Report (1974) reviews three (3) primary ethical principles related to research concerning human subjects, and they include respect for persons, beneficence, and justice. Consequently, the basic principles of morals and ethics were factored into the conduct of the study. They includes ethical considerations regarding social justice, capability, expertise, and dedication to research, a prospect for and safeguarding of rights and interest of research participants as well as businesses, informed and non-coerced permission,respect for cultural diversity, equity, honesty and objectivity, integrity, transparency and accountability,risk maximisation and non-exploitation.

In this current study, the researcher before data collection explained to the participants the purpose of the study and thereafter gave them the consent form to read. The content of the consent form was explained to participants who could not read. The researcher made sure that respondents responded positively before the data collection instrument was handed over to them for administration. The researcher gave them assurances that their identities would be protected and kept anonymous and also that the data were going to be used for educational purposes only.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION

4.1 Introduction

The primary intent of the current study is to determine the feasibility of implementing TQM principles and finding out its effects on the production of Slit and Kaba in small to medium garment production enterprises. This chapter, therefore, presents the survey and interview results and the analysis.

4.2 Demographic Characteristics of the Respondents

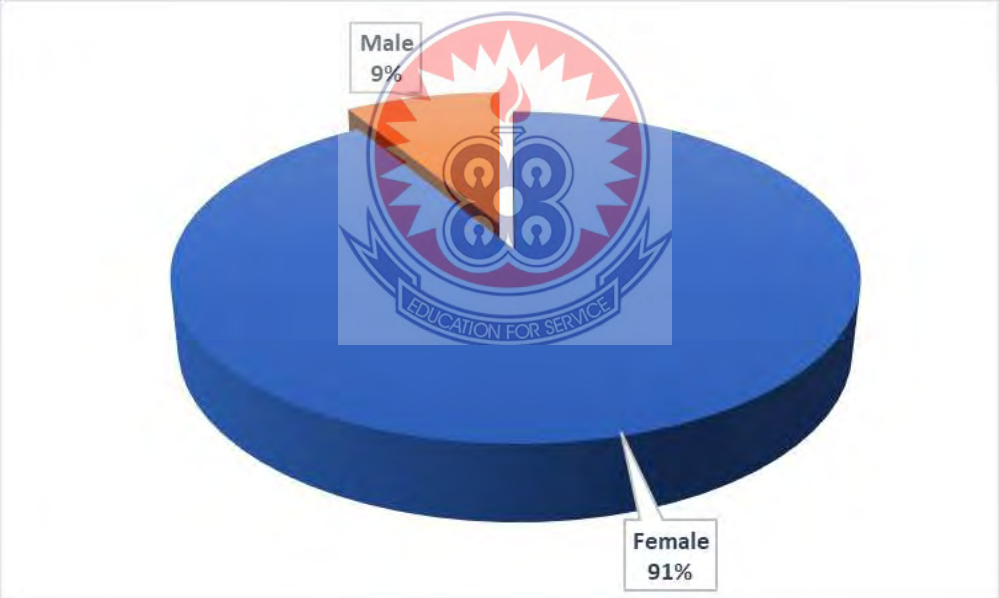

Figure 4.1 Gender Distribution of Respondents

Source: Fieldwork (2020)

Figure 4.1 shows the gender of respondents. Out of 138 respondents, 91% were female with the remaining 9% being male. This suggests that as expected in the fashion industry majority of the workers at the firms surveyed were predominantly females.

Table 4.1 Highest Level of Education

Level of Education	Frequency	Percentage
No formal education	118	85.5
Basic school	17	12.3
Secondary/Vocational	3	2.2
Total	**138**	**100.0**

Source: Fieldwork (2020)

Table 4.1 shows the highest level of education of respondents used for the study. Out of 138 respondents, 118 representing 85.5% had no formal education, 17 representing 12.3% had basic school education with only three representing 2.2% being having secondary/vocational education. The educational level of the respondents gives a direct indication that most of the workers of the firms had no formal education and that the workers with some level of education were basic school leavers.

Table 4.2 Areas of Specialization

Specialization	Frequency (*n*)	Percentage (%)
Textiles	43	31.2
Fashion	69	50.0
Design	26	18.8
Total	**138**	**100.0**

Source: Fieldwork (2020)

With regards to the area of specialization of respondents, the results in Table 4.2 shows 69 representing 50% of the respondents were into fashion, 43 representing about 31% were into Textiles with 26 representing approximately 19% being into Design. This indicates the majority of the respondents were into fashion.

Table 4.3 Working Experience

Length of Experience	Frequency (*n*)	Percentage (%)
< 1 year	48	34.8
1 - 5 years	44	31.9
6 - 10 years	38	27.5
> 10 years	8	5.8
Total	**138**	**100.0**

Source: Fieldwork (2020)

From Table 4.3; with regards to the working experience of respondents, 48 respondents representing 34.8% had less than a year of working experience, 44 representing had between 1 – 5 years working experience, 38 representing 27.5% had between 6 – 10 years working experience with only eight representing 5.8% having more than 10 years working experience. This implies that since most of the respondents have had at least one year of working experiences it could be resolved that the respondents generally have had sufficient working experiences to make worthy contributions to the study.

Table 4.4 Position in the Firm

Position	Frequency (*n*)	Percentage (%)
Machine installation, maintenance and repairs	28	20.3
Supervisor/manager	27	19.6
Seamstress/Dressmaker/Apparel Designer	83	60.1
Total	**138**	**100.0**

Source: Fieldwork (2020)

Table 4.4 shows the position of respondents used for the study. Out of 138 participants, it could be observed that more than half (n=83, 60.1%) of the respondents were seamstresses, dressmakers and apparel designers. That notwithstanding, 28 representing 20.3% respondents were in charge of machine installations,repairs and maintenance whereas 27 (19.6%) were supervisors and or managers of the outfit. It can be seen that majority of the workers were Seamstress/Dressmaker/Apparel Designer. It implies that the fashion houses do not regard machinists as important to their operations.

Table 4.5 Respondents' Views on the Concept Of TQM

Concept	N	Min.	Max.	Mean	±SD
Expensive	138	1	5	4.06	1.201
Satisfying internal customer	138	1	5	3.94	.934
Satisfying external customer	138	1	5	4.28	.926
Appearance	138	1	5	3.86	.948
Increased profit	138	2	5	3.75	1.153
Value for money	138	2	5	4.00	1.190
Teamwork	138	1	5	3.33	1.719

Source: Fieldwork (2020)

Table 4.5 indicates respondents' views on the total quality management (TQM) practices existing at their workplaces. This was measured on a five-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree. From the Table 4.5, majority of the respondents agreed to a large extent that TQM means satisfying a customer (M=3.94, ±SD=1.201), satisfying external customer (M=4.28, ±SD=.926), appearance (M=3.86, ±SD=.948), increased profit (M=3.75, ±SD=1.153),

value for money (M=4.00, ±SD=1.190) and teamwork (M=3.33, ±SD=1.719). The majority, however, agreed to a large extent that TQM is expensive.

The above discussions give workers' positive perception of TQM and how it affects their work. Also, it indicates the existence of various TQM concepts in the businesses and respondents vividly affirm those concepts and its existence manifested by way of its expensiveness, being customer-driven, appearance, profit orientation, value for money, teamwork as well as an expression of the relationship between the organization and supplier.

4.3 Prospects/Benefits of TQM Implementation of Slit and Kaba in Smes

Table 4.6 Respondents' views on Benefits of TQM Implementation

Statements	N	Min	Max	Mean	±SD
Meeting customers' requirements	138	1	5	3.86	1.316
Enhances customer loyalty through satisfaction	138	1	5	3.86	1.128
Reduce sewing defects	138	1	5	3.88	1.081
It ensures every worker does his work with quality the first time, improving the efficiency of operation and avoiding some cost associated with waste	138	1	5	3.87	1.278
Motivate workers	138	1	5	3.51	1.667
Improve the working climate	138	1	5	3.87	1.201
Provide more value to customers in terms of price and quality	138	1	5	4.33	1.082
Ensures the business change how they perform activities to eliminate inefficiency	138	1	5	4.16	1.198
Reduce customers complaints	138	1	5	3.05	1.544
Enhance business reputation	138	1	5	2.56	1.495
Improve the quality of products and reduces scrap, and rework and establishes a stable production process	138	1	5	3.05	1.622
Reduce the cost of production and time of production	138	1	5	2.83	1.439

Source: Fieldwork (2020)

Table 4.6 gives the prospects/benefits of TQM Implementation in the view of respondents. This was gathered using the 5-point Likert scale of 1-Strongly Disagree, 2-Disagree, 3-Not sure, 4-Agree, 5-Strongly agree.

From the table majority of the respondents agreed that TQM implementation helps in meeting customers' requirements (M=3.86, ±SD=1.316), enhances customer loyalty through satisfaction (M=3.86, ±SD=1.128), reduces sewing defects (M=3.88, ±SD=1.081), ensures workers do their work with quality whiles improving efficiency and reducing costs (M=3.87, ±SD=1.278), ensures workers' motivation (M=3.51, ±SD=1.667) and improve the working climate of enterprises (M=3.87; ±SD=).

That notwithstanding, TQM implementation provides value to customers in terms of price and quality (M=4.33, ±SD=1.082), ensures businesses eliminate inefficiency (M=4.16, ±SD=1.198),reduces customers complaints (M=3.05, ±SD=), and also improve the quality of products and reduces scrap, and rework and establishes a stable production process (M=3.05, ±SD=1.622).

On the contrary, majority of the respondents were not sure whether the implementation of TQM enhances business reputation (M=2.56, ±SD=1.495), or reduces the cost of production and time of production (M=2.83, ±SD=1.439).

It can be suggested from the responses that TQM provides small and medium Garment Production Enterprises with enormous benefits. Such benefits could be categorised in terms of customer benefits, business progress and worker satisfaction. Total Quality Management ensures firms meet customer requirements, improves working climate, provide value for customers in terms of pricing and quality,reduces complaints and generally improve the quality of products and reduces scrap, and rework and establishes a stable production process.

Table 4.7 Respondents' views on the TQM Framework

Statements	N	Min	Max	Mean	±SD
Commitment to quality plays a decisive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance.	138	1	5	3.12	1.383
Workers involvement plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance.	138	1	5	2.25	1.221
Customer focus plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance.	138	1	5	3.46	1.410
Continuous improvement orientation plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance.	138	1	5	3.51	1.491
Garment process monitoring and control plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance.	138	1	5	2.78	1.346
Incentive and recognition systems play a decisive role in the level of TQM implementation in small to medium garment production enterprises and lead to garment quality, business performance and general garment business performance.	138	1	5	2.70	1.360
There is no significant difference between the level of TQM implementation in small to medium garment production enterprises and general garment business performance	138	1	5	3.04	1.508

Source: Fieldwork (2020)

Table 4.7 gives the respondents' view of the framework for the implementation of TQM. This was gathered using the 5-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree.

With regards to commitment to quality, majority of the respondents agreed that commitment to quality plays a decisive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance (M=3.12, ±SD=1.383). Majority of the respondents also agreed that customer focus plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance (M=3.46, ±SD=1.410). Also, most of the respondents agreed that continuous improvement orientation plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance (M=3.51, ±SD=1.491).

On the contrary, most of the respondents were not sure on the role of workers involved in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance (M=2.25, ±SD=1.221), and as well the role of garment process monitoring in the level of TQM implementation (M=2.78, ±SD=1.346). That notwithstanding, majority of the respondents were not sure on whether incentive and recognition systems play a decisive role in the level of TQM implementation in small to medium garment production enterprises and lead to garment quality, business performance and general garment business performance (M=2.70, ±SD=1.360)

Finally, majority of the respondents agreed that there is no significant difference between the level of TQM implementation in small to medium garment production enterprises and general garment business performance.

It is recognizable from the above discussions that commitment, customer focus and garment process monitoring and control play important roles in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance, and that the level of TQM implementation in small to medium garment production enterprises directly impacts general garment business performance.

4.4 Basic Pillars Required for the Implementation of TQM Principles and Slit and Kaba SMEs

Table 4.8 Respondents' views on their firms' Commitment to Quality

Statements	N	Min	Max	Mean	±SD
There must be a very high level of management commitment towards the quality in the design and production of Slit and Kaba	138	1	5	4.01	1.011
There must be a very high level of management commitment towards productivity in the design and production of Slit and Kaba	138	1	5	4.02	1.007
There must be a very high level of management commitment towards the customer in terms of the design and production of Slit and Kaba	138	1	5	3.54	1.451
There must be a good relationship between management and workers	138	1	5	3.84	.968
Management has a clear vision for implementing quality goals in terms of the design and production of Slit and Kaba	138	1	5	3.29	1.115
Management is committed to ensuring the success of the quality	138	0	5	3.93	.956
Management empowers all workers to have adequate knowledge of quality procedures	138	1	5	4.36	.810
Management creates a quality awareness among workers and is supportive of technology advancement to improve the quality of the design and production of Slit and Kaba	138	1	5	2.58	1.266

Source: Fieldwork (2020)

Table 4.8 shows respondents' view on their commitment to Quality. The respondents' views were collected using the 5-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree.

