

ASSESSING TOTAL QUALITY MANAGEMENT STRATEGIES OF
ELECTRICITY COMPANY OF GHANA (ECG), KUMASI.

BY

GEORGINA ROCKSON, BSC LAND ECONOMY (HONS)

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DECLARATION

I hereby declare that this work is the result of my own research carried out under the able supervision of Mr. Bylon Abeeku Bamfo, of KNUST School of Business, and that this work has never been submitted to any university for the award of a degree.

All references cited therein have been fully acknowledged.

Georgina Rockson

Signature.....

date... 6th October, 2009

(PG 1644907)

Certified by

Mr. Bylon Abeeku Bamfo

Signature.....

date... 12/10/09

(Supervisor)

Certified by

Mr. Samuel Akomea

Signature.....

date... 19/10/09

(Head of Department)

DEDICATION

This work is dedicated foremost to God almighty, my son Samuel Peprah Amaning, my mother Elizabeth Wilson, my siblings Phillipa Rockson, Helena Rockson, Alex Rockson, Frederick Sampson and my husband Emmanuel Peprah Amaning.



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ABSTRACT

TQM is the way of managing for the future, and is far wider in its application than just assuring product or service quality – it is a way of managing people and business processes to ensure complete customer satisfaction at every stage, internally and externally. TQM combined with effective leadership, results in an organization doing the right things right, first time. The main objective of the study was to assess Total Quality Management strategies adopted by Electricity Company of Ghana (ECG), Kumasi. The main findings were that, dissatisfaction of customers in terms of information flow to the public before voluntary power cuts and response to customer complaints were very high. However, bill delivery, power supply and commitment of staff to Total Quality Management strategies were rated good by the consuming public. In conclusion, Total Quality Management is managing for the future and the principle of continuous improvement is a lifelong policy that should be pursued at all cost by management of any service industry in Ghana. The researcher recommends regular refresher courses to be organised for the staff and involvement of the entire staff in any change process within the organisation to enable staff own the program and ensure its success.

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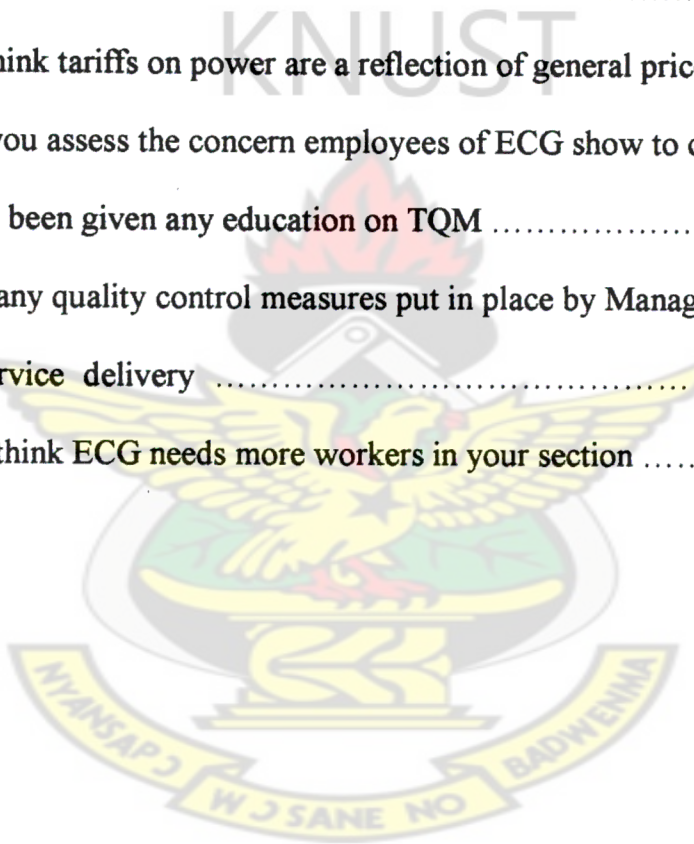
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CHAPTER ONE

GENERAL INTRODUCTION

1.0 INTRODUCTION

The chapter looks at the general introduction of the study, problem statement, objectives of the study, key research questions, organization of the study and limitations of the study.

1.1 BACKGROUND OF THE STUDY

One of the primary roles of management is to lead an organization in its daily operation and to maintain it as a viable entity into the future. Quality is an important factor in both of these objectives.

Although ostensibly always an objective for business, customer satisfaction, in customer terms became specific goal in the late 1980's according to Hellstenn and klefsjo (2000).

Providing high quality service was recognized as a key element for success. Most large corporations taking that path have documented their success. First, they survived the strong overseas competition that had set the high quality levels and now have regained some of their former markets. Smaller companies are also adopting similar goals according to Huxtable (1995).

Stevenson (2007) "Total Quality Management refers to a quest for quality in an organization. According to Stevenson, there are three key principles in total quality management. One is a never-ending push to improve, which he referred to as a

continuous improvement; the second is the involvement of everyone in the organization; and the third is a goal of customer satisfaction, which means meeting or exceeding customer expectations.

Total quality management (TQM) is therefore considered to be an important management philosophy which sustains the organizations in their effort towards quality improvement and satisfied customers (Dale, 1994; Haxtable, 1995).

TQM is a wide concept since it embraces the whole organization and its processes instead of focusing on the product.

Total Quality Management is generally considered to be based on a number of some values such as customer focus, decision based on facts, process orientation, continuous improvement, everybody's commitment and leadership (Hellsten and Klefsjo (2000).

Undoubtedly all these core values need to form the ingredient for a successful running of a service provider such as Electricity Company of Ghana. Electricity Company of Ghana has been saddled with numerous customer complaints in the areas like billing system (late billing), connectivity challenges like difficulty in accessing services, unattended faults, consumption challenges such as consistent power fluctuations and unprecedented hikes in light bills.

It is against this backdrop that Electricity Company of Ghana introduced Total Quality Management Strategy in 1994, to address the myriad of problems of customer dissatisfaction.

1.2 STATEMENT OF THE PROBLEM

Electricity Company of Ghana has been under constant criticisms from the general public, customers and pressure groups for her performance. Customers have on several occasions expressed their dissatisfaction for the service rendered to them through both the electronic and print media. The complaints of customers range from connectivity issues, consumption challenges and the Billing System. Another issue has to do with customer relations between employees of the company and the general public (Daily Graphic, 10th August, 2009, No.17990).

Industrial concerns and individual consumers require uninterrupted supply of power from Electricity Company of Ghana and hence they rely heavily on energy from Electricity Company of Ghana. However requirements for accessing power from Electricity Company of Ghana is very challenging especially acquisition of meters and the high cost of electricity nowadays has been very astronomical, with added problem of constant power fluctuations and lack of information flow to customers; all these is against the backdrop of the introduction of Total Quality Management Strategies to reduce the myriad of problems confronting the company hence the need to assess the impact of Total Quality Management Strategies adopted by the company.

1.3 OBJECTIVES OF THE STUDY

The main objective which the researcher wanted to achieve was to find out whether total quality management strategies of the company have had a positive effect on customer

satisfaction. To achieve this, the researcher wanted to explore the following specific objectives;

- a. To investigate the effectiveness of Total Quality Management Strategies used by Electricity Company of Ghana.
- b. To find out the commitment level of Staff of Electricity Company of Ghana to the whole concept of total quality management.
- c. To investigate which factors account for poor customer satisfaction.
- d. To give possible recommendations as to how best to implement TQM in order to derive the benefit therein.

1.4 KEY RESEARCH QUESTIONS

1. What Total Quality Management strategies are used by ECG?
2. How committed are the employees of ECG to the Total Quality Management Strategies of the organization?
3. Are customers satisfied with the services provided by ECG?
4. How can customer satisfaction be improved?

1.5 JUSTIFICATION OF THE STUDY

Electricity Company of Ghana in an attempt to improve its image in the eye of the public as well as render effective and efficient service has embarked on research and

development to improve their services. In 1992, the company introduced Total Quality Management Strategies in the company to offer greater opportunities to serve customers better and ensure maximum customer satisfaction to help achieve the objectives of the company (status report of ECG).

The study therefore will serve as a guide for policy makers, management and staff of Electricity Company of Ghana and consumers to ensure customer satisfaction and smooth running of the company, in its quest for success.

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1.6 SCOPE OF THE STUDY

The researcher will focus on Electricity Company of Ghana, Kumasi Metropolis. Two branches noted to have the highest number of customers according to the company's customer chart will be selected. They are Adum Main Branch and Danyame Branch, all in the metropolis, which will form the scope of the study.

1.7 METHODOLOGY OF THE STUDY

Material and data required for the study shall be on the case study organisation (ECG). The choice of the method therefore shall take into consideration any peculiarity in the nature of the organisation.

Sources of data: Data is gathered from the following sources

- a. Internally generated documentary sources e.g. Operational manual and strategic document of the Company
- b. Externally generated documentary sources e.g. Newspapers, company periodicals, relevant library books were consulted extensively.

Method of data collection: Questionnaires were used to obtain necessary data. A structured interview method was also used. A serious consideration was also given to timing of data collection in order not to inconvenience the targeted personalities involved, since this helped obtain reliable and relevant data for the work.

Method of data Analysis: Qualitative method of data analysis was used. This was to ensure that all aspects of the research were analysed before relevant conclusions were drawn.

