THE IMPACT OF PEOPLE INVOLVEMENT IN TOTAL QUALITY MANAGEMENT PRACTICES ON ORGANISATIONAL PERFORMANCE IN THE GHANAIAN PRINTING INDUSTRY.

BY

NICHOLAS KINGSLEY GRAHAM

B. A. (HONS) PUBLISHING STUDIES

Thesis submitted to the School of Business, Kwame Nkrumah University of Science and Technology in partial fulfilment of the requirements for the degree of

MASTER OF PHILOSOPHY IN BUSINESS ADMINISTRATION

(OPERATIONS MANAGEMENT)

KNUST School of Business

College of Art and Social Sciences

October, 2009

DECLARATION

I hereby declare that this submission is my own work towards the MPhil Award, and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree in the University, except where due acknowledgement has been made in the text.

NICHOLAS KINGSLEY GRAHAM (20033843) 15-10-09

Student   Signature   Date

Certified by:

DR. KOFI POKU 15/10/09

Supervisor   Signature   Date

MR. JONATHAN ANNAN   ....

Head of Department   Signature   Date

ii

ACKNOWLEDGEMENT

To God be the glory for the heavenly wisdom bestowed on me throughout this work. I wish to express my gratitude to Dr. Kofi Poku, my supervisor, for his invaluable contribution and support throughout the writing of this thesis. Without his contribution, this work would not have been completed.

I also acknowledge with gratitude the support, encouragement and advice given to me by Dr. Kwasi Opoku Amankwa, Mrs. Monica Aba Brew-Hammond, Mrs. Lucy Ry-Kottoh and Dr. F. T. Oduro.

Special thanks go to Mr. & Mrs. Yeboah, Mr. Stephen Aidoo, Mr. Dennis Amponsah, and all those who contributed in diverse ways toward the completion of this work. I am also grateful to you all.

The acknowledgement will be incomplete without mentioning my wife, Mrs. Adwoa Darkowaa Graham for her persistent support, both spiritually and physically. Words cannot express my appreciation to you. All I can say is God bless, protect and give you long life.

To all my friends: Duke Peprah Mensah, Mariama Zakari and my family, I say you are special.

ABSTRACT

The Ghanaian Printing Industry has not been performing well in the current trend of business competition resulting from globalisation and trade liberalisation. Among the factors is poor quality print output by local printing firms. As a consequence, jobs which could have been printed by printing firms in the country are sent overseas for printing. In their quest to improve their quality and enhance their performance, Ghanaian printing firms have adopted quality management systems. It is believed that Total Quality Management (TQM) improves performance by yielding superior product/service quality which will give satisfaction to the customers. Burgeoning research literature has established that for any quality management programme to produce the intended result, people (both management and the workers) within the organisation have important roles to play irrespective of the person's status within the organisation. The purpose of the study was to evaluate the People Involvement of TQM practices and their effect on organisational performance in the printing industry in Ghana. Qualitative and quantitative tools were used to gather data for the study. A total of 96 management personnel and 127 workers responded to questionnaires which were analysed using computer software (SPSS version 16.0) to perform Principal Component Analysis (PCA), descriptive statistics and correlation analysis were performed on the extracted factors. An interview was also conducted among Quality Officer/Production Managers and Sectional Heads to validate the responses from the questionnaire survey. The results from the data revealed that people involvement by an aggregate concept is associated with organisational performance and subsequently contributed significantly to performance. The extent of association and contribution however differ from the items of measurement of the variables. In practice, leadership ranked first, followed by commitment and quality policy being last from management responses. From the employees' responses, participation ranked first, followed by empowerment and development as least practiced. By assessing the people involvement of TQM practices, management focus is the centre of attention than the employees in the Ghanaian printing industry.

TABLE OF CONTENTS

CHAPTER 5 SUMMARY OF FINDINGS, RECOMMENDATIONS AND

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER ONE

INTRODUCTION

1.1   Background to the Study

Total quality management (TQM) is a broad set of management and control processes designed to focus on the entire organisation and all of its employees in providing products or services that satisfy the customer (Talha, 2004). It employs tools and techniques that ensure exceptional quality achievement. The trend of trade today has made it possible for firms to operate across borders (Bendell, 1995). As countries embrace free market model and open up borders for investments and trading (Lee, 2002) competition sets in and the only way for organisations to meet the competition is to repackage and embrace a strategy that ensures efficient and effective performance of the organisation. The concept of total quality management provides the approach to realise this fundamental business strategy for enhanced business excellence.

TQM is seen as partly philosophical and partly practice oriented. It requires an enlightened mindset as well as knowledge of techniques on collecting and analysing data to provide solutions that could enhance the competitive advantage of the organisation. Its implementation requires careful planning and enormous amount of time and effort. Studies show that people involvement which is an aspect of TQM is the key driver of TQM successes in an organisation (Dale and Oakland 1991; Saravanan and Rao 2006) and has weighty effect on the organisational performance (Hung, 2004), when the organisation undertakes TQM initiatives. It is the people who carry out the policies, strategies and processes of an organisation. Therefore TQM practices will only flourish in an organisation where the people in it willingly embrace and carry them out. Thus, people in organisations are expected to take the right action alongside stated philosophy. The work of Boon *et al*

1

(2005) established that when people, both managers and employees are wholly involved in TQM implementation in an organisation, it ensures better business performance. The organisation enjoys cost-efficiency, flexibility and responsiveness, improvements in quality, productivity and competitiveness, financial gains, increased employee morale and motivation and customer satisfaction (Beheshti and Lollar, 2003).

According to Lee (2004), quality consciousness and desire tend to affect business operations worldwide and have triggered the demand for higher quality products and services. With the multiplicity of products and services coupled with the advent of information and communication technology (ICT), customers can now assess or measure the quality of a product or service, making the customers well informed about them. It is therefore incumbent on producers to produce high quality products that satisfy the customers in order for their businesses to survive. The only way to get the customers satisfied according to Walsh et al (2002) is to deliver a quality product which is defect free.

Lee (2002) also states that an organisation can stay ahead, if it builds a strategy that focuses on customers and stays lean. In order to sustain and continuously improve upon the quality of the goods and services to satisfy the customers, organisations have adopted quality management practices such as quality control, quality assurance and total quality management as management systems for successful business operations. However, total quality management has received more attention in business literature and studies have established that it is widely practised among organisations (Beheshti and Lollar, 2003; Lee, 2002; Devadasan et al, 2003).

TQM is seen as one of the most significant recent developments in management practice and the focus on it is as a response to global competition. For instance, countries like Japan and China, and firms like Toyota and Ford; have made headway in turbulent marketplaces because quality was built into their business strategies using TQM (Lee and Yu, 1997). The Japanese used "superior quality" to capture, hold and build market share. This is to say that inefficient suppliers or suppliers of low quality goods and services are unlikely to survive for long (Bendell, 1995). Saravanan and Rao (2006) are of the view that for a successful business operation, an organisation must adopt TQM as an essential part of its strategic process.

A large number of studies have empirically investigated the effectiveness of TQM to organisations and have concluded that it contributes substantially to the organisational performance, especially when it is viewed as a long term strategy. It is therefore not surprising that total quality management has become the predominant quality management practice among organisations in the developed countries. It is seen as a philosophy which aims to provide organisations with a template for success through customer satisfaction (Walsh, Hughes and Maddox, 2002).

1.2   Problem Statement

Ghanaian firms are confronted with many problems, especially in this era of keen competition emanating from trade liberalisation. In the printing industry relatively low product quality is recognised as one of the most serious problems. Many concerns have been raised about the quality of the output of the local printing firms. McGregor (1996) affirms that textbooks produced in low-and middle-income countries are found to be poor in quality and usually last for only a year. Most customers in Ghana prefer printing their

3

works overseas in order to ensure high quality prints. This is because customers have expressed their dissatisfaction with the services of the local printing firms in diverse ways, such as rejection of printed works and abrogating contracts.

To improve the quality of print materials and meet deadlines in order to ensure customer satisfaction and become competitive, printing firms have been engaging in quality management practices. Although there exist somewhat quality management programmes in place in most of the Ghanaian printing firms, they appear less comprehensive and more of top-down approach. Members of top management think quality issues should only be addressed from the top without involving the workers. Instead of printing firms having a philosophy which considers the input of all employees, top management seems to devise their own policy and hand it down to the workers to implement. As a result there exist a gap between policy initiators and implementers which is always a recipe for failure. Saravanan and Rao (2006) and Palo and Padhi (2003) assert that quality management programme will only be successful when all the people, both management and non management (employees) staff within the organisation mutually contribute. Thus, people are seen as the vital and versatile resource of an organisation and they play a key role in achieving high quality. It is in this direction that this research is conducted to empirically examine the impact of people involvement in total quality management practice on organisational performance in the Ghanaian printing industry.

1.3   Objectives of Study

The objectives of the research include:

1. To examine the extent to which people involvement in TQM variables are practised in the firms in the printing industry.

4

2. To evaluate the firms' performance in printing industry.

3. To assess the effect of people involvement in TQM practices on the firms' performance.

1.4   Research Questions

1. To what extent is people involvement in TQM practices in the printing firms in Ghana?

2. What is the level of performance of printing firms in Ghana?

3. What are the effects of people involvement in TQM practices on the firms' performance?

According to Dale et al (1991), TQM as a company-wide programme starts at the top with the chief executive (or equivalent); the most senior directors and management who must all demonstrate that they are serious about quality and as well become good role models and TQM champions. Workers on the other hand are also expected to play a role in the TQM programme. It means that for a successful quality drive, people (everyone) in the organisation have a role to play, irrespective of the person's status in the organisation.

When there is mutual contribution and involvement by the people in TQM practices, there is improvement in performance – cost-efficiency, flexibility and responsiveness, improvements in quality, productivity and competitiveness, financial gains, increased employee morale and motivation and customer satisfaction.

1.5   Significance of Study

The Ghanaian printing industry is currently facing keen competition from its foreign counterparts. Customers print most of their printed materials outside the country instead of

5

giving them to local printing firms. This has been as a result of unsatisfactory works produced by the local printing firms. This study seeks to identify the quality management practices of the printing firms which have impacted negatively on the firms' performances, so as to help them to redefine and redirect their quality management activities to improve the quality of the printed materials.

The Government's Textbook Policy which mandates publishing firms to print 70% of the textbooks locally presents an opportunity for the printing industry. However, the printing firms need to assure the publishers of satisfactory outputs. This study provides an insight to quality management practices which have been empirically tested and established as ideal for improving performance. The printing firms can use the study as a guide to redesign their quality management practices in order to ensure better performance.

Moreover, no study was found in Ghana on total quality management practices in the printing industry. So this study will serves as a good source of reference.

1.6   Research Methodology

The insight to the study could not only be adequately gained by the use of a single data collection technique. Therefore various methods were employed to gather data. Primary data was obtained through the administration of questionnaire. The questionnaires were given to managers and employees and were collected by the researcher personally at the surveyed printing firms. Structured interview was also employed to check the information accuracy, validate the outcome of analysis, and develop an understanding of practical aspects of quality management practices. The interviewees were key personnel like quality managers or production managers and sectional heads. The results from the structured

6

interview were also used to explain the results obtained from questionnaire survey findings. The secondary data on the other hand were obtained from the firms' documented policies such as strategic plans and quality policy.

The data was analysed using the Statistical Package for Social Scientists (SPSS) to run a principal component factor analysis, correlation and regression analysis to determine the strength and directions of relationships between the variables.

1.7   Scope of Study

There are numerous printing firms in Ghana; some print on paper, rubber, metal, fabric, plastic, etc. The focus of this study was on printing firms that printed on paper only. Such printing firms are established all over the country's regions and suburbs. Data from the Ghana Statistical Service (GSS) indicated that the majority of printing firms were located in Greater Accra region followed by the Ashanti region with only a few located in other regions of Ghana. This study should have considered the printing firms country-wide, but due to time and resource constraints, the study looked at the printing firms in the Greater Accra region only. The printing firms included in the study were those registered with Ghana Printers and Paper Converters Association.

1.8   Limitations of Study

The study expected 100% response rate, but this was not achieved. Also, there may be respondent bias as data was opinion based and not numerical based. More so it took a lot of effort to persuade some of the firms to partake in the study. This situation thus affected their responses. In addition, the position of the respondents in the firm also affected the result. For example, the views of quality officers/production managers may be different

from that of other management staff on the same issues. It was also difficult obtaining comprehensive and reliable data on the firms' strategic plan and quality policy. This made the research work not only difficult to carry out, but created a gap between the expected and the actual result.

1.9   Organisation of Study

The study is structured into five chapters:

Chapter one gives a brief description of the research and highlights salient points in TQM. The chapter also presents a statement of the problem, objectives of the study, research questions, significance of the study, limitation and the structure of the thesis. Chapter two describes the concept of TQM based on the literature from numerous writers, the evolution of TQM, perspectives/approaches of TQM, variables of TQM and people involvement. It also discusses the factors affecting the success or failure of TQM programme and then presents the conceptual framework of the study. Chapter three presents the methodological perspectives of this study. The strategies adopted in the study are fully discussed in this chapter. The strategies included questionnaire survey, structured interviews and document analysis. Chapter four presents the analysis and discusses the results of the study. Chapter five presents a brief summary of the study and the main conclusions with regards to the new knowledge derived from the research.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

Total quality management (TQM) focuses on quality which is now an important strategic issue facing organisations. It employs tools and techniques that ensure exceptional quality achievement. Until recently, producers were producing according to their capabilities and for that reason the description and concept of quality was "manufacturing base quality" (Summers, 2005). In today's business environment, production of goods and delivery of services are dictated by the customers. Therefore there is a shift from traditional concept of quality known as 'manufacturing base quality' to 'subjective quality concept' which lays emphasis on the customer (Summers, 2005). Producers can no longer produce and offer what they can for sale with the hope that customers will patronise; rather they produce to meet customers taste and expectations. Tan (2002) indicates in his study that quality is no longer confined to the quality of product or service, but applies to delivery, administration, customer service, and all other aspects of company activities. In view of this, organisations have revised their policies and strategies and have incorporated quality into them in order to deliver goods and/or services which provide continuous and consistent satisfaction to the customers. TQM as one of the quality management systems addresses this bottom-line issue that organisations pursue.

This chapter reviews the extent of literature on the concept of TQM and provides the approaches, theories and constructs of TQM. The chapter also presents works on the people involvement variables and presents the conceptual framework of this study.

2.2   Evolution of Total Quality Management (TQM)

The emergence of quality management (QM) is closely associated with manufacturing environments. Until recently many of the definitions and practices of quality were derived and heavily oriented towards the manufacturing and object-based economy (Hough 2004). Before the advent of the TQM concepts and ideas, extensive work had gone on in the area of quality movement, all in the interest of responding to the keen global competition as well as delivering quality product or service to customers. Dale et al (1994) describe the quality movement to be inspection, quality control, quality assurance and total quality management. The shifts have been in line with the changing business environment.

While quality control attempts to identify departure from budgeted costs, to enable reactive action to be taken to return costs to budget; quality assurance attempts to put in place systems to prevent departures from budgeted costs and to have corrective mechanisms to prevent future departures from budgeted costs. Total quality management on the other hand attempts to reduce progressively and continuously the cost of production of goods or services, using the skills and participation of the people involved in producing those goods or services (Mackowski, 1994). According to him, Quality control is concerned with the past and deals with correcting defects in the final product. The data on the defect is obtained from previous production to enable reactive action to be taken to stop further production of defective output. Quality assurance is concerned with the present. It deals with having in place proactive systems to prevent defects from occurring and having corrective mechanisms to prevent future defects from occurring. Quality management is concerned with the future. It deals with management of people to improve continuously, the products and services offered by an organisation and to improve the efficiency of the processes involved in the production of those products or services.

According to Petersen (1999), the concept of TQM as a management philosophy emerged around the 1950s and became very popular in the 1980s. During this period, this concept became popular after American firms had lost market share to their Asian and European counterparts after World War II. It is however argued that, the concept of "total quality" was first introduced by Armand V. Feigebaum in a presentation to denote wider issues such as planning, organisation and management responsibility (Krüger, 2001). Feigenbaum (1983) argues that the responsibility for quality must rest with the people who do the work, hence the concept of quality at source – every worker being responsible for performing his or her work with perfect quality. Total quality was subsequently used as total quality control (TQC) by Ishikawa (1985) to mean company-wide quality control; it emphasised on building quality into the process rather than identifying quality by inspection (Chase et al, 2001). Total quality control focused on product quality more than the production rates, so workers were given the liberty to stop production whenever problems affecting quality occurred. The fact that quality needed to be managed and not controlled gave rise to the concept of TQM. This was reinforced by Deming's (1986) assertion that sampling inspection should be suppressed and also by Crosby's (1979) view that control is unnecessary when zero defect level is achieved. Moreover, the term "control" is sometimes misconstrued as control over workforce activities, which is not the aim of TQM as opined by Peters (1999).

The interest in TQM studies increased especially when US chip manufacturers were criticized for poor quality as compared with their Japanese counterparts. Since then, quality management has gained worldwide recognition, and it is adopted by many businesses as a key strategy to deal with quality issues in their operations (Palo and Padhi, 2003).

2.3   The Concept of Total Quality Management (TQM)

Gaither (1994) asserts that Total Quality Management (TQM) is a paradigm shift in traditional quality management. It is viewed as an all encompassing dynamic process to promote a never ending improvement in the effectiveness and efficiency of all elements of a business (Kulkarni, 2005). TQM integrates functions and processes within an organisation in order to achieve continuous improvement in the quality of goods and services. TQM philosophy of management is customer focused. It involves the continuous improvement of organisational processes, resulting in high quality products and/or services that provide satisfaction to the customer. It is believed that a firm's success and existence require repeat business, which in turn depends upon the customers. Thus, TQM gives customer satisfaction a priority, because it is believed that satisfied customers repeat buying, and in turn assures a firm's existence in business.

TQM as a modern quality management tool uses concepts and principles different from traditional quality management, although they all lay emphasis on quality. However, traditional quality management ensures delivery of quality output through rigorous inspection. A number of criticisms have been made against this approach. Among them are the decision on the number of products to be inspected; what to do with the defective products identified during the inspection; and to what extent can rigorous inspection guarantee the delivery of good products and services to the customers (Gaither, 1994; Chase et al, 2001). There is a possibility of oversight during the wholesale inspection and increased costs of scrap and rework as more and more outputs are inspected. Unlike the traditional quality management, TQM ensures quality through prevention. While the traditional quality management views quality as a defensive mechanism by trying to reduce customer complaints, TQM sees it as competitive strategy for survival. The work of

12

Kulkarni (2005) claims that TQM measures are not merely confined to traditional rejects, reworks, downgrades and the like as it is with traditional quality management. Thus, TQM criticises traditional quality management for being more costly. Moreover traditional quality management limits the responsibility of quality delivery to a department instead of making it company-wide responsibility (Benowitz, 2001). TQM extends the responsibility of quality over the entire organisation, extending the quality from the product or service to delivery, administration, customer service and all other aspects of a company's activities (Tan, 2002). According to Talha (2004), TQM incorporates the concepts of product quality, process control, quality assurance and quality improvement, and as such, makes it a powerful quality management system.