From Table 4.8, it could be observed that the majority of the respondents agreed that there must be a very high level of management commitment towards high quality in the design and production of Slit and Kaba (M=4.01, ±SD=1.011), and the design and production of Slit and Kaba (M=3.54, ±SD=1.451). Furthermore, majority of the respondents also agreed that there must be a good relationship between management and workers (M=3.84, ±SD=.968).

That notwithstanding, most of the respondents also agreed that management has a clear vision for implementing quality goals in terms of the design and production of Slit and Kaba (M=3.29), committed to ensuring the success of quality (M=4.36, ±SD=3.93), and empowers all workers to have adequate knowledge of quality procedures (M=4.36). Finally, the majority of the workers disagreed that Management creates a quality awareness among workers and is supportive of technology advancement to improve the quality of the design and production of Slit and Kaba.

It can be suggested from the responses that most of the workers had a strong commitment towards commitment and held high management's quest to ensure the success of quality in the firms. The majority believed in the management vision towards quality, commitment towards empowerment and product design and production in general even though management provided little in terms of technological advancement towards the design and production of Slit and Kaba.

Table 4.9 Respondents' views on Workers Involvement

Statements	N	Min	Max	Mean	±SD
The business encourages suggestions from workers	138	1	5	4.17	1.120
Workers enjoy their job descriptions and working environment	138	1	5	3.06	1.339
The business encourages teamwork rather than individual work	138	2	5	3.69	1.059
The business encourages workers to suggest ideas for work improvement	138	1	5	3.96	1.070
Workers are involved in decision-making in daily activities	138	1	5	4.00	1.367
The business' goals are communicated regularly to workers	138	3	5	4.43	.791
Workers' suggestions are always implemented	138	1	5	4.04	1.087
Workers are actively involved in quality-related activities	138	1	5	3.43	1.301
Self-improvement is encouraged to improve the skills and performance of workers	138	1	5	3.28	1.371

Source: Fieldwork (2020)

Table 4.9 shows respondents' views on workers' involvement. The responses were collected using the 5-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree.

From the table 4.9, majority of the respondents agreed that the business encourages suggestions from workers (M=4.17, ±SD=1.120), workers enjoy their job descriptions and work environment (M=3.06, ±SD=1.059), the business encourages teamwork rather than individual work (M=3.69, ±SD=1.059), the business encourages workers to suggest ideas for work improvement (M=3.96, ±SD=1.070), and workers are involved in decision-making in daily activities (M=4.00, ±SD=1.367).

Moreover, majority of the respondents also agreed that the business' goals are communicated regularly to workers (M=4.43, ±SD=.791), workers' suggestions are

always implemented (M=4.04, ±SD=1.087), workers are actively involved in quality-related activities (M=3.43, ±SD=1.301) and self-improvement is encouraged to improve the skills and performance of workers (M=3.28, ±SD=1.371). The above discussions suggest workers were generally satisfied with their involvement in the activities of the firms. The firms also play important role in worker involvement; communication of business goals, encouragement of teamwork, implementation of workers' suggestions and workers' involvement in quality-related activities.

Table 4.10 Respondents' views on Customer Focus

Statements	N	Min	Max	Mean	±SD
The business gives full attention to customer needs	138	1	5	3.51	1.599
The business gives feedback forms to customers after delivery of the Slit and Kaba	138	1	5	3.92	1.215
The business has information to measure customer satisfaction	138	2	5	3.84	.830
There is an active search for customer feedback	138	1	5	4.12	.811
Customer satisfaction is monitored to identify trends and to initiate quality improvements in design and production	138	1	5	3.86	1.012
Customer complaints are communicated to all workers	138	1	5	4.40	.815

Source: Fieldwork (2020)

Table 4.10 shows the respondents' views on customer focus. The responses were collected using the 5-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree.

From the table most of the respondents agreed that the business gives full attention to customer needs (M=3.51, ±SD=1.599), the business gives feedback forms to customers after delivery of the Slit and Kaba (M=3.92, ±SD=1.215), and the business has information to measure customer satisfaction (M=3.84, ±SD=.830).

Moreover, majority of the respondents also agreed that there is an active search for customer feedback (M=4.12, ±SD=.811), customer satisfaction is monitored to identify trends and to initiate quality improvements in design and production (M=3.86, ±SD=1.012), and customer complaints are communicated to all workers (M=4.40, ±SD=.815).

The responses reveal that firms focused mainly on the customers and gave customers high consideration in terms of attention, feedback and complaints. Customer complaints were communicated promptly to all workers and frantic effort was made to gather information to measure customer satisfaction.

Table 4.11 Respondents' view on Garment Process Monitoring

Statements	N	Min	Max	Mean	±SD
There is clear clarity of work processes and methods	138	1	5	3.71	1.291
Check sheets are available to monitor the adherence to schedule	138	1	5	2.99	1.253
Processes	138	1	5	3.64	1.398
Inspection of raw material, processes and methods are followed in laying and cutting of fabric/material, assembly of the Slit and Kaba and finishing and packaging	138	1	5	3.03	1.329
Adopting the proper procedure of work from raw material to finished goods	138	1	5	3.93	1.150
Selection and use of appropriate machinery and training of workers at all level	138	1	5	4.20	1.073

Source: Fieldwork (2020)

Table 4.11 shows the descriptive statistics of respondents' view on garment processing and monitoring. The responses were collected using the 5-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree.

From the table majority of the respondents agreed that there is a clear clarity of work processes and methods (M=3.71, ±SD=1.291), proper procedure of work from raw

material to finished goods was adopted (M=3.93, ±SD=1.150) and appropriate machinery was selected and used and training was conducted for workers at all levels (M=4.20, ±SD=1.073).

On the contrary, most of the respondents were not sure on the availability of check sheets to monitor adherence of scheduled processes (M=2.99, ±SD=1.253), and the inspection of raw material, processes and methods in cutting of fabric/material as well as assembly, finishing and packaging of Slit and Kaba. It is noticeable that some procedures in garment processing were followed; clarity of work processes and methods, adoption of proper procedure of work from raw material to finished goods and the selection and usage of appropriate machinery and training of workers at all levels of work. However, documented checking systems were not made available to monitor workers consistently.

Table 4.12 Respondents' views on Incentive and Recognition System

Statements	N	Min	Max	Mean	±SD
There are appropriate reward and recognition for outstanding performance in the design and production of garments	136	1	5	3.93	1.251
Reward and recognition activities effectively stimulate employee commitment to quality improvement	137	1	5	3.74	1.291
There are insufficient opportunities for self-development	138	1	5	4.26	1.089
Management generally encourages, rewards, accepts, evaluates, and implements workers' suggestions in quality matters	138	1	5	4.49	.898
Workers are recognized for achievements in quality improvement	138	1	5	4.07	1.245

Source: Fieldwork (2020)

Table 4.12 represents the descriptive statistics of respondents' view on incentives and recognition. The responses were collected using the 5-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree.

It can be recognized that majority of the respondents agreed that there are appropriate reward and recognition for outstanding performance in the design and production of garments (M=3.93, ±SD=1.251),reward and recognition activities effectively stimulate employee commitment to quality improvement (M=3.74, ±SD=1.291), and their insufficient opportunities for self-development (M=4.26, ±SD=1.089).

Moreover, most respondents also agreed that management generally encourages, rewards, accepts, evaluates, and implements workers' suggestions in quality matters (M=4.49, ±SD=.898) and workers are recognized for achievements in quality improvement (M=4.07, ±SD=1.245). The results implies that there are insufficient opportunities for workers self-improvement in the firms even though management has made adequate provision for reward and recognition of workers' performance. Management also generally encourages, rewards, accepts, evaluates, and implements workers' suggestions in quality matters.

Table 4.13 Respondents' views on Continuous Improvement Orientation

Statements	N	Min.	Max.	Mean	±SD
The business encourages workers to be creative and innovative in improving sewing processes	138	1	5	3.94	1.243
The business has an improvement perception not just maintaining the traditional work methods	138	1	5	3.21	1.487
There is a program to continuously improve product quality	138	1	5	3.25	1.662
The business evaluates performance and takes measures to improve it	138	1	5	3.35	1.565

The business emphasizes on continuous improvement and this is applied in all operations and at all levels of production.	138	1	5	4.36	.934
Problem-solving and continuous improvement processes are based on customer feedback	138	1	5	3.74	1.289
All workers are trained to look for continuous improvement in their daily sewing activities	138	1	5	3.49	1.263

Source: Fieldwork (2020)

Table 4.13 depicts respondents' assertions on continuous improvement orientation. The responses were measured using the 5-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree.

From the table most of the respondents agreed that the business encourages workers to be creative and innovative in improving sewing processes (M=3.94, ±SD=1.243), the business has an improvement perception not just maintain the traditional work methods (M=3.82, ±SD=1.200), there is a program to continuously improve product quality (M=3.25, ±SD=1.662) and the business evaluates performance and takes measures to improve it (M=3.35, ±SD=1.565).

Moreover, majority of the workers agreed that the business emphasizes continuous improvement, and this is applied in all operations and at all levels of production (M=4.36, ±SD=.934), problem-solving and continuous improvement processes are based on customer feedbacks (M=3.74, ±SD=1.289). Finally, most respondents agreed that all workers are trained to look for continuous improvement in their daily sewing activities (M=3.49, ±SD= 1.263).

It could be suggested that business generally encouraged creativity and innovation from workers. Performances are evaluated effectively and improvement processes are based on customer feedback. Moreover, workers oriented to look for continuous improvement in their daily sewing activities.

4.5 The Constraints/Barriers Faced in The Implementation of TQM Principles and Slit and Kaba Smes

Table 4.14 Respondents' views on the Constraints/Barriers Faced in SMG in the Implementation TQM Initiatives

Statements	N	Min	Max	Mean	±SD
Lack of commitment from management	138	1	5	4.04	1.168
Lack of experience in quality management	138	1	5	3.21	1.355
Emphasis on short term objectives of design and production	138	1	5	3.32	1.530
Lack of objectives and strategies in design and production	138	1	5	4.10	1.176
Our quality system is solely based on detection	133	1	5	4.08	1.142
Design and production department is given the sole responsibility for the quality	138	1	5	4.04	1.175
Lack of assessment procedures and benchmark indices in design and production	138	1	5	4.03	1.124
Workers resistance to change	138	1	5	3.82	1.300
Poor planning	138	1	5	4.11	1.277
Lack of proper training	138	1	5	3.27	1.375
Insufficient resources for TQM implementation	138	1	5	4.44	.967
Lack of customer orientation	138	1	5	3.37	1.465
The inability to change organizational thinking	138	1	5	4.03	1.183
Ineffective or unsuitable methods in the implementation of TQM	138	1	5	4.06	1.170
Absence of motivation and reward systems	138	1	5	4.15	1.226
Lack of use of quality measurement and benchmarking	138	1	5	3.73	1.380

Source: Fieldwork (2020)

Table 4.14 gives the descriptive statistics on the constraints/barriers small and medium Garment Production Enterprises face during the implementation of Quality Improvement Initiatives. The responses were measured using the 5-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree.

The challenges pointed out by the majority of the respondents covered issues relating to management, employees and customer relations. From the table majority of the

respondents agreed to lack of management commitment (M=4.04, ±SD=1.168), lack of experience in quality management (M=3.21, ±SD=1.355), businesses emphasizing short term objectives of design and production (M=3.32, ±SD=1.530), lack of objectives and strategies in design and production (M=4.10, ±SD=1.176), detection-based quality systems (M=4.08, ±SD=1.142) and handing of quality responsibilities to the design and production department (M=4.04, ±SD=1.175).

Moreover, most of the respondents also agreed that lack of assessment procedures and benchmark indices in design and production (M=4.03, ±SD=1.124), workers resistant to change (M=3.82, ±SD=1.300), poor planning (M=4.11, ±SD=1.277), lack of proper training (M=3.27, ±SD=1.375), insufficient resources for TQM implementation (M=4.44, ±SD=.967) and lack of customer orientation (M=3.37, ±SD=1.465) posed a major threat to the successful implementation of TQM to Small to Medium Garment Production Enterprises pursuit of quality TQM.

Finally, majority of the respondents agreed that the inability of the business to change organizational thinking (M=4.03, ±SD=1.183), ineffective or unsuitable methods in the implementation of TQM (M=4.06, ±SD=1.170), absence of motivation and reward systems (M=4.15, ±SD=1.226), and lack of use of quality measurement and benchmarking (M=3.73, ±SD=1.380) also made the implementation of TQM difficult.