1.8 LIMITATIONS OF THE STUDY

The major limitation of the study is the unpreparedness of interviewers to disclose certain information critical to the study, in addition to difficulty in accessing information from management of Electricity Company of Ghana where such information is deemed confidential. This is probably due to the fact that most staff are made to sign oath of secrecy and confidentiality. There was also the issue of time and monetary constraints.

1.9 ORGANISATION OF THE STUDY

Chapter one of the study consists of the general introduction. The remainder of the study is organized as follows;

Chapter two will review relevant literature on Quality concepts, Total Quality Management strategies and core values, of other researchers and my own criticisms of their stands if any.

Chapter three is dedicated to methodology of the study, comprising sampling procedure, sample size and method of data collection.

Analysis of data collected through the administration of questionnaire is the focus of the fourth chapter of this study. The analysis goes to determine which areas that TQM seeks to address and the company's view of TQM's benefits if any.

Chapter five, the final chapter will include conclusions and recommendations based on the research findings. There are also supplementary pages covering graphs on the outcome of questionnaire, sample of the questionnaire and references that were used.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

TQM is the way of managing for the future, and is far wider in its application than just assuring product or service quality – it is a way of managing people and business processes to ensure complete customer satisfaction at every stage, internally and externally. TQM combined with effective leadership, results in an organization doing the right things right, first time, (Deming, 1986).

The core of TQM is the customer-supplier interfaces, both externally and internally, and at each interface lay a number of processes. This core must be surrounded by commitment to quality, communication of the quality message, and recognition of the need to change the culture of the organization to create total quality. These are the foundations of TQM, and they are supported by the key management functions of people, processes and systems in the organization (Juran, 1990).

This section discusses definitions and concept of quality, definitions of TQM , ISO 9000 its criticisms and effects , relationship between ISO 9000 practices , historical background of TQM factors and factors for effective implementation of TQM.

The section also discusses quality management principles such as quality control and assurance and inspection. More light is also thrown on main elements of TQM and quality awards, TQM and ethics and quality costs.

2.1 DEFINITIONS AND CONCEPT OF QUALITY

A frequently used definition of quality is “Delighting the customer by fully meeting their needs and expectations”. These may include performance, appearance, availability, delivery, reliability, maintainability, cost effectiveness according to Juran, (1993).

2.1.1 DEFINITION OF QUALITY

There are many quality gurus such as Deming, Juran and Crosby who propounded concepts of quality in the 1920's.

Deming (1900-1993) was an American who introduced quality management to Japan in the 1950's. He also conducted training courses in quality management for Japanese industrialists and helped in transforming Japanese quality, productivity and competitive position from a low level to the best in the world. He taught the Shewart/Deming circle of problem solving –plan, Do, Check, and Act (PDCA). He also introduced the 14 point guiding principle of total quality.

The highest quality award in Japan was named after him-the Deming award or prize. This is one of Japan's most coveted prize recognizing successful quality efforts. It is given annually to any company that meets the awards standards. Although typically given to Japanese firms, in 1989, Florida Power and Light became the first U.S Company to win the award.

The major focus of the judging is on statistical quality control, making it much narrower in scope than the Baldrige Award, which focuses more on customer satisfaction.

Companies that win the Deming prize tend to have quality programs that are detailed and well communicated throughout the company. Their quality improvement programs also reflect the involvement of senior management and employees, customer satisfaction and training.

Juran is also an American who published the quality control handbook in 1904. He was also in Japan and introduced new insights into management responsibility for improvement of quality and productivity and he defined quality as 'fitness for purpose or use'. He expressed his approach in trilogy. Managing for quality involved three basic processes- quality planning, quality control and quality improvement, culminating in his ten steps to quality Improvement.

Crosby in 1926 also brought total quality to boardroom and off the shop floor. He described quality as 'free' and argued that zero defects were a desirable and achievable goal. His book quality is free was publish 1979 and popularized the slogan 'Do it right the first time'. He also defined quality as conformance to requirements. His view of quality was articulated as the four absolutes of quality management. He also came up with a 14 point programmed to improve quality. According to Stevenson (2007), Quality, broadly defined, refers to the ability of a product or a service to consistently meet or exceed customer requirements or expectations. Different customers have different expectations so a working definition of quality is customer-dependent.

Quality is often used synonymously with excellence. However, for proper quality management, defining quality and its measurement are essential.

Definitions or approaches to quality, describing the relative nature of the concept in the context of higher education.

Nunan and Calvert (2006) point out that: “The term quality defies any definition which will be universally accepted. When it is linked to performance, quality implies evaluation for comparative purposes; ‘measures’ of quality involve norms criterion referenced indicators. Where measurement focuses on the student as a product of education, quality is seen as ‘value-based’ by the process of education. When the emphasis is management of quality, attention focuses on strategies for achieving or improving quality.”

Garvin (2003) identified five approaches to define quality:

- Transcendent approach (Quality always exists)
- User based approach (quality to meet user’s requirements)
- Manufacturing-based approach
- Product based approach (Products meeting high quality standards)

2.1.2 Ethics and Quality management

According to Stevenson (2007), all members of an organization have an obligation to perform their duties in an ethical manner. Ethical behavior comes into play in many situations that involve quality. One area is substandard work, including defective products and substandard service, poor designs and shoddy workmanship. Having knowledge of this and failing to correct or report it in a timely manner is unethical and can have a number of negative consequences. These include increased cost for

organization in terms of decreased productivity, inconveniences and injuries to customers and increased liability costs. Another issue is how an organization chooses to deal with information about quality problems in products and here the automakers have been accused of not recalling \products already in service but preferring to deal with complaints that arose on individual basis.

2.1.3 Quality Awards

Quality awards have been established to generate awareness and interest in quality. The Malcolm Baldrige, the European Quality Award and the Deming Prize are well known awards given annually to recognize firms that have integrated quality management in their operations.

2.2 Baldrige Award

This is an award named after the late Malcolm Baldrige, an industrialist and former secretary of commerce. This award is administered by the National institute of standards and Technology. In 1987, congress passed the Malcolm Baldrige National Quality Improvement Act. This legislation was designed to inspire increased efforts on the part of organizations located in the United States of America to improve the quality of their products and services. Initially, in 1988, the categories were manufacturing and small business. Years later service categories; education and health care were added. Some winners include IBM and Xerox Corporation in the United States of America.

2.2.1 Baldrige Core Values and Concepts

The criteria for the Baldrige Award are related to a set of core values and concepts and serve as a foundation for integrating key business requirements within a result- oriented framework. They are;

2.2.2 Visionary leadership:

An organization's senior leaders need to set directions and create a customer focus, clear and visible values and high expectations, balancing the needs of all stakeholders. Leaders need to ensure the creation of strategies, systems, and methods for achieving excellence, stimulating innovation, and building knowledge and capabilities, Sisson (1994).

2.2.3 Customer Driven Excellence

According to Yang (2005), being customer driven is a strategic concept directed toward customer retention, market share gain, and growth. It includes not only defect and error reduction, meeting specifications and reducing complaints, but also how well the organization is able to recover from defects and mistakes.

2.2.4 Organizational and Personal Learning

Organizational learning refers to continuous improvement of existing approaches and processes and adaptation to change, leading to new goals and approaches.

Organization invest in employee personal learning through education, training, and

opportunities for continuing growth. Opportunities might include job rotation and increased pay for demonstrated knowledge, according to Stevenson, (2007).

2.2.5 Valuing Employees and Partners

From the perspective of Eriksson et al (2003), valuing employees' means committing to their satisfaction, development, and well-being. Increasingly, this involves more flexible, high performance work practices tailored to employees with diverse workplace and home life needs. Major challenges in the area of valuing employees include (1) demonstrating your leaders' commitment to your employees; (2) providing recognition opportunities that go beyond the normal compensation system; (3) providing opportunities for development and growth within your organization; (4) sharing your organization's knowledge so your employees can better serve your customers and contribute to achieving your strategic objectives; and (5) creating an environment that encourages risk taking.

Organization need to build internal and external partnerships to better accomplish overall goals. Internal partnerships might include labor management cooperation, such as agreement with your unions. Partnerships with employees might entail employee development, cross-training or new work organizations, such as high performance work teams. Internal partnerships also might involve creating network relationships among your work units to improve flexibility, responsiveness, and knowledge sharing.

External partnerships might be with customers, suppliers, and education organization. Strategic partnerships or alliances are increasingly important kinds of external partnerships. Such partnerships might offer entry into new markets or a bias for new

products or services. Also partnerships might permit the blending of your organizations core competencies or leadership capabilities of partners, thereby enhancing overall capability, including speed and flexibility.

2.2.6 Agility

Success in globally competitive markets demands creating a capacity for rapid change and flexibility. All aspects of electronic commerce require more rapid, flexible, and customized responses. Business face ever-shorter cycles for introduction of new or improved products and services. Faster and more flexible response to customers is now a pre requisite and more often require simplification of work units and processes and or the ability for rapid changeover from one process to another. Cross-trained employees are vital assets in such a demanding environment, according to Eriksson et al (2003).

2.2.7 Focus on the Future Pursuit of sustainable growth and market leadership requires a strong future orientation and a willingness to make long-term commitments to key stakeholders. Major components of a future focus include developing employees and suppliers, seeking opportunities for innovation, and fulfilling public responsibilities, from the view of Harrington, (1987).

2.2.8 Managing for Innovation

According to Stevenson (2007), innovation involves making meaningful change to improve an organization's products, services, and processes and create new value for the organization's stakeholders. Innovation should focus on leading your organization to new

dimensions of performance. Organizations should be structured in such a way that innovation becomes part of the culture and daily work.