On the contrary, Adams et al., (2007) perceive TQM as a paradigm shift in management thinking, thus a new way of managing an organisation as against traditional management. TQM refutes the view of traditional management which Baker (1989) summarises as follows:

- An enterprise is a collection of separate, highly specialised individual performers.
- Employees are passive contributors with little autonomy, doing what they are told.
- Quality is defined as adherence to internal specifications and standards.
- Individualism rather than teamwork.

TQM recognises the contribution of other facets of organisation as crucial and emphasises on team work, instead of the traditional barriers that restrain executives and managers. Jablonski (1991) asserts that the philosophy of TQM allows organisations to harness the tremendous potential stored in each and every one in the organisation and utilises them.

TQM is seen to have three core components which are variously described as fundamental principle, tools and result (Ciampa, 1992); core values, techniques and tools (Hellsten and Klefsjo, 2000); and principles, procedures and tools (Shea and Gobeli, 1995). Ciampa (1992) describes the fundamental principle as the total orientation of the organisation to satisfying customers and creating value to the various stakeholders – customers, employees, shareholders, and community. Jablonski (1991) and Martins and Toledo (2000) on the other hand identify six elements of TQM principles as customer focus, process and result focus, prevention focus, mobilization of expertise of workforce, fact-based decision making and feedback. The tools according to Wille (1992) are the methodologies and techniques used within the process, and these include reliability, engineering, statistical process control, and Taguchi methodology. Finally, the result is an increase in market share (by maintaining current customers and acquiring new ones), cost reductions and improvement in the performance of products and services.

The UK's Department of Trade and Industry sees TQM as a way of managing people and business processes to ensure complete customer satisfaction at every stage, internally and externally by combining effective leadership which will result in an organisation doing the right things right, first time (www.dti.gov.uk). Therefore, preventing defect and ensuring high quality product and/or service require the right attitude, right leadership, right processes, right raw materials, right environment, right skills and many more. The description also recognises that organisations are made up of people, and managing them effectively is critical, since they are the carriers and implementers of policies. Ten out of fourteen points about TQM propounded by Deming make explicit reference to people.

2.4   Perspectives on TQM

As stated earlier, TQM is all about getting quality output. There are numerous approaches of TQM, each trying to explain the achievement of the quality goal from different TQM perspectives. However majority of them are either expansion or deduction from three main quality approaches of Deming, Juran and Crosby (Petersen, 1999; Krüger, 2001; Sila and Ebrahimpour, 2005).

Deming, described as the father of TQM noted that majority of the quality problems emanate from lapses in management. He identified variation as the cause of errors in product/service from set standards (Wille, 1992). According to him, there are two causes of variation: 'common and special causes'. The 'common causes' are engendered by the system and it is the responsibility of management to correct and improve the system. The 'special causes' on the other hand are human faults and must be corrected by the employees. He introduced and encouraged the use of the PDCA (Plan-Do-Check-Act) cycle (Bendell et al., 1995) which some writers call PDSA (Plan-Do-Study-Act) as a systematic approach to problem solving. He introduced the use of statistical process control (STC) and encapsulated his approach to TQM into "14 points of management" (Summers, 2005), covering all aspects of business, from the customers to leadership to employees, and recommended that an organisation implement all, and not just a part, for successful TQM.

Juran's quality approach emphasises the integration of quality improvement in each job. He sees TQM as a company-wide function of meeting quality goals throughout the company. By this, he defines quality to encompass not only product or service but a spectrum of issues and illustrated it with "Q" and "q" (Summers, 2005); each having special characteristics to show the broad applicability of the quality concept. While the "q"

15

denote the era of manufacturing predominance, "Q" extends to all aspects of any organisation, regardless of type. He proposed the use of techniques like quality function deployment, experimental design, and reliability engineering to ensure design quality (Zhang, 2000). He propounded quality management theories like Juran Trilogy, Tripol Concept and Company-wide Quality Management. The Juran Trilogy is used to explain the interrelationship of three basic managerial processes, namely Quality Planning, Quality Control and Quality Improvement meant for managing and improving quality. He also introduced the concept of cost of quality and divided it into costs of prevention, costs of detection/appraisal and costs of failure as a measure of the firm's costs related to quality characteristics of a product or service.

Crosby's approach to quality goal is the use of zero defects as the measure of performance standard of an organisation embarking on continuous improvement. To attain zero defects, Crosby suggests that prevention must be given preference over inspection (Rao et al, 1996). To him the former reduces costs while the latter raises costs. It is out of this that he coined the term "do it right first time" in order to avoid waste and errors. He articulated his TQM approach as the "four absolutes of quality management" enumerated below as a way of achieving continuous improvement:

1. Define quality as conformance to requirements. The requirement must be clearly specified for everyone to understand and know what is expected of him/her.

2. Have a system which manages quality by preventing defects and not appraisal.

3. The performance standard is zero defects. Errors should not be tolerated.

4. The measurement of quality is the price of non-conformance.

In addition to this, he proposed a 14-step programme as an approach for pursuing quality improvement.

In much the same way, countries' approach to TQM initiative is embedded in the business excellence performance models established by the country as an award framework for business assessment. Among the award models are the Malcolm Baldrige National Quality Award (MBNQA) in the US, Deming Prize (DP) and Japanese Quality Award (JQA) in Japan, European Quality Award (EQA) in Europe, and others. However, each award is based on a perceived model of TQM (Ghobadian and Woo, 1996), and they do not focus exclusively on either product or service perfection or traditional quality control methods, but consider a wide range of management activities, behaviour and processes which influence the quality of the final offerings.

Although the various approaches are unique, there are many overlaps which portray the same goal. They all emphasise on management and employee responsibility, quality achievement through continuous improvement, integration of functional areas and customer satisfaction. These approaches and theories are common to many of the TQM studies. Kumar (2007) indicates that though the models have different TQM approaches, they all lay emphasis on leadership, strategic planning, customer and market focus, human resource focus, process management and business results in one way or the other.

2.5   The Constituents of TQM

The components of TQM vary from writer to writer. As a consequence, Laszlo (1996) contends that there is no specific internationally recognised standard that specifies what constitutes the ideal TQM approach. Sila and Ebrahimpour (2002) in their study compiled twenty five (25) TQM constructs that have been used by various researchers in an attempt to measure TQM successes among firms. While some researchers used seven, others used nine or more of the constructs to evaluate TQM. This suggests a lack of universal

prescription regarding the number of constructs constituting TQM. For instance, Berk and Berk (1993) espouse eleven central elements of TQM to be *employee involvement, employee empowerment, quality measurement, training, value improvement, benchmarking, root cause corrective action, sustained management commitment, supplier teaming, thinking statistically and teamwork.* Lee (2004) on the other hand advocates nine TQM constructs. To him, these constructs – *customer focus, top management's commitment, quality data and reporting, training, roles of quality departments, employee involvement, process management, product/service design and supplier quality management* are the ones identified, validated and established by empirical works as most important. There is however a great deal of overlap and similarity among the elements of TQM frameworks. For instance, elements such as top management commitment and training and education are common to most of the frameworks.

In the field of TQM implementation, the frameworks proposed by Saraph et al (1989), Flynn et al. (1994) and Ahire et al. (1996) are the three most widely used and referenced constructs. However, Ahire et al. (1996) recommend strongly that a combination of the three frameworks be undertaken for future TQM studies. That notwithstanding, some writers divide the constructs into two main groups: namely, soft and hard TQM (Powell, 1995; Dow et al., 1999; Baidoun, 2003; Lau and Idris, 2001; Boon et al, 2005). Janpen et al (2005) view soft TQM as a management system and hard TQM as a technical system. The soft TQM elements include top management commitment and involvement, employee empowerment, leadership, education and training, employee participation and involvement, cooperation, customer focus and organisational culture (Dale, 1999; Lau and Idris, 2001; Baidoun, 2003) while hard TQM elements include improvement tools and techniques and system (Baidoun, 2003). The elements of soft TQM are viewed as the

principal key practices relevant to organisational excellence. They have a significant effect on the TQM results. A TQM initiative is basically implementing both the hard and soft constructs of TQM.

The work of Hung (2004) classifies TQM constructs as process alignment and people involvement. He used the term People involvement to denote executive commitment and employee empowerment and established that they influence organisational performance when an organisation performs TQM initiative. According to Rahman (2004), the element of soft TQM such as training and education, leadership and empowerment are essentially the people aspect. This justifies why people involvement is used in this study. An investigation of the TQM survey based research by Sila and Ebrahimpour (2002) seems to agree with Hung that the people aspect of TQM is very important. The study revealed seven factors widely covered in TQM studies as critical for TQM success. These included employee involvement, training, leadership and top management commitment. Literature concludes that the most valuable resource within an organisation is the people that work within it (Lau and Idris, 2001; Goodstadt and Marti, 1990). It therefore suggests that people involvement is very critical and it seems all successful enterprises, without any exception, which are going concerns have recognised it and have given much priority to it.

Following the recommendation made by Ahire et al. (1996), this study combines the factors used by the various researchers in their TQM studies. However, the term "people involvement" was borrowed from Hung (2004) and Rahman (2004) with modified variables. The people involvement as used in this study denotes two main TQM factors namely **management focus** and **employee focus**. The management focus is made up of top management commitment, leadership, quality policy while the employee focus also called workforce management (Ahire et al, 1996) or human resource management (Sila and Ebrahimpour, 2002) comprises employee development, employee empowerment and

19

employee participation. These variables are consistent with the TQM approaches discussed above by the various practitioners as well as the work of Karia and Ahmed (2000). The practitioners as well as many studies (Dale and Oakland, 1991; Palo and Padhi 2003) emphasise on the involvement of the management and employees as the primary requirements for successful TQM programme in an organisation. The effectiveness and the success of TQM programme are highly dependent on the extent to which management and employees are involved in TQM practices; their involvement is inseparable and interdependent. Hence the effectiveness of TQM is crippled when there is a malfunction or inactivity in one part. This will have an adverse effect on achieving the expected TQM results.

2.6   People Involvement in TQM – Management Focus

2.6.1   Top Management Commitment

Organisational success is achieved as a result of top management commitment to TQM practices (Everette, 2002; Buch and Rivers, 2002). Studies establish that top management commitment is a major contributor to the success of any quality strategy within a firm (Ahire et al., 1996; Saraph et al., 1989; Zhang et al., 2000; Beheshti and Lollar, 2003; Rao et al., 2004); and it leads to foster an environment of quality excellence, competitiveness and continuous improvement (Talha, 2002). Most quality initiatives according to Talha (2002) fail because of the absence of the driving force and commitment of top management.

Literature describes top management commitment as a commitment of corporate resources (Karuppusami and Gandhinathan; 2006), including the executive's own time, to the improvement process (Jablonski; 1991). Jablonski (1991) contends that committing a

20

subordinate's time and corporate funds to TQM initiative is inadequate. A substantial amount of executive time, especially that of chief executive officer is necessary to successfully implement TQM. On the contrary, Beer (2003) asserts that when the commitment of top management is reduced, resources (time and money) are withdrawn. He further states that management lack of emotional commitment can lead them to overly rely on staff groups or consultants to drive the TQM programme. This in turn leads leadership teams at the subunit level to passively comply with the corporate TQM programme for political reasons, rather than out of conviction that TQM will improve their unit's performance.

Harrington (1987) asserts that, the improvement process starts with the top management; progresses at a rate proportionate to their demonstrated commitment, and stops as soon as they lose interest in the process. A company takes on the personality of its top management, and an active participation by top management in the quality improvement process facilitates the inclusion of quality into the corporate strategy. The work of Lee (2004) maintains that lack of top management commitment is the first impeding factor in TQM implementation. When management lacks commitment, they become reluctant to make changes in the production system as part of their TQM programme. It also becomes hard for them to sacrifice short-term profits for long-term gains of TQM.

Koegh (1994) argues that TQM implementation first requires commitment from the top management and then descends to individual employee. The commitment of top management should be full and absolute for a successful TQM programme. Thus, they must be firm believers of the TQM programme; act as the drivers for TQM implementation; create values, goals and systems to satisfy customer expectations; and act

to improve an organisation's performance (Ahire et al., 1996). Dale (1991, cited in Lascelles and Dale, 1994) opines that management commitment to the TQM programme is not about lip service; rather it must be exhibited in the provision of resources and facilities to support the programme. This according to him includes funding training programmes, assigning task forces to facilitate the programme, and budgeting reward systems. Literature however suggests that top management's lack of commitment is typically caused by the view that total quality is something that can be delegated to others (Brown, 1993; Tatikonda and Tatikonda, 1996). Although it is believed that delegation in certain cases is necessary, it should not provide an excuse for top management not to be involved in the TQM programme.

Choi and Behling (1997) indicate that TQM as a long term strategic issue requires also a long term commitment from the top management. The above suggests that TQM success factors are generally attributable to the result of management action within the organisation rather than institutional constraints placed on the organisation externally. This is consistent with the approaches of Deming, Juran and Crosby.

2.6.2 Leadership

Anderson et al. (1994) explain the concept of leadership as the ability of top management to establish, practice, and lead a long-term vision for the firm, driven by changing customer requirements, as opposed to an internal management control role. The seventh point of Deming's 14 points of management lays emphasis on leadership. Deming (1986) argues that the principal role of managers is not about control, but it is about making sure that workers do what they have been empowered to do. Leadership according to Wille (1992) is more of improving the performance of workers, machinery and quality, increasing output

and bringing pride of workmanship to people. In other words, leadership is not merely to find and record failures; but rather to remove the causes of failure and help employees to do a better job with less effort.

Literature exemplify leadership by clarity of vision, long-term orientation, coaching management style, participative change, employee empowerment, planning and implementing organisational change, top management encouragement, top management learning and commitment to employee development and top management pursuit of product quality (Anderson et al., 1994; Zhang, 2000). In order to achieve quality excellence, Boulter and Bendell (2002) contend that an organisation requires leadership for efficient and effective management. Furthermore, Choppin (1995) argues that strong and effective leadership must stem from the top of the organisation. As the guide and promoter of the TQM implementation process, Calvo-Mora et al (2006) maintains that management leadership in quality must be visible, permanent and present at all levels in the organisation. As a consequence, Brah and Lim (2006) observe that the influence of top management leadership has an effect on other quality attributes.

The business excellence models recognise the crucial role of leadership in creating the goals, values and systems that guide the pursuit of continuous performance improvement. The criticality of leadership is also established variously by the TQM practitioners in their approaches and theories to TQM. Top management is required to be committed; for a healthy leadership leads to a healthy organisation. Thus their actions must correspond with the written vision and mission statement of the organisation.

2.6.3 Quality Policy

According to Tricker and Sherring-Lucas (2001), quality policy is the overall intentions and direction of an organisation related to quality as formally expressed by top management. The policy outlines how management intends to achieve quality and dictates how every other aspect of an organisation's quality management system is set up and run. Thus, the policy defines and controls processes and activities of all aspects of work in the organisation. The quality policy is seen basically as the mission statement of the organisation (Tricker and Sherring-Lucas, 2001; Zhang, 2000) and the two are inseparable (Macdonald and Piggott, 1990). Therefore quality must be incorporated in the corporate vision and mission.

An extant literature (Harrington, 1987; Deming, 1986; Saraph et al., 1989) establishes that the foundation for an improvement process is a statement of quality policy that clearly and concisely states what is expected of all employees, as well as the products or services that are delivered to the customers. The policy describes standards, values and beliefs of an organisation and propels it forward. The quality policy serves to provide internal consistency between the goals and procedures of an organisation by aligning each member, division and element of the organisation towards its long-term objectives (Palo and Padhi, 2003). Usually quality policy is printed and issued to each and every employee in the form of a pocket diary.

Literature maintains that quality policy must be developed by top management and propagated throughout the organisation (Harrington, 1987; Macdonald and Piggott, 1990; Tricker and Sherring-Lucas, 2001). However, Zhang (2000) argues that to gain the commitment of all, quality policy must be developed by involving a variety of employees.

In developing the quality policy, Tricker and Sherring-Lucas (2001) caution that an organisation's quality policy should focus on customer satisfaction; be appropriate for the needs of the organisation and its customers; involve everybody within the organisation; outline the organisation's goal and objectives; be communicated and implemented throughout the organisation; and be understood by everyone. As a consequence, Leonard et al. (2002) postulate that management should be clear on what they want the organisation to achieve in the corporate mission and philosophy. It is this intent that will determine the appropriate mix of TQM to create continuous improvement.

2.7   People Involvement in TQM – Employee (Workers) Focus

2.7.1   Employee Development

As stated earlier, the philosophy of TQM establishes that quality improvement is a continuous process. People as the most vital and versatile resource of an organisation have a key role to play in achieving this objective. Palo and Padhi (2003) assert that, TQM implementation requires people who are multi-skilled, motivated, adaptable to rapidly changing business conditions, and have broad conceptual knowledge and capability to perform requisite tasks. The Malcolm Baldrige National Quality Award (MBNQA) also reflects on the need for employees' education and training to develop their knowledge and skills, effectiveness and efficiency. The above claim suggests that employees must be developed; and this can be achieved through persistent education and training.

Palo and Padhi (2003) describe training as a process of updating the knowledge, developing skills, bringing attitudinal and behavioural changes, improving the ability of the trainee to perform his/her task efficiently and effectively. The training programmes attempt to teach employees how to perform particular activities or specific jobs (Beheshti and

25

Lollar, 2003). The training is intended to equip all employees with the knowledge of TQM principles, values, objectives, tools, techniques; the concept of quality as well as company's plan for its implementation (Palo and Padhi, 2003; Agus, 2001). Education on the other hand, is seen as more broad based; which provides employees with general knowledge that can be applied in many different settings.

Summers (2005) suggests that the training should be appropriate so that it will enable employees to perform their tasks at a level that supports the ultimate customer's needs, wants and expectations. Besides, he recommends job-related skill training which combines on-the-job training and "classroom type" instruction. He believes that job-related skill training prepares workers for the daily activities involved with their job. Extant literature (Zhang, 2000; Summers, 2005; Wille, 1992) maintains that employee development should include:

1. Information about how quality, cost, schedule and profit expectations for their jobs affect customer satisfaction,

2. How well the firm is achieving its goal,

3. The skills needed by the employees to accomplish the organisational goal.

In addition, Jablonski (1991) divides the training programme into three categories as awareness, orientation and skills training and recommends that the training approach be timely. Deming (1986) and Jablonski (1991) contend that employees should be properly trained, must have sufficient knowledge, skills, and attitudes to perform in order for the organisation to achieve the intended objectives; otherwise it will be difficult to improve their work as expected. Research works re-affirm that employees provide better customer service, which is the core goal of TQM, after they have received appropriate technical and

26

customer values training (Sharma and Sarel, 1995; Johnson, 1996). Prior to organising education and training, some writers (Palo and Padhi, 2003; Zhang, 2000) recommend that issues like quality problems and challenges that the organisation faces, knowledge and skill levels needed to meet the challenges, assessment of actual knowledge and skills employees possess among others need to be considered.