From the responses it could be concluded that the garment production houses surveyed are challenged in their implementation of TQM by the lack of commitment from management, lack of objectives and strategies in design and production, quality system solely based on detection, design and production left in the hands of only the quality officer, lack of assessment procedures and benchmark indices, poor planning, insufficient resources, inability to change organizational thinking, ineffective methods of implementation as well as the absence of motivation and reward systems.

4.6 Improving TQM Practices in Garment Production

Table 4.15 Respondents' views on How TQM can be Implemented to Improve Productivity and Product Quality

Statements	N	Min	Max	Mean	±SD
There must be a quality improvement commitment from all workers	138	1	5	3.88	1.187
The business must follow a modern quality improvement culture constantly	138	1	5	3.89	1.260
Continuous improvement must take place in all policies, procedures, and activities	138	1	5	3.83	1.306
Cooperation and experience of workers must be utilised to improve strategies and enhance productivity	138	1	5	3.55	1.585
The focus must be on customers' requirements and satisfaction of their expectations for the long-term survival of the business	138	1	5	3.88	1.180
Adequate controls must be laid down to monitor and measure the real productivity and performance of the business.	138	1	5	3.92	1.178
TQM must look at all aspects of the business, from the sourcing of raw materials and components to production line technology, staff skills, planning, and customer relationship	138	1	5	4.09	1.133

Source: Fieldwork (2020)

Table 4.15 depicts respondents' views as to how TQM can be implemented to improve productivity and product quality. The responses were measured using the 5-point Likert scale of 1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree. From the table, majority of the respondents agreed that there must be a quality improvement commitment from all workers (M=3.88, ±SD=1.187), businesses must follow a modern quality improvement culture constantly (M=3.89, ±SD=1.260), continuous improvement must take place in all policies, procedures, and activities

(M=3.83, ±SD=1.306), and cooperation and experience of workers must be utilized to improve strategies and enhance productivity (M=3.55, ±SD=1.585).

Moreover, majority of the respondents agreed that the focus must be on customers' requirements and satisfaction of their expectations for the long-term survival of the business (M=3.88, ±SD=1.180), adequate controls must be laid down to monitor and measure the real productivity and performance of the business (M=3.92, ±SD=1.178), and TQM must look at all aspects of the business, from the sourcing of raw materials and components to production line technology, staff skills, planning, and customer relationship (M=4.09, ±SD=1.133)

It can be deduced from the discussions above that business commitment, policies, procedures, and activities and implementation of adequate controls for monitoring how TQM can be implemented to improve productivity and product quality. Furthermore, an effective TQM must inculcate all aspects of the business, from the sourcing of raw materials and components to production line technology, staff skills, planning, and customer relationship.

4.7 Analysis of Interview Responses

4.7.1 Benefits of TQM Implementation in The Design and Production of Slit and Kaba

The managers and owners of the garment production centres who participated in the study were asked to indicate their understanding of the prospects and benefits of implementing Total Quality Management in the design and production of Slit and Kaba. Summary of the responses revealed that the respondents demonstrated an appreciable understanding of the concept under study and went further to allude to

several benefits of implementing TQM in the design and production of Slit and Kaba. Selected comments have been given below;

"I understand quality in garment production to mean like do things that will improve the performance of the product being produced…and when you bring it into garment production like the Slit and Kaba you were asking it's all about the steps you take to ensure that what you are producing will meet the demands and requirements of the client. So, the garment fits the clients in terms of measurement, functions of closures, the finishing etc…" [Fashion House Owner 2]

"…oh, I understand what quality management means and I believe it's an emerging concept. It is a principle which embodies every aspect of the organisation and it is mainly geared towards elevating the importance of the customer through the institution of quality practices which in the end benefits and satisfies the customer…" [Fashion House Owner 5]

"…Yes, I agree, TQM is very very important when it comes to production in all manner of sense because it seeks to achieve a near-perfect production system where there is the reduction of waste, increased productivity, improved customer focus and satisfaction, increased sales…" [Fashion House Owner 22]

"…I know it's a concept that for instance our field of industry it starts from the sourcing of materials to the customer relationship stage. When you are sewing for someone you need to take into consideration reducing the cost of production while at the same time producing a good and satisfactory product to the customer…" [Fashion House Owner 28]

From the responses, it can thus be concluded that the respondents agreed with the assertion that TQM is fundamental to the achievement of high-quality products and customer satisfaction and retention. The subjects are well aware of the many benefits to be attained from the implementation of TQM in their work practices. Increase in sales, effective customer service coupled with cost reduction and improved production practices all will inure to the benefit and prospects of the production houses.

4.7.2 Basic Pillars Required for The Implementation of TQM Principles in the Design and Production of Slit and Kaba

The respondents were asked about their knowledge of the basic pillars required for the implementation of the TQM principles as part of their production processes. The responses give the impression that their sole understanding of the basic pillars of TQM is centred on the customer. They share the belief that quality in business should be at the dictate of the customer and nobody else. Selected responses are as given below;

"My thinking is that the customer is always right when it comes to business and this is because he's the one you are producing the thing for so if you don't listen to him who else should you listen to? So, to me, the customer remains the strongest pillar when it comes to thinking in terms of quality…" [Fashion House Owner 19]

"Oh, I believe that for a successful TQM implementation the whole business strategy should focus on customer, process, empower and compensate the employee, fact-based decision making, while being receptive to their feedback. I am sure these are the things that if all businesses will adhere to in their practices they will succeed. But I must reiterate that among these kinds of stuff you realize the customer is central…" [Fashion House Owner 10]

From the responses, it can be concluded that the main pillar underlying TQM in businesses like that of garment production outfit is the customer and that also requires improvement in internal operations by way of process improvement, employee empowerment and compensations and being receptive to customer complaints and feedback.

4.7.3 Implementation of TQM PRinciples in the Design and PRoduction of Slit and Kaba

Furthermore, from the understanding of the respondents, they were asked to indicate whether their respective garment manufacturing outfits have implemented any form of the quality management system and also indicate their motivation to do so.

Summary of the responses shows that most of the garment production firms have implemented some form of quality management processes. However, it was noted that the firms do not strictly follow the quality management procedures they have put in place. Selected excerpts from their responses have been given below;

"...yes, we have implemented quality practices in our work here. We make sure that every material we use are of the highest quality and we don't take anything substandard from our suppliers. We do it all the time to ensure that the end product is the best we can offer the customer..." [Fashion House Owner 29]

"...We have developed a systematic method for listening to our customers, collecting and looking to solve those problems for them. Most of the issues have to do with fitness issues. They wear it here but when they go home and relax and wear them that is where their inner preferences come to fore hence, they come back or sometimes they call on the phone to say a word or two about their observations about the apparel..." [Fashion House Owner 48]

...we have something like that but you know our people and the way we do our sewing. We don't follow it like that...we do well to inspect the work done at the end of the production, try to find out defective parts of the work...sometimes we are under so much pressure to deliver the Slit and Kaba because they come late and they want the delivery in a short time... [Fashion House Owner 1]

What we do here is a very comprehensive exercise where everything relative to the sewing of the Slit and Kaba is regarded with great consideration. Upon receipt of the fabric in the shop I have people to inspect it closely and then we can begin the actual sewing process. The table markings end positioning, tensions, etc after we check for miscuts, ragged cuttings, pattern checks and among a whole lot that time will not permit me to recount them. See most of the shops don't go through the rigorous exercise that we undertake here... [Fashion House Owner 19]

From the responses, it could be concluded that most of the Slit and Kaba production firms have adopted some form of quality management practices.

When asked about their motivation for using TQM; the responses points in one direction that is to satisfy the customer. Sample responses have been given below;

...normally we do that to satisfy the customer because sometimes we need to do more work to deliver a particular style all intended to satisfy the specific needs and desires of the customer...for this reason, we have a schedule we follow where we check the machine, look for tensions, check needles, cleanliness of the machine, stability of the table and among others... [Fashion House Owner 25]

From the responses, it could be concluded that the motivation for the implementation of TQM in the garment production houses surveyed is basically to satisfy the customer. Customer satisfaction remains the cardinal principles of TQM implementation. The responses indicate that the firms implement certain kinds of TQM programs giving the impression that they are conscious of the importance of TQM.

Additional comments to that effect have been given below;

for us, we know that quality has to be a companywide and we try to implement different quality management approaches or practices are followed to ensure the highest level of customer satisfaction in the apparel... [Fashion House Owner 42]

We use the principles in all of our processes because if you don't make quality a priority when designing the process your product outcomes will come short of the expected standard... [Fashion House Owner 38]

our main focus is on compliance with the international standards organisation on the quality that is ISO and we try as much as possible to follow the guidelines to the latter but you can see we are humans and for that matter cannot have a 100% perfect system like that; but we make sure that there is quality culture, process planning, Strategic quality management, employee empowerment and Employee training and education [Fashion House Owner 32]

From the responses, it can be concluded that the apparel manufacturing companies have adopted the concept of TQM and it is implemented in the entirety of their operations.

4.7.4 Challenges with the Implementation of TQM in Garment Production Enterprises

The respondents were asked about the challenges they encounter as part of implementing TQM in their operations. The responses suggest that most of the respondents suggested that they are challenged by the lack of proper training on the full rudiments of implementing TQM. Selected comments have been given below;

I believe that the major challenge I for one face is that I don't have any deeper training and understanding of total quality management. I am always tempted to believe that there is more I could do to satisfy my customers well… [Fashion House Owner 17]

oh, am not sure I have any challenge the only thing is for me to keep the customer in mind and think that everything is doing is to satisfy him and nothing more. That means that I need to listen to their needs and pay attention to fine details all towards satisfying him so that he would purchases my products more… [Fashion House Owner 11]

I think that most of us in the industry fail to succeed in the implementation of TQM is about the absence of a genuine quality culture. See some of my colleagues in the industry are used to the old ways of doing things that they do not want to improve. There has to be that genuine effort to implement quality activities in your operations… [Fashion House Owner 41]

Some of the production houses I must say they are not committed to living according to any given standard. They are not ready to do anything, especially where they have to spend a bit more to please the customer. They feel they are doing so much than they are getting paid in monetary terms. They don't understand the impact of goodwill on the long-term sustainability of the business… [Fashion House Owner 18]

From the responses, it can be concluded that the major challenge of stakeholders in the industry in the implementation of TQM has to do with the lack of quality culture in the

industry, lack of commitment towards the implementation of the concept into the operations of the firms in the industry.

4.7.5 Improving TQM in Small to Medium Garment Production Enterprises

The respondents were asked to share their opinions on ways they can improve on their TQM practices in the industry. The respondents alluded to the fact that the concept is an emerging one and has not yet been well understood by many people in the industry. The process they say would not occur overnight and that the results may not be experienced for a long period. However, the maintained that the main strategies to improve are to make the needs of the customer central to their operations. That way their internal processes and decisions all will be made towards ultimately satisfying the customer. Selected responses are as provided below;

...I believe that we need to create an enabling environment for effective customer relationship. I say this because I sometimes go to my colleague's shop and the environment there alone is not enabling for good customer relations. Yes, I agree it's a sewing shop but we need to understand that it is giving a good customer experience that will encourage more customers to come and purchase your services... [Fashion House Owner 39]

... To improve the level of quality standards in the industry I believe strongly that there has to be some form of continued education on the subject... [Fashion House Owner 05]

Total Quality Management has no specific destination and it's changing limit is also endless. As organisations around the world try to improve on their operational activities using different techniques and tools a lot of advocacy and education on the concept must be done in the industry to raise the awareness of the firms to also get the knowledge on how to improve their operations to better their lot.

4.8 Discussion of Results

4.8.1 Introduction

The primary purpose of this study was to determine the implementing of TQM principles and finding out its effects on the production of Slit and Kaba in small to medium garment production enterprises. This section of the research report discusses the findings of the study in relation to the literature review.

4.8.2 Prospects/Benefits of TQM Implementation of Slit and Kaba in Smes

The study found that TQM provides small and medium Garment Production Enterprises with enormous benefits. Such benefits could be categorised in terms of customer benefits, business progress and worker satisfaction. Total Quality Management ensures firms meet customer requirements, improves working climate, provide value for customers in terms of pricing and quality,reduces complaints and generally improve the quality of products and reduces scrap, and rework and establishes a stable production process (See Table 4.6). This study finding corroborates the works of Jaeger and Adair (2016) who opined that effective implementation of TQM in the garment manufacturing sector will increase customer satisfaction with service offerings. And Gavareshki et al., (2019) observed that implementation of TQM also helps to ensure that businesses change how they perform activities to eliminate inefficiency, improve customer satisfaction and achieve the best practice.