2.2.9 Management by Fact

Data and analysis support a variety of purposes, such as planning, reviewing your overall performance, improving operations, and comparing your performance with competitors or with “best practices” benchmarks.

A major consideration in performance improvement involves the selection and use of performance measures or indicators from the perspective of Harrington (1987).

2.2.10 Social Responsibility

According to Stevenson (2007), an organization’s leadership needs to stress its responsibilities to the public and needs to practice good citizenship. These responsibilities refer to basic expectations of your organization which includes business ethics and protection of public health, safety, and the environment. Health, safety, and the environment include your organization’s operations as well as the life cycles of your products and services. Also, organizations need to emphasize resource conservation and waste reduction at the source. Planning should anticipate adverse impacts from production, distribution, transportation, use, and disposal of your products. Plans should seek to prevent problems, to provide a forthright response if problems occur, and to make available information and support needed to maintain public awareness, safety, and confidence. Organizations should not only meet all local, state, and federal laws and

regulatory requirements, they should treat these and related requirements as opportunities for continuous improvement “beyond mere compliance”.

2.2.11 Focus on Results and Creating Value

From the camp of Gehari (1993), an organization’s performance measurements need to focus on key results. Results should be focused on creating and balancing value for all your stakeholders who are your customers, employees, stockholders, suppliers, and partners, and the community to meet the sometimes conflicting and changing aims that balancing value implies. Organizational strategy needs to explicitly include all stakeholder requirements. This will help to ensure that actions and plans meet differing stakeholder needs and avoid adverse impacts on any stakeholders.

2.2.12 System perspective

The Baldrige Criteria provide a systems perspective for managing your organization and achieving performance excellence.

The core values and the seven Baldrige Categories form the building blocks of the system. However, successful management of the overall enterprise requires synthesis and alignment. Synthesis means looking at your organization as a whole and focusing on what is important to the whole enterprise. Alignment means concentrating on key organizational linkages among requirements given in the Baldrige Categories.

2.3 DEFINITIONS OF TQM FROM DIFFERENT PERSPECTIVES

Clifford V. Smith Jr (1999), TQM is the outgrowth of a long line of developments seeking to evaluate and improve the quality of manufactured goods. The idea behind TQM is that much can be achieved by innovation, but competitive advantage is largely affected by continuous process improvement. Universities and colleges have applied TQM to both the administrative aspects of university operations and, to a lesser extent, the academic aspects. Experience with the TQM process on university campuses has found it to be inexpensive to undertake and relatively quick to complete while achieving significant improvement. TQM is an organizational culture dedicated to training, continuous improvement, and customer satisfaction.

In addition Barnard et al (2001), also define Total Quality Management as an integrative approach for assuring quality in an organization. The four basic principles explain the nature of Total Quality Management.

- **Delight the customer.** What service would delight the customer?

What are the requirements of the customer?

- **Management by fact.** Knowing the current quality standards of the product is the first step in the process of improvement. Knowledge of facts at all levels is an essential aspect of continuous improvement.

- **People-based Management.** Systems, standards and technology themselves will not provide **quality**. People must understand what to do, how to do and must be ready to review the progress of their own work, for continuous improvement of quality.

- **TQM is aimed at continuous improvement.**

Weltgen (2004), Total Quality Management (TQM) is an approach to leading and organizing a company. It takes into account all participants (employees, middle management and top management as well as customers and sub-contractors). TQM isn't a project; it's a process that has a starting point, but no ending point. If the TQM process is successful, it's a "never ending story". TQM has little to do with quality management programs such as ISO 9000 or with quality control programs.

2.3.1 ISO 9000 Criticisms and Effects

The international Organization for Standardization (ISO) promotes worldwide standards for the improvement of quality, productivity and operation efficiently through a series of standards and guidelines. Used by industrial and business organizations, regulatory agencies, governments, and trade organizations, the standards have important economic and social benefits. Not only are they tremendously important for designers, manufacturers, suppliers and service providers, and customers, but the standards make a tremendous contribution to society in general; they increase the levels of quality and reliability, productivity and safety, while making products and services affordable. They provide governments with a base for health, safety and environmental legislation. It relates to organizations processes rather than its products. ISO 9000 pertains to quality management and concerns with what an organization does to ensure that its products or services conform to its customers requirements. ISO 9000 standards include requirements such as system, management, resource, realization and remedial requirements

The eight quality management principles that form the basis of the latest version of ISO 9000 are as follows; a customer focus, leadership, involvement of people, a process approach, a system approach to management, continual improvement, use of a factual approach to decision making and mutually beneficial supplier relationships.

2.3.2 ISO 9000 and TQM; A Critical Analysis

At first site, a revolution seems to be taking place in quality management initiative activities

In quality management initiatives and, in particular, self- assessment tools in most countries- whether developed or developing ones – through the internationally recognized Organization for Standardization (ISO). ISO as the world's largest developer of standards seems capable both of quality management and quality assurance agenda and of providing a company with the minimum requirements for a quality system, and also a rationale for elevating TQM. Although ISO's principal activity is the development of technical standards, ISO standards make a positive difference, not just to engineers and manufacturers for whom they solve basic problems in production and distribution, but to society as a whole (ISO 9000: 2000, 2001). Essentially, it sees leadership, faced with ever intensifying competition in an increasing global economy, obliged to understand current and future customer expectations, through people involvement as the essence of an organization (Sisson, 1994).

Among ISO's multitude of series, the ISO 9000 is among the most widely known and successful standards ever. The popularity of such standards can be seen in the attention given to them by various organizations across the world as an international reference for quality requirements in business to business transactions (Karthi, 2002). For example, evidence from both UK and US practice indicates that a great deal of importance is attached to certification to ISO 9000 standards, and such certification is likely to increase continuously (Dick, 2000; ISO, 2001). For Taormina (2002), ISO 9000 has become a non-political baseline for quality, simply because it penetrated barriers of culture and language, which no other standard could achieve. The truly quality-driven organizations, it is argued, cannot compete with their competitors across the world head-on solely in terms of cost of quality, let alone the rest: their attempts would be in vain. Instead, in response to the global competition and demand for better quality requirements by customers in recent years – referred to as the main reason for evolution of ISO series – they must put the emphasis more on management, the customer, and continuous improvement. Furthermore, quality organizations require a quality workforce – as a prerequisite for quality goods and services. From this it follows that customer: the extent to which their requirements are met, management: the way they manage the organization and, people: the way they are managed, become the major sources of competitive advantage (Sisson, 1994).

Although ISO 9000 standards are seen to cover various quality management issues, one final concern remains and this relates to the negative side of ISO 9000: the issue of traditional command and control of management philosophy. The problem is that a huge amount of bureaucratic controls which developed in the wake of ISO 9000, as Seddon

(2000) notes, have established a “control through procedures system” rather than help the business. For Seddon, ISO 9000 promotes a command and control method of management which emphasises on written procedures, however, entirely unnecessary; it lacks integrity; it has no guidance on implementation; and it remains rooted in conformance and audit thinking. In short, Seddon concludes one distinctive note. Organizations register to ISO 9000 because they are obliged to market-place coercion which works on the principle of “you comply or we won’t buy” and registration is no guarantee of quality (Spear and Bowen, 1999).

This is above all true of a world-leading high profile Japanese company: Toyota. When introducing something new, Toyota’s philosophy is to test actually before overall implementation rather than discuss on the desk. Therefore, Shimoyama factory was selected as a test plant. This is an example of scientific approach of Toyota. And after the test, Toyota has concluded that there was no evidence in ISO 9000 for quality improvement, nor it saw value to improvement of quality performance, then saw no need to get registration (Nishizawa, 2004). Such realization began the attack on the concepts and practice of ISO 9000 in the 1990s. In 1999, Harvard Business Review article Spear and Bowen follow a similar line and devote a full paper to explain why Toyota has been so successful. In doing so, they concentrated on four principles – three rules of design and one rule of improvement – that govern Toyota’s operations:

- (1) All work is highly specific in content, sequence, timing, and outcome;
- (2) Every connection between employees must be standardized, direct, and unambiguous;
- (3) Every product and service flows along a specified, direct path; and
- (4) All improvements will be made according to the scientific method.

Spear and Bowen take more of a holistic view to improving quality, arguing the need to move beyond the current production standards and creating new standards to test the new procedures. They finally summarize the logic behind Toyota's success this way: Toyota's ideal plant would indeed be one where a Toyota customer could drive up to any of their showrooms and be treated with the best of service for satisfaction. Management plays a critical role in TQM. The approach is reflected in an operating philosophy. For example among the 14 Toyota way principles is

Principle 1.

Base your management decisions on a long- term philosophy, even at the expense of short-term financial goals...And' "Generate value for the customer, society and the economy; it is your starting point. Evaluate every function in the company in terms of its ability to achieve this." In addition there are eight quality management principles that form the basis of the latest version of ISO 9000. These include:

1. A customer focus
2. Leadership
3. Involvement of people
4. A process approach
5. A system approach to management
6. Continual improvement
7. Use of a factual approach to decision making
8. Mutually beneficial supplier relationship.