Glew et al. (1995) see lack of knowledge as a frequently cited factor limiting effective participation. This is consistent with Fenton-O'Creevy's (1998) argument that employees with technical backgrounds in an organisation have the fear of obsolescence of their old skills and at the same time worry about their inabilities to acquire new ones. Thus, the importance of employee development is highly appreciated. It is seen as the recipe for proficient teamwork, enhances participation and increases workforce flexibility (Hunt, 1992; Leitch et al., 1995). An employee development is considered as an essential condition for gradual progress towards developing a TQM-based culture in an organisation (Oakland, 1989).

However, studies maintain that, employee development is one of the largest cost components in a TQM initiative and that companies often attempt to measure the benefits against costs (Beheshti and Lollar, 2003; Palo and Padhi, 2003; Zhang, 2000). It is expedient for companies committed to quality management programmes to invest in quality training and development of their employees in order to realise the full benefits of their quality programmes. The commitment of an organisation to employee development is emphasised in diverse ways by TQM practitioners such as Deming (1986) in his '14 points of management'. It therefore implies that employee development is crucial, as it brings out employees' potential and improves their capabilities and competencies.

27

2.7.2 Employee Empowerment

The principle of TQM embodies employee empowerment. TQM maintains that there is the need to empower and encourage employees to give input from their rich knowledge and experience. This is parallel with Wille's (1992) argument that employees are the better stakeholders to consult on quality issues. Since they actually do the job and for that matter know all the idiosyncrasies of the system, they can make sound decisions when given the opportunity to improve quality.

Conger and Kanungo (1988) define empowerment as "a process of enhancing feelings of self-efficacy among organisational members through the identification of conditions that foster powerlessness and through their removal by both formal organisational practices and informal techniques of providing efficacious information". This implies that empowerment is a feeling that is influenced by organisational practices; it is established and controlled by top management to improve employee commitment and enhance quality and competitiveness (Lashley, 1997; Holden, 1999; Wilkinson et al, 1997). Empowerment takes preference over delegation to the workforce to give them the chance to inspect quality as part of their job rather than having the products or services inspected externally at a later stage (Wille, 1992). In addition, Daily and Bishop (2003) found that empowerment allows workers to be responsible for making decisions and performing tasks previously under management's direction. For this reason, self managing becomes the central role of empowerment making the employees responsible for their own works and actions. Then the employees' job will involve a significant degree of autonomy and discretional power to make decisions regarding quality problems. They will have the prerogative to stop work whenever a problem affecting quality is encountered, rather than turning out a defective output. This is consistent with Feigebaum's concept of 'quality at source'. Rao et al. (1996) see this situation as a relief to management to concentrate more

28

on market-related problem solving and dispense with the worry about day-to-day operations to employees. They further state that driving decision-making power lower into the organisation accomplishes several things like better service to customers; employees become more satisfied and productive which in turn ensures organisational effectiveness and efficiency. In order to achieve these results, literature suggests that employees should have access to information, knowledge and reward (Spreitzer, 1995; Wille, 1992; Rao et al., 1996).

Eisman (1992) argues that employees must be empowered to make certain decisions on the job, to communicate with others in order to solve problems and to find ways of doing things that will reduce waste. By so doing variation in individual processes can be reduced and subsequently eliminated. TQM is perceived to de-emphasise status distinctions and emphasise employee empowerment (Crosby, 1979; Deming, 1986, Plutat, 1994), an alternatives to 'management by control' (Price, 1989).

2.7.3 Employee Participation

TQM stresses on participative management. It is a style of management that actively seeks employees' inputs, allowing the employee to contribute to improving work-related issues (Harrington, 1987). It chips away the traditional barriers that separate management from labour to enable managers to solicit the opinions and ideas of their subordinates (Jablonski, 1991). Saravanan and Rao (2006), simply describe employee participation as the involvement of employees in the quality management practices of the organisation voluntarily.

The recognition of the employees as part of the decision making is fundamental to 'total quality'. Lawler et al. (1992) refute the top-down approach of management because it

29

limits real employee participation in key decisions. According to Summers (2005), TQM principles recognise that everyone wants to do a good job and that they must have the opportunity to express their opinions. In this case, employees should participate in the formulation of the goals, so that they can have a strong personal interest in the success of the drive to meet them. In this regard, Macdonald and Piggott (1990) believe that employees will not feel the goals have been unfairly imposed on them.

Extant research reports (Wilkinson, 1994; Marchington et al., 1992) exemplify employee participation to include:

1. Downward communication involving the use of house journal or company newspaper, employee report, and regular briefing session,

2. Upward problem solving through structures such as suggestions schemes, attitude surveys, quality circles, improvement and action teams,

3. Change in organisation of work, including reduction in inspection, more teamwork, a shift towards cell organisation and establishment of semi-autonomous work groups,

4. Representative participation such as joint consultative committees or advisory councils and collective bargaining.

According to Zhang (2000), teamwork (e.g. cross functional teams and within-functional teams) is one of the remarkable characteristics of employee participation. The aim of the team is to improve the input and output by welcoming varied ideas from people of different functional areas. For effective participation, Harrington (1987) suggests that:

- Managers must be willing to accept a system that decentralizes decision making.

- Managers must trust employees.

- Managers must see problem solving and prevention training as paramount.

- Work must be viewed as a cooperative effort between management and employees.

- Management must admit that everyone has good ideas and combining the ideas will yield better result.

On the same issue, Dale et al. (1994) emphasise recognition and reward as important factors, because they play an essential role in inspiring employees on quality. Brown (1992) asserts that employee participation is one of the most difficult styles of management because it requires many people within the organisation to function with the same philosophy. In other words, participation can be undermined by different philosophies (such as corporate bureaucracy, office politics) within the organisation.

2.8   Measuring Organisational Performance

A firm's performance indicates how well and healthy an organisation is. According to Simmons (2000), performance measures can be financial or non-financial. Financial measures are typically derived from or directly related to chart of accounts and found in a company's profit and loss statement or balance sheet, such as inventory levels or cash on hand. Non-financial measures are ones not found in the chart of accounts, such as customer satisfaction scores or product quality measures. Also, Kellen (2003) indicates that the performance of an organisation may be related to inputs into a process, feedback on the performance of a process itself or outcomes/outputs from the process. The measures may also be related to human performance, process performance or market conditions.

Kellen (2003) identifies the frameworks or approaches for measuring organisational performance to include Balanced Scorecard, Economic Value Added, Activity-Based Costing, Quality Management, Customer Value Analysis and Action-Profit Linkage Model. The two most influential frameworks for organisational performance measurement in the field of TQM are the balanced scorecard (Kaplan and Norton, 1992) and the Malcolm Baldrige Criteria for Performance Excellence. Sila and Ebrahimpour (2005) and Kellen (2003) assert that, not all performance measures are directly related to the firm's strategy and are critical for successful execution of its strategy. Hence, TQM researchers adopt different indicators for measuring organisational performance. For instance, Forza and Filippini (1998) used conformance and customer satisfaction to measure performance in their study. This implies that certain performance measures may not be applicable within a particular study context and thus are not significant predictors of performance.

After the evaluation of the various business performance measures, this study decided to use four indicators: customer satisfaction, product and service quality, organisational effectiveness, and employee satisfaction. These indicators are seen as significant predictors of performance by the soft TQM elements and they have been stressed variously by TQM approaches and practitioners.

2.8.1 Customer Satisfaction

Anderson et al. (1994) define customer satisfaction as the degree to which a firm's customers continually perceive that their needs are being met by the firm's products and/or services. According to them, customer satisfaction is a more fundamental indicator of the firm's past, present and future performance. Customer satisfaction is the feeling of pleasure or displeasure resulting from comparing a product's performance against expectations.

TQM helps firms to do all things possible to meet customer expectations through improved product/service quality.

Customers who are satisfied with continuously improving product or service of a firm express their loyalty through repeat buying as well as recommending it to others. This assertion is parallel to the study of Martins and Toledo (2000), which admits that TQM increases market share by maintaining current customers and acquiring new ones. Thus, old customers are retained as new ones join. Youssef (1992) also maintains that TQM helps to meet customer needs in an agile manner. On the contrary, when the customer is dissatisfied, he/she will switch to another competitor. Currently, attaining and maintaining satisfactory levels of customer satisfaction is seen as a fundamental determinant for business health, growth, and economic viability (Feigenbaum, 1983).

Almost all TQM practitioners and business excellence models recognise customer satisfaction as the key indicator of performance (Deming, 1986; Rao et al., 1996; Oakland, 2000). Firms exist only because they have customers.

2.8.2   Product/Service Quality

TQM stresses on the operation of an organisation using quality. There are numerous definitions of quality in the literature. British Standard BS 4778 defines quality as the totality of features and characteristics of a product or service that bear on its ability to satisfy a given need. Juran defines it as fitness for use. Crosby (1979) defines quality as conformance to requirements. Feigenbaum (1983) defines quality as the total composite product and service characteristic of marketing, engineering, manufacturing and

maintenance through which the product and service in use will meet the expectation of the customer.

Macdonald and Piggott (1990) raised an argument that competition in the marketplace is directed by continuous quality improvement; hence they defined quality as delighting the customer by continuously meeting and improving upon agreed requirements. This definition is parallel to TQM principles of continuous improvement and zero defects. Quality is seen as dynamic and not static in nature, because customers' expectations are subject to change over time. The continuous improvement and working towards zero defects is an antidote to stiffer competition in the market place. Literature establishes that superior products or services continuously and consistently delight customers (Davis et al, 2003; Smith, 1994). Furthermore, an organisation which continuously improves its product or service becomes responsive to changes in the marketplace (customer expectations and needs) and cannot be overtaken by its competitors.

The numerous definition of quality suggests that there is no universally agreed definition. One major reason to this is the fact that quality is a judgement by the users of a product or service (Wille, 1992). This study defines quality as conformance to customer specification. Printing firms produce printed materials according to customers' prescription, since most of print works are customer specific. This is consistent with Peters' (1999) claim that quality to a great degree is what the customer says it is. Conformance to specification as a measure of quality is straightforward. An organisation can easily assess whether its quality conforms to the agreed specifications or not.

34

2.8.3 Organisational Efficiency

Spector and Beer (1994) describe organisational efficiency as a state where an organisation carries out its activity in a cost effective manner. TQM guarantees maximum effectiveness and efficiency within an organisation by putting in place processes and systems which ensure that every aspect of its activity is aligned to satisfy customer needs and all other objectives without waste of effort. According to Rao et al. (1996), efficiency measures reflect the consumption of resources to complete a task. In other words, an efficient organisation is the one which is capable of producing goods and services with less cost and less waste.

For Zaire and Simintiras (1991, cited in Öztas et al., 2004), TQM combines total system process towards doing the right things (externally), everything right (internally) at the right time and all the time, with economic viability considered at each stage of each process. Doing everything right by the entire organisation (every department, every single person at every level and every activity) reduces cost and time, prevent defects, reduces rework and scrap and increases productivity. According to Nabil and Gershon (1995), most organisations regard TQM as a cost-saving tool through inventory/waste reduction.

2.8.4 Employee Satisfaction

Employee satisfaction is the extent to which the employees of a firm feel that their interests are continuously satisfied by the management (Schneider and Bowen, 1992). They found in their study that employees join organisations with psychological contracts. Thus, when employees are satisfied with the organisation they in turn will satisfy the needs of customers effectively. In view of this, it is believed that employee satisfaction and customer satisfaction are strongly linked. Employees' satisfaction can lead to behaviours

that will help the organisation to function, while employees' dissatisfaction can lead to behaviours that are detrimental to the organisation (Zhang, 2000).

Employee satisfaction is seen as equally important as customer satisfaction by many researchers (e.g. Saravanan and Rao, 2006; Palo and Padhi, 2003), TQM proponents and business excellence models. Ishikawa (1985) contends that a firm whose members are not happy and cannot be happy does not deserve to exist. TQM practices of 'employee participation' enhanced job satisfaction, career satisfaction, and organisational commitment (Igbaria et al., 1994), create a culture that encourages employees to work together across the company, improve personal responsibility, and enhance a sense of accomplishment (Karia and Asaari, 2006). Forsyth (1995) indicates that the important factors that are conducive for employee satisfaction include equitable rewards, supportive working conditions, and helpful colleagues. Literature suggests that satisfied employees are more likely to provide high levels of service to their customers (Butler, 1996; Kerr, 1996) and more likely to remain with an organisation, thus reducing staff turnover (Guimareas, 1996).

2.9 Determinants of TQM's Success or Failure

A plethora of TQM studies maintain that TQM is a powerful philosophy because of its numerous manifest benefits. However, some studies have also identified manifold factors as determinants of success or failure of TQM programmes.

Devadasan et al. (2003) contend that in order for TQM programmes to deliver the intended results, more effort must be exerted. They assert that one of the efforts that are often missed in TQM programmes is the exploitation of quality information system. They believe that TQM programmes will work better when a quality information system is

36

incorporated into its implementation. The information system will make relevant data available and accessible for collection and processing in order to obtain the right information for pragmatic action without delay. According to Rahman and Siddiqui (2006), computer-based information forms the baseline for many managerial decisions, business strategies, policies and missions of an organisation and this is where TQM realises its optimal value.

Lee (2002) in his study pointed out that successful adoption and implementation of TQM in a business organisation requires careful planning and an enormous amount of time and effort. TQM is perceived to be a long-term strategy which requires a long-term commitment. But literature maintains that TQM activity of many organisations remains internally focused, which is symptomatic of managers' preoccupation with achieving short-term results (Terziovsky et al., 1999; Sohal and Terziovsky, 2000). In order for TQM to produce significant benefits, literature strongly suggests that it must be implemented on a long-term basis; else the programme will stall shortly after it is launched (Shin et al, 1998).

According to Loomba and Spencer (1997), TQM failures are largely due to bad management policies, non-conducive organisational culture and organisational structure. TQM is seen as a culture change programme; its implementation requires cultural overhaul (Rao et al., 2004). Kano (1993) on the other hand, says that one needs to take cultural background into account when implementing TQM. This is because most of the organisational cultures are not homogenous; there are vertical (differentiated by hierarchical level), horizontal (functional and departmental subcultures), and other subcultures (related to ethnicity, gender, age, etc) which may differ greatly. TQM becomes 'off-the-shelf' model if it does not take organisational culture into account (Thiagarajan

and Zairi, 1997). An organisation will be better off if it devises an implementation strategy that fits the organisation's unique circumstances or considers the adoption of the portions of another organisation's TQM programme which will be beneficial.

Furthermore, the reports on the failure of TQM also emphasise the neglect of soft TQM elements, wherein the human resource and organisational behaviour aspects of quality management are not given their deserved emphasis (Wilkinson et al., 1998; Lowery et al., 2000). The success of an organisation's programme requires collaboration between both the management staff and the workers. The absence of one party, especially the workforce is likely to have an adverse effect on the programme.

Lee (2002) admits that the principles of TQM are sound and when applied correctly and consistently would enhance a firm's competitiveness. In other words, the failure of TQM is as a result of the approach to its implementation and not TQM theory and method. Jun et al. (2004) summarises the factors of TQM failure as:

1. Lack of top management commitment

2. Lack of customer focus

3. Erroneous measures about the time frame and cost of TQM implementation and

4. The inability to develop and sustain a quality culture

Mann and Kehoe's (1995 cited in Prajogo and Sohal, 2004) Quality Critical Organisational Characteristics Framework can be used to analyse these factors that influence the implementation or effectiveness of TQM. TQM implementation is believed to be a very difficult task; it is seen as one of the most complex tasks an organisation might encounter (Glover, 1993; Kanji and Asher, 1993). In order for an organisation to reap the intended

38

benefit, TQM should be viewed as a never-ending programme which requires commitment of the entire staff; change of attitudes of the employees in accepting a quality culture; willingness to improve and continuously improve. Also a TQM programme should be perceived as a long term strategy; a journey which takes significant effort over an extended period of time.

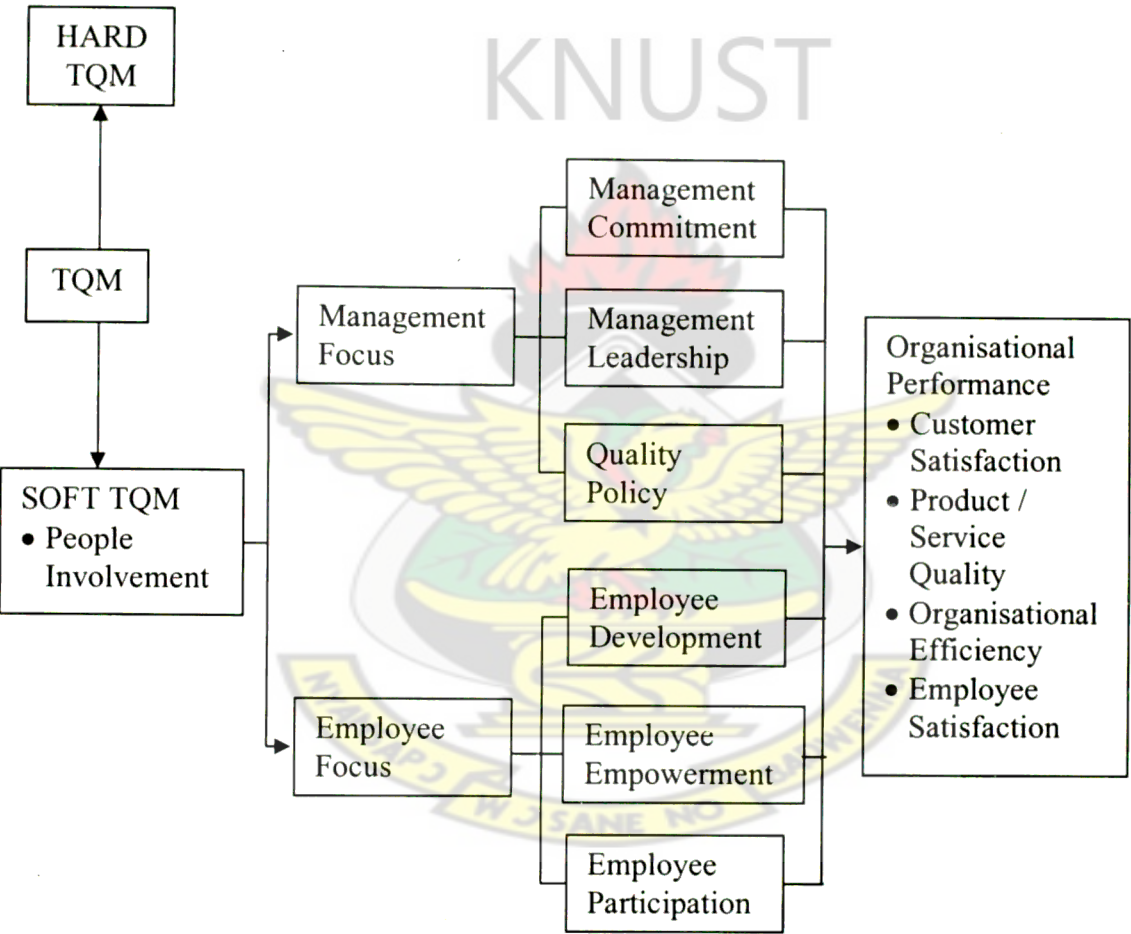## 2.10 Conceptual Framework of People Involvement in TQM on Organisational Performance in the Ghanaian Printing Industry

Fig. 2.1: A conceptual model of people involvement in TQM on organisational Performance.