Moreover, the study discovered that commitment, customer focus and garment process monitoring and control plays important roles in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance and general garment business performance,

and that the level of TQM implementation in small to medium garment production enterprises directly impacts general garment business performance (Table 4.7). This outcome of the results is affirmed by the findings of Wei et al., (2019) and Beshah and Berhan (2017) who noted that implementing TQM helps to ensure the participation of everyone in the decision-making process through activities such as quality cycles and teamwork. Therefore, implying that TQM remains a management philosophy which emphasizes the devolution of authority to workers in the organization which in the end also improves employee's level of job satisfaction (Georgiev & Ohtaki, 2019).

4.8.3 Basic Pillars Required for The Implementation of TQM Principles and Slit and Kaba Smes

On the basic pillars required for the implementation of TQM the current study found that most of the workers showed a strong commitment towards management's quest to ensuring the success of quality in the fashion houses. The study observed that this is carried out by empowerment and product design and production in general even though management provided little in terms of technological advancement towards the design and production of Slit and Kaba (Table 4.8). The finding agrees with the position of the Petliushenko et al., (2018) who discovered that the implementation of TQM in practice requires an organizational culture and climate which does not happen overnight and that takes time and endurance to accomplish.

Similarly, the study found that Slit and Kaba producers were generally satisfied with their involvement in the activities of the firms. The firms also play important role in worker involvement; communication of business goals, encouragement of teamwork, implementation of workers' suggestions and workers' involvement in quality-related activities (Table 4.9). It was also noted that the main pillar underlying TQM in

businesses like that of garment production outfit is the customer and that also requires improvement in internal operations by way of process improvement, employee empowerment and compensations and being receptive to customer complaints and feedback.

That notwithstanding, focused mainly on the customers and gave customers high consideration in terms of attention, feedback and complaints, customer complaints were communicated promptly to all workers and frantic effort was made to gather information to measure customer satisfaction. It is noticeable that some procedures in garment processing followed; clarity of work processes and methods, adoption of proper procedure of work from raw material to finished goods and the selection and usage of appropriate machinery and training of workers at all levels of work. However, documented checking systems were not made available to monitor workers consistently. The finding is supported by the works of Besterfield et al., (2009) who found a technical tool that can be applied to control the process and to advance the process capability. The ability to clarify the work processes and methods puts the production system in place to ensure raw materials like the fabric are effectively converted to finished goods like the Slit and Kaba.

The study further noted that there are insufficient opportunities for workers self-improvement in the firms even though management has made adequate provision for reward and recognition of workers' performance. Management also generally encourages, rewards, accepts, evaluates, and implements workers' suggestions in quality matters. The is findings as enumerated above agrees with the outcomes of Jablonski (1994) who acknowledged six (6) qualities for the successful implementation of a TQM which included customer focus, process focus, prevention and inspection,

worker enablement and compensation, fact-based decision making, and receptivity to feedback.

4.8.4 The Constraints/Barriers Faced in SMG in the Implementation TQM

Nupur et al., (2016) acknowledge that unlike manufacturing organizations, garment manufacturing industries have limited management capabilities and incentives but on the contrary, most are faced with some challenges. The study observed that the garment production houses are constrained by the lack of commitment from management, lack of objectives and strategies in design and production, quality system solely based on detection, design and production left in the hands of only the quality officer, lack of assessment procedures and benchmark indices, poor planning, insufficient resources, inability to change organizational thinking, ineffective methods of implementation as well as the absence of motivation and reward systems (See Table 14).

The findings affirm those made by Nupur et al., (2011); Mosadeghrad (2014) and Nicolaou and Kentas (2017) which discovered the underlying barriers to TQM to be the inadequate human resource development and management, absence of planning for quality the absence of leadership for quality, insufficient resources and an absence of consumer focus. The study finding on the challenges was not corroborated by the outcomes found in the study by Lee et al., (2013) who found the lack of education as one of the reasons why TQM implementation fail, in addition to corruption, negligence, and irresponsibility as critical issues to quality management success. Lack of education, corruption, negligence and irresponsibility were not found as the challenges to effective implementation of TQM in the garment production industry particularly relative to the production of Slit and Kaba.

4.8.5 Improving TQM in The Production of Garment

In considering measures for improving TQM in the production of Slit and Kaba the current study discovered that business commitment, policies, procedures, and activities and implementation of adequate controls for monitoring how TQM can be implemented to improve product quality and that an effective TQM must inculcate all aspects of the business, from the sourcing of raw materials and components to production line technology, staff skills, planning, and customer relationship (see Table 4.14).

More so, the study observed that that the best way to improve on TQM organisations should make the effort to improve on their operational activities using different techniques and tools. It was noted that there is the need for a lot of advocacy and education on the concept in the industry to raise the awareness of the firms to also get the knowledge on how to improve their operations to better their lot and that businesses generally encourage creativity and innovation from workers. Performances are evaluated effectively and improvement processes are based on customer feedback. Moreover, workers oriented to look for continuous improvement in their daily sewing activities.

Also, the study found that there has to be a concerted effort in terms of commitment, stating of clear objectives, provision of resources, change in the mindset of workers, customer orientation and the provision of effective reward/recognition systems.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

5.1.1 Benefits of TQM Implementation of Slit and Kaba in Smes

The study concludes that garment production benefits from customer benefits, business progress and worker satisfaction. TQM ensures firms meet customer requirements, improves working climate, provide value for customers in terms of pricing and quality,reduces complaints and generally improve the quality of products and reduces scrap, and rework and establishes a stable production process. The study further concludes that TQM commitment, customer focus and garment process monitoring and control play important roles in TQM implementation which leads to garment quality, business performance and general garment business performance.

The study concluded that TQM is fundamental to the achievement of high-quality products and customer satisfaction and retention and that TQM results in an increase in sales, effective customer service coupled with cost reduction and improved production practices all will inure to the benefit and prospects of the production houses.

5.1.2 Basic Pillars Required for the Implementation of TQM Principles

On the basic pillars required for the implementation of TQM principles in the production of Slit and Kaba; the study concludes that there must be a commitment as well as management's quest to ensuring the success of quality in the firms and that management should have the vision towards quality, commitment towards empowerment and product design and production.

The study concludes that workers in the garment production industry are generally satisfied with their involvement in the activities of the firms and that play an important role in worker involvement; communication of business goals, encouragement of teamwork, implementation of workers' suggestions and workers' involvement in quality-related activities.

Also, the study concludes that firms focused mainly on the customers and gave customers high consideration in terms of attention, feedback and complaints and that customer complaint were communicated promptly to all workers and frantic effort was made to gather information to measure customer satisfaction.

That most the garment production firms are not sure about the availability of check sheets to monitor adherence to scheduled processes and the inspection of raw material, process and methods in cutting of fabric/material as well as assembly, finishing and packaging of Slit and Kaba. More so that some procedures in garment processing were followed; clarity of work processes and methods, adoption of proper procedure of work from raw material to finished goods and the selection and usage of appropriate machinery and training of workers at all levels of work.

On the contrary, it was concluded that there are insufficient opportunities for workers self-improvement in the firms even though management has made adequate provision for reward and recognition of workers' performance. Management also generally encourages, rewards, accepts, evaluates, and implements workers' suggestions in quality matters.

That management of the garment production firms encourages creativity and innovation from workers while undertaking performance evaluation activities effectively while basing on customer feedbacks and improvement processes.

5.1.3 The Constraints/Barriers Faced in SMG in The Implementation TQM Initiatives

From the findings on the challenges or constraints encountered by the garment production firms who participated in the study; the study concluded that in the implementation of TQM by the lack of commitment from management, lack of objectives and strategies in design and production, quality system solely based on detection, design and production left in the hands of only the quality officer. Additionally, there is the lack of assessment procedures and benchmark indices, poor planning, insufficient resources, inability to change organizational thinking, ineffective methods of implementation as well as the absence of motivation and reward systems. More so, it was concluded that the firms in implementing TQM there is the lack of quality culture in the industry, lack of commitment towards the implementation of the concept into the operations of the firms in the industry.

5.1.4 Improving TQM in the Production of Garment

The study concludes relative to ways of improving TQM in the production of Slit and Kaba were that business commitment, policies, procedures, and activities and implementation of process controls must be implemented to improve productivity and product quality. And that an effective TQM must inculcate all aspects of the business, from the sourcing of raw materials and components to production line technology, staff skills, planning, and customer relationship.

That a lot of advocacy and education on the concept of Total Quality Management should be given to industry players to raise the awareness of the firms thereby improving the knowledge of industry players about the benefits and potentials of implementing TQM in their operations.

5.2 Recommendations

Based on research results and assumptions, the following suggestions were made;

1. There should be a policy to include contents on TQM as part of the curriculum of Higher Fashion Education in Ghana. There must be a persistent education and training for all workers to facilitate a shift in attitudes and working practice. Apparel manufacturing businesses in Ghana must focus their attention on satiating its clientiles by affording quality garment and services.
2. Managers and owners of the firms must continue to demonstrate a commitment to quality, allocation of time and resources to quality improvement and learning from problems as examples of effective ways of using TQM through Managerial and Operational processes to improve competitiveness and sustainable growth.
3. Management of apparel manufacturing businesses in Ghana must show faith in their workers and improve their work condition and relations. Workers must be motivated and supported to make the right decisions concerning their work and be able to offer solutions related to their work problems whether during cutting, assembling, finishing etc. Through the improvement of production coordination and effective communication, employees must be inspired to advance their skills and performance.
4. That employees should be given more empowerment by employers to be integral to the application of TQM in the firms to improve processes in firms. The employees must not be controlled but empowered, stimulated to innovate and be involved in decision-making. Given priority to customers remains very important to the growth of every firm.
5. Apparel manufacturing businesses in Ghana must execute the TQM process through the application of problem-solving teams. The use of fishbone diagram

must be embraced by the apparel manufacturing business in Ghana in determining the source of a problem whether from labour, equipment, techniques of sewing or other supplies, and endeavour to reduce the cost that is least pertinent through a process of elimination. Apparel manufacturing businesses in Ghana must also encourage quality staff engagement process.

5.3 Suggestions for Further Research

Further research must study variations occurring in the apparel manufacturing business globally due to the adoption of the TQM system. The study sought to analyze total quality management implementation in small to medium enterprises production of Slit and Kaba in Accra, Ghana. The study focused only on Small to Medium scale enterprises in Accra. The scope in comparison to the entire nation may not be enough to support the generalization of the results. It is therefore suggested that up and coming researchers consider to widen the scope of this study for a more generalizable result.

REFERENCES

Aamer, M., Al-Awlaqi, M. & Alkibsi, M. (2017). TQM implementation in a least developed country: an exploratory study of Yemen. *The TQM Journal*, 29(3), 467-487.

Abdullah, M. M. B. & Tarí, J.J. (2012). The influence of soft and hard quality management practices on performance. *Asia Pacific Management Review*, 17(2), 177-193.

Abraham, I., & Howard, E. K. (2018). The Growing Popularity of Fashion Accessories Made of African Prints in Ghana. In *International Conference on Applied Science and Technology Conference Proceedings* (Vol. 4, No. 1, pp. 229-236).

Abusa, F. M., & Gibson, P. (2013). TQM implementation in developing countries: A case study of the Libyan industrial sector; *Benchmarking: An International Journal*, 20(5), 693-711.

Ahmad, M. M. & Elhuni, R. (2014). Critical quality factors for successful TQM implementation in Libyan oil and gas sector. *Benchmarking: An International Journal*, 21(5), 713-733.

Alonso-Almeida, M. M., Rodríguez-Anton, J. M. & Rubio-Andrada, L. (2012). Reasons for implementing certified quality systems and impact on performance: An analysis of the hotel industry. *The Service Industries Journal*, 32, 919-936.

Alsmadi, M. Almani, A. & Khan, Z. (2014). Implementing an integrated ABC and TOC approach to enhance decision making in a Lean context: A case study. *International Journal of Quality & Reliability Management* 8, 906-920.

Alsughayir, A. (2014). Does practising total quality management affect employee job satisfaction in Saudi Arabian organizations? *European Journal of Business and Management*, 6(3), 169-175.

Antubam, K. (1963). Ghana's Heritage of Culture; Leipzig: Kehler & Amelang.

Arslan, M. (2019). Evaluating the maturity level of TQM benefits in Pakistan. *International Journal of Productivity and Quality Management*, 28(2), 143-159.

Bahar, M., Kayvan, M., & Uma, K. (2016), Operational excellence through business process orientation: An intra-and inter-organizational analysis. *The TQM Journal*, 28(3), 467-495.

Bajpai, S. R., & Bajpai, R. C. (2014). The goodness of Measurement: Reliability and Validity. *International Journal of Medical Science and Public Health*, 3(2), 112-115.

Balaji, P. K. (2012). Quality Control in Apparel production, Research *Journal of Management Sciences, ISCA*, 2(2), 57-69.

Barouch, G. & Kleinhans, S. (2016). Learning from criticisms of quality management. *International Journal of Quality and Service Sciences*, 7(2/3), 201-216.