2.4 HISTORICAL BACKGROUND OF TQM

What we today call Total Quality Management, or TQM, is the outgrowth of a long line of developments dating back to Frederick Taylor's efforts in the 1920s to evaluate and improve the quality of manufactured goods. Following Taylor's efforts, the next major improvement came with the introduction of statistical quality control procedures as pioneered by the Bell Telephone Labs in the 1940s. This effort was, in turn, followed by Deming's work with quality assurance. Deming focused on continuous improvement and the elimination of waste. Ultimately, quality assurance efforts began to broaden so that they became a concern of all management and led to the Total Quality Management approach used today. The literature is rich with descriptions of TQM as a process for improving productivity and customer satisfaction.

Capecio and Morehouse (2005) refer to Total Quality Management as: *a management process and set of disciplines that are co-ordinated to ensure that the organization consistently meets and exceeds customer requirements. TQM engages all divisions, departments and levels of the organization -Top management organizes all of its strategy and operations around customer needs and develops a culture with high employee participation. TQM companies are focused on the systematic management of data in all processes and practices to eliminate waste and pursue continuous improvement.*

Again in looking at the evolution of total quality management, it can be said that the desire for quality products and services has led to its rapid evolvement. The last few decades has seen it through various phases of quality systems. They are;

- Inspection
- Quality control
- Quality assurance
- Total quality management

2.4.1 INSPECTION

According to Jain et al (1998), essentially, this is a practice of sorting good products or services from bad ones and it may be a hundred percent or a sample inspection.

The system involves examining one or more characteristics of products or service, measured or tested and compared with specifications to assess conformance. It is applied to incoming materials, work-in-process, bought out parts, and finished goods or services. Products or services which do not meet specifications are either scrapped, or redone. It is worth noting that quality cannot be inspected into goods or services by mere inspection or sorting out after the good or the service is rendered, however if it is designed and built into a product or a service through quality assurance or a comprehensive quality control system.

2.4.2 QUALITY CONTROL

A further development of quality systems after inspection is quality control. According to Crosby (1986), this is concerned with operational techniques and procedures for checking or testing and maintaining the desired level of quality. Emphasis is placed on defect

detection, analysis and correction. The techniques employed are mainly inspection procedures and statistical methods such as acceptance sampling and control charts for monitoring process stability.

- Setting quality specifications or standards.
- Appraisal of quality standards i.e. checking conformance to the standards during operations.
- Acting when standards are exceeded or violated by taking corrective action.
- Planning for improvement in the standards.

2.4.3 QUALITY ASSURANCE

This is the third stage of the evolution of a system for management of products or service quality. Quality assurance embraces 'all planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality'. It involves comprehensive quality planning, defect prevention and monitoring of all quality activities. It makes use of statistical process control (SPC) techniques where applicable but is increasingly based on ISO 9000 series. They are ISO 9000 to ISO 9004 all dealing with quality systems and quality assurance, essentially providing standards which tell suppliers and manufacturers what is required of a quality system. It sets out how an organization can establish, document and maintain an effective quality management system which will demonstrate to customers that the organization is committed to quality and is able to meet their quality requirements. It involves all phases from initial identification to final satisfaction of customer requirements and expectations.

2.4.4 TOTAL QUALITY MANAGEMENT (TQM)

The highest level of development of a system for quality management is the concept and practice of total quality management. According to Sadgroove (1997), this concept puts much emphasis on the involvement of every worker from the chief executive officer of the company to the lowest ranking staff in ensuring that products or services continually meet customer expectations.

Total quality management offers a strategic approach to producing the best products and services through a process of continuous improvement of every aspect of a company's operations with the involvement of staff at all levels. It is a way of managing to improve the effectiveness, flexibility and competitiveness of a business as a whole. It also serves as a means of improving the bottom line performance by creating a sense of purpose shared by everyone in the company and geared towards the needs of the customer. Total quality management unlike other quality concepts involves a whole company getting organized in every department in every activity with every single person at every level not only in solving problems but also in preventing them. TQM aims chiefly at changing behaviors', attitudes and skills so that the culture of the organization becomes one of preventing failures and doing things right the first time, every time. The elimination of waste in all forms is a major objective of any company's TQM process. The aim should be to redeploy resources away from wasteful activities into value added activities. This will improve customer service, flexibility and responsiveness and reduce product development lead times.

So TQM is directed at enhancing competitive edge and as a result increasing job security. Again improving quality is the most cost-effective and less capital intensive way of improving productivity.

2.5 THE MAIN ELEMENTS OF TQM

Some of the main elements of TQM approach would comprise

- **Management Responsibility and Commitment**
- **Customer Focus or Orientation**
- **Employee Participation and Team Work**
- **Quality System**
- **Education and Training**

2.5.1 Management Responsibility and Commitment

Total quality management will be successful in promoting efficiency and effectiveness when it is truly company-wide and must start at the top most hierarchy with the chief Executive officer, directors and management who must all demonstrate their seriousness about quality. These people should serve as good role models and avoid lip service.

If the chief of an organization accepts the responsibility for and commitment to policy, this action alone will offer a broad approach and extend well beyond the accepted formalities of the disciplines required in the quality function. Management responsibility

and commitment creates in turn, through a process of quality policy deployment, responsibilities for interaction between marketing, design, product or operations, purchasing, distribution and all service functions.

Top management must exhibit leadership and commitment if the process of continuous improvement is to be both successful and sustained. Again quality must be infused in to strategic planning, from the perspective of Garvin, (1988).

2.5.2 Customer Focus or Orientation

A customer is a real or legal person who somehow relates to the organization and benefits from its goods or services. Juran (1990) stated that the concept of customer as most people suppose that a customer is the final consumer whereas the customer is found in both the intra and extra organizational, that is whoever the product and service are produced to meet his or her needs.

A business exists because of its customers. Where the needs of customers are not met, then they are likely to take their orders elsewhere to the detriment of the organization. Total quality management demands customer focus. This means

- Understanding customer expectations in addition to discovering and fulfilling latent customer needs through customer surveys and forming partnership with suppliers.
- Another way is supplying products, services and knowledge which consistently exceed customer expectations thereby delighting the customer.

- Providing benefits of unique value to customers which yield competitive edge.

However an excellent supplier-customer relationship is a useful starting point for meeting customer expectations.

2.5.3 Employee Participation and Teamwork

According to Yang (2005), for an excellent and truly effective organization, each section or division must work together in a harmonious fashion, keeping in mind that every person and activity is interlinked and can in turn be affected. The supplier-customer relationship is applicable to the organization. Each person should see themselves as a supplier or a customer at any stage of the organization's activity and all must be involved in quality. For instance, in ensuring that a unit meets its obligation whilst ensuring that other unit's requirements are met, then the organization stands a higher chance of meeting customer's expectations.

An enabling environment must be created for all employees to become fully involved in contributing to company objectives and maximizing organizational productivity through team work and problem solving culture. In effect, sectional and departmental barriers must be removed so as to promote working together across functional boundaries to understand each other's needs. There must be continuous interchange of ideas and free flow of information in all stages of the quality loop.

Genuine participation can be expected only if employees are given the opportunity to express constructive criticism and suggest methods to improvement. Management must

infuse quality system and undertake appropriate incentives and motivation to boost the morale of staff to give off their best to help in the growth and profitability of the organization. Again good human relations of staff and management towards clients creates a harmonious work environment

2.5.4 Quality System

Total Quality Management process can be facilitated through effective quality system. Management has the responsibility to develop, establish and implement a quality system as a means through which drawn up policies of the company can be accomplished. The quality system should include the objectives, policies, organizational structure, responsibilities, operating procedures and resources for implementing quality management. It must also incorporate an inbuilt auditing and re-evaluation system for continuous improvement. In Stevenson (2007) continuous improvement is a philosophy that seeks to make a never- ending improvement to the process of converting inputs into outputs. The quality system must be comprehensive and documented in a quality manual. It must also emphasize preventive actions and avoid the occurrence of problems while expediting the ability of the company to respond and correct failures when they occur.

2.5.5 Education and Training

According to Longenecker et al (There are many responsibilities of management in total quality management and one is to orient employees towards quality and to create the right environment for quality implementation. Hence all levels of staff must be given adequate training on the organizations quality policies, objectives and concepts of customer

satisfaction, engage in quality awareness programs which offer induction and training for new entrants and refresher courses for old staff. Top management must be trained to embrace and manage change in order to create leadership by example for other employees to emulate. The change may include a change in organizational structure, positions, responsibilities and attitudes.

2.5.6 Continuous Improvement

According to Yang (2005), the philosophy that seeks to improve all factors related to the process converting inputs into output on an ongoing basis is called continuous improvement. It covers equipment, methods, materials, and people. Under this, the old adage of ‘if its ain’t broken, don’t fix it’ gets transformed into ‘just because it isn’t broke doesn’t mean it can’t be improved’. Although continuous improvement originated from the U.S.A, it did not receive much interest in the U.S.A however many Japanese companies used it and it became the corner stone of their production approach.

2.5.7 Competitive Benchmarking

This involves identifying other organizations that are best at something and studying how they do it to learn how to improve your operation. Yang (2005) emphasizes that the company need not be in the same line of business. For example Xerox used the mail – order company LL Bean to benchmark order filling.

2.5.8 Employee Empowerment

Giving workers the responsibility for improvements and the authority to make changes to accomplish them provides strong motivation for employees. This puts decision making into the hands of those who are closest to the job and have considerable insights into problems and solutions, from the perspective of Yang (2005).

2.5.9 Decisions based on facts rather than opinion

Management gathers and analyses data as a basis for decision making. Knowledge of tools is important where employees and managers are trained in the use of quality tools. Also a total quality management champion's job is to promote the value and importance of TQM's principles throughout the company, according to Hellsten et al (2000).