Source: Researcher's Own Conceptualisation

Figure 1 shows the interrelationship between management focus and employee focus in achieving an organisation's stated goals through TQM programme. TQM is an integrated concept in quality management which requires collaborative efforts between management and employees (workers) in order to ensure better performance of an organisation. TQM programme requires that all members from shop floor employees to senior managers contribute positively toward Quality Management drive. Management is expected to exhibit open-minded leadership which recognises the potential of every member of staff, commit requisite resources and craft policy to guide all the activities of the firm. When management does these, employees will respond positively by actively involving themselves in the organisation's quality programme. When there is total commitment in the organisation, it will be reflected in all the operations of the organisation. Employees will seek to work efficiently and effectively, doing things in the right direction to reduce waste, improve quality of product/service thereby satisfying the ultimate stakeholder, the customer.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Several methods exist that can be employed in a study. The research methodology adopted for a study determines the validity and reliability of the study. A blend of the methodologies can be used for a study. However, the methodology must be scientific, that is, the process must be systematic, rigorous and free from any biases as possible. This chapter describes the research methods and the data collection tools (questionnaire survey, interview and document analysis) employed in the study.

3.2 Research Strategy

In gathering data for this study, both qualitative and quantitative tools were used. This is because the researcher wanted to avoid the disadvantages of the two methods in order to strengthen the research. The qualitative method permits in-depth and detailed study of phenomenon of smaller numbers and takes descriptive approach (Walliman, 2001). Quantitative method on the other hand requires the use of standardised instruments, so that the varying perspectives and experiences of people can fit a limited number of predetermined response categories, to which numbers are assigned and measured statistically. Quantitative method gives a broad, generalised set of findings presented succinctly and parsimoniously (Zhang, 2000). Jankowicz (1995) stresses on "the valid handling of complexity" in management research, and the combination of methods makes such valid handling more achievable (Denzin, 1989; Hartman & Hedblom, 1979).

The mixed method is believed to provide more perspectives on the phenomena being studied. Strategies available for conducting social science research include experimental,

archival, survey and case study. This study was based on survey, because it enabled the researcher to use smaller groups of people to make inferences about larger groups which was prohibitively expensive to study (Holton and Burnett, 1997).

3.3 Sampling Techniques

3.3.1 Population

The study focused on the printing industry in Ghana. A data from Ghana Statistical Service (GSS) indicated that majority of printing firms were located in Greater Accra Region. Hence, the researcher deemed it necessary to look at the printing firms located in the Greater Accra Region only. Moreover, the region is seen as the commercial hub of the country, where the majority of the printing works are carried out.

3.3.2 Sampling

The study drew sample from list of registered members of Ghana Printers and Paper Converters Association (GHaPPCA), Southern Sector – Greater Accra region. There were 145 registered printing firms as at January 2009. Simple random sampling was used to select sixty (60) printing firms. In order to obtain varied opinion and avoid bias in the data, five respondents each from the selected printing firms were included in the study. This yielded a sample size of 300. According to Mason et al (1999), a sample is said to be large if it is greater than 30, hence the sample size for the study is statistically acceptable.

3.4 Data Collection Tools

Two types of data: primary and secondary data were collected for the study. Primary data were collected from the firms understudy. The study employed questionnaire survey and

structured interview in collecting the primary data. The questionnaire survey was the main form of primary data collection and the analysis was based on that data.

Secondary data on the other hand were obtained through existing literature and document analysis. The sources of the secondary data included books, journals, articles, magazines, and firms' policy documents. The media for data collection were libraries and the internet. The literature review was substantially based on secondary data. The firms' policy documents on the other hand were used to verify the findings of the questionnaire survey.

3.4.1 Questionnaire Survey

To answer the research questions posed by the researcher in this study, questionnaire survey was employed. Questionnaire survey was seen as an appropriate tool for data collection for quantitative research study. It is used when the objective of the study is clear and not complex (Bourque and Fielder, 1995). In the field of TQM research, most of the studies (e.g. Yeung et al., 2005; Saravanan and Rao, 2006; Zhang, 2000; Anderson et al. 1994) were conducted using questionnaire survey. The questionnaires developed and used by these researchers were different and depended on the purposes of their study. However, these questionnaires provided an insight for this study.

Two separate semi-structured questionnaires (one for management personnel and one for lower-level workers) were used to study the people involvement variables of TQM: leadership, commitment, quality policy, employee development, employee empowerment, and employee participation. Both of the questionnaires used for this study consisted of three main parts. The first part sought general information about the company and about the respondent. The second part of the questionnaire, which constituted the main body,

sought information on the people involvement in TQM and the organisational performance variables as discussed in chapter 2. Several items/questions were developed to measure the people involvement in TQM and the performance variables (see appendix 1 for details). The firms were asked to evaluate the variables by indicating the extent of the practice of each of the variables using a seven-point Likert scale, where 1=lowest and 7=highest. The third part consisted of both open- and closed-ended questions which examined the firms on the mode of TQM practices. All the variables were extracted from the literature. The management questionnaires were filled by the production manager or quality officer as the case may be and any other management staff of the selected firms. The employee questionnaires were filled by at least a worker from the three sections (prepress, press and postpress) of the firms. The questionnaires were distributed through an officer within the organisation after obtaining permission from the authorities and collected by the researcher personally.

The questionnaires were initially tested by conducting interviews with two management staff and three workers of five printing firms in Kumasi. This was done to verify that the questions were understood clearly and that responses would be consistent with the purpose of the study. Thus the results of the pilot study were used to improve the reliability and validity of the questionnaire. Some of the questions were revised based on the responses of the pilot firms surveyed so as to ensure comprehensibility and accuracy.

3.4.2 Interviews

According to Wimmer and Dominick (2000), interviews are used to obtain more dynamic, detailed information on a question within a relatively short time period. Also, some information which cannot be obtained through questionnaire survey can be obtained

through interviews. The information obtained from the interview is used to explain the results obtained from questionnaire survey findings.

Structured interview was used by the researcher to collect information on the people involvement of TQM practices in the TQM drive. This is because the researcher had specific, predetermined agenda with specific questions to guide and direct the interview. Key informant interviews were conducted among quality managers, production managers and sectional heads of twelve firms from the selected firms in order to answer some of the 'why?' and 'how?' questions and to help enrich, interpret and understand the quantitative data. According to Kumar et al. (1993), the selection of key informants knowledgeable about the problem being researched minimises response error. The interview structure was therefore predetermined by the structure of the questionnaire and the completed questionnaire was used as a guide in the interviews. This method was parallel to the work of Soltani et al. (2003). The interviews were then content analysed creating categories to classify the meanings expressed in the data, to check information accuracy and to validate the outcome of analysis.

3.4.3 Document Analysis

Walizer and Weinir (1978) define content analysis as a systematic procedure of examining the content of recorded information. The researcher examined relevant internal document of the firms understudy in order to provide a second information source. The firms' documents included strategic plans and quality manuals. The documents were examined to ascertain the firms' quality achievement strategies.

3.5 Variable Measurements

3.5.1 Independent variables

The independent variables: management focus (leadership, top management commitment, quality policy) and employee focus (employee development, employee empowerment and employee participation) as TQM dimensions were adapted from the literature (Ahire et al., 1996; Agus, 2004; Boon et al., 2005; Daily and Bishop, 2003; Hung, 2004, Zhang, 2000). The items used to develop the questionnaire were grouped under the variables by PCA (see appendix 2).

3.5.2 Dependent variable

This study adopted customer satisfaction, product/service quality, organisational efficiency and employee satisfaction as organisational performance measures. The organisational performance measured the level of satisfaction of the firms' output to the customer and the extent to which firms' operations focused on the customer. It also measured the performance of the product/service, the level of waste/error/defect and as well as the level of employee performance and retention.

All the variable items were measured using seven-point Likert scale adapted from the literature. Respondents were asked to evaluate their organisations on each item on the scale ranging from (1) lowest to (7) highest. However, some of the items were reverse coded with (1) highest and (7) lowest in order to avoid position bias. The higher scale score indicated a high extent of current practice of people involvement in TQM, while a lower scale score indicated a low extent of current practice of people involvement in TQM.

3.6 Data Analysis

As a survey study, the analysis was more of quantitative nature and that Statistical Package for Social Scientist (SPSS 16.0) software was used to analyse the data. The software was used to perform Principal Component Analysis (PCA), correlation and regression analysis. According to Shlens (2009), PCA is a standard tool used for modern data analysis. It is a simple, non-parametric method for extracting relevant information from confusing data sets, especially from empirical works. It is also useful when the data appears clouded, unclear and even redundant, thus making it difficult to figure out the outcome. It also helps to develop smaller number of artificial variables that will account for most of the variance in a number of observed variables. The correlation and the regression analysis were used to determine the relationship and the impact of the independent variables on the dependent variables.

3.6.1 Testing for Data Adequacy and Reliability

The reliability analysis was conducted to examine the extent to which a variable or set of variables is consistent in what it is intended to measure (Hair et al., 2005). Reliability can be measured by test-retest method, equivalent form, split-halve method and internal consistency method (Nunnally, 1967). However, internal consistency is more reliable and requires single administration (Suresh Chandar et al., 2001), and it is the method generally used by researchers. Therefore, internal consistency method was used in this study. The internal consistency of each factor was determined by examining each item inter-correlation and computing Cronbach's alpha. Cronbach (1951) suggests that alpha value of 0.6 is sufficient while alpha value of 0.7 or more implies strong scale reliability. All the variables had a value of more than 0.7, which indicates that the variables were highly reliable and internally consistent.

3.6.2 Performing Principal Component Analysis

The data were first screened to check for multicollinearity and singularity which were possible to cause problem in the analysis. This is because when the variables are highly or perfectly correlated, it becomes impossible to determine the unique contribution to a factor of the variables. The items inter-correlation matrix served as a guide in determining which items were highly correlated and thus were the best candidates for deletion. Hence, 7 and 3 questions were deleted from the management and employee questionnaires respectively.

After some of the items had been deleted, the selected ones were checked for adequacy using R-matrix and Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity. According to Field (2005), the determinant of the R-matrix should be greater than 0.00001 before the analysis by Principal Component Analysis (PCA) will be relevant. The selected items for both the management and employees questionnaires produced KMO values of 0.842 and 0.872 and determinants of 0.001 at 0.05 significant levels. Kim and Mueller (1978) suggest that KMOs in the range of $0.7 - 0.8$ are considered meritorious, those in the range $0.6 - 0.7$ are average, and KMOs in the range $0.5 - 0.6$ are poor. Hence the KMO values (0.842 and 0.872) and the Bartlett's test (Chi-square = 603.333 and 837.595, $p < 0.01$) showed that the R-matrix was not an identity matrix and approved the data to be significant, adequate and appropriate for further analysis.

After the screening, PCA extracted three main components for both management focus and employee focus. Descriptive statistics were performed on the extracted data sets to ascertain the extent of people involvement in TQM practices and organisational performance of the printing firms. Correlation analysis was performed to determine the effect of people involvement in TQM variables on organisational performance.

48

CHAPTER 4

RESEARCH FINDINGS, ANALYSES AND DISCUSSSION

4.1 Introduction

The data were analysed to examine the people involvement in TQM variables and several performance measures along with the demographics of the sampled firms. The findings were organised and presented in the form of frequency distributions, descriptive statistics, chart and tables to enable examination and description on the patterns of the responses.

4.2 Survey Response Rate

The questionnaires survey was administered in two separate parts: one for the management personnel and one for the employees (workers). On the part of the management, 120 questionnaires were distributed to the firms, but 98 were retrieved. Out of the 98 questionnaires obtained, 96 were valid for the analysis, while two were invalid as a result of improper filling, yielding response rate of 80%. On the part of the employees, 180 questionnaires were distributed with each firm filling at least three: one to each section (prepress, press and postpress) of the firms. Out of the 180 questionnaires distributed, 131 were obtained; but 127 were useable and 4 discarded for improper filling, yielding a response rate of 70.56%.

4.3 Profile of Respondent Firms

The management questionnaire indicated that 70.8% of the data were obtained from commercial printing firms, 9.4% from security firms, 6.3% from advertising firms, 9.4% from firms operating as both commercial and security firms; and 4.2% from firms operating as both commercial and advertising firms (see Table 4.1). The number of employees of the respondent firms yielded the following: 35.4% of the firms had 30-99

49

employees, 15.6% had 100 and above employees, 15.6% had 10-29 employees, 33.3% had 1-9 employees (Table 4.2).

Table 4.1: Distribution of operations of the respondents firms

Scope of operation	Frequency	Percentage (%)
Commercial/General	68	70.8
Security	9	9.4
Advertising	6	6.3
Commercial and Security	9	9.4
Commercial and Advertising	4	4.2
Total	**96**	**100**

Source: Fieldwork, March 2009

Table 4.2: Number of Employees of the respondents firms

No. of employees	Frequency	Percentage (%)
30-99	34	35.4
100 or More	15	15.6
10-29	15	15.6
1-9	32	33.3
Total	**96**	**100**

Source: Fieldwork, March 2009

By National Board for Small Scale Industries (NBSSI in 2006 MOTI Report) definition, the above table indicates that the printing industry is dominated by micro and medium enterprises. This, according to Smallbone et al. (2000), is due to the fact that the industry is capital intensive. As a result, the industry is polarised between a few large firms and a large number of medium and micro firms.

4.4 Demographics of Respondents

4.4.1 Management

Out of the 96 responses from the management questionnaire, 29.9% of the respondents were females and 70.1% were males (Table 4.3). The educational level of the respondents

50

is presented in Figure 2. The "other" in Figure 2 below indicates management staff with professional qualification such as CIM, Diploma in Business Studies and ACCA. Most of the management questionnaires required information from key informants and for that matter majority were answered by Quality Officers or Production Managers and few from other management staff like Marketing Officers, Accountants and Estimators, hence males being the majority.

Table 4.3: Gender of respondents of management questionnaire.

Gender	Frequency	Percentage (%)
Female	20	20.8
Male	76	79.2
Total	**96**	**100**

Source: Fieldwork, March 2009
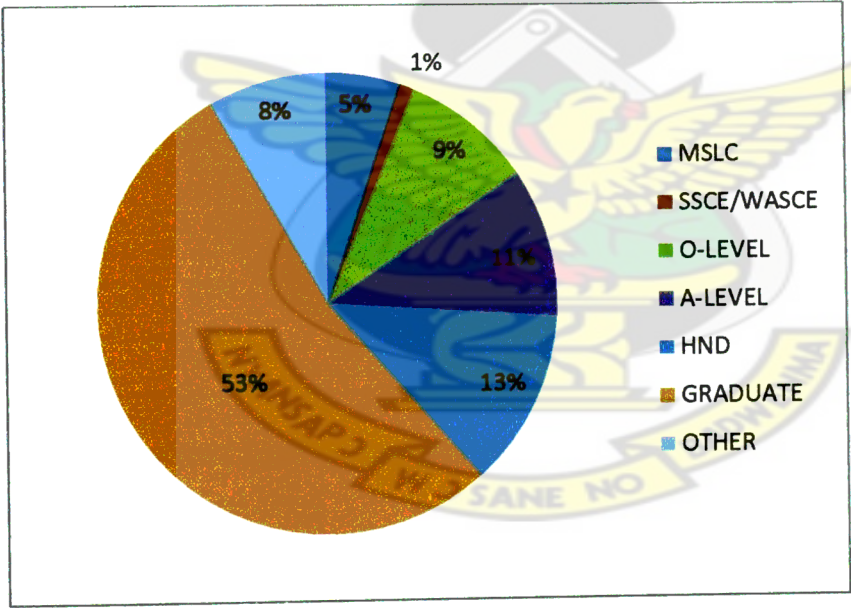
Figure 4.1: Educational level of management respondents

Source: Fieldwork, March 2009

4.4.2   Employees (Workers)

Out of the 127 responses received from the employees (workers), 29.9% were females and 70.1% males (Table 4.4). Figure 3 below indicates the educational level of the respondents of the employee questionnaires.

Table 4.4: Gender of respondents of employees (workers) questionnaires

Gender	Frequency	Percentage (%)
Female	38	29.9
Male	89	70.1
Total	**127**	**100**

Source: Fieldwork, March 2009
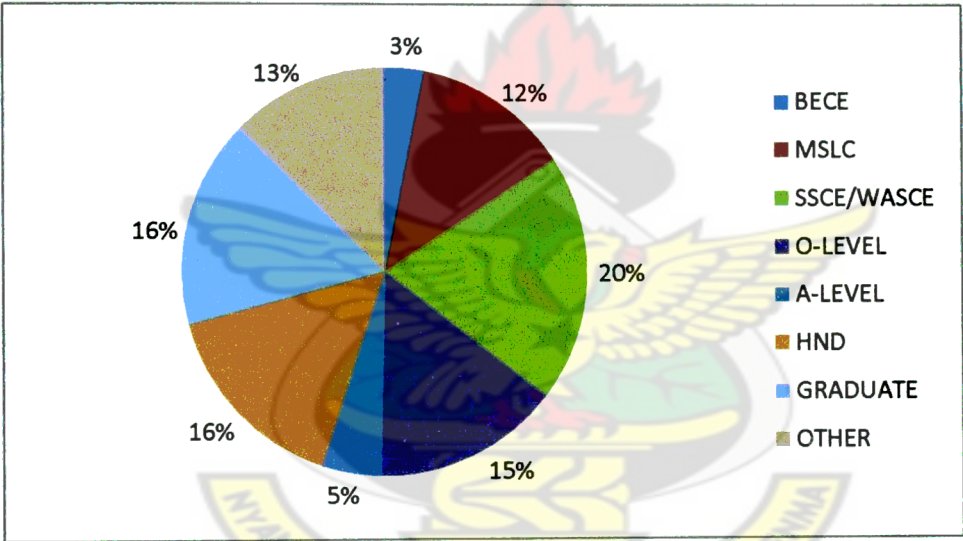
Figure 4.2: Educational level of employee respondents

Source: Fieldwork, March 2009

Figure 3 above indicates that majority of the workers who filled the questionnaires were SSCE/WSCE leavers followed by HND holders, Graduate and BECE holders. The "other" as used in the chart indicates respondents with qualifications like City and Guilds, Certificate in Printing Craft, and National and Vocational Training Institute (NVTI) Grade I and II.