Bayazit, O., & Karpak, B. (2007). An analytical network process-based framework for successful total quality management (TQM): An assessment of Turkish manufacturing industry readiness. *International Journal of Production Economics*, 105(1), 79-96.

Bell, S. (2006). *Lean enterprise systems: using IT for continuous improvement*. Hoboken, NJ: John Willey & Sons, Inc.

Bernardino, L. L., Teixeira, F., de Jesus, A. R., Barbosa, A., Lordelo, M. & Lepikson, H. A. (2016). After 20 years, what has remained of TQM? *International Journal of Productivity and Performance Management,* 65(3), 378-400.

Berry,R., & Smith, L. B. (2005). Conceptual foundations for the theory of constraints. *Human Systems Management,* 24(1), 83-94.

Beshah, B., & Berhan, E. (2017). Critical success factors for TQM implementation. *Int. J. Qual. Product. Management*, *21*, 490-499.

Besterfield, D., Besterfield-Michna, C., Besterfield, G. H., Besterfield-Sacre, M., Urdhwareshe, H., & Urdhwarshe,R. (2012). Total quality management. New Delhi, Dorling Kindersley Pvt. Ltd.

Bhamu, J. & Sangwan K. S. (2014). Lean manufacturing: literature review and research issues. *International Journal of Operations & Production Management*, 34 (7), 876-940.

Bhasin, S. & Burcher, P. (2006). Lean viewed as a philosophy. *Journal of Manufacturing Technology Management*, 17(1), 56-72.

Bhasin, S. (2012). Prominent obstacles to lean. *International Journal of Productivity and Performance Management*, *61*(4), 403-425.

Bicheno, J. (2008). The Lean toolbox for service systems, PICSIE Books, Buckingham, UK.

Blackstone J. H. (2010). Theory of constraints: A status report. *International Journal of Production Research,* 39(6), 1053-1080.

Blazey, M. L. (2011). Insights to Performance Excellence 2011-2012: Understanding the Integrated Management System and the Baldrige Criteria. Milwaukee: American Society for Quality.

Bolatan, G. I. S., Gozlu, S., Alpkan, L. & Zaim, S. (2016). The impact of technology transfer performance on total quality management and quality performance. *International Strategic Management Conference* (ISMC), 235, 746-755.

Burris, J. E (2015). A Forecast of Global Textile and Apparel Market Shifts in Importing and Exporting - Is this the Final Death Rattle of Domestic Apparel and

Textile Manufacturing Industries? *Journal of textiles and apparel technology management* 9(2), 1-8.

Burton-Houle T. (2001). The theory of constraints and thinking processes. The Goldratt Institute.

Castillo-Villar, K. K., Smith, N. R. & Simonton, J. L. (2012). A model for supply chain design considering the cost of quality. *Applied Mathematical Modeling*, 36(12), 5920–5935.

Castillo-Villar, K. K., Smith, N. R. & Simontoncy, J. L. (2012). The impact of the cost of quality on serial supply-chain network design. *International Journal of Production Research* 50(19), 5544–5566.

Chakraborty, A. Mutingi, M. & Vashishth, A. (2019). Quality management practices in SMEs: a comparative study between India and Namibia. *Benchmarking: An International Journal*, https://doi.org/10.1108/BIJ-08-2017-0210

Chaudhari C. V. & Mukhopadhyay S. K. (2003). Application of Theory of Constraints in the integrated poultry industry. *International Journal of Production Research,* 41(4), 799-817.

Cherrafi, A.; Elfezazi, S.; Chiarini, A.; Mokhlis, A. & Benhida, K. (2016). The integration of lean manufacturing, six sigmas and sustainability: A literature review and future research directions for developing a specific model. *J. Clean. Prod.* 139, 828–846.

Chiu, Y., Lin, H., Wu, M. & Chiu, S. (2018). Alternative Fabrication Scheme to Study Effects of Rework of Nonconforming Products and Delayed Differentiation on a Multiproduct Supply-Chain System. *International Journal of Industrial Engineering Computations*, 9, 235-248.

Cho, J. & Kang, J. (2001). Benefits and Challenges of Global Sourcing: Perceptions of US Apparel Retail Firms. *International Marketing Review*, 18, 542-561.

Choe, K., & Herman, S. (2004). Using Theory of Constraints Tools to Manage Organizational Change: A Case Study of Euripa Labs. *International Journal of Management & Organisational Behaviour,* 8(6), 540-558.

Chopra, A., & Garg, D. (2011). Behaviour patterns of quality cost categories. *The TQM Journal*, 23 (5), 510-515.

Chowdhury, N. H & Haque, S. (2013). Point allocation-based quality control and defect Analysis in the sewing section of a woven factory of Bangladesh for shirt manufacturing. *Dhaka University Journal of Management*; 5(1&2).

Corredor, P. & Goñi, S. (2011). TQM and performance: Is the relationship so obvious? *Journal of Business Research,* 64(8), 830-838.

Cox, J. & Schleier, J. (2010). Theory of Constraints. Handbook, New York, NY: McGraw Hill Professional.

Creech, W. L. (1994). The Five pillars of TQM: how to make Total Quality Management work for you. New York: Williamson Music, Inc.

Crosby, P. (1979). *Quality is Free.* New York, NY: McGraw-Hill, 1979.

Crosby, P. (1984). *Quality without Tears.* New York, NY: McGraw-Hill, 1984.

Crosby, P. (1994). *Completeness* New York, NY: Penguin Books.

Crosby, P. (1999). *Quality & Me: Lessons from an Evolving Life.* San Francisco, CA: Jossey-Bass.

Cypress, B. S. (2017). Rigour or reliability and validity in qualitative research: Perspectives, strategies, reconceptualization, and recommendations. *Dimensions of Critical Care Nursing*, *36*(4), 253-263.

Dahlgaard, J. J. & Dahlgaard-Park, S. M. (2006). Lean production, six sigma quality, TQM and company culture. *The TQM Magazine*, 18(3), 263-281.

Dale, B. G., & Wan, G. M. (2002). Setting up a quality costing system. *Business Process Management Journal*.

Das, A., Paul, H., & Swierczek, F. W. (2008). Developing and validating total quality management (TQM) constructs in the context of Thailand's manufacturing industry. *Benchmarking: An International Journal*, 15(1), 52-72.

Delic, M., Radlovacki, V., Kamberovic, B., Maksimovic,R. & Pecujlija, M. (2014). Examining relationships between quality management and organizational performance in transitional economies. *Total Quality Management and Business Excellence*, 25(4), 367-382.

Deming, W. E. (1982). *Quality, Productivity, and Competitive Position.* Cambridge, MA: MIT Center for Advanced Engineering Study.

Deming, W. E. (1986). Out of the Crisis. Cambridge, MA: MITC enters for Advanced Engineering Studies.

Deming, W. E. (1993). *The New Economics.* Cambridge, MA: MIT Center for Advanced Engineering Study.

Demircioğlu E. N., Demircioğlu M. & Küçüksavaş N. (2010). The Relationship of the Theory of Constraints with Other Accounting and Management Techniques. *Journal of Çukurova University*, 14(1), 42-55.

Dettmer, H. W. (1997). Goldratt's Theory of Constraints: A Systems Approach to Continuous Improvement. ASQ Quality Press, Milwaukee, WI.

Dettmer, W. H. (2007). *The logical thinking process: A systems approach to complex problem solving (American Society for Quality)*, Milwaukee: Quality Press.

Dogbe, E. (2003). Unravelled yarns: Dress, consumption, and women's bodies in Ghanaian culture. *Fashion Theory*, *7*(3-4), 377-395.

Ehsan, A. (2013) Quantitative Cost of Quality Model in Manufacturing Supply Chain, thesis, Concordia University, Canada.

Ellis, R. (1993). Quality Assurance for University Teaching. Buckingham: SRHE & Open University Press.

Elshaer, I. A. & Augustyn, M. M. (2016). Direct effects of quality management on competitive advantage. *International Journal of Quality & Reliability Management*, 33(9), 1286-1310.

Emiliani, B., Stec, D. J., Grasso, L. & Stodder, J. (2003). *Better thinking, better results: Using the power of lean as a total business solution*. Center for Lean Business Management.

Essel, O. Q. (2019). Challenges Hampering the Growth of Dress Fashion Design in the Ghana Fashion Industry. *Journal of Small Business and Entrepreneurship*, *7*(2), 1-6.

Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal*, *5*(6), 00149.

Farhana, F. (2009). Lean production practices in Bangladesh: an investigation into the extent of practices and the existence of enabling environments for lean implementation, University of the Wollongong Thesis Collection, Available: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=4697&context=theses

Feigenbaum, A. (1961). *Total quality control*. London: McGraw-Hill.

Feigenbaum, A. (1983). Total Quality Control, 3rd edition, New York: McGraw-Hill.

Feigenbaum, A. V. (1989). How to Implement Total Quality Control. *Executive Excellence*, Nov. 6(11), 15-16.

Feigenbaum, A. V. (1991). *Total Quality Control.* New York, NY: McGraw-Hill.

Ferdousi, F., & Ahmed, A. (2009). An investigation of manufacturing performance improvement through lean production: A case study on Bangladeshi garment firms, *International Journal of Business and Management,* 4(9), 106-116.

Freiesleben, J. (2004). On the limited value of the cost of quality models. *Total Quality Manage*, 15(7), 959-969.

Fu A. (2000). Theory of constraints and activity-based costing. *University of Auckland Business Review*, 2(2), 66-74.

Fu, S. L., Shou, S. Y., Chen, K. C. & Wang, C. W. (2015). Assessment and cultivation of total quality management organizational culture – an empirical investigation. *Total Quality Management & Business Excellence,* 26(1-2), 123-139.

Gaus, N. (2017). Selecting research approaches and research designs: A reflective essay. *Qualitative Research Journal.*

Gavareshki, M. H. K., Dabestani, R., & Azar, A. S. O. (2019). Clustering employees based on their perception of critical success factors of total quality management and its influence on customer focus. *International Journal of Management Concepts and Philosophy*, *12*(2), 103-116.

Georgiev, S., & Ohtaki, S. (2019). Critical success factors for TQM implementation among manufacturing SMEs. *Benchmarking: An International Journal.*

Gershon, M. & Christobe, M. (2006). Comparing the cost of quality between C = 0 acceptance plans andMIL-STD-105E plans. *International Journal of Productivity and Quality Management,* 1(3), 272–289.

Gharakhani, D., Rahmati, H., Farrokhi, M. R. & Farahmandian, A. (2013). Total quality management and organizational performance. *American Journal of Industrial Engineering*, 1(3), 46-50.

Ghauri, P., Grønhaug, K., & Strange,R. (2020). *Research methods in business studies*. Cambridge University Press.

Gherbal, N., Shibani, A., Saidani, M., & Sagoo, A. (2012). Critical Success Factors of Implementing Total Quality Management in Libyan Organisations. In Proceedings of the International Conference on Industrial Engineering & Operations Management, Istanbul, Turkey, July 3-6.

Giaccio, M. C. (2013). The first theorization of quality: Deutscher Werkbund. *Total Quality Management & Business Excellence*, 24(3-4), 225-242.

Giakatis, G., Enkawa, T., & Washitani, K. (2001). Hidden quality costs and the distinction between quality cost and quality loss. *Total Quality Management*, (12)2, 179-190.

Gillham, B. (2008). *Developing a questionnaire*. A&C Black.

Gimenez-Espin, J. (2013). Organizational culture for total quality management. *Total Quality Management & Business Excellence*, 24(5-6), 678-692.

Glesne, C. (2016). *Becoming qualitative researchers: An introduction*. Pearson. One Lake Street, Upper Saddle River, New Jersey 07458.

Goldratt, E. M. (1990). What is this thing called the Theory of Constraints? North River Press, Croton-On-Hudson, NY.

Goldratt, E. M. (1997). *Critical chain: A business novel*. Barrington, MA. The North River Press.

Goldratt, E. M., & Cox, J. (1992). The Goal - A Process of Ongoing Improvement. Second Rev. Ed., North River Press Publishing Corporation, Great Barrington, MA.

Golratt, E. M. (1984). The goal: excellence in manufacturing New York: North River Press.

Gott, S. & Loughran, K. (eds.) (2010). Contemporary African Fashion. Bloomington, Indiana: Indiana University Press.

Gott, S. (2010). The Ghanaian Kaba: Fashion that Sustains Culture. In Contemporary African Fashion, eds. Gott, S. & Loughran, K. Loughran, pp. Bloomington, Indiana: Indiana University Press.

Gray, D. E. (2019). *Doing research in the business world*. Sage Publications Limited.

Greenwood, M. (2016). Approving or improving research ethics in management journals. *Journal of Business Ethics*, *137*(3), 507-520.

Grigoroudis, E., & Siskos Y. (2010). Customer Satisfaction Evaluation: Methods for Measuring and Implementing Service Quality. Technical University of Crete.