2.5.10 Quality at Source

This refers to the philosophy of making each worker responsible for the quality of his or her work. This incorporates the notion of 'Do it right' and 'if it isn't right, fix it'. Workers are expected to provide goods or services that meet specifications and to find and correct mistakes that occur. It places direct responsibility for quality on the person(s) who directly affect it. It also removes adversarial relationship that often exists between quality control inspectors and production workers. It again motivates workers by giving them control over their work as well as pride in it.

2.6 TQM AND QUALITY COSTS

The cost of quality is the cost of implementing and maintaining an organizations quality system. This means the resources committed to continuous improvement and it is sometimes referred to as what it costs for a company to get things right. According Phillip Crosby in his book titled quality is free, he asserts that quality costs money and through continuous improvement efforts such costs can be reduced to the barest minimum. The elements of quality costs are; prevention costs, appraisal costs and failure costs.

- Prevention costs – this involves planning, training, design and preventive measures by the organization. Prevention is a primary focus of a well conceived quality program. Although it may be difficult to sell, when adhered to, prevention cuts waste, saves money and increases productivity.
- Appraisal costs – this also involves inspection, testing and undertaking quality audit.
- Failure costs – this concentrates on internal and external areas of operation.
Internal deals with re-work.

Therefore to reduce quality costs, the company should concentrate on preventive activities and involve all departments in quality management, from the perspective of Crosby (1986).

2.7 THE APPROACH TO TQM

According to Stevenson (2007), the TQM approach can be described as follows;

- Find out what customers want. This might involve the use of surveys, focus groups, interviews or some other technique that integrates the customer's voice in the decision making process. Be sure to include the internal customer (the next person in the process) as well as the external customer (the final customer).
- Design a product or a service that will meet or exceed what customers want. Make it easy to use and easy to produce.
- Design processes that facilitate doing the job right the first time. Determine where mistakes are likely to occur and try to prevent them. When mistakes do occur, find out why so that they are less likely to occur again. Strive to make the process "mistake proof". This is sometimes referred to as fail-safing; elements are incorporated in product or service design that makes it virtually impossible for an employee or sometimes a customer to do something incorrectly.
- Keep track of results, and use them to guide improvement in the system. Never stop trying to improve.
- Extend these concepts to suppliers and distributors.

Many companies have successfully implemented TQM programs. Successful TQM programs are built through the dedication and combined efforts of everyone in the organization. Top management must be committed and involved. If it is not, then TQM will become just another fad that quickly dies and fades away.

2.8 OBSTACLES TO IMPLEMENTING TQM

Companies have had varying success in implementing TQM. Some have been quite successful, but others have struggled. Part of the difficulty may be with the process by which it is implemented rather than with the principles of TQM. Among the factors cited in the literature by Prajogo et al (2006), are the following:

- Lack of a companywide definition of quality: Efforts aren't coordinated; people are working at cross-purposes, addressing different issues, and using different measures of success.
- Lack of a strategic plan for change: Without such a plan the change of success is lessened and the need to address strategic implications of change is ignored.
- Lack of a customer focus: Without a customer focus, there is a risk of customer dissatisfaction.
- Poor intraorganizational communication: The left hand doesn't know what the right hand is doing; frustration, waste, and confusion ensue.
- Lack of employee empowerment: Not empowering employees gives the impression of not trusting employees to fix problems, adds red tape, and delays solution.
- View of quality as a "quick fix": Quality needs to be a long- term, continuing effort.
- Emphasis on short-term financial results: "Duct-tape" solutions often treat symptoms; spend a little now-a lot more later
- Inordinate presence of internal politics and "turf" issues: These can sap the energy of an organization and derail the best of ideas.

- Lack of strong motivation: Managers need to make sure employees are motivated.
- Lack of time to devote to quality initiatives: Don't add more work without adding additional resources.
- Lack of Leadership: Managers need to be leaders.

This list of potential problems can serve as a guideline for organizations contemplating implementing TQM or as a checklist for those having trouble implementing it.

2.9 CRITICISMS OF TQM

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From the perspective of Stevenson (2007), TQM programs are touted as a way for companies to improve their competitiveness, which is a very worthwhile objective.

- Overzealous advocates may pursue TQM programs blindly, focusing attention on quality even though other priorities may be more important.
- Programs may not be linked to the strategies of the organization in a meaningful way.
- Quality-related decisions may not be tied to market performance. For instance, customer satisfaction may be emphasized to the extent that its cost far exceeds any direct or indirect benefit of doing so.
- Failure to carefully plan a program before embarking on it can lead to false starts, employee confusion, and meaningless results.
- Organizations sometimes pursue continuous improvement that is incremental improvement when dramatic improvement is needed.

- Quality efforts may not be tied to results.

Note that there is nothing inherently wrong with TQM; the problem is how some individuals or organizations misuse it. TQM can be applied in schools, hospitals, banks, small and big companies. In a status report on Total Quality Management launched in Electricity Company of Ghana (then corporation) in 1992, Mr. Hagan stressed that top management is the main driver of TQM activities. He added “TQM is a culture and not just a program.” He was of the view that TQM management is capable of changing in diverse ways the values and behaviors of organizations and their employees. Top management support is important to ensure that right priorities are set and total Quality Management is shown in the organization.

2.9.1 PROFILE OF THE STUDY AREA- ECG KUMASI

Electricity company of Ghana limited was incorporated under the companies code 1963 (Act 179) and became limited by shares on the 12th of February, 1997.

Mission: the mission of ECG is “to provide quality electricity services to support economic growth and development in Ghana”.

Vision: the company’s vision is “to be among the leading electricity distribution companies in Africa in terms of quality, safety and reliability.

Core Values; Electricity Company of Ghana (ECG) limited is committed to quality service delivery, teamwork and safety consciousness, quality, reliable and safe power supply, competency and motivation of staff, professionalism, integrity and transparency.

Customer population

The customers of ECG have been grouped under special load tariff (SLT) and non special load tariff (non SLT). The categories of users that fall under the special load tariff are commercial entities such as small scale businesses, industries, hotel and catering services etc. the non special tariff users includes domestic or residential users.

The customer population of ECG has been classified according to districts. The total population of 20,000 plus customers is classified as district A, and an example of districts classified under district A are Obuasi, Manhyia and Asokwa districts.

The customer population of 10,000 plus customers is classified as district B, with areas like

Effiduase, Kwabre and Konongo.

Again customer population of up to 10,000 is classified as district C with areas such as Dunkwa and Offinso coming under. In all, there are seventy seven (77) district offices of ECG in the Kumasi metropolis.

Operations of ECG

The core operations of ECG are in three areas such distribution of electric power purchased from Volta River Authority (VRA), Revenue collection and Customer education. These operations

are grouped under commercial activities and technical activities. Under the technical activities, the activities include supply of power, routine maintenance, attending to faults and monitoring of sub-stations and transformers to monitor the load on each transformer.

Under the commercial activities, the company undertakes distribution of bills, disconnection exercise, customer orientation or education, revenue collection and monitoring exercise.

Bill distribution- here two activities go on concurrently, that is meter readers read meters and at the same time distribute bills to consumers.

Disconnection- this is curtailing of power supply of individual customers due to reasons such as

- Nonpayment or refusal to pay debts
- Illegal connections or unapproved means of power usage.

Self reconnections- that is consumers reconnecting their power after disconnection exercise without permission from the ECG.

Customer Orientation and Education- giving information to customers in respect to the usage of power and giving answers to pertinent questions that bothers customers.

Revenue Collection- this is one of the key activities of the company and it is done by making announcement at the various areas or communities using public address system and positioning revenue collectors at various cash collection points.

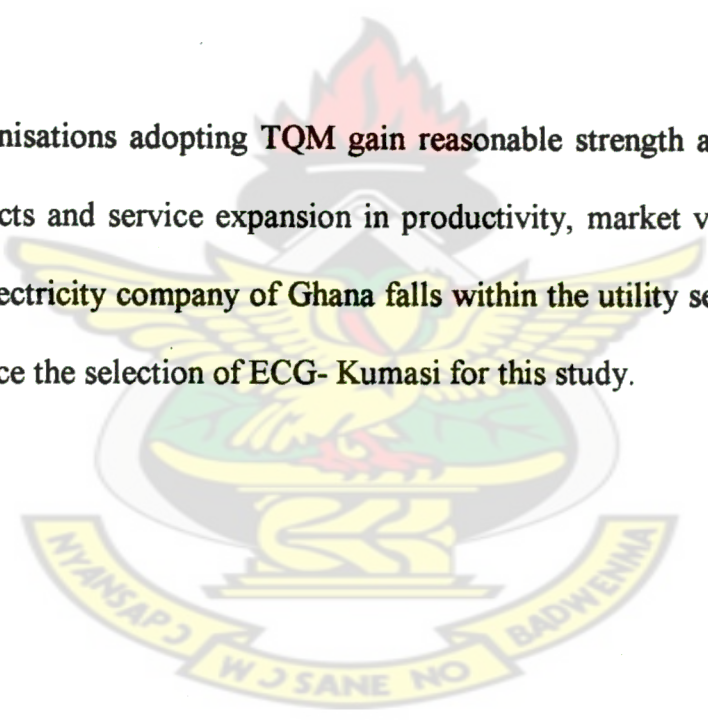
Issuing demand notice and court summons to high debtors and undertaking court actions.