4.5　Extent of People Involvement in TQM Practices in the Printing Industry

To examine the extent to which people involvement in TQM practices in the printing industry, the 'Mean Values' of the responses from management and employees perspectives were computed.

Table 4.5: Summary of the mean and standard deviations of extracted items of people involvement in TQM practice

Variable	No. of items	Mean	Standard Deviation	Population N
Management leadership	4	5.45	1.23	96
Top management commitment	3	5.37	1.35	96
Quality policy	5	4.97	1.48	96
Employee development	5	3.37	1.98	127
Employee empowerment	3	3.69	2.03	127
Employee participation	4	4.38	1.73	127

Source: Fieldwork, March 2009

The descriptive statistics in Table 4.5 indicates that managers within the surveyed firms perceived leadership (with the highest mean score, i.e. M=5.45, STD=1.23) to be the TQM variable mostly practised within the firms and evident to a considerable extent, followed by commitment (with M=5.37, STD=1.35), and quality policy (with M=4.97, STD=1.48) which is rated as average in practice.

The employee focus of people involvement in TQM practice in Table 4.5 indicates that employees within the survey firms perceived participation (with the highest mean score, i.e. M=4.38, STD=1.73) to be the most TQM implementation practice within their firm, followed by empowerment (with M=3.69, STD=2.03) and development (with M=3.37, STD=1.98) as least practised in the firm.

4.5.1 Leadership

Management leadership was seen by the interviewees as a key factor in the success of TQM programme. Managers were seen as the drivers of an organisation's strategies and plans where most of the initiatives come from. The interview results revealed that an organisation will require effective leadership to achieve excellence. This can be achieved through a collaborative effort by management and workers. The findings reveal that the nature of the printing business relies heavily on good leadership which welcomes suggestions and opinions from the workers who carry out the various operations. Filley et al. (1976) indicate that management needs to co-opt workers in decision making. They believe workers were more likely to accept a decision when they are involved in making it. Also, it aids in developing an environment of trust, which helps to develop an achievement oriented teams.

In practice, many managers had the conviction that they dare not delegate the decisions of quality, process or product conformance to workers. As a result, employee involvement and empowerment are given less priority. Leadership of the printing firms only welcome suggestions and views from the workers they think are experienced and their views will yield positive output. Unfortunately, such workers are not rewarded for their good ideas, but are accused when their ideas fail; hence they feel cheated and prefer to 'coil into their shells'. Forsyth (1995) recommends equitable rewards as an essential component for successful TQM programme. Some of the workers become disheartened when management does not listen to them; hence they do what their strength can allow. This negative relationship between managers and employees demotivates the employees to do their best. Meanwhile, Karia and Asaari (2006) expect TQM to create an environment in which positive relationships exist between managers and employees and in which people

feel motivated to do their best. Jablonski (1991) argues that for firms to be efficient, improve product/service quality and satisfy their customers, the traditional barriers that separate management and workers need to be chipped away and rather recognise employees' capabilities and contributions. TQM emphasises on the top manager's responsibility for quality (Hackman and Wageman, 1995). According to them, an organisation is a system and it is top managers who determine how each sub-system interacts with one another. Therefore, the whole TQM approach begins with top managers. Employees' work effectiveness is viewed as a direct function of the quality of the systems that is led by top managers (Ishikawa, 1985; Deming, 1986). According to Wang (2004), TQM's leadership sub-system is built on mutual trust and teamwork.

4.5.2 Top Management Commitment

The work of Rahman and Siddiqui (2006) established that the degree of success achieved in implementing TQM has a strong relationship with the commitment and support provided by the top management, as it is the fountainhead for all key policies of the firm. But the study revealed that TQM programme receives less support from top management. Even though management stresses on quality, they devote little or no attention to issues and practices that will guarantee quality achievement. Top management feels reluctant to provide logistics to facilitate TQM programme. The results of the interviews made it clear that there was neither reward for quality performance nor strategies to deal with problems. Because of lack of commitment, managers ask employees to 'do or use it like that' rather than providing the right materials for the work, and thus results in waste. Managers prefer using alternative materials as against the recommended materials for production. For example, firms used ordinary water for dampening instead of fountain solution, laser films instead of imagesetter films.

According to the managers interviewed, it was expensive to use standardised materials for every work. They explained that, the use of standardised materials or alternative depends on the customer or the profit on the project. This practice was common to most of the printing firms. TQM emphasises prevention by doing it right the first time and de-emphasises correction (Rao et al., 1996), because it views correction as cost. Therefore TQM requires from management not to compromise with quality. Managers should emphasize that work should be done right the first time and that there is always room for improvement. Beheshti and Lollar (2003) postulate that commitment to quality management begins with management and spreads to all areas of business. Management should be ever ready to provide adequate resources for work to be done, commit resources to constantly train the workers and also remove barriers to quality and performance. This will give an indication of strong commitment to a quality initiative. Apart from the mission statement, majority of printing firms had no comprehensive strategic plan to either guide their operations or commit resources for training workers. A clear and consistent communication of a mission statement and the objectives defining quality values, expectations and focus, is considered the major indication of top management commitment (Smith, 1994; Oakland, 2000). To get the commitment of all, top management plays a crucial role to attract employees' interest and motivate them to achieve a shared vision.

4.5.3 Quality Policy

Quality policy which is the least ranked practice of management in Table 4.5 is the firm's documented outcome of the process of strategic quality planning. The results of the interviews indicated that quality policy serves to provide internal consistency between the goals and procedures of the firms by aligning each member, section and element of the firm toward its long term objectives. Although the interviewees admitted that quality

policy was very important, few firms had a well-documented quality policy which envisages commitment to meeting the requirements of the customer as well as achieving continual improvement. Even those which had the quality policy keep it under a lock by either the Quality Officers or Production Managers of the firms and make it available at particular times. However, TQM recommends that copies of the quality policy should be made available to all members in the form of pocket dairy so that it can be referred to at any time. Majority of the firms had quality captured in their mission and vision or slogan statement and ensured it through verbal instructions, use of job docket or work instruction ticket. However, Jablonski (1991) recommends that management creates and sustains a clear and visible quality value system, along with a supporting management system, to guide all activities of the firm toward quality and excellence. This will help minimise errors in the operations and ensure conformance.

Saravanan and Rao (2006) suggest the application of Deming's PDCA cycle while implementing vision and mission statements (quality policy) to achieve the goals of the organisation. In other words, quality must be revised to meet ever changing needs of business environment and the customers. According to Beheshti and Lollar (2003), quality policy is a strategic operating policy that allows the firm to respond to increasing competition and growing consumer expectations. It must therefore be reviewed and updated from time to time. The findings revealed that almost all the printing firms which had quality policy have not been revising the policy for considerable period of time and were not sure when it will be revised either. However, Jabnoun (2000) cautions that the quality policy should be congruent with the organisational goal and as well be consistent with TQM vision.

4.5.4 Employee Participation

Total involvement is the integrating concept in quality management, comprising the participation and contribution of all members (from shop floor employees to senior managers) to continuous improvement (Dimitriades, 2000). TQM requires combined efforts of all members of an organisation from senior management to workers and clerks. Thus, effective TQM environment allows all employees to participate in achieving an organisation's goal. According to Karia and Asaari (2006), participative management creates an environment in which positive relationships exist between managers and employees and in which people feel motivated to do their best. This may be the reason why the firms involve the employees in quality programme, and thus ranked it highest by employees in terms of practice. The interview findings revealed that employees were involved in making quality decisions and solving quality problems. This was done through the use of suggestion forms/boxes to gather employees' inputs. The suggestions were evaluated based on their acceptability and implementability before implementing them.

Sometimes management devolve quality decision to a group of employees (usually sectional heads – cross functional teams, quality circle, improvement/problem solving teams), while concurrently they provide guidance and support. The group is consulted when there is a printing problem or on how a job could be executed. However, employees complained that management only decide to try their suggestions when their decisions and efforts had proved futile. The results of the interviews revealed that when the employees' suggestions are taken, they feel satisfied but instead of raising their morale, it demoralises them when they do not receive any reward (monetary incentive) in return. As a result, they become discouraged to participate whole-heartedly and exhibit lackadaisical attitudes towards work. Yang (2006) believes that employee participation is encouraged by a good

58

incentive system. Etzioni (1961) presents three types of employee participation: moral, calculative and alienative that may arise in an organisation. The alienative participation, where the employees have negative attitude toward the organisation due to lack of incentive systems, is common in the printing firms. Workers pretend to be sick and absent themselves from work or sometimes stop work without notice especially at a time a job is urgently needed. This puts an undue pressure on management and causes delay in production which sometimes results in the firms losing prominent customers.

According to the literature (Lawler, 1994; Wagner, 1994), employee participation could take several forms like job participation where employees take formal, direct role in decisions relating to job issues; downward communication through newsletter and team briefing; representative participation in which employees elect councils or board members to represent their interests to management; financial participation through gain-sharing, profit-sharing and employees ownership schemes. In a society like Ghana where people are driven by material possessions, it was not surprising that employees supported the use of financial rewards and incentives in the quality efforts. The employees feel that their commitment to the organisation and its goal should be matched by additional commitment by the employer to the employees' welfare.

4.5.5 Employee Empowerment

The second ranked TQM employee focus variable was empowerment. Empowerment entails sharing management's information-processing, decision-making and problem-solving power with employees in the continuous quality improvement process. Karia and Asaari (2006) argue that employees who are closest to the daily operating procedures are in the best position to understand and improve the quality of those procedures. So they must

59

be empowered to make certain decisions on the job, communicate freely with others in order to solve problems and to find their ways of doing work that will reduce wasted steps or improve quality. A study of Keating and Wruck (1993) on how to improve the efficacy of lactic acid concentrator indicated that workers were the ones who were able to provide the solution and not the managers. According to the employees interviewed, they have the liberty to take actions on minor problems; but for a major problem, they need to consult superiors, else they will be liable for failure.

The print production processes are interdependent; an error in one process will lead to waste of the final output. Because the rejection of the final print can result in a huge loss, management insists that workers consult them for approval on any decision they make. This is consistent with the two empowerment strategies: **participatory empowerment** and **self-management** proposed by Dimitriades (2000). He suggests that employees are given partial decision-making authority and responsibility, being encouraged to participate and contribute to continuous improvement by suggesting to company management new ways of improving the quality of products, processes, procedures, and customer service while management ultimately decides whether employee suggestions are of value to the company and whether they should be acted upon.

4.5.6 Employee Development

According to the employees' responses, employee development had the least mean value of 3.48. The purpose of the employee development is for skill enhancement which in turn enhances the performance of the employees (Palo and Padhi, 2003). The results of the interviews confirmed that almost all the firms did not have any planned employee development programme in place. Almost all the managers interviewed complained that

60

when workers are sponsored for a skill and knowledge acquisition, they come back with all kinds of demands. When their demands are not fulfilled, they decide to quit without the firm benefiting from them. Although management agreed that employee education and training is important, they said that there is only one specialised training institution which organises the training for the workers. Even that, the institution only offers formal training which according to the printing firms, takes a longer period because the company cannot afford to have the workers away for such long time. In view of these challenges, in-service training was the only predominant development programme employees receive, and it is even organized only once, usually for a newly employed worker. The training tends to inform the worker how things are done in the organisation so as to do same. Another kind of training common to the printing firms was operational training which is usually organized by a manufacturer, when a new machine/equipment is bought and installed. Also, the workers get the chance to attend workshops and seminars when Ghana Printers and Paper Converters Association organises one or when there is a printing fair. This according to the interviewees was rare.

Due to lack of effective education and training programme, employees in the printing industry have shallow knowledge in the state-of-the-art technologies in printing. Therefore they tend to stick to the old ways of doing things and resist change. It is believed that an effective employee development programme leads to attitudinal change on work commitment to fulfil job requirements. Rahman and Siddiqui (2006) maintain that it is out of the education and training that a firm inculcates and propagates quality culture into the employees. It also gives them confidence to accept responsibility for an activity, or even being engaged in pursuit of a quality objective.

4.6   Performance of the Printing Firms

To ascertain the extent of the performance of the printing firms, descriptive statistics of the responses were performed. The mean values of the performance variables in Table 4.6 indicates that product/service quality has the highest score of 5.89 followed by customer satisfaction with 5.58, organisational efficiency with 4.33 and employee satisfaction with the least score of 4.32.

Table 4.6: Summary of the mean and standard deviation of the performance variables

Variable	No. of items	Mean	Standard Deviation	Population N
Customer Satisfaction	5	5.58	1.289	223
Product / Service Quality	2	5.89	1.111	223
Organisational Efficiency	2	4.33	1.275	223
Employee Satisfaction	2	4.32	1.401	223

Source: Fieldwork, March 2009

All the printing firms in the study subscribed to Crosby's (1979) description of quality of a product as conformance to requirements. According to the interviewees, printing materials are customer specific and that they produce the materials according to the customers' specifications. What the printing firms do is to offer technical advice and suggestions to help the customer to come out with the right specification. In order to ensure that the printed work satisfies its intended use, a sample copy is given to the customer for approval before the entire quantities are produced.

Kulkarni (2005) postulates that a firm's continued success requires repeat business, which in turn depends upon the customers. Therefore a strong customer focus is imperative. The interview results revealed that almost all the printing firms focus their operations on satisfying the customer. It was found out from the interviews that, most of firms are having

some key customers that they cannot afford to lose. So they do everything possible to satisfy their needs and expectations. The printing firms treat customers' complaints with all seriousness. One of the immediate measures that are taken in order to satisfy the customers is to replace defective copies. Sometimes the printing firms make follow-ups through telephone calls to ascertain the extent the printed material satisfies the needs of the customers.

Literature establishes that an efficient organisation enjoys reduction in reworks, scraps and defects. The printing firms admitted that defect is inevitable in printing, because some of the copies may have poor colour, blurred images among others. But in order to ensure that the right quantity demanded by the customer is obtained, provisions are made in the estimate to cater for waste. However the interview results revealed that sometimes the waste is too much that it reduces the copies to be given to the customer. In this case the good ones are delivered to the customer while the firms reprint copies to make up the quantity.

It was not surprising that employee satisfaction was ranked the least among the performance variables. The findings revealed that employees feel cheated in terms of remuneration, reward and recognition and that they express their dissatisfaction in diverse ways. For instance a task which could have taken a short time to complete sometimes takes long time to finish. Some employees leave the firm unceremoniously, especially when there was work to be done or when the service of the employee was seriously needed.

4.7   Effect of People Involvement in TQM practices on the organisations' performance.

In order to obtain the effect of people involvement in TQM on organisational performance, the three components extracted by the PCA were aggregated and regressed. The eigenvalue greater than 1 was used as the criterion for the extraction.

4.7.1   Effect of Management Focus on Organisational Performance

From Table 4.7 (p. 66) the first three components were extracted and considered significant because they are the components which explained relatively large amount (66.8%) of the total variance while the rest explained small amount (33.2%) of the total variance in the management data set. The component matrix in Table 4.8 (p. 67) indicates that the loadings (bold figures in each column) on component one relate to **Quality Policy**; while loadings on component two relate to **Top Management Commitment** and that of component three relate to **Leadership**. The variance explained by the individual components is as follows: quality policy explained 29.06%, top management commitment explained 19.67% and leadership explained 18.07%.

In order to determine the effect of management focus on performance, the mean values of the three components were computed and correlated, and their coefficients were used to determine the extent of contribution (see Appendix 3). The correlation analysis indicated that management focus variables have positive effect on the performance variables. Quality policy had positive effect on all the performance items except "the level of errors or defects/waste". Top management commitment had positive effect on the performance items except "the level of errors or defects/waste" and "the extent employees leave the

64

firm". Out of the management focus variables it is only leadership which contributed positively to all the performance items.

4.7.2 Effect of Employee Focus on Organisational Performance

With employee focus, the PCA extracted three components as in Table 4.9 (p. 68). These components were considered significant because they explained larger percentage (69.24%) of the variance while the rest of the components explained smaller percentage (31.76%) of the variance in the employee data set. The loadings (bold figures in each column) on the extracted components: 1, 2 and 3 in Table 4.10 (p. 69) relate to **employee development**, **employee empowerment** and **employee participation** respectively. The variance explained by individual components was employee development = 30.08%, employee empowerment = 20.07% and employee participation = 19.07%.

The 'mean values' of the extracted components were computed and used for correlation analysis. The coefficients of the components (see Appendix 3) indicated that employee focus variables have positive effect on the performance of the printing firms. Employee development had positive relationship and contribute to all the performance items except "customers pay money for quality print outs". Employee empowerment also had positive relationship with all the performance items except "customers pay money for quality print outs". Employee participation on the other hand was positively related to all performance items except "the level of errors or defects/waste" and "the extent employee leave the firm".

On the whole people involvement in TQM practices had positive effect on the performance of the printing firms.

65

Table 4.7: Factor Extraction of Management Focus Variables

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.634	46.949	46.949	5.634	46.949	46.949	3.488	29.063	29.063
2	1.362	11.350	58.299	1.362	11.350	58.299	2.360	19.667	48.731
3	1.020	8.501	66.800	1.020	8.501	66.800	2.168	18.070	66.800
4	.885	7.371	74.171						
5	.667	5.561	79.732						
6	.589	4.908	84.639						
7	.455	3.789	88.429						
8	.428	3.566	91.994						
9	.347	2.888	94.882						
10	.296	2.468	97.350						
11	.206	1.714	99.063						
12	.112	.937	100.000						

Extraction Method: Principal Component Analysis

66

Table 4.8: Factor Matrix of Management Focus Variables

Rotated Component Matrix

Items Measuring Management Focus Variables	Component		
	1	2	3
Management actively participates in quality management activities	.050	.491	**.579**
Management strongly encourages employee involvement in quality management activities	.320	-.069	**.770**
Management is much concerned with quality output	.064	.351	**.692**
Management acts on employees' suggestions	.193	.170	**.585**
Management exhibits belief in continuous improvement through strategies and actions at all levels	.421	**.618**	.379
Management routinely removes barriers to quality and performance	.210	**.690**	.149
The firm has clear and detailed quality policy	**.754**	.408	.071
Quality policies and plans are well communicated to employees	**.804**	.401	.191
Quality policy applies to each employee and not specific groups	**.765**	.103	.377
The quality policy sets performance standards	**.862**	.045	.133
Quality values, principles and practices are routinely reviewed and improved	**.716**	.281	.179
Management actively involves itself in establishing and communicating the firm's vision, mission and values for quality	.253	**.828**	.145

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

67

Table 4.9: Factor Extraction of Employee Focus Variables

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.869	48.911	48.911	5.869	48.911	48.911	3.609	30.075	30.075
2	1.372	11.434	60.345	1.372	11.434	60.345	2.408	20.070	50.145
3	1.067	8.894	69.239	1.067	8.894	69.239	2.291	19.094	69.239
4	.854	7.116	76.355						
5	.597	4.973	81.328						
6	.484	4.033	85.362						
7	.453	3.777	89.138						
8	.364	3.030	92.168						
9	.309	2.573	94.741						
10	.230	1.915	96.657						
11	.211	1.757	98.414						
12	.190	1.586	100.000						

Extraction Method: Principal Component Analysis.