Gryna, F. M., Chua, R. C., & DeFeo, J. A. (2007). Juran's Quality Planning and Analysis for Enterprise Quality, -Chapter 5.

Gupta A., Bhardwaj A. & Kanda A. (2010). Fundamental Concepts of Theory of Constraints: An Emerging Philosophy. *World Academy of Science, Engineering and Technology*, 46, 686-692.

Gupta M. C., Sahi G. K. & Chahal H. (2013). Improving market orientation: the theory of constraints-based framework. *Journal of Strategic Marketing*, 21(4), 305-322

Gupta, D. (2011). Design and engineering of functional clothing. *Indian Journal of Fibre and Textile Research* 36(4), 327-335.

Gyekye, K. (2003). African Culture Values: An Introduction, Accra, Ghana: Sankofa Publishing Company.

Hallgren, M. & Olhager, J., (2009). Lean and agile manufacturing: external and internal drivers and performance outcomes. *International Journal of Operations & Production Management*, 29 (10), pp.976-999.

Halling, B. (2013). Lean Implementation: the significance of people and dualism. Stockholm: KTH Royal Institute of Technology.

Harrington, H. J. (1987). The Improvement Process: How America's Leading Companies Improve *Quality.* New York, NY: McGraw-Hill.

Harrington, H. J. (1991). Business Process Improvement: The Breakthrough Strategy for Total Quality, Productivity, and Competitiveness. New York, NY: McGraw-Hill.

Harrington, H. J. (1996). *High-Performance Benchmarking.* New York, NY: McGraw-Hill, 1996.

Harvey, L. & Stensaker, B. (2008). Quality culture: understandings, boundaries and linkages. *European Journal of Education*, 43(4), 427–42.

Harvey, L., & Green, D. (1993). Defining quality. *Assessment and Evaluation in Higher Education,* 18(1), 9-34.

Hendricks, K. B., & Singhal, V. R. (2001). Firm characteristics, total quality management, and financial performance. *Journal of Operations Management*, 19(3), 269-285.

Hirts, T. & Guernaccini, P. (2012). Toward a Model of Performance Measurement of Output Based on the Theory of Constraints. *Studies in Managerial and Financial Accounting* 25, 117-137.

Ho, S. K. M. (2010). Integrated lean TQM model for global sustainability & competitiveness. The *TQM Journal*, 22(2), 143-158.

Hodge, G. L., Goforth Ross, K., Joines, J. A. & Thoney, K. (2011). Adapting lean manufacturing principles to the textile industry. *Production Planning & Control*, 22 (3), pp. 237-247.

Hoyle, D. (2007). Quality management Essentials. UK: Elsevier Limited.

Huq, Z. (2005). Managing change: A barrier to TQM implementation in services industries. *Managing Service Quality*, 15(5), 452-469.

Hyer, N. L. & Wemmerlov, U. (2002). The office that Lean built, IIE *Solutions*, 34 (10), 36-43.

Ioannou G. & Papadoyiannls C. (2004). Theory of constraints-based methodology for effective ERP implementations. *International Journal of Production Research,* 42(23), 4927-4954.

Ishikawa, K. (1982). Guide to Quality Control. Tokyo, Japan: Asian Productivity Organization.

Ishikawa, K. (1985). What Is Total Quality Control? Englewood Cliffs, NJ: Prentice-Hall.

Ishikawa, K. (1991). What is Total Quality Control? The Japanese Way, translated by David J. Lu. Englewood Cliffs, NJ: Prentice-Hall.

Islam, A. & Haque A.F.M (2012a). Key aspects of TQM implementation in manufacturing organization- an empirical investigation. *International Journal of Research in Management & Technology* (2(33), 268-277.

Islam, A. & Haque A.F.M (2012b). Pillars of TQM Implementation in Manufacturing Organization- An Empirical Study. *Journal of Research in International Business and Management,* 2(5) 128-141.

Islam, M. M. Khan, A. & Khan, M. R. (2013). Minimization of Defects in the Sewing Section of Apparel Industry. *Research Journal of Management Sciences*. 2(8), 10-15.

Jablonski, J. R. (1994). Implementing TQM: Competing in the Nineties through Total Quality Management. Albuquerque, NM: Technical Management Consortium, Inc.

Jacob, D., Bergland, S., & Cox, J. (2009). Velocity: Combining Lean, Six Sigma, and the Theory of Constraints to Achieve Breakthrough Performance. New York: Free Press.

Jaeger, M. & Adair, D. (2016). Perception of TQM benefits, practices & obstacles: the case of project managers & quality management representatives in Kuwait. *The TQM Journal*, 28(2), 317-336.

Jaguar. (1953). The Sunday Mirror, December 21., p. 1, 10.

Jones T. C. & Dugdale D. (1998). Theory of constraints: Transforming ideas? *British Accounting Review*, 30(1), 73-91.

Jørgensen, B. & Emmitt, S. (2008). Lost in transition: the transfer of lean manufacturing to construction. *Engineering, Construction and Architectural Management*, *15*(4), 383-398.

Juran, J. M. (1988). Planning for Quality. London, England: Collier Macmillan.

Juran, J. M. (1989). Leadership for Quality. London, England: Collier Macmillan.

Juran, J. M. (1992). Quality by Design. New York, NY: Maxwell Macmillan International.

Juran, J. M. (1995). A History of Managing for Quality. Milwaukee, WI: ASQ Quality Press.

Juran, J. M. (2002). A Call to Action - The Summit: Carlson School of Management, University of Minnesota, Minneapolis, Minnesota. *Measuring Business Excellence* 6(3), 4–9.

Juran, J. M. (2004). *Architect of Quality.* New York, NY: McGraw-Hill.

Kalina-Kaminsky C. (2005). A Statistical Analysis of the Theory of Constraints, Doctorate Thesis, Graduate School of the University of Texas at Arlington.

Karatepe, M. (2013). Service Quality, Customer Satisfaction and Loyalty: The Moderating Role of gender. http://www.questia.com/library/1G1-267133418/service-quality-customer-satisfaction-and-loyalty

Kaynak, E., & Rogers, R. E. (2013). Implementation of total quality management: A comprehensive training program. New York; London: Routledge.

Kent, R. (2005). Manufacturing strategy for window fabricators 14 – the cost of quality. Tanagram Technology available at:www.tanagram.co.uk

Khalid, K., Abdullah, H. H., & Kumar M, D. (2012). Get along with quantitative research process. *International Journal of Research in Management*.

Khan, J. H. (2003). Impact of total quality management on productivity. *The TQM magazine*.

Kim S., Mabin V. J. & Davies J. (2008). The theory of constraints thinking processes: retrospect and prospect. *International Journal of Operations & Production Management*, 28(2), 155-184.

Kim, D. Y., Kumar, V. & Murphy, S. A. (2010). European Foundation for Quality Management Business excellence model. An integrative review and research agenda. *International Journal of Quality & Reliability Management*, 27(6), 684-701.

Kim, G. S. (2016). Effect of total quality management on customer satisfaction. *International Journal of Engineering Sciences & Research Technology*, 5(6), 507-514.

Kim, H. S., & Damhorst, M. L. (1998). Environmental concern and apparel consumption. *Clothing and Textiles Research Journal* 16, 126–133.

Krishnan, S. K., Agus A., & Husain, N. (2000). Cost of quality: The hidden costs. *Total Quality Management,* 11(4-6), 844-848.

Krosnick, J. A. (2018). Questionnaire design. *In the Palgrave handbook of survey research* (pp. 439-455). Palgrave Macmillan, Cham.

Kuma-Kpobee, M. A. (2009). *Determination of a sizing system for mass customisation of Ghanaian women's traditional dress: and a conceptual framework for small and medium scale enterprises* (Doctoral dissertation, Manchester Metropolitan University).

Kuma-Kpobee, M. A. (2013). The Evolution and Current Manufacturing Practice Applied to the traditional Dress of Women in Ghana. *International Journal of Technology and Management Research, 1(2)*, 56-66.

Kuma-Kpobee, M., Power, J., & Otieno, R. (2007). Utilisation of traditional dress: The case of the Slit and Kaba in Ghana. University of Leeds.

Kumar, R., Garg, D., & Garg, T. K. (2011). TQM success factors in North Indian manufacturing and service industries. *The TQM Journal*, 23(1), 36-46.

Lam, S. Y., Shankar, V., Erramilli, M. K., & Murthy, B. (2004). Customer value, satisfaction, loyalty, and switching costs: An illustration from a business-to-business service context. *Journal of the Academy of Marketing Science,* 32, 293-311.

Lari, A., & Asllani, A. (2013). Quality cost management support system: an effective tool for organisational performance improvement. *Total Quality Management & Business Excellence,* 24(3-4), 432-451.

Leavy, P. (2017). *Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches*. Guilford Publications.

Lee, C. K. H., Choy, K. L., Ho, G. T., Chin, K. S., Law, K. M. Y. and Tse, Y. K. (2013). A Hybrid OLAP-Association Rule Mining Based Quality Management System for

Extracting Defect Patterns in the Garment Industry. *Expert Systems with Applications*, 40, 2435-2446.

Lee, V. H., Ooi, K. B., Tan, B. I., & Chong, A. Y. L. (2010). A structural analysis of the relationship between TQM practices and product innovation. *Asian Journal of Technology Innovation*, *18*(1), 73-96.

Levitt, H. M., Motulsky, S. L., Wertz, F. J., Morrow, S. L., & Ponterotto, J. G. (2017). Recommendations for designing and reviewing qualitative research in psychology: Promoting methodological integrity. *Qualitative psychology*, *4*(1), 2.

Levy, P. S., & Lemeshow, S. (2013). *Sampling of populations: methods and applications*. John Wiley & Sons.

Librelato, T. P. Lacerda, D. P. Rodrigues, L. H. & Veit D. R. (201). A constraint is anything that prevents the system from achieving its goals. *Business Process Management Journal* 6, 922-949.

Loke, S. P., Ooi, K. B., Tan, B. I., & Safa, M. S. (2010). The role of TQM and KM in supply chain learning: A conceptual model. *International Journal of Innovation and Learning*, 8, 332-344.

Lu, S. (2018a). How regional supply chains are shaping world textile & apparel trade. Just-Style.

Lu, S. (2018b). Changing trends in world textile & apparel trade. Just-Style.

Maistry, K., Kumar, D. & Ramessur, H. (2017). Total quality management and innovation: relationships and effects on performance of agricultural R & D organisations. *International Journal of Quality & Reliability Management,* 34(3) 418-437.

Mann, D. (2009). The missing link: Lean leadership. *Frontiers of Health Services Mgmt., 26*(1), 15-26.

Marodin, G. A. & Saurin, T. A. (2013). Implementing lean production systems: research areas and opportunities for future studies. *International Journal of Production Research,* 51 (22), pp. 6663-6680.

Mehmet, D. & Lenny, K. S. C. (2006). TQM and market orientation's impact on SMEs' performance. *Industrial Management & Data Systems,* 106(8), 1206-1228.

Mehta, A., Eilers, L. F., Campbell, A. M., Ramirez, D. W. & Godambe, S. A. (2017). Using the PRISM Model to Drive Quality Improvement in the Emergency Department. *Clinical Pediatric Emergency Medicine,* 18, 103-114.

Mele, C., & Colurcio, M. (2006). The evolving path of TQM: Towards business excellence and stakeholder value. *International Journal of Quality and Reliability Management*, 23(5), 464-489.

Mendes, L. (2012). Employees' Involvement and Quality Improvement In Manufacturing Small And Medium Enterprise (SME): A Comparative Analysis. *African Journal of Business Management*. 6(23), 6980–6996.

Mitreva, E. & Prodanovska V. (2013). The Management Teams are a Unique Business Potential that can Initiate, Identify and Manage Change within the Organization, in: Applied Social Sciences: Administration and Management, Cambridge Scholars Publishing, Newcastle upon Tyne, UK, pp. 57-65.

Mitreva, E., Taskov, N., Sazdova, J., Gjeorgieva, I. & Gjorshevski, H. (2015). The Need for Implementation of Integrated Management Systems (IMS) in Macedonian Companies, *Quality - Access to Success*, 16(147), 62-65.

Moccia, S. (2016). The role of value & virtues in TQM: an overview of literature. *The TQM Journal*, 28(2), 216-234.

Mohajan, H. K. (2017). Two criteria for good measurements in research: Validity and reliability. *Annals of Spiru Haret University. Economic Series*, *17*(4), 59-82.

Mohammad, M., Mann, R., Grigg, N., & Wagner, J. P. (2011). Business excellence model: An overarching framework for managing and aligning multiple organizational improvement initiatives. *Total Quality Management and Business Excellence*, 22, 1213-1236.

Mortimore, P. & Stone, C. (1991). Measuring Educational Quality, *British Journal of Educational Studies*, 3 9(1), 67-82.