Services of ECG:

The service provided by ECG is in three areas such as Service Connections, Power Supply and Customer Care.

Service Connections-this is where individuals or entities apply for power supply to their premises. An application form is bought at two Ghana cedis (Ghc 2), completed and submitted to the customer service office to schedule estimator for inspection of the respective premises and based on the work of the estimator followed by preparation of job cards, the job is executed by ECG contractors in charge of service connections.

In conclusion, organisations adopting TQM gain reasonable strength and confidence in quality of its products and service expansion in productivity, market volume, sales mix and profitability. Electricity company of Ghana falls within the utility service provider in the country and hence the selection of ECG- Kumasi for this study.



CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTON

This chapter presents the methods that were used to collect, manage and analyze data for this work. In order to satisfy the basic scientific requirement of objectivity and reliability, care was taken to clearly specify all the laid down review of problems associated with methods used.

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3.1 SOURCES OF DATA

Methodology is the methods adopted by the researcher in gathering or collecting data. Data can be defined as “any information collected as part of a research project and expressed as numbers” Healey (2000). The researcher adopts two main data collection sources, namely primary and secondary data source. The primary data source is where the researcher gets first hand information from the field using printed questionnaire that were administered to the general public and the staff of ECG. This data is free from distortions, omissions, and commissions, and can properly aid analysis and constructive assessment of situation.

Secondary data source is a where the researcher adopts the use of data already collected and documented such as bulleting, journals, quarterly and annual reports and other relevant publications about the research topic and the case study company.

The study was started by reading of relevant materials on the subject from all sources including the internet (Google scholar, Emerald insight, Yahoo etc), especially articles by renowned writers such as Deming, Juran, Crosby and others.

Books on Total Quality Management were also read to be abreast with the technicalities on the subject. Descriptive approach to research was also adopted to describe data in both qualitative and quantitative manner for convenience.

3.2 SAMPLING PROCEDURE

In sampling procedure, one looks at the ideal number of respondents in order to get reliable responses for the study. Some of the sample strategies the researcher will apply include the random sampling methods such as,

Simple Random Sampling: This is where all items or people in the population are given equal chance to be selected for the research. For the purpose of this study every staff of ECG stands the chance of being selected. The same applies to the entire customers or clients of ECG.

Stratified Sampling: Sub-dividing the population into groups and selecting a given number in each group. For example the researcher put ECG workers into their various departments and dealt with each department separately. The researcher started by grouping the respondents or staff of ECG into meter reading section, reconciliation, customer service, faults and complaints section, and management staff who were given printed questionnaires for self administration.

3.3 SAMPLE SIZE

Sample size has to be chosen out of the population for interview or questionnaire administration. The sample size chosen must be a fair representation of the total population so that the results of the survey can be generalized. Generally, 95% of total population chosen as sample is acceptable as a fair representation, Saunders et al (2007). Alternatively, where the population is less than thirty (30), then the total population would have to be considered for the research.

Population for research work is concerned with the entire membership of all those related to the data collection with common characteristics and from whom data could be sourced. For the purpose of this work, the entire workforce of ECG and the consuming public constitute the population. Obviously this population size is too large to work with, for the purposes of this work however, a sample of the population was chosen

A sample size is actually a fraction or a section of the population which the researcher can conveniently work with at a time. For this work a sample size of eighty (80) respondents from the consuming public comprising usage categories such as residential or domestic users, small scale businesses, industries, commercial users were chosen and twenty (20) respondents from ECG workforce comprising the various departments were dealt with totaling a sample space of hundred (100) respondents in all.

3.4 METHOD OF DATA COLLECTION

To get information from the field the following data collection tools such as questionnaires, interviews and observation are normally used.

Interviews- according to Kahn and Cannell (1957), an interview is a purposeful discussion between two or more people. Interview has benefits some of which are that it can help the researcher to gather valid and reliable data that are relevant to the research questions and objectives.

Questionnaire – this is a structured data collection mechanism which involves a range of question formats completed orally or in print. A questionnaire is usually distributed to the sample population chosen. The technique involves each person being asked to respond to the same set of questions in a predetermined order. Responses to these questions are collected at a later date for analysis.

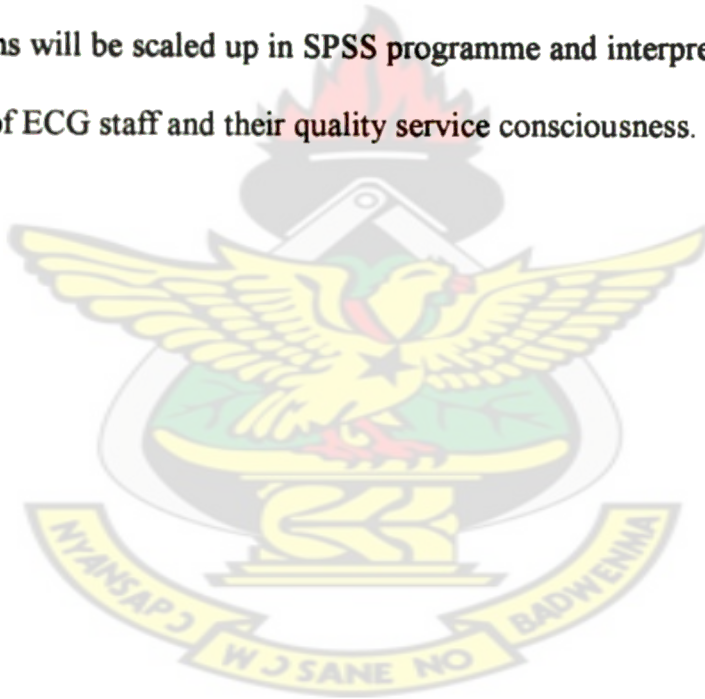
For the purposes of this work, a well designed questionnaire was used by the researcher and administered randomly on selected people from the consuming public and respondents from ECG. The researcher went to the premises of ECG's Adum and Danyame branch and administered the questionnaires using face to face oral interview method whereas other staff were given time for self administration and the responses were collected at a later date to facilitate the research process. For fear of victimization as observed from most participants, respondents were made not to declare their identities to incur the displeasure of any authority.

The researcher wishes strongly to avoid biasness towards any particular people since data collected that is devoid of apathy and marginalization and from the required source is rich enough for analysis and objective assessment of situations.

3.5 METHOD OF DATA ANALYSIS

The data collected will be entered into the SPSS programme to analyze them. The results will be interpreted in relation to whether the respondents are satisfied with the services delivered by ECG or what TQM seeks to address in the organization.

The response options will be scaled up in SPSS programme and interpreted in the light of commitment level of ECG staff and their quality service consciousness.



CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 INTRODUCTION

Data collected need to be transformed into information purpose to facilitate effective decision making. Data analyses play an important role in any research work. This particular one not being an exception, because it enables the researcher in particular and others in general to critically evaluate the data collected to measure its suitability and validity for the stated objectives.

This chapter shall seek to present an overall review of data collected in the field through graphs. Major findings will be discussed as well.

4.1 FINDINGS AND DATA ANALYSIS

The questionnaire of 34 items were aimed at ascertaining the TQM strategies adopted by ECG, the commitment level of staff to the TQM strategies, whether customers are satisfied with the services provided by ECG, and how to improve customer satisfaction.

4.1.1 RESPONDENCE AS CLASSIFIED WITH THE USE OF ELECTRICITY

The table below is a representation of eighty (80) respondents put under various electricity usage categories.

TABLE 1

where do you belong in the use of electricity

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid hotel service	10	12.5	12.5	12.5
medium / small scale business	10	12.5	12.5	25.0
domestic / residential	51	63.8	63.8	88.8
industrial	9	11.2	11.2	100.0
Total	80	100.0	100.0	

From the table above as indicated in percentages 63.8% of the selected respondents use electricity for domestic purposes. Small scale businesses and hotel service with 12.5% respectively and industrial concerns with 11/2%.

The small scale businesses comprises interne cafes, drug stores, dressmakers and barbering shops drinking spots etc, whereas hotel service includes restaurants, wayside canteens and hospitality and tourist ventures. It is seen that majority of the users of electricity are for domestic purposes.

4.1.2 ASSESSMENT OF POWER SUPPLY

The data captured on assessment of power supply by ECG to their various customers which is one of the key services rendered by the organization is depicted below.