KNUST

68

Table 4.10: Factor Matrix of Employee Focus Variables

Rotated Component Matrix

Items Measuring Employee Focus Variables	Component		
	1	2	3
The firm has employee development programme in place	**.807**	.264	.117
Employees are encouraged to accept education and training	**.780**	.296	.231
Resources are made available for employee development	**.800**	.298	.127
Quality awareness education is given to employees	**.777**	.042	.372
Employees receive education and training throughout their career	**.806**	.322	.097
Employees are encouraged to solve quality problems they find	.371	.375	**.591**
Employees have freedom to decide how to execute a task effectively	.281	**.666**	.293
Management gives employees the liberty to make and learn from their mistakes	.231	**.896**	.070
Management are prepared to act on employees' suggestions	.079	.210	**.784**
Employees are actively involved in quality-related activities	.179	-.009	**.858**
Management is willing to share power and responsibilities	.342	**.714**	.225
The firm has cross functional teams to deal with quality problems	.174	.341	**.468**

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

CHAPTER 5

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

5.1 Summary of findings

Globalisation and trade liberalisation have changed the face of business environment. There is keen competition in both local and international markets. Quality is one of the primary elements driving the global competition, and survival requires that firms provide better quality. Many business organisations (small- and medium-sizes, as well as large companies) have been forced to engage in quality management practices in order to ensure continual existence and compete favourably in the local and international markets. One of the quality management systems which have emerged as a predominant business issue is TQM. It is a quality management system which has received world-wide recognition and practised by many firms. Though different researchers adopted different TQM measurements, their findings tend to be congruent; thus TQM implementation has effects on firms' business performance. This study attempted to examine the impact of people involvement in TQM practices on organisational performance. It is believed that better organisational performance is achieved by concerted effort of management and employees of the firm. In other words TQM requires corporate collaboration as failure on the part of any one party affects the success of the TQM programme.

On the part of management, TQM emphasises good leadership, total management commitment and planned quality policy. In the case of the printing firms in Ghana, the analysis showed effective leadership from management. This is because leaders welcome views from employees, give freedom to employees to solve quality problems. Also, quality policy was recognised by the firms as important, but there were no planned documented quality policies to follow. Rather, it is expressed by word of mouth, firm's slogan and the

use of job dockets and work instruction tickets. The printing firms used these approaches to guide and direct production. With regards to management commitment, the analysis indicated that it was not the best. Management does not make resources readily available and sometimes compromise with the use of non recommended or substandard materials for production. While TQM maintains that management show strong commitment in all aspects of the firms' operations, firms' commitment is exhibited by lip service.

TQM stresses effective human resource management: development, empowerment and participation for employee. The findings indicated that the printing firms deemed employee participation as crucial. Employees are given the chance to present their suggestions and views in different forms regarding decision on quality issues. However the success of their suggestions does not attract any reward but they are blamed if their suggestions fail. The nature of printing operations welcomes empowerment; hence the second best practice in the firm. However, only few workers have freedom to decide on how to carry out their activities. These are employees who are known to contribute positively to quality decisions. Employee development is given the lowest attention in the printing firms. Because of the cost associated with it, coupled with the fear that employee will demand higher salary or leave the firm after training. The printing firms had less interest in developing their employees; they hardly encourage and provide funding for it. Meanwhile the industry is dominated by semi-literate workers who need relentless training to bridge the knowledge gap and equip them with the requisite know-how for their work. Another contributing factor, as the firms claimed, was lack of specialised training institutions to provide short-term training programmes for the industry.

Further investigation into ascertaining the relationship between People Involvement in TQM practices and organisation performance variables led to 'correlation analyses'. The data were first screened, and PCA was performed to extract the items with eigenvalue greater than 1. The items loading on the extracted components were used for the correlation analysis. There existed some relationship between the variables. While some of the items of measurement showed positive relationship others showed negative relationship. The relationship ranged from strong, moderate and weak between the independent and dependent variables significantly at 95%.

Descriptive statistics was performed and the mean values of the extracted component were compared to ascertain the extent of people involvement in TQM practices. The analysis also indicated that the printing firms are not paying attention to employee focus variables in terms of practice. According to the findings, the management focus which is even the centre of attention in TQM practice is not satisfactory. However, when the printing firms pay attention to employee focus items, people will endeavour to do things right because they will have strong bond with the firms.

5.2   Recommendations

From the findings, some of the People Involvement in TQM practices of the printing firms were seen to be satisfactory and others unsatisfactory. It must be noted that TQM can only be total and effective to yield the necessary benefits when all the stakeholders (people) show absolute commitment and dedication to the programme. Therefore the following recommendations are put forward to improve people involvement in TQM implementation practices in the printing industry.

1. For effective leadership, management must not devolve quality decision to few employees and listen to them only. This partiality will bring division among the workers and as a consequence will lead to apathy, when other workers realise it. Rather management must welcome all suggestions, evaluate and explain to employees why some suggestions were accepted and some rejected to ensure total involvement as stressed by TQM.

2. Management must play proactive role by constantly reviewing the firm's plans and strategies (quality policy) needed to achieve the organisational goals and objectives. To insist on quality and avoid non conformance, there should be a well planned quality policy which stipulates how things are done. This will serve as a guide to employees and help avoid deviations and errors. The use of 'oral' directives should be avoided, because there is the tendency for employees to forget and as a consequence will lead to unacceptable errors.

3. On the issue of commitment, management should be prepared to provide resources and facilities such as funds to support workers training. According to Beheshti and Lollar (2003) companies committed to quality management programmes must invest in quality training and development of their employees and not themselves only in order to realise the full benefits of their quality programme. Employee development is a prerequisite for employee empowerment; unfortunately this is not given much attention. Empowered employees need new knowledge and skills that are essential in performing their functions. There should be customized training plans for all categories of personnel. The training should not focus only on how to execute a task but include instructions on the basics of TQM: cause and effect analysis, team problem solving, interpersonal communication and interaction, rudimentary statistical methods, and cost of quality measurement. Printing firms

should consider employee development programmes in their plans and budget for it. Because TQM begins with education and ends with education. Literature (Ishikawa, 1985; Rahman and Bullock, 2002) recommends that education be repeated over and over again.

4. Recognition and rewards play an essential role in inspiring employees on quality. Therefore printing firms should institute reward systems for quality performance. It is the only way to get employees engrossed in quality achievement programme and contribute meaningfully. Rewards should be given for suggestions that are successfully implemented. Employees should not be blamed for the failure of their suggestions in order not to kill their initiatives. Rather all suggestions must be well examined before implementation to avoid failure. However, there is the tendency for workers to lose their objective when given complete freedom. Management must rather give direction to the whole organisation by presenting a clear vision to individuals and guide them with a proper mission.

5. TQM stresses on prevention by doing everything right first time and all the time. The printing firms should not compromise but provide the right materials and equipment for operation, instead of going for the alternative, which always have adverse effect on the output.

5.3 Conclusion

As an aggregate concept, this research found that people involvement: leadership, top management commitment, quality policy, employee development, employee empowerment and employee participation is positively associated with organisational performance. The degree of association however differs from variable to variable. While some of the variables showed strong, moderate and positive relationship, others showed moderate and

negative relationship with some of the organisational performance variables. Stronger leadership and commitment from top management towards managing core processes, and providing more authority to employees to manage their work (Daily and Bishop, 2003), as well as a planned documented quality policy tend to enable an organisation to achieve better performance. On the other hand, a knowledgeable and skilled employee is equipped to accept additional responsibility. Such workers when empowered, will deliver.

The research found that people involvement in TQM practices in the printing industry result in better performance. In practice, employee focus is less recognised in the printing industry. This is seen in the contribution of the employee focus variable to performance. This is because the coefficients of the management focus variables were relatively higher than that of the employee focus variables. This may occur as a result of less attention being given to its implementation in the firms. In order to realise the full benefits of TQM programme, it is required that printing firms review their TQM practices by involving everyone within the firm. Emphasis on education and training, empowerment and participation, good leadership alongside strong commitment from management are critical for effective TQM programme.

REFERENCES

Adams, A. J., Gupta, M. and Raho, L. (2007), "Perceptions of Management Philosophies", *The Journal for quality and participation*, Summer, pp. 34-40.

Agus, A (2001), "A Linear Structural Modelling of Total Quality Management Practices in Manufacturing Companies in Malaysia". *Total Quality Management,* Vol. 12 No 5, pp. 561–573.

Agus, A. (2004), "TQM as a Focus for improving overall Service Performance and Customer Satisfaction: An Empirical Studies on a Public Service Sector in Malaysia", *Journal of Total Quality Management*, July-August, Vol. 15 No. 5-6, pp. 615-628.

Ahire, L. S., Golhar, D. Y. and Waller, M. A. (1996), "Development and Validation of TQM implementation constructs", *Journal of Decision Sciences*, Vol. 27 No. 1, pp. 23-56.

Anderson, J., Rungtusanatham, M. and Schroeder, R. (1994), "A Theory of Quality Management underlying the Deming management method", *Academy of Management Review*, Vol. 19 No. 3, pp. 472-509.

Baidoun, S. (2003), "An empirical study of critical factors of TQM in Palestinian organisations", *Journal of Logistics Information Management*, Vol. 16 No. 2, pp. 156-171.

Baker, E. (1989), "The chief executive officer's role in total quality: preparing the enterprise for leadership in the new economic age", *Proceeding of the William G. Hunter Conference on Quality.*

Beer, M. (2003), "Why Total Quality Management Programmes Do Not Persist: The Role of Management Quality and Implications for Leading a TQM Transformation", *Journal of Decision Sciences*, Vol. 34 No. 4, pp. 623-642.

Beheshti, H. M. and Lollar, J. G. (2003), "An empirical study of US SMEs using TQM", *Journal of TQM and Business Excellence*, Vol. 14 No. 8, 839-847.

Bendell, T., Penson, R. and Carr, S. (1995), "Illuminate: The Quality Gurus – Their Approaches Described and Considered", *Managing Service Quality*, Vol. 5 No. 6, pp. 44-48.

Benowtiz, E. A. (2001), *Cliffs Quick Review: Principles of Management*, Hungry Minds, New York, NY.

Berk, J. and Berk, S. (1993), *Total Quality Management: Implementing Continuous Improvement*, Sterling Publishing, New York, NY.

Boon, O. K., Arumugam, V. and Hwa, S. T. (2005), *"Does Soft TQM Predict Employees' Attitudes?",* The TQM Magazine, Vol. 17 No. 3, pp. 279-289.

Boulter, L. and Bendell, T. (2002), "How can ISO 9000:2000 help companies achieve excellence? What the companies think", *Measuring Business Excellence*, Vol. 6 No. 2, pp. 37-41.

Bourque, L. B. And Fielder, E. P. (1995), *How to Conduct Self-Administered and Mail Surveys – The Survey Kit 3*, Sage Publications, London.

Brown, D. (1992), "Why Participative Management Won't Work Here", *Management Review*, Vol. 81 No. 2, pp. 42-46.

Brown, M. G. (1993), "Why does Total Quality fail in two out of three tries?", *Journal of Quality and Participation*, Vol. 16 No. 2, pp. 80-89.

Buch, K. and Rivers, D. (2002), "Sustaining a Quality Initiative", *Strategic Direction,* Vol. 18 No. 4, pp. 15-17.

Butler, D. (1996), *A Comprehensive Survey on how Companies Improve Performance through Quality Efforts*, David Butler Associate, Inc., CA.

Calvo-Mora, A., Leal, A. and Roldan, J. L. (2006), "Using Enablers of the EFQM Model to Manage Institutions of Higher Education", *Quality Assurance in Education*, Vol. 14 No. 2, pp. 99-122.

Chase, R. B., Aquilano, N. J. and Jacobs, F. R. (2001), *Operations Management for Competitive Advantage*, 9th Edition, McGraw Hill/Irwin, New York, USA.

Choi, T. Y. and Behling, O. C. (1997), "Top Managers and TQM success: One more look after all these years", *Academy of Management Executive*, Vol. 11 No. 1, pp. 37-47.

Choppin, J. (1995), "Total Quality Management – what isn't it?", *Managing Service Quality*, Vol. 5 No. 1, pp. 47-9.

Ciampa, D. (1992), *Total Quality: A User's Guide for Implementation*, Addison Wesley, New York, NY.

Conger, J. A. and Kanungo, R. N. (1988), "The Empowerment Process: Integrating Theory and Practice", *Academy of Management Review*, Vol. 13, pp. 471-482.

Cronbach, L. J. (1951), "Coefficient Alpha and the Internal Structure of Tests", *Psychometrika*, Vol. 16, pp. 297–334.

Crosby, P. B. (1979), *Quality Is Free: The Art of Making Quality Certain, Mentor*, McGraw-Hill, New York, NY.

Daily, B. F. and Bishop, J. W. (2003), "TQM Workforce and Employee Involvement: The Pivotal Role of Teamwork", *Journal of Managerial Issues*, Vol. 15 No. 4, pp. 393-412.

Dale, B. G. (1999), *Managing Quality*, 3rd Edition, Blackwell, Oxford.

Dale, B.G., Boaden, R.J. and Lascelles, D.M. (1994), in Dale, B. (Ed.), *Managing Quality*, 2nd ed., Prentice-Hall, London.

Dale, B. and Oakland, J. (1991), *Quality Improvement through Standards*, Stanley Thrones Ltd., London.

Davis, M. M., Aquilano, N. J. and Chase, R. B. (2003), *Fundamentals of Operations Management*, 4th Edition, McGraw Hill/Irwin, New York, USA.

Deming, W. E. (1986), *Out of Crises: Quality, Productivity and Competitive Position*, Cambridge University Press, Cambridge.

Denzin, N. K. (1989), *The researcher Act*, 3rd ed, Englewood Cliffs, NJ: Prentice Hall.

Department of Trade and Industry, UK: www.dti.gov.uk.

Devadasan, S. R., Kathiravan, N., Sakthivel, M., Kulandaivelu, K. and Sundararaj, G. (2003), "Financial Accounting of ISO 9001:1994 based on Quality Information System", *The TQM Magazine*, Vol. 15 No. 4, pp. 275-285.

Dimitriades, Z. S. (2000), "Total Involvement in Quality Management", *Team Performance Management: An International Journal*, Vol. 6 No. 7/8, pp. 117-121.

Dow, D., Samson, D. and Ford, S. (1999) "Exploding the Myth: do all Quality Management practices contribute to Superior Quality Performance", *Production and Operations Management*, Vol. 8 No. 1, pp. 1-27.

Eisman, R. (1992), "Why Companies are Turning to Total Quality", *Incentive*, Vol. 166 No. 5, pp. 22-26.

Etzioni, A. (1961). A Comparative Analysis of Complex Organizations. New York: Free Press.

Everette, C. (2002), "Penn States Commitment to Quality Improvement", *Quality Progress*, Vol. 35 No. 1, pp. 44-49.

Feigenbaum, A. V. (1983), *Total Quality Control*, 3rd rev. Ed, McGraw-Hill, New York, NY.

Fenton-O'Cleevy, M. (1998), "Employee Involvement and the Middle Manager: Evidence from a survey of organisations", *Journal of Organisational Behaviour*, Vol.19, pp. 67-84.

Field, A. P. (2005), *Discovering Statistics Using SPSS*, Sage, 2nd Ed, London.

Filley, A.C., House, R.J., & Kerr, S. (1976), *Managerial process and organization behavior*. Glenview, IL: Scott, Foresman.

Flynn, B. B., Sakakibara, S. and Schroeder, R. G. (1994), "AA Framework for Quality Management Research and an Associated Measurement Instrument", *Journal of Operations Management*, Vol. 11, pp. 339-366.

Forsyth, P. (1995), *101 Ways to be a Better Manager*, Heinemann Asia, Singapore.

Forza, C. and Filippini, R. (1998), "TQM impact on Quality Conformance and Customer Satisfaction: a causal model", *International Journal of Production Economics*, Vol. 55 No. 1, pp. 1-20.

Gaither, N, (1994), *Production and Operations management*, 6th Edition, The Dryden Press, USA.

Ghobadian, A. and Woo, H. S. (1996), "Characteristics, benefits and shortcomings of four major quality awards", *International Journal of Quality and Reliability Management*, Vol. 13 No. 2, pp. 10-44.

Glew, D. J., O'Leary-Kelly, A. M., Griffin, R. W. and Van Fleet, D. D. (1995), "Participation in Organisations: Preview of the Issues and Proposed Framework", *Journal of Management*, Vol. 21 No. 3, pp. 394-421.

Glover, J. (1993), "Achieving the Organisational Change necessary for Successful TQM", *International Journal of Quality and Reliability Management*, Vol. 10 No. 6, pp. 47-64.

Goodstadt, P. and Marti, R. (1990), "Quality Service at National Westminster Bank: the Continual Striving for Excellence", *International Journal of Quality and Reliability*, Vol. 7, pp. 19-29.

Guimaraes, T. (1996), "TQM's Impact on Employee Attitude", *The TQM Magazine*, Vol. 8 No. 5, pp. 20-25.

Hackman, J. R. and Wageman, R. (1995), "Total Quality Management: Empirical Conceptual and Practical Issues", *Administrative Science Quarterly*, Vol. 40, pp. 309-342.

Hair, J. F., Black, B., Babin, B., Anderson, R. E. and Tatham, R. L. (2005), *Multivariate data analysis*, Pearson Education Limited (Pte), Singapore.

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

Hartman, J. J. and Hedblom, J. H. (1979), *Methods for the Social Sciences: A Handbook for Students and Non-specialists*, London: Greenwood Press.

Hellsten, U. and Klefsjo, B. (2000), "TQM as a Management System consisting of Values, Techniques and Tools", *The TQM Magazine*. Vol. 12 No. 4, pp. 238-244.

Holden, L. (1999), "The Perception Gap in Employee Empowerment: A Comparative Study of Banks in Sweden and Britain", *Personnel Review*, Vol. 28 No. 3, pp. 222-241.

Holton, E. H. and Burnett, M. B. (1997), *Qualitative Research Methods in R. A. Swanson and E. F. Holton Ed*, Human Resource Development Research Handbook: Linking Research and Practice, San Francisco: Barrett-Koehler Publishers.

Hough, M. (2004), "Updating our TQM Thinking for a Knowledge and Service Economy", *Total Quality Management*, Vol. 15 No. 5/6, pp. 753-791.

Hung, R. Y. (2004), "The Implementation of Total Quality Management Strategy in Australia: Some Empirical Observations", *The Journal of America Academy of Business*, September, pp. 70-74.

Hunt, V. D. (1992), *Quality in America: How to Implement a Competitive Quality Programme*, Homewood, II; Business One, Irwin.

Igbaria, M., Parasuraman, S. and Badawy, M.K. (1994), "Work Experiences, Job Involvement, and Quality of Work Life among Information Systems Personnel", MIS Quarterly, Vol. 18 No. 2, pp. 175-201.