Mosadeghrad, A. M. (2006). The impact of organizational culture on the successful implementation of total quality management. *TQM Managing*, 18(6), 606-625.

Mosadeghrad, A. M. (2014). Why TQM programmes fail? A pathology approaches. *The TQM Journal,* 26(2), 160-187.

Mottaleb, K. A. & Sonobe, T. (2011). An Inquiry into the Rapid Growth of the Garment Industry in Bangladesh. Economic Development & Cultural Change, 60, 67-89.

Mulat, A. A. Subhalakshmi, K. Yan, H. & Linzi P. (2018). Implementation of Statistical Process Control (SPC) in the Sewing Section of Garment Industry for Quality Improvement. *Autex Research Journal* 18(2), 160-172.

Najeh, R. T., (2006). A Road Map for the Effective Adoption of Total Quality Management in Libyan Oil Industries. Doctoral Thesis, University of Bradford.

Naor, M., Bernardes E. S. & Coman, A. (2013). Theory of constraints: is it a theory and a good one? *International Journal of Production Research*, 51(2), 542-554.

Narasimhan, R., Swink, M. & Kim, S. W. (2006). Disentangling leanness and agility: an empirical investigation. *Journal of operations management*, *24*(5), pp. 440-457.

Neyestani B. (2017). Seven Basic Tools of Quality Control: An Appropriate Tools for Solving Quality Problems in the Organizations. MPRA Paper No. 77681,

Neyestani, B., & Juanzon, J. B. P. (2016). Identification of a Set of Appropriate Critical Success Factors for Successful TQM Implementation in Construction, and Other Industries. *International Journal of Advanced Research* 4(11), 1581-1591.

Ngwenya, B., Sibanda, V., Matunzeni, T., Ngwenya, B., Sibanda, V., & Matunzeni, T. (2016). Challenges and benefits of total quality management (TQM) implementation in manufacturing companies: A case study of delta beverages. *Zimbabwe. International Journal Original Research*, *2*(6), 296-307.

Nicolaou, N & Kentas. G. (2017). Total Quality Management Implementation Failure Reasons in Healthcare Sector. *Journal of Health Science 5*, 110-113.

Nicoletti, B. (2013). Lean Six Sigma and digitize procurement. *International Journal of Lean Six Sigma,* (2), 184-203.

Nilsson, L., Johnson, M., & Gustafsson, A. (2001). The impact of quality practices on customer satisfaction and business results: product versus service organizations. *Journal of Quality Management,* 6, 5-27.

Noori, B., & Latifi, M. (2018). Development of Six Sigma methodology to improve grinding processes: a change management approach. *International journal of lean six sigma*, 9(1), 50-63.

Nupur, R., Gandhi, K., Solanki, A. & Jha, P. C. (2018). Six Sigma Implementation in Cutting Process of Apparel Industry. In: *Quality, IT and Business Operations, Springer, Singapore*, 279-295.

Oakland J. S. (2003). Total Quality Management: text with cases. Great Britain: Butterworth Heinemann.

Osayawe, E. B., & McAndrew, E. B. (2005). Innovation, diffusion and adoption of total quality management (TQM). *Management Decision,* 43(6), 925-940.

Peris-Ortiz, M., . lvarez-García, J., & Rueda-Armengot, C. (2015). Achieving competitive advantage through quality management. Cham: Springer.

Petliushenko, K., Kumar, V., Zwiegelaar, J., Loonam, J., & Garza-Reyes, J. A. (2018). Investigating the benefits and challenges of Total Quality Management implementation in the pharmaceutical companies. *Proceedings of the 2018 British Academy of Management (BAM) Conference*, Bristol, UK, 4-6 September.

Pettersen, J. (2009). Defining lean production: some conceptual and practical issues. *The TQM Journal* 21(2), 127-142.

Phan, A. C., Abdallah, A. B., & Matsui, Y. (2011). Quality management practices & competitive performance: Empirical evidence from Japanese manufacturing companies. *International Journal of Production Economics,* 133(2), 518-529.

Plunkett, J. J. & Dale, B. G. (1988). Quality costs: a critique of some economic cost of quality models. *International Journal of Production Research*, 26(11), 1713.

Porter, L. & Rayner, P. (1992). Quality costing for total quality management. *International Journal of Production Economics,* 27(10), 69–81.

Porter, M. E. (1985). Competitive Advantage. Free Press.

Quartey, P. (2006). The Textiles & Clothing Industry in Ghana, in: Herbert Jauch/Rudolf Traub-Merz (Eds.) The Future of the Textile & Clothing Industry in Sub-Saharan Africa (Bonn: Friedrich-Ebert-Stiftung).

Rahi, S. (2017). Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics & Management Sciences*, *6*(2), 1-5.

Rahi, S., Alnaser, F. M., & Ghani, M. A. (2019). Designing survey research: recommendation for questionnaire development, calculating sample size and

selecting research paradigms. *Economic and Social Development: Book of Proceedings*, 1157-1169.

Rahman, M. H. & Al Amin, M. (2016). An Empirical Analysis of the Effective Factors of the Production Efficiency in the Garments Sector of Bangladesh. *European Journal of Advances in Engineering & Technology*, 3, 30-36.

Randhawa, J. S., & Ahuja, I. S. (2017). 5S–a quality improvement tool for sustainable performance: literature review and directions. *International Journal of Quality & Reliability Management*.

Rasamanie, M., & Kanapathy, K. (2011). The Implementation of Cost of Quality (COQ) Reporting System in Malaysian Manufacturing Companies: Difficulties Encountered and Benefits Acquired. *International Journal of Business and Social Science*, (2)6, 243-247.

Ravitz, L. (1991). The cost of quality: a different approach to noninterest expense management, Financial Managers. *Statement,* 13(2), 8-13.

Ray A., Sarkar B. & Sanyal S. (2010). The TOC-Based Algorithm for Solving Multiple Constraint Resources. *IEEE Transactions on Engineering Management*, 57(2), 301-309.

Ray A., Sarkar B. & Sanyal S. K. (2008). An improved theory of constraints. *International Journal of Accounting and Information Management,* 16(2), 155-165.

Reeves, C. A., & Bednar, D. A. (1994). Defining quality: alternatives and implications. *Academy of management Review*, *19*(3), 419-445.

Richard, J. (2012). Total Quality Management, *Business Management and Strategy*, 3(2), 36-42.

Ronen, B., & Spector, Y. (1992). Managing system constraints: a cost/utilisation approach. *International Journal of Production Research*, 30(9), 2045–2061.

Ryall, J. & Kruithof, J. (2001). The Quality Systems Handbook. Australia: Consensus Books.

Samir D. B, Mohammed, Z. S, & Omar A. O. (2018). Assessment of TQM implementation level in Palestinian healthcare organizations: The case of Gaza Strip hospitals. *The TQM Journal*, 30(2), 98-115.

Sandoval-Chavez, D. A. & Beruvides, M. G. (1997). A state-of-the-art matrix analysis of the cost related to quality. Sixth International Conference on Management of Technology, pp.1253– 1260.

Sandoval-Chavez, D. A., & Beruvides, M. G. (1998). Using opportunity costs to determine the cost of quality: a case study in a continuous-process industry. *Engineering Economist*, 43(2), 107-127.

Sansalvador, M. E., & Brotons, J. M. (2013). Quality cost analysis: a case study of a Spanish organization. *Total Quality Management & Business Excellence*, 24(3-4), 378-396.

Saunders M., & Mann, R. (2008). Implementing Strategic initiatives: a framework of leading practices. *International Journal of Operations and Production Management,* 28(11), 1095-1123.

Schiele, J. J., & McCue, C. P. (2010). A framework for the adoption of lean thinking within public procurement. *International Journal of Procurement Management,* 3(4), 379-396.

Schiele, J. J., & McCue, C. P. (2011). Lean thinking and its implication for public procurement: Moving forward with assessment and implementation. *Journal of Public Procurement*, 11(2), 206-239.

Schiffauerova, A. & Thomson, V. (2006). A review of research on the cost of quality models and best practices. *International Journal of Quality and Reliability Management*, 23(6), 647–669.

Schneiderman, A. (1986). Optimum quality costs and zero defects: are they contradictory concepts? *Quality Progress*, 29(11), 28–31.

Schragenheim, E. (1999). Management dilemmas: The theory of constraints approach to problem identification and solutions. Boca Rotan, FL: St. Lucie.

Seawright, K. & Young, S. A. (1996). A Quality Definition Continuum. Interfaces 26(3), 107-113.

Sebastianelli, R. & Tamimi, N. (2002). How product quality dimensions relate to defining quality. *The International Journal of Quality & Reliability Management* 29(4), 442.

Sedevich, L. A. (2012). Integration of quality cost and accounting practices. *The TQM Journal,* (24)4, 338-351.

Seetharaman, A., Sreenivasan, J., & Boon, L. P. (2006). Critical success factors of total quality management. *Quality and quantity*, 40(5), 675-695.

Shaari, J. A. N. (2008). Japan & TQM: Malaysian Perception on TQM Implementation, Proceedings of National Management Conference 2008, Kota Terengganu: Malaysia.

Shah, R. & Ward, P. T. (2003). Lean manufacturing: context, practice bundles, and performance. *Journal of Operations Management*, 21 (2), 129-149.

Sharma, G. (2017). Pros and cons of different sampling techniques. *International journal of applied research*, *3*(7), 749-752.

Sharma, M., & Kodali, R. (2008). TQM implementation elements for manufacturing excellence. *The TQM Journal*, 20(6), 599-621.

Shewhart, W. A. (1931). Economic control of quality manufactured product, Van Nostrand, New York.

Sila, I., & Ebrahimpour, M. (2005). Critical linkages among TQM factors and business results. *International Journal of Operations and Production Management*, 25(11), 1123-1155.

Sit, W. Y., Ooi, K. B., Lin, B., & Yee-Loong, C. A. (2009). TQM and customer satisfaction in Malaysia's service sector. *Industrial Management and Data Systems*, 109(7), 957-975.

Sony, M., Antony, J., & Douglas, J. A. (2020). Essential ingredients for the implementation of Quality 4.0. *The TQM Journal*.

Spector, Y. (2011). Theory of constraint methodology where the constraint is the business model. *International Journal of Production Research*, 49(11), 3387-3394.

Sraun, J. S., & Singh, H. (2017). Continuous improvement strategies across manufacturing SMEs of Northern India. *International Journal of Lean Six Sigma*.

Stone, K. B. (2012). Four decades of lean: a systematic literature review. *International Journal of Lean Six Sigma*, *3*(2), 112-132.

Stone-Romero, E. F., & Rosopa, P. J. (2008). The relative validity of inferences about mediation as a function of research design characteristics. *Organizational Research Methods*, *11*(2), 326-352.

Suárez-Barraza, M. F., Smith, T. & Dahlgaard-Park, S. M. (2012). Lean Service: A literature analysis and classification. *Total Quality Management & Business Excellence*, *23*(3-4), 359-380.

Syduzzaman, M. D. Monirul, I., Ahashan H. & Dilruba, Y. (2016). Effects of Implementing TQM Principles in the Apparel Manufacturing Industry: Case Study on a Bangladeshi Clothing Factory. *Science and Technology* 6(3), 68-75.

Talapatra, S. & Rahman, M. H. (2016). Safety Awareness and Worker's Health Hazards in the Garments Sector of Bangladesh. *European Journal of Advances in Engineering and Technology,* 3, 44-49.

Talapatra1, S. & Uddin, K. (2018). Some obstacles that affect the TQM implementation in Bangladeshi RMG Sector: An empirical study *Proceedings of the International Conference on Industrial Engineering and Operations Management Bandung, Indonesia, March 6-8, 2018.*

Tan Owee, K.; Tan Su, Y.; Amran, R. & Choi Sang, L. (2016). Lean six sigma sustainability frameworks: A case study on an automotive company. *Asian J. Sci. Res.* 9, 279–283.

Tiplady, B., (2010). Running a Lean office. *The British Journal of Administrative Management*, 22-23.

Tranberg, H. K. & Madison. D. S. (2013). African Dress: Fashion, Agency, Performance. New York: Bloomsbury Academic.

Tulasi L. & Rao A. R. (2012). Review on Theory of Constraints. *International Journal of Advances in Engineering & Technology,* 3(1), 334-344.

Tye, L. H., Halim, H. A. & Ramayah, T., (2011). An exploratory study on the cost of quality implementation in Malaysia: the case of Penang manufacturing firms. *Total Quality Management and Business Excellence*, 22(12), 1299–1315.

Upadhye, N., Deshmukh, S. G., & Garg, S. (2010). Lean manufacturing for sustainable development. *Global Business and Management Research*, *2*(1), 125.