TABLE 2

How do you assess the power supply?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid excellent	1	1.2	1.2	1.2
good	14	17.5	17.5	18.8
fair	43	53.8	53.8	72.5
poor	16	20.0	20.0	92.5
very bad	6	7.5	7.5	100.0
Total	80	100.0	100.0	

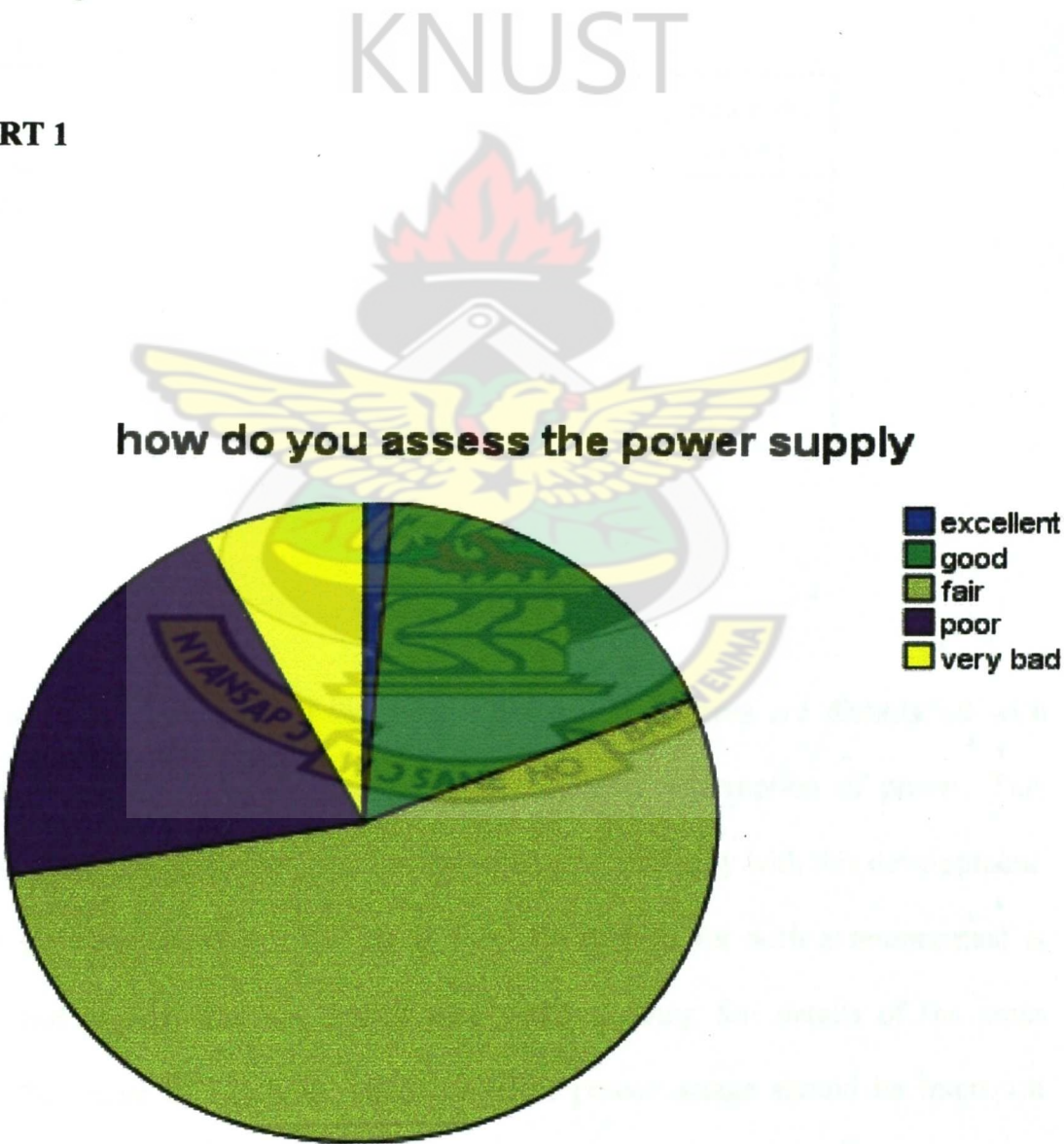
From the table it can be seen that 20% of respondents maintain that supply of power by ECG is poor whilst 7.5% also claim power supply is very bad. Such respondent's buttress their stands with the argument that power is inconsistent with several power outages within a day with no prior announcement leading to damages to their gadgets running into millions of Ghana cedis. However 53.8%, 17.5% and 1.2% of respondents said that power supply was fair, good and excellent respectively buttressing their argument view that although power outages do occur, it is quickly restored unless an unexpected major fault has occurred.

It is quite clear from the data that comparing the good side to the bad side, one finds that the good side comprising excellent, good and fair combined comes up to 72.5% whereas the bad side comprising poor and very bad also comes up to 27.5%. This means that the

good side far outweigh the bad side and hence in terms of quality supply of power to customers the corporation is rated high with the introduction of TQM strategy of continuous improvement on their services to customers.

The researcher also found out from management that frequent power cuts is attributable to an automatic machine system which is sensitive to unfavorable weather condition such as windy or thunder activities threatening and hence the power will automatically cut and given favorable weather power is quickly restored. The pie chart below gives a vivid impression at a glance.

PIE CHART 1



4.1.3 INFORMATION BEFORE POWER CUTS OR ANNOUNCEMENT

Many customers were of the view that there were frequent uninformed power cuts and they reported few instances of apologies from the corporation. This is depicted by table 3 as follows;

TABLE 3

How do you assess announcement before voluntary interruption of power and apologies after interruption of power

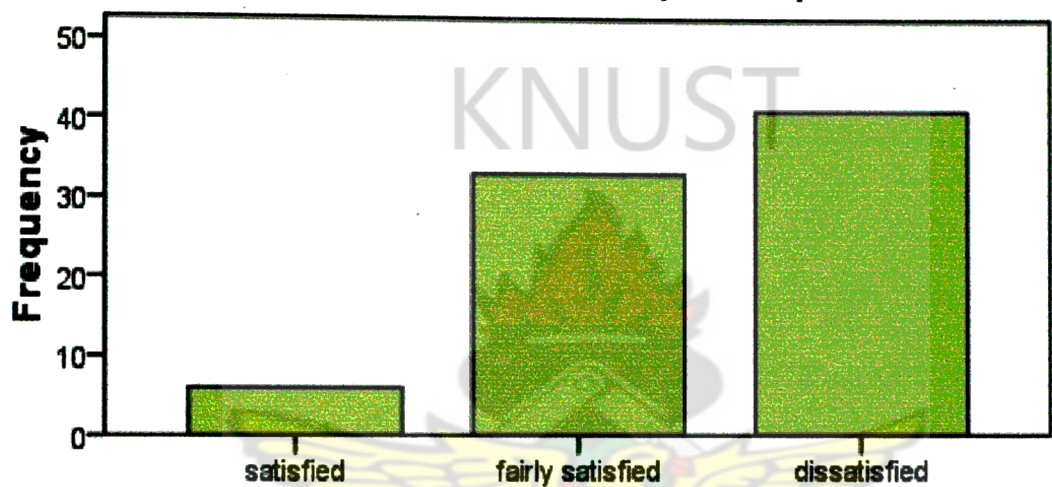
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid satisfied	6	7.5	7.5	7.5
fairly satisfied	33	41.2	41.2	48.8
dissatisfied	41	51.2	51.2	100.0
Total	80	100.0	100.0	

From the table above it is seen that 51.2% of the respondents are dissatisfied with information flow to the general public before voluntary interruption of power. This clearly shows that majority of the consuming public are not happy with this development. Consumers also contended that the use of local fm stations for such announcement is inadequate and mostly done on short notice without giving full details of the areas concerned. Therefore ECG’s prior notice to effect power outage should be improved

upon to ensure the essence of TQM strategy of placing premium on the consumer and utmost desire for customer satisfaction. It is also illustrated with a bar graph below

CHART 2

how do you assess announcement before voluntary interruption of power and apologies after interruption of power



how do you assess announcement before voluntary interruption of power and apologies after ...

4.1.4 ECG’S RESPONSE TO CUSTOMER COMPLAINTS

The table below illustrates satisfaction level of consumers with regard to the complaints received from the general public and their response to it in the view of the consuming public.

TABLE 4

response to customer complaints on faults and repairs				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid immediate	5	6.2	6.2	6.2
delayed with excuse	33	41.2	41.2	47.5
wait for longer days	36	45.0	45.0	92.5
don't care	6	7.5	7.5	100.0
Total	80	100.0	100.0	

From the table above, it is gathered from respondents that only 6.2% of respondents were satisfied with response of ECG to customer complaints in terms of faults and repairs. They claim staff of ECG attend to their call immediately. However, about 93.2% of the respondents were not satisfied with ECG response to complaints on faults and repairs. It can be inferred that there is high dissatisfaction amongst consumers with regard to prompt attention to fault and repairs.

This notwithstanding, it was gathered by the researcher that to ensure prompt response to such complaints the corporation has outsourced some of these activities to private companies. This means that the corporation has to take a second look at their outsourcing program to ensure effective response to complaints.

ASSESSING METER READING

The table below will depict the satisfaction level of customers as gathered from the respondents in the area of meter reading where posted paid meters are used by consumers.

TABLE 5

Satisfaction levels in terms of meter reading?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid very satisfied	3	3.8	3.8	3.8
satisfied	20	25.0	25.0	28.8
fairly satisfied	48	60.0	60.0	88.8
dissatisfied	9	11.2	11.2	100.0
Total	80	100.0	100.0	

From the above table, satisfaction level comprising very satisfied and satisfied is 28.8% compared to fairly satisfied and dissatisfied of 71.2%. This indicates that a higher proportion of the consuming public are dissatisfied with regards to meter reading by ECG staff. Dissatisfied respondents contend that in most cases when meter readers do not get access to the meters, they resort to the use of estimates leading to over billing.