Ishikawa, K. (1985), *What is Total Quality Control?*, Prentice Hall, Englewood Cliffs, NJ
Jablonski, J. R. (1991), *Implementing Total Quality Management: An Overview*, Pfeiffer & Company, USA.

Jabnoun, N. (2000), "Restructuring for TQM: A Review", *The TQM Magazine*, Vol. 12 No. 6, pp. 395-399.

Jankowicz, A. D. (1995), *Business Research Projects*, London: International Thomson Business Press.

Janpen, P., Palaprom, K. and Horadal, P. (2005), "An Application of Total Quality Management for Thai Communities Knowledge Management Systems", *Proceedings of the Fourth International Conference on eBusiness, November 19-20,* Bangkok, Thailand.

Johnson, J. W. (1996), "Linking Employee Perception of Service Climate to Customer Satisfaction", *Personnel Psychology*, Vol. 49, pp. 831-851.

Jun, M., Cai, S. and Peterson, R. T. (2004), "Obstacles to TQM implementation in Mexico's Maquiladora Industry", *journal of Total Quality Management*, January, Vol. 15 No. 1, pp. 59-72.

Kanji, G. K. and Asher, M. (1993), "TQM Process: A Systematic Approach", *Advances in TQM Series*, Carfax, Abingdon.

Kano, N. (1993), "A Perspective on Quality Activities in American Firms", *California Management Review*, Vol. 35 No. 3, pp. 12-31

Kaplan, R. S. and Norton, P. D. (1992), "The Balanced Scorecard – Measures that drive Performance", *Harvard Business Review*, January/February, pp. 771-79.

Karia, N. and Ahmed, Z. A. (2000), "Quality Practices that Pay: Empowerment and Teamwork", *Malaysia Management Review*, Vol. 35 No. 2, pp. 66-76.

Karia, N. and Asaari, M. H. A. H. (2006), "The Effects of Total Quality Management practices on Employees' Work Related Attitudes", *The TQM Magazine*, Vol. 18 No. 1, pp. 30-43.

Karuppusami, G. and Gandhinathan, R. (2006), "Pareto Analysis of critical success factors of Total Quality Management: a Literature Review and Analysis", *The TQM Magazine*, Vol. 18 No. 4, pp. 372-85.

Keating, S. A. and Wruck, K. H. (1993), *Sterling Chemical Inc.: Quality and Process Improvement Program*, Harvard Business School Case No. 9-439-026, MA: Harvard Business School.

Kellen, V. (2003), *Business Performance Measurement at the Crossroads of Strategy, Decision-Making, Learning and Information Visualisation*. http//www.depaul.edu

Keogh, W. (1994), "The Role of Quality Assurance Professionals in Determining Quality Costs", *Managerial Auditing Journal*, Vol. 9 No. 4, pp. 23-32.

Kerr, M. (1996), "Developing a Corporate Culture for the Maximum Balance between the Utilisation of Human Resources and Employee Fulfilment in Canada", *Canada-United States Law Journal*, Vo. 22, pp. 169.

Kim, J. and Mueller, L. W. (1978), *Factor Analysis: Stratified Methods and Practical Issues*, Sage, London.

Krüger, V. (2001), "Main schools of TQM: 'The Big Five'", *The TQM Magazine*, Vol. 13 No. 3, pp. 146-155.

Kulkarni, S (2005), "RESEARCH AND CONCEPTS: Graph Theory and Matrix Approach for Performance Evaluation of TQM in Indian Industries", *The TQM Magazine*, Vol. 17 No. 6, pp. 509-526.

Kumar, N., Stern, L. and Anderson, J. (1993), "Conducting Interorganisational Research Using Key Informants", *Academy of Management Journal*, 36, pp. 1633–1651.

Kumar, M. R. (2007), "Comparison between DP and MBNQA: Convergence and Divergence over time", *The TQM Magazine*, Vol. 19 No. 3, pp. 245-258.

Labovitz, G., Chang, Y. S. and Rosansky, V. (1992), *Making Quality Work: A Leadership Guide for the Results-Driven Manager*, John Wiley & Sons Inc., Canada.

Lascelles, D. M. and Dale, B. G. (1994), *Difficulties and Barriers to Quality Improvement, in: B. G. Dale Mahler (Ed.), Managing Quality*, 2 ed. Prentice Hall International, Hertfordshire.

Lashly, C. (1997), *Empowering Service Excellence: Beyond the Quick Fix*, London, Cassell.

Laszlo, G. P., (1996), "Quality Awards – Recognition or Model?", *The TQM Magazine*, Vol. 8 No. 5, pp. 14-18.

Lau, H. and Idris, M. (2001), "Research and concepts: The Soft Foundation of the Critical Success Factors on TQM Implementation in Malaysia", *The TQM Magazine*, Vol. 13 No. 1, pp. 51-60.

Lawler, E. E., Mohrman, S. A. and Ledford, G. E. Jr (1992), *Employee Involvement and Total Quality Management*, Jossey-Bass, San Francisco, CA.

Lawler, E.E. (1994), "Total Quality Management and Employee Involvement: Are They Compatible?", *Academy of Management Executive*, Vol. 8, pp. 68-76.

Lee, C. Y. (2004), "Perception and Development of Total Quality Management in Small Manufacturers: An Exploratory Study in China", *Journal of Small Business Management*, Vol. 41 No. 1, pp. 102-115.

Lee, C. Y. And Yu, Q. (1997), "Quality Management in China", *Proceedings of 1997 Midwest Decision Sciences Institute Annual Meeting*, Indianapolis, IN, April 24-26, pp. 212-214.

Lee, P. M. (2002), "Sustaining Business Excellence through a Framework of Best Practices in TQM", *The TQM Magazine*, Vol. 14 No. 3, pp. 142-149.

Leitch, J., Nieves, D., Burke, G., Little, M. and Gorin, M. (1995), "Strategies for Involving Employees", *Journal of Quality and Participation*, Vol. 18 No. 5, pp. 68-74.

Leonard, D., McAdam, R. and Reid, R. (2002), "A Grounded Multi-Model Framework for TQM dynamics", *International Journal of Quality of Reliability Management,* Vol. 19 No. 6, pp. 710-736.

Loomba, A. P. S. and Spencer, M. S. (1997), "A Model for Institutionalizing TQM in a State Government Agency", *International Journal of Quality and Reliability*, Vol. 14 No. 8-9, July, pp. 753.

Lowery, C. M., Beadles, N. A. II and Carpenter, J. B. (2000), "TQM's Human Resource Component: Lack of Attention can inhibit Effective Implementation", *Quality Progress*, February, pp. 55-59.

Macdonald, J. & Piggott, J. (1990), *Global Quality; The New Management Culture*, Gold Arrow Publications Ltd., London.

Mackowski, S. J. (1994), "A Question of Understanding", *The TQM Magazine*, Vol. 6 No. 1, pp 24-25.

Marchington M., Wilkinson, A., Ackers, P. and Goodman, J. (1992), "Total Quality Management and Employee Involvement", *Human Resource Management Journal*, Vol. 2 No. 4, Summer, pp. 1-20.

Martins, R. and Toledo, C. J. (2000), "TQM Programmes: A Framework Proposal", *Journal of Work Study*, Vol. 49 No. 4, pp. 145-151.

Mason, R. D., Marchal, W. G. and Lind, D. A. (1999), *Statistical Techniques in Business and Economics*, 10th ed, McGraw Hill, New York, NY.

McGregor, C. (1996), "Doing It Better", *Bellagio Publishing Network Newsletter*, November, No. 18, pp 12-14.

Ministry of Education (2007), Textbook Development Policy – Reviewed, Ghana

MOTI/PSD/PSI/ JICA (2006), "An Analysis of Small and Medium Enterprises (SME) Survey in Ghana, Final Report Submitted by MEL Consulting Limited.

Nabil, T. and Gershon, M. (1995), "A Tool for Assessing Industry TQM practice versus the Deming Philosophy", *Production and Inventory Management Journal*, Vol. 36 (First Quarter), pp. 27-32.

Nunnally, J. (1967) Psychometric Theory, McGraw-Hill, Inc., New York, NY.

Oakland, J. S. (1989), *Total Quality Management*, Butterworth Heinemann, Oxford.

Oakland, J. S. (2000), *Total Quality Management – Text With Cases*, 2nd ed, Butterworth Heinemann, Oxford.

Oakland, J., Tanner, S. and Gadd, K. (2002), "Best Practice in Business Excellence", Operations Management: A Strategic Approach, Sage Publication Ltd., London.

Öztas, A, Ozbay, E. And Yeğinobali, A. (2004), "Current Status of TQM Implementation in the Turkish Cement Industry", *The TQM Magazine*, Vol. 15 No. 7, pp. 985-999.

Palo, S. and Padhi, N. (2003), "Measuring Effectiveness of TQM Training: an Indian study", *International Journal of Training and Development*, Vol. 7 No. 3, pp. 203-216.

Peters, V. J. (1999), "Total Service Quality Management", *Journal of Managing Service Quality*, Vol. 29 No. 1, pp. 6-12.

Petersen, P. B. (1999), "Total Quality Management and the Deming Approach to Quality Management", *Journal of Management History*, Vol. 5 No. 8, pp. 468-488.

Plutat, B. M. (1994), 'Total Quality Management: A Framework for Application in Manufacturing", *The TQM Magazine*, Vol. 6, pp. 44-49.

Powell, T. C. (1995), "Total Quality Management as Competitive Advantage: A Review and Empirical Study", *Strategic Management Journal*, Vol. 16 No. 1, pp. 15-37.

Prajogo, D. I. and Sohal, A. S. (2004), "The Sustainability and Evolution of Quality Improvement Programmes – An Australian Case Study", *Journal of Total Quality Management*, Vol. 15 No. 2, pp. 205-220.

Price, F. (1989), "Out of Belam: Management by Quality Leadership", *Management Decision*, Vol. 27, pp. 15-21.

Rahman, S. (2004), "The Future of TQM is Past, Can TQM be Resurrected?", *The TQM Magazine*, Vol. 15 No. 4, pp. 411-422.

Rahman, S. and Bullock, P. (2002), "Relationships between Soft TQM, Hard TQM, and Organisational Performance", *Working paper*, ITS-WP-02-10.

Rahman, Z. and Siddiqui, J. (2006), "Exploring Total Quality Management for Information Systems in Indian Firms: Application and Benefits", *Business Process Management Journal*, Vol. 12 No. 5, pp. 622-631.

Rao, A., Carr, L. P., Dambolena I., Kopp, R. J., Martin, J., Rafii, F. and Schlesinger, P. F. (1996), *Total Quality Management: A Cross Functional Perspective*, John Wiley & Sons Inc., Canada.

Rao, M. P., Youssef, M. A. and Straton, C. J. (2004), "Can TQM Lift a Sinking Ship? A Case Study", *Journal of Total Quality Management*, March, Vol. 15 No. 2, pp. 161-171.

Saraph, J. V., Benson, G and Roger, G. S. (1989), "An Instrument for Measuring the Critical Factors of Quality Management", *Decision Science*, Vol. 20, pp. 810-829.

Saravanan, R. and Rao, K. S. P. (2006), "Development and Validation of an Instrument for Measuring Total Quality Service", *Total Quality Management*, Vol. 17 No. 6, July, pp. 733-749.

Schneider, B. and Bowen, D. E. (1992), "Personnel/Human Resources Management in the Service Sector", *Personnel and Human Resource Management*, Vol. 10, pp. 1–30.

Sharma, A. and Sarel, D. (1995), "The Impact of Customer Satisfaction Based Incentive Systems on Sale-People's Customer Service response: An Empirical Study", *Journal of Personal Selling and Sales Management*, Vol. 15, pp. 17-29.

Shea, J. and Gobeli, D. (1995), "TQM: What's in it for Academics?", *Business Horizons*, January/February, pp. 71-77.

Shin, D., Kalinowski, J. G. and El-Enein, G. A. (1998), "Critical Implementation Issues in Total Quality Management", *SAM Advanced Management Journal*, Vol. 58, Spring, pp. 34-40.

Shlens, J. (2009), *A Tutorial on Principal Component Analysis*, Centre for Neural Science, New York, NY.

Sila, I. and Ebrahimpour, M. (2002), "An Investigation of the TQM Survey Based Research published between 1989 and 2000: A Literature Review", *International Journal of Quality and Reliability Management*, Vol. 19 No. 7, pp. 902-970.

Sila, I. and Ebrahimpour, M. (2005), "Critical Linkages among TQM Factors and Business Results", *International Journal of Operations and Productions Management*, Vol. 25 No. 11, pp. 1123-1155.

Simmons, R. (2000), *Performance Measurement and Control Systems for Implementing Strategy*, Prentice Hall.

Smallbone, D., Supri, S. and Baldock, R. (2000), "The Implications of New Technology for the Skill and Training needs of Small- and Medium-Sized Printing Firms", *Journal of Education and Training*, Vol. 42 No. 4/5, pp. 299-307.

Smith, S. (1994), *The Quality Revolution: Best Practice from the World's Leading Companies*, Management Books 2000 Ltd.

Sohal, A. S. and Terziovski, M. (2000), "TQM in Australian Manufacturing: Factors critical to Success", *International Journal of Quality and Reliability*, Vol. 17 No. 2, pp. 158-167.

Soltani, E., van der Meer, R. B. and Gennard, J. W. (2003), "Performance Management: TQM versus HRM – Lesson Learned", *Management Research News*, Vol. 26 No. 8, pp. 38-49.

Spector, B. and Beer, M. (1994), "Beyond TQM Programmes", *Journal of Organisational Change Management*, Vol. 7 No. 2, pp. 63-70.

Spreitzer, G. M. (1995), "Psychological Empowerment in the Workplace: Dimensions, Measurement and Validation", *Academy of Management Journal*, Vol. 38 No. 5, pp. 1442-1465.

Summers, D. C. S. (2005), *Quality Management: Creating and Sustaining Organisational Effectiveness*, Pearson Prentice Hall, USA.

Suresh Chandar, G. S., Rajendran C. and Anantharaman, R. N. (2001), "A Holistic Model for Total Quality Service", *International Journal of Service Industry Management*, Vol. 12, pp. 338–412.

Talha, M. (2004), "Total Quality Management (TQM): An Overview", *Journal of the Bottom Line: Managing Library Finances*, Vol. 17 No. 1, pp. 15-19.

Tan, K. C. (2002), "A Comparative Study of 16 National Quality Awards", *The TQM Magazine*, Vol. 14 No. 3, pp. 165-171.

Tatikonda, L. U. and Tatikonda, R. J. (1996), "Top Ten Reasons your TQM Effort is failing to improve Profit", *Production and Inventory Management Journal*, Vol. 37 No. 3, pp. 5-9.

Terziovski, M., Sohal, A. S. and Moss, S. (1999), "Longitudinal Analysis of Quality Management practices in Australian Organisations", *Total Quality Management*, Vol. 10 No. 6, pp. 915-926.

Thigarajan, T. and Zairi, M. (1997), "A Review of Total Quality Management in Practice: Understanding the Fundamentals through examples of Best Practice Applications, Part I", *The TQM Magazine*, Vol. 9. No. 4, pp. 270-286.

Tricker, R. and Sherring-Lucas, B. (2001), *ISO 9000:2000 in Brief*, Butterworth Heinemann, London.

Wagner, J.A. (1994), "Participation's Effect on Performance and Satisfaction: A Reconsideration of Research Evidence", *The Academy of Management Review*, Vol. 19, pp. 312-30.

Walizer, M. H. and Weinir, P. L. (1978), *Research Methods and Analysis: Searching for Relationships*, Harper and Row, New York.

Walliman, N. (2001), *Your Research Project: A Step-by-Step Guide for the First-Time Researcher*, Sage Publications, London.

Walsh, A., Hughes, H. and Maddox, D. P. (2002), "Total Quality Management Continuous Improvement: Is the Philosophy a Reality?", *Journal of European Industrial Training*, Vol. 26 No. 6, pp. 299-307.

Wang, T. (2004), "From General System Theory to Total Quality Management", *Journal of American Academy of Business*, March, pp 394-400.

Wilkinson, A. (1994), "Managing Human Resource for Quality" in Dale, B. G. (ed.), *Managing Quality*, Prentice-Hall, Hemel Hempstead.

Wilkinson, A., Godfrey, G. and Marchington M. (1997), "Bouquets, Brickbats and Blinkers: Total Quality Management and Employee Involvement in Practice", *Organisation Studies*, Vol. 18 No. 5, pp. 799-819.

Wilkinson, A., Redman, T., Snape, E. and Marchington, M. (1998), *Managing with Total Quality Management, Theory and Practice*, Macmillan Business, London.

Wille, E (1992), *Quality Achieving Excellence*, BCA, Toronto.

Wimmer, R. D. and Dominick, J. R. (2000), *Mass Media Research: An Introduction*, 6th Ed, Wadsworth Publishing Company, Albany, NY.

Yang, C. (2006), "The Impact of Human Resource Management practices on the Implementation of Total Quality Management: An Empirical Study on High-Tech Firms", *The TQM Magazine*, Vol. 18 No.2, pp.162-173.

Yeung, V. W. S. and Armstrong, R. W. (Mar. 2005), "The Management Pattern of Adopting TQM in Hong Kong Companies", *Journal of Total Quality Management*, Vol. 16 No. 2, pp. 171-183.

Youssef, M. A. (1992), "Agile Manufacturing: A Necessary Condition for Competing in Global Markets", *Industrial Engineering*, Vol. 24 No. 12, pp. 18-21.

Zhang, Z., Waszink, A. and Wijngaard, J. (2000), "An Instrument for Measuring TQM Implementation for Chinese Manufacturing Companies", *International Journal of Quality and Reliability Management*, Vol. 17 No. 7, pp. 730-755.

Zhang, Z. (2000), "Quality Management Worldwide: Quality Management Approach in China", *The TQM Magazine*, Vol. 12 No. 2, pp. 44-48.

Zhang, Z. (2000), "Implementation of TQM: An Empirical Study of Chinese Manufacturing Firms", PhD unpublished thesis, Faculty of Management and Organisation of the University of Groningen, the Netherlands.

APPENDICES

APPENDIX I: Survey Instruments

QUESTIONNAIRE FOR MANAGERS

This information is needed for a Masters Thesis. Please spare me part of your time and answer the questions as completely and honestly as possible. The information provided will be treated as highly confidential and anonymous.

Topic: The Impact of People Involvement in Total Quality Management implementation on Organisational Performance in the Ghanaian printing industry

This questionnaire seeks information on management leadership style, commitment, quality policy; employee development, empowerment and participation; and organisational performance.