Uzuegbu, C. P., & Nnadozie, C. O. (2015). Henry Fayol's 14 Principles of Management: Implications for Libraries and Information Centres. *Journal of Information Science Theory and Practice,* 3(2), 58-72.

van Kemenade, E. A. (2010). Past is prologue: know the history of quality management to achieve future success. *Quality Progress*, 8(8), 49-53.

van Kemenade, E.A. (2018). #9 new insights on quality paradigms. Available at: www.vankemenade-act.nl/2018/05/30/9-new-insight-on-quality-paradigms/

Varukolu, V. & Park-Poaps, H. (2009). Technology Adoption by Apparel Manufacturers in Tirupur Town, India. *Journal of Fashion Marketing and Management* 13 (2), 201-214.

Vehovar, V., Toepoel, V., & Steinmetz, S. (2016). Non-probability sampling. *The Sage handbook of survey methods*, 329-345.

Veltmeyer, J. & Mohamed, S. (2017). Investigation into the hierarchical nature of TQM variables using structural modelling. *International Journal of Quality & Reliability Management,* 34(4), 462-477.

Vimal K. Sharma, R. R. K. Pratima V., Kuei-Kuei L., and Yu-Hsin Chang, (2018). Mapping the TQM implementation. *Benchmarking: An International Journal*, 25, 3081.

Vimal K., & Sharma, R. R. K. (2017). An empirical investigation of critical success factors influencing the successful TQM implementation for firms with different strategic orientation. *International Journal of Quality & Reliability Management*, 34, 1530.

Vora, M. K. (2013). Business excellence through sustainable change management. *The TQM Journal,* 25, 625-640.

Weckenmann, A., Akkasoglu, G. & Werner, T. (2015). Quality management – history and trends. *The TQM Journal*, 27(3), 281-293.

Wei, J. T., Chang,Y. W., Zhang, X., Wu, H. H., & Tang,Y. T. (2019). Performance measurement systems, TQM and multi-level firm performance: a person–organisation fit perspective. *Total Quality Management & Business Excellence*, *30*(15-16), 1578-1595.

Westerheijden, D. (1999). Where are the quantum jumps in quality assurance? Development of a decade of research on a heavy particle. *Higher education*, 38(2), 233-254.

Westphal, J. D., Gulati,R., & Shortell, S. M. (1997). Customization or conformity? An institutional and network perspective on the content and consequences of TQM adoption. *Administrative Science Quarterly*, 42(2), 366-394.

Wickramasinghe, G. L. D. & Perera, A. (2016). Effect of total productive maintenance practices on manufacturing performance: Investigation of textile & apparel manufacturing firms. *Journal of Manufacturing Technology Management*, 27(5), 713-729.

Womack, J. P., & Jones, D. T. (2010). *Lean thinking: banish waste and create wealth in your corporation*. Simon and Schuster.

Womack, J. P., Jones, D. T. & Roos, D. (1990). *Machine that changed the world*. Simon and Schuster.

World Trade Organization (WTO) (2017), World Trade Report 2017: Trade, technology & jobs, Geneva: WTO.

Yang, C. (2008). Improving the definition and quantification of quality costs. *Center for the Topology and Quantization of Moduli Spaces*, 19(3), 175–191.

Yang, C. X., Liu, H. M., & Wang, X. X. (2013). Organization Theories: From Classical to Modern. *Journal of Applied Sciences*, 13 (21), 4470.

Yu, G. J., Park, M., & Hong, K. H. (2020). A strategy perspective on total quality management. *Total Quality Management & Business Excellence*, *31*(1-2), 68-81.

Zairi, M. (2013). The TQM legacy – Gurus' contributions and theoretical impact. *The TQM Journal,* 25(6), 659-676.

APPENDIX: A

QUESTIONNAIRES FOR WORKERS

This questionnaire is designed to collect relevant information about your views on the **implementation of Total Quality Management (TQM) in the design and production of Slit and Kaba in small to medium garment production enterprises in Ghana**. Your response to the items of this questionnaire will remain confidential. The return of the questionnaire will be your consent to participate in this study. You can use a [√] mark to indicate your responses for items with alternative responses. Please briefly state your responses to the open-ended items.

THANK YOU

SECTION A - DEMOGRAPHICS

Name of the business: ……

Gender: Male [ ] Female [ ]

Age: Below 20 [ ] 21-30 [ ] 31-40 [ ] 41-50 [ ] 50 & above [ ]

Educational qualification: [ ] No formal education [ ] Vocational [ ] Tertiary [ ]

Others (specify)……...

Area of specialization…….....

How long have you worked in this firm? Less than 1 year [ ] 1-3 [ ] 3-5 [ ] 6-10 [ ]

10 years & above [ ]

Please Indicate Your Current Position by ticking [√] appropriately

Please Indicate Your Current Position	***YES***	***NO***
Sales and related occupations		
Office and administrative support		
Seeing machine installation, maintenance, and repair		
Supervisor/manager of production		
Patternmaker		
Sewing machine operator		
Cutter and trimmer		
Inspector, tester, sorter, sampler,		
Packaging and filling machine operator		
Miscellaneous production worker		

SECTION B: TQM CONCEPTS AND BASIC PILLARS REQUIRED FOR THE IMPLEMENTATION OF TQM PRINCIPLES

In your view, which of these bests define quality, in your opinion	***Not at all 1***	***2***	***3***	***4***	***To a very large extent 5***
The expensiveness of the product					
Quality has to do with satisfying the internal customer					
Quality has to do with Satisfying external customer					
Quality has to do with the Appearance					
Quality results in increased profit					
Quality is value for money					
Quality is Teamwork					

Basic pillars required for the implementation of TQM principles	***Strongly Agree 5***	***4***	***3***	***2***	***Strongly Disagree 1***
Commitment to Quality					
There must be a very high level of management commitment towards quality in the design and production of Slit & Kaba					
There must be a very high level of management commitment towards Productivity in the design and production of Slit & Kaba					
There must be a very high level of management commitment towards the customer in terms of the design and production of Slit and Kaba					

There must be a good relationship between management and workers					
Management has a clear vision for implementing quality goals in terms of the design and production of Slit & Kaba					
Management is committed to ensuring the success of the quality					
Management empowers all workers to have adequate knowledge of quality procedures					
Management creates a quality awareness among workers and is supportive of technology advancement to improve quality of the design and production of Slit & Kaba					

Basic pillars required for the implementation of TQM principles	***Strongly Agree 5***	***4***	***3***	***2***	***Strongly Disagree 1***
Workers Involvement					
The business encourages suggestions from workers					
Workers enjoy their job descriptions and working environment					
The business encourages teamwork rather than individual work					
The business encourages workers to suggest ideas for work improvement					
Workers are involved in decision-making in daily activities					
The business' goals are communicated regularly to workers					
Workers' suggestions are always implemented					
Workers are actively involved in quality-related activities					
Self-improvement is encouraged to improve the skills and performance of workers					

Basic pillars required for the implementation of TQM principles	***Strongly Agree 5***	***4***	***3***	***2***	***Strongly Disagree 1***
Customer Focus					
The business gives full attention to customer needs					
The business gives feedback forms to customers after delivery of the Slit & Kaba					
The business has information to measure customer satisfaction					
There is an active search for customer feedback					
Customer satisfaction is monitored to identify trends and to initiate quality improvements in design and production					
Customer complaints are communicated to all workers					

Basic pillars required for the implementation of TQM principles	***Strongly Agree 5***	***4***	***3***	***2***	***Strongly Disagree 1***
Garment Process Monitoring and Control					
There is clear clarity of work processes and methods					
Check sheets are available to monitor the adherence to scheduled processes					
Inspection of raw material, processes and methods are followed in laying and cutting of fabric/material, assembly of the Slit & Kaba and finishing and packaging					
Adopting the proper procedure of work from raw material to finished goods					
Selection and use of appropriate machinery and training of workers at all level					

Basic pillars required for the implementation of TQM principles	***Strongly Agree 5***	***4***	***3***	***2***	***Strongly Disagree 1***
Incentive and Recognition System					
There are appropriate reward and recognition for outstanding performance in the design and production of garments					

Reward and recognition activities effectively stimulate employee commitment to quality improvement					
There are insufficient opportunities for self-development					
Management generally encourages, rewards, accepts, evaluates, and implements workers' suggestions in quality matters					
Workers are recognized for achievements in quality improvement					

Basic pillars required for the implementation of TQM principles	***Strongly Agree 5***	***4***	***3***	***2***	***Strongly Disagree 1***
Continuous Improvement Orientation					
The business encourages workers to be creative and innovative in improving sewing processes					
The business has an improvement perception not just maintaining the traditional work methods					
There is a program to continuously improve product quality					
The business evaluates performance and takes measures to improve it					

The business emphasis on continuous improvement, and this is applied in all operations and at all levels of production.					
Problem-solving and continuous improvement processes are based on customer feedback					
All workers are trained to look for continuous improvement intheir daily sewing activities					

SECTION C: HOW TQM CAN BE IMPLEMENTED TO IMPROVE PRODUCTIVITY AND PRODUCT QUALITY

TQM implementation	***Strongly Agree 5***	***4***	***3***	***2***	***Strongly Disagree 1***
There must be a quality improvement commitment from all workers					
The business must follow a modern quality improvement culture constantly					
Continuous improvement must take place in all policies, procedures, and activities					
Cooperation and experience of workers must be utilised to improve strategies and enhance productivity					

The focus must be on customers' requirements and satisfaction of their expectations for the long-term survival of the business					
Adequate controls must be laid down to monitor and measure the real productivity and performance of the business.					
TQM must look at all aspects of the business, from the sourcing of raw materials and components to production line technology, staff skills, planning, and customer relationship					

SECTION D: THE CONSTRAINTS/BARRIERS FACED IN SMALL TO MEDIUM GARMENT PRODUCTION ENTERPRISES DURING THE IMPLEMENTATION OF QUALITY IMPROVEMENT INITIATIVES

To what extent do you agree with the following barriers of TQM implementation?	***Strongly Agree 5***	***4***	***3***	***2***	***Strongly Disagree 1***
Lack of commitment from management					
Lack of experience in quality management					
Emphasis on short term objectives of design and production					
Lack of objectives and strategies in design and production					
Our quality system is solely based on detection					

Design and production department is given the sole responsibility for quality					
Lack of assessment procedures and benchmark indices in design and production					
Workers resistant to change					
Poor planning					
Lack of proper training					
Insufficient resources for TQM implementation					
Lack of customer orientation					
The inability to change the organisational thinking					
Ineffective or unsuitable methods in the implementation of TQM					
Absence of motivation and reward systems					
Lack of use of quality measurement and benchmarking					

SECTION E: THE PROSPECTS/BENEFITS OF TQM IMPLEMENTATION

To what extent do you agree with the following prospects/benefits of TQM implementation?	***Strongly Agree 5***	***4***	***3***	***2***	***Strongly Disagree 1***
Meeting customers' requirements					
Enhances customer loyalty through satisfaction					
Reduce sewing defects					

It ensures every worker does his work with quality the first time, improving the efficiency of operation and avoiding some cost associated with waste					
Motivate workers					
Improve the working climate					
Provide more value to customers in terms of price and quality					
Ensures the business change how they perform activities to eliminate inefficiency					
Reduce customers complaints					
Enhance business reputation					
Improve the quality of products and reduces scrap, and rework and establishes a stable production process					
Reduce the cost of production and time of production					

Framework

Please indicate the degree to which you agree with the ensuing?	***Strongly disagree 1***	***2***	***3***	***4***	***Strongly Agree 5***
Commitment to quality plays a decisive role in the level of TQM implementation in small to					

medium garment production enterprises and leads to garment quality, business performance & general garment business performance					
Workers involvement plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance & general garment business performance					
Customer focus plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance & general garment business performance					
Continuous improvement orientation plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance & general garment business performance					
Garment process monitoring and control plays a positive role in the level of TQM implementation in small to medium garment production enterprises and leads to garment quality, business performance & general garment business performance					

Incentive & recognition systems play a decisive role in the level of TQM implementation in small to medium garment production enterprises and lead to garment quality, business performance & general garment business performance					
There is no significant difference between the level of TQM implementation in small to medium garment production enterprises and general garment business performance					

THANK YOU

APPENDIX B

INTERVIEW GUIDE FOR MANAGERS/SHOP OWNERS

Interview No.: _____

Date/Time: _____

Interviewee: _____

Firm: _____

Female [ ] Male [ ]

1. How do you consider TQM as a fundamental system to achieve high-quality products and improve customer satisfaction and retention?
2. Has your company implemented a formal quality management system? If yes, what factors motivated the implementation of TQM? IF no why have not implemented TQM?
3. What is the extent of TQM implementation in your company?
4. What do you think are the prospects/benefits of TQM implementation in the design and production of Slit and Kaba in small to medium garment production?
5. What are the basic pillars required for the implementation of TQM principles in the design and production of Slit and Kaba in small to medium garment production?
6. How do you implement TQM in the design and production of Slit and Kaba?
7. In what ways can improving TQM in small to medium garment production enterprises in the design and production of Slit and Kaba.