1. Name of company _____
2. Year of establishment _____
3. Area of specialization
   ☐ General/Commercial Printing ☐ Security Printing ☐ Advertising Printing

4. Number of employees (Please tick as appropriate)
   ☐ 1-9 ☐ 10-29 ☐ 30-99 ☐ 100 and above

5. Position in company: (Please tick as appropriate)
   ☐ Chief Executive Officer (CEO) ☐ Managing Director ☐ General Manager
   ☐ Marketing Manager ☐ Production/Operations Manager
   ☐ Personnel/Human Resource Manager ☐ Financial Manager

   ☐ Other (specify) _____

6. Years spent in current position (Please tick as appropriate)
   ☐ 0-2 years ☐ 2-4 years ☐ 4-6 years ☐ 6 years and above

7. Gender: ☐ Male ☐ Female

8. Educational level
   ☐ BECE ☐ MSLC ☐ SSSCE/WASSCE ☐ O-Level ☐ A-Level
   ☐ HND ☐ Graduate

   ☐ Other, specify _____

Explanation of Total Quality Management (TQM)

TQM is an all encompassing dynamic process which promote never ending improvement in the effectiveness and efficiency of all elements of a business to result in an organization doing the right things right, first time, every time and all the time in order to ensure complete customer satisfaction.

On a scale of 1 to 7, where 1 – lowest, 2 – lower, 3 – low, 4 – average, 5 – high, 6 - higher and 7 – highest. Indicate how much you will score your organization in the following statements/practices. Please tick the appropriate box

1 2 3 4 5 6 7

1. Management actively participates in quality management activities. ☐☐☐☐☐☐☐
2. Management strongly encourages employee involvement in quality management activities. ☐☐☐☐☐☐☐

3. Management is much concerned with quality output. ☐☐☐☐☐☐☐
4. Management empowers employees to solve quality problems. ☐☐☐☐☐☐☐
5. Management is interested in pursuing long-term business success. ☐☐☐☐☐☐☐
6. Management listens to the voice of employees. ☐☐☐☐☐☐☐
7. Management acts on employees' suggestions. ☐☐☐☐☐☐☐
8. Management exhibits belief in continuous improvement through strategies and actions at all levels. ☐☐☐☐☐☐☐

9. Management provides funding for employee development. ☐☐☐☐☐☐☐
10. Management routinely removes barriers to quality and performance. ☐☐☐☐☐☐☐
11. Management treats employee with trust, openness and honesty. ☐☐☐☐☐☐☐
12. Management rewards quality improvement efforts. ☐☐☐☐☐☐☐
13. The firm has clear and detailed quality policy. ☐☐☐☐☐☐☐
14. Quality policies and plans are well communicated to employees. ☐☐☐☐☐☐☐
15. Quality policy applies to each employee and not specific groups. ☐☐☐☐☐☐☐
16. The quality policy sets performance standards. ☐☐☐☐☐☐☐
17. Quality values, principles and practices of the firm are routinely reviewed and improved. ☐☐☐☐☐☐☐

18. Management actively involves itself in establishing and communicating the firm's vision, mission and values for quality. ☐☐☐☐☐☐☐

19. Employees from various level are involved in making quality policies and plans. ☐☐☐☐☐☐☐

Organisational Performance

20. Customers pay money for quality print outs. ☐☐☐☐☐☐☐
21. Customers repeat business with the firm. ☐☐☐☐☐☐☐
22. Quality-related customer complaints are treated as top priority. ☐☐☐☐☐☐☐
23. The firm gathers continuous feedback from its customers. ☐☐☐☐☐☐☐
24. Customers recommend the firm to friends. ☐☐☐☐☐☐☐
25. The firm delivers printed materials according to customer's specification. ☐☐☐☐☐☐☐

26. The printed material satisfies its intended use. ☐☐☐☐☐☐☐

27. The level of errors or defects/waste.
28. Delivering product/service on time.
29. The level of employee turnover.
30. The level of employee job performance?

Please tick the appropriate answer

31. Who is responsible for ensuring quality in the firm?
☐ Production Manager

☐ Everyone in the firm

☐ Quality Officer

☐ Other, specify _____

32. What is the firm's mission statement in relation to quality?
☐ Quality is captured in the mission statement

☐ There is a stand-alone policy for quality

☐ Mission statement does not capture quality

☐ Other, specify _____

33. How does the firm solve quality problems?
☐ Assign an individual to solve it

☐ Set a team made up of workers from various department/section

☐ A permanent team deals with the problems

☐ The Managing Director or CEO solves it

☐ Other, specify _____

34. How does the firm see quality? Please tick as many as appropriate.
☐ Customer satisfaction

☐ Continuous improvement

☐ Prevention of waste

☐ Reduction of cost

☐ Other, specify _____

Explanation of Total Quality Management (TQM)

TQM is an all encompassing dynamic process which promote never ending improvement in the effectiveness and efficiency of all elements of a business to result in an organization doing the right things right, first time, every time and all the time in order to ensure complete customer satisfaction.

On a scale of 1 to 7, where 1 – lowest, 2 – lower, 3 – low, 4 – average, 5 – high, 6 - higher and 7 – highest. Indicate how much you will score your organization in the following statements/practices. Please tick the appropriate box

1 2 3 4 5 6 7

1. Management actively participates in quality management activities.
2. Management strongly encourages employee involvement in quality management activities.

3. Management is much concerned with quality output.
4. Management empowers employees to solve quality problems.
5. Management is interested in pursuing long-term business success.
6. Management listens to the voice of employees.
7. Management acts on employees' suggestions.
8. Management exhibits belief in continuous improvement through strategies and actions at all levels.

9. Management provides funding for employee development.
10. Management routinely removes barriers to quality and performance.
11. Management treats employee with trust, openness and honesty.
12. Management rewards quality improvement efforts.
13. The firm has clear and detailed quality policy.
14. Quality policies and plans are well communicated to employees.
15. Quality policy applies to each employee and not specific groups.
16. The quality policy sets performance standards.
17. Quality values, principles and practices of the firm are routinely reviewed and improved.

18. Management actively involves itself in establishing and communicating the firm's vision, mission and values for quality.

19. Employees from various level are involved in making quality policies and plans.

Organisational Performance

20. Customers pay money for quality print outs.
21. Customers repeat business with the firm.
22. Quality-related customer complaints are treated as top priority.
23. The firm gathers continuous feedback from its customers.
24. Customers recommend the firm to friends.
25. The firm delivers printed materials according to customer's specification.

26. The printed material satisfies its intended use.

35. What kind of training/education programme do you organize for the employee? Please tick as many as appropriate.
☐ In-service or on-the-job training

☐ Workshops

☐ Seminars

☐ Formal Training (classroom training, refresher courses, etc)

36. What is the content of training/education you provide to the workers? Please tick as many as appropriate.
☐ Problem solving and prevention training

☐ Job related training

☐ Quality achievement training

☐ Organization situation training

☐ Other, specify _____

37. How many times do you organize the training?
☐ Once in a year

☐ Twice in a year

☐ Thrice in a year

☐ Other, specify _____

38. Do you have training/education programmes for management?   ☐ Yes   ☐ No
If yes to question 38, answer questions 39 to 41

39. What kind of training/education programme? Please tick as many as appropriate.
☐ In-service or on-the-job training

☐ Workshops

☐ Seminars

☐ Formal Training (classroom training, refresher courses, etc)

40. How many times do you organize the training?
☐ Once in a year

☐ Twice in a year

☐ Thrice in a year

☐ Other, specify _____

41. Who attends the training/education programme?
☐ Chief Executive Officer or Managing Director

☐ Production Manager

☐ Quality Assurance Officer
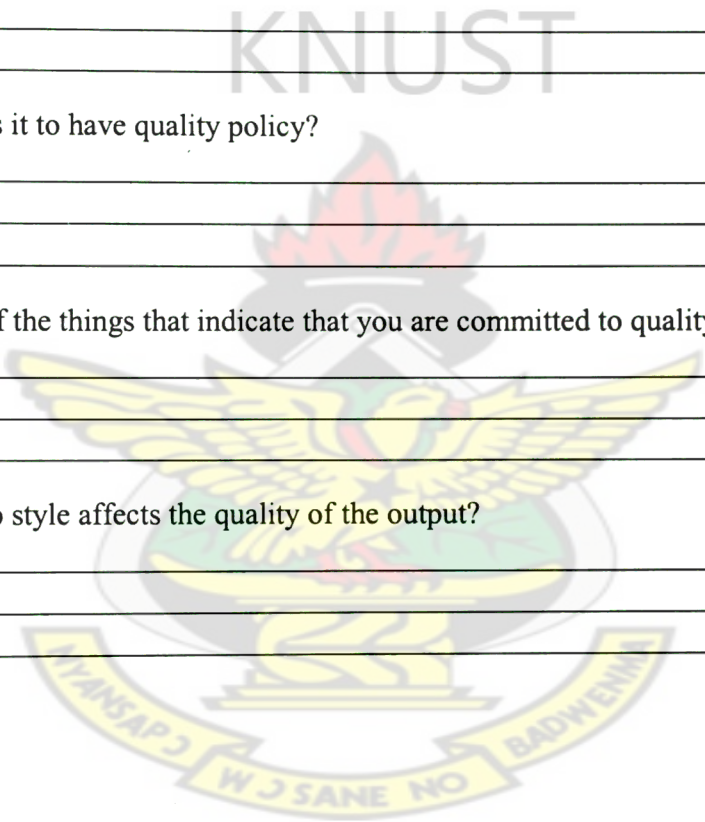
☐ Other, specify _____

42. To what extent do you think employee education and training is important to the firm?
_____
_____
_____

43. To what extent does management encourage employees' initiatives?
_____
_____
_____

44. How important is it to have quality policy?
_____
_____
_____

45. What are some of the things that indicate that you are committed to quality output?
_____
_____
_____

46. Which leadership style affects the quality of the output?
_____
_____
_____

Thank you for your time

QUESTIONNAIRE FOR WORKERS

This information is needed for a Masters Thesis. Please spare me part of your time and answer the questions as completely and honestly as possible. The information provided will be treated as highly confidential and anonymous.

Topic: The Impact of People Involvement in Total Quality Management implementation on Organisational Performance in the Ghanaian printing industry

1. Name of company _____
2. Year of establishment _____
3. Area of specialization
   ☐ General/Commercial Printing   ☐ Security Printing   ☐ Advertising Printing

4. Number of employees (Please tick as appropriate)
   ☐ 1-9   ☐ 10-29   ☐ 30-99   ☐ 100 and above

5. In which department do you work? Please tick as appropriate.
   ☐ Typesetting/Designing

   ☐ Reproduction/Darkroom

   ☐ Pressroom

   ☐ Binding

   ☐ Other (specify) _____

6. How long have you worked in the department? Please tick as appropriate.
   ☐ 0-2 years   ☐ 2-4 years   ☐ 4-6 years   ☐ 6 years and above

7. Gender: ☐ Male   ☐ Female
8. Education level
   ☐ BECE   ☐ MSLC   ☐ SSSCE/WASSCE   ☐ O-Level

   ☐ A-Level   ☐ HND   ☐ Graduate

   ☐ Other, specify _____

Explanation of Total Quality Management (TQM)

TQM is an all encompassing dynamic process which promote never ending improvement in the effectiveness and efficiency of all elements of a business to result in an organization doing the right things right, first time, every time and all the time in order to ensure complete customer satisfaction.

On a scale of 1 to 7, where 1 – lowest, 2 – lower, 3 – low, 4 – average, 5 – high, 6 - higher and 7 – highest. Indicate how much you will score your organization in the following statements/practices. Please tick the appropriate box

	1	2	3	4	5	6	7
1. The firm has employee development programme in place.	☐	☐	☐	☐	☐	☐	☐
2. Employees are encouraged to accept education and training.	☐	☐	☐	☐	☐	☐	☐
3. Resources are made available for employee development.	☐	☐	☐	☐	☐	☐	☐
4. Quality awareness education is given to employees.	☐	☐	☐	☐	☐	☐	☐
5. Specific work-skills training are given to all employees.	☐	☐	☐	☐	☐	☐	☐
6. Employees receive education and training throughout their career.	☐	☐	☐	☐	☐	☐	☐
7. Employees are encouraged to solve quality problems they find.	☐	☐	☐	☐	☐	☐	☐
8. Employees have freedom to decide how to execute a task effectively.	☐	☐	☐	☐	☐	☐	☐
9. Management gives employees the liberty to make and learn from their mistakes.	☐	☐	☐	☐	☐	☐	☐
10. Employees can take actions without consulting their superiors on quality issues.	☐	☐	☐	☐	☐	☐	☐
11. Management are prepared to act on employees' suggestions.	☐	☐	☐	☐	☐	☐	☐
12. Employees are actively involved in quality-related activities.	☐	☐	☐	☐	☐	☐	☐
13. Management are willing to share power and responsibilities.	☐	☐	☐	☐	☐	☐	☐
14. Work is viewed as a joint effort between management and employees.	☐	☐	☐	☐	☐	☐	☐
15. The firm has cross functional teams to deal with quality problems.	☐	☐	☐	☐	☐	☐	☐

Organisational Performance

	1	2	3	4	5	6	7
16. Customers pay money for quality print outs.	☐	☐	☐	☐	☐	☐	☐
17. Customers repeat business with the firm.	☐	☐	☐	☐	☐	☐	☐
18. Quality-related customer complaints are treated as top priority.	☐	☐	☐	☐	☐	☐	☐
19. The firm gathers continuous feedback from its customers.	☐	☐	☐	☐	☐	☐	☐
20. Customers recommend the firm to friends.	☐	☐	☐	☐	☐	☐	☐
21. The firm delivers printed materials according to customer's specification.	☐	☐	☐	☐	☐	☐	☐
22. The printed material satisfies its intended use.	☐	☐	☐	☐	☐	☐	☐
23. Level of errors, defects or waste?	☐	☐	☐	☐	☐	☐	☐
24. Delivering product/service on time.	☐	☐	☐	☐	☐	☐	☐
25. The extent employees leave the firm?	☐	☐	☐	☐	☐	☐	☐
26. The level of employee job performance?	☐	☐	☐	☐	☐	☐	☐

Please tick the appropriate answer

27. Who is responsible for ensuring quality in the firm?
☐ Production Manager

☐ Everyone in the firm

☐ Quality Officer

☐ Other, specify _____

28. What is the firm's mission statement in relation to quality?
☐ Quality is captured in the mission statement

☐ There is a stand-alone policy for quality

☐ Mission statement does not capture quality

☐ Other, specify _____

29. How does the firm solve quality problems?
☐ Assign an individual to solve it

☐ Set a team made up of workers from various department/section

☐ A permanent team deals with the problems

☐ The Managing Director or CEO solves it

☐ Other, specify _____

30. How does the firm see quality? Please tick as many as appropriate.
☐ Customer satisfaction

☐ Continuous improvement

☐ Waste prevention

☐ Cost reduction

☐ Other, specify _____

31. What forms of training/education programme does the firm offer? Please tick as many as appropriate.
☐ In-service or on-the-job training

☐ Workshops

☐ Seminars

☐ Formal Training (classroom training, refresher courses, etc)

32. How many times does the firm organize the training/education programme?
☐ Once in a year

☐ Twice in a year

☐ Thrice in a year

☐ Other, specify _____

33. Who attend the training/education programme?
☐ Selected workers from a department

☐ All workers

☐ A particular Department Workers

☐ Other, specify _____

34. What is the content of training/education the firm provides to the workers? Please tick as many as appropriate.
☐ Problem solving and prevention training

☐ Job related skill training

☐ Quality achievement training

☐ Organization situation training

☐ Other, specify _____

35. To what extent do you think workers education and training is important to the firm?
_____
_____
_____

36. To what extent do you think employee freedom affect the firm?
_____
_____
_____

Thank you for your time.

APPENDIX 2: Frequency Distributions and Means of Respondents' Responses to Measurement items.

Extracted Items Measuring Management Focus of TQM practices

Scales	Items	Means	Response Category							Total
			1	2	3	4	5	6	7	
Leadership										
	1	5.85	0	2	3	6	19	32	34	96
	2	5.29	0	3	7	17	18	34	17	96
	3	6.25	0	1	0	3	18	22	52	96
	4	4.40	3	8	13	23	28	15	6	96
Commitment										
	1	5.55	2	0	4	10	23	35	22	96
	2	5.07	0	3	8	15	35	23	12	96
	3	5.50	1	6	6	7	17	29	30	96
Quality Policy										
	1	4.86	2	7	12	17	20	19	19	96
	2	4.83	1	8	7	18	27	26	9	96
	3	5.25	2	4	6	11	24	31	18	96
	4	4.99	6	1	5	17	26	29	12	96
	5	4.93	2	4	8	15	34	22	11	96

Extracted Items measuring Employee focus of TQM Practices

Scales	Items	Means	Response Category							Total
			1	2	3	4	5	6	7	
Development										
	1	3.17	33	25	16	16	21	9	7	127
	2	3.69	27	23	13	16	11	22	15	127
	3	3.23	33	25	18	14	14	14	9	127
	4	3.83	18	21	18	19	19	22	10	127
	5	2.91	52	16	10	13	20	8	8	127
Empowerment										
	1	3.88	18	18	16	27	18	17	13	127
	2	3.64	26	17	24	16	14	14	16	127
	3	3.55	37	16	8	17	19	15	15	127
Participation										
	1	4.29	8	7	31	28	15	23	15	127
	2	4.26	13	5	19	32	27	19	12	127
	3	4.95	5	6	16	14	31	32	23	127
	4	4.00	20	13	16	19	31	13	15	127

Responses to Items Measuring organisational performance items

Scales	Items	Means	Response Category							Total
			1	2	3	4	5	6	7	
Customer Satisfaction										
	1	5.77	5	4	14	19	32	56	93	223
	2	5.89	2	0	5	15	45	84	72	223
	3	5.80	2	5	8	18	37	77	76	223
	4	4.85	10	6	25	44	59	45	34	223
	5	5.60	1	1	9	29	50	80	53	223
Product/Service Quality										
	1	6.11	2	0	5	17	29	60	110	223
	2	5.68	2	2	4	15	65	85	50	223
Organisational Efficiency										
	1	3.12	28	55	56	48	23	12	1	223
	2	5.55	1	3	11	24	53	86	45	223
Employee Satisfaction										
	1	3.49	34	44	49	32	28	22	14	223
	2	5.15	0	4	12	35	90	61	21	223

APPENDIX 3: Correlation coefficients of the extracted components

| Performance | Management Focus | | | Employee Focus | | |
	Quality Policy	Top Management Commitment	Leadership	Development	Empowerment	Participation
1	0.361	0.46	0.323	-0.02	-0.065	0.311
2	0.452	0.518	0.395	0.213	0.220	0.321
3	0.332	0.480	0.307	0.177	0.228	0.361
4	0.315	0.221	0.144	0.240	0.378	0.300
5	0.418	0.454	0.400	0.119	0.206	0.282
6	0.385	0.449	0.437	0.117	0.110	0.332
7	0.270	0.402	0.306	0.229	0.212	0.173
8	-0.187	-0.166	0.178	0.087	0.277	-0.067
9	0.366	0.307	0.371	0.092	0.210	0.319
10	0.033	-0.134	0.019	-0.059	0.083	0.109
11	0.433	0.384	0.322	0.337	0.342	0.365