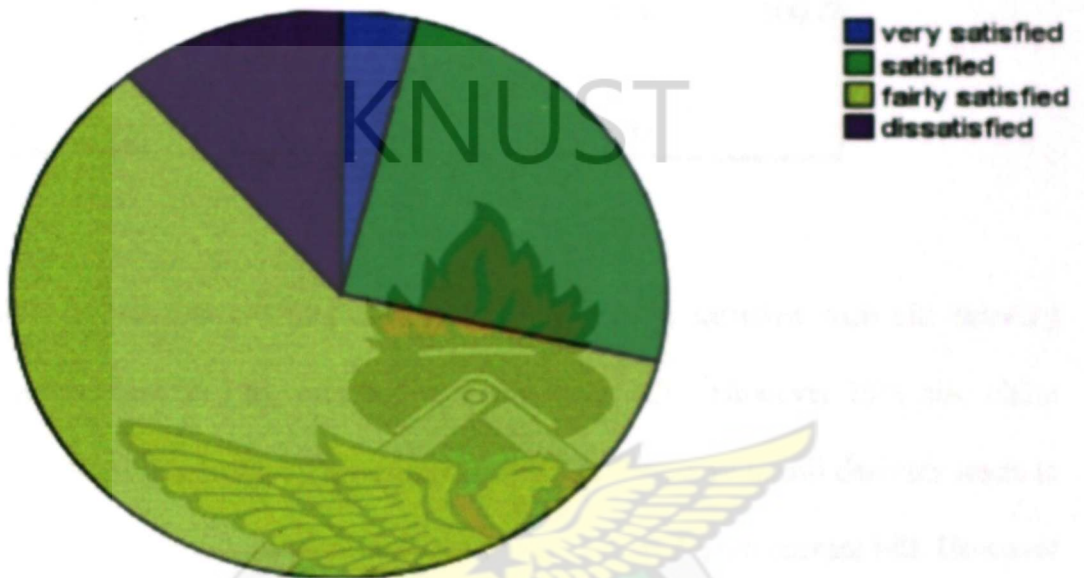
However the researcher gathered from management that to forestall some of these teething problems that lead ECG to introduced mass prepaid meters and smart cards in



most urban areas in the country to help reduce the dissatisfaction level among the consuming public. The data is further processed and presented as a pie chart as follows;

CHART 3

satisfaction levels in terms of meter reading



More often than not, consumers with faulty meters and estimated readings have to seek reconciliation at the regional offices usually the customer service points of the corporation.

4.1.5 ASSESSING BILL DELIVERY

The delivery of bills to customers is one of the integral functions performed by the corporation and this is indeed necessary where the customers are on post paid meters. Question number 10 of customer questionnaire was used to assess how regular electricity bills are delivered and the response is shown below

TABLE 6

How are bills delivered?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid monthly	65	81.2	81.2	81.2
bimonthly	12	15.0	15.0	96.2
unpredictable	3	3.8	3.8	100.0
Total	80	100.0	100.0	

From the table 6, it is realized that 81% of respondents are satisfied with bill delivery since they contend that bills are received monthly from ECG. However 15% also claim that bills are received bimonthly. This group argues that the delay in bill delivery leads to huge bills as a result of previous payments not being deducted from current bill. However since respondents for monthly far outweigh those of bimonthly and unpredictable, it can be inferred that bill delivery is generally encouraging.

The researcher gathered that this marked improvement in bill delivery was as a result of outsourcing bill delivery to private companies.

4.1.6 ELECTRICITY TARIFFS

The perception of the general public to the tariff charged by ECG is shown by table 7 below

TABLE 7

Do you think tariffs' on power are a reflection of general price increase?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	43	53.8	53.8	53.8
No	37	46.2	46.2	100.0
Total	80	100.0	100.0	

It is seen from table 7 that hitherto consumers were of the view that tariffs charged by ECG were very high. However from the table 53.8% of respondents are of the view that increases in tariffs charged by ECG are a reflection of the general price increase in the economy, whereas 46.2% say that they do not agree with the assertion that it is a reflection of general price increases. The researcher gathered from respondents that their rights are being protected by the Public Utilities Regulatory Commission (PURC) which is a body set up by government to regulate the utility providers to take into account the concerns of the consuming public in setting tariffs and charges and to offer quality service to their customers.

4.1.7 WHAT TQM STRATEGIES ARE USED BY ECG

Total quality management as put by the quality management gurus like Juran, Deming and Crosby involves managing for the future, continuous improvement and customer satisfaction. In line with this thinking the following are the Total quality management

strategies adopted ECG to ensure quality service delivery to their customers. The following are what the researcher gathered from management of ECG.

- Engagement of debt collection companies to maximize debt recovery rate.
- Strengthening of customer service through various training programs for all sections of the corporation to be 'customer service conscious.
- Introduction of call centres to assist customers with their complaints.
- Monitoring is taken seriously due to the fact that the core of the job is done on site and it is only through monitoring that quality can be ascertained or assured.
- Performance appraisal of departments and individual employees to ensure targets set are actually achieved or to re-strategise.
- Motivation to ensure committed staff.
- Recruitment of professionals and experts to ensure good quality human resource base to deliver quality service.

The following are some challenges gathered by the researcher, they are; low tariff rates, obsolete equipments, illegal connections, system losses and low capital base.

It is noted from literature that all the above strategies are essential for the implementation of Total Quality Management in any organization; however how successful one is with this program depends on the implementation and orientation of the staff towards the program.

4.1.8 ASSESSING EMPLOYEES OF ECG’S COMMITMENT TO TQM STRATEGIES

Among the TQM strategies adopted by ECG is strengthening of customer service through training programs. The table below illustrates the concern of staff towards customers and their commitment to TQM.

TABLE 8

How do you assess the concern employees of ECG show to customers or you?

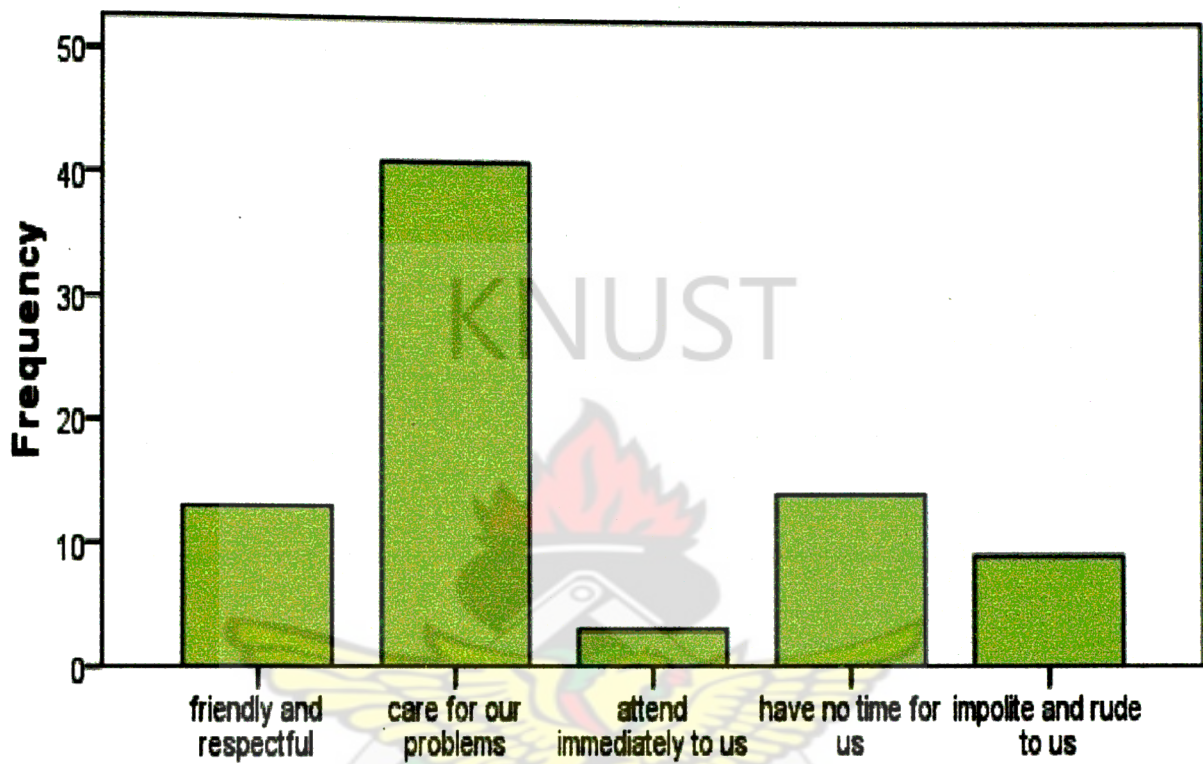
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid friendly and respectful	13	16.2	16.2	16.2
care for our problems	41	51.2	51.2	67.5
attend immediately to us	3	3.8	3.8	71.2
have no time for us	14	17.5	17.5	88.8
impolite and rude to us	9	11.2	11.2	100.0
Total	80	100.0	100.0	

From table 8, it is seen that 71.2% of respondents comprising those who said that ECG staff care for their problems, are friendly and respectful and attend immediately to their problems far outweigh those respondents that intimated that staff of ECG have no time for them and are impolite and rude to them which is 28.7%. This analysis goes to confirm that staff of ECG are committed to TQM. However more training is required to reduce the negative comments drastically.

The data is further processed into a graph for vivid representation as follows;

CHART 4

How do you assess the concern employees of ECG show to customers or you?



How do you assess the concern employees of ECG show to customers or you?

ASSESSING KNOWLEDGE OF TQM

From literature, failure to carefully plan a program before embarking on it can lead to false starts, employee confusion, and meaningless results. This is according to Stevenson

(2007). The table below illustrates staff of ECG consciousness of TQM. Questionnaire number 3 was used to ascertain this view.

TABLE 9

**Have you been given any education on Total Quality
Management as introduced by ECG?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	5	25.0	25.0	25.0
No	15	75.0	75.0	100.0
Total	20	100.0	100.0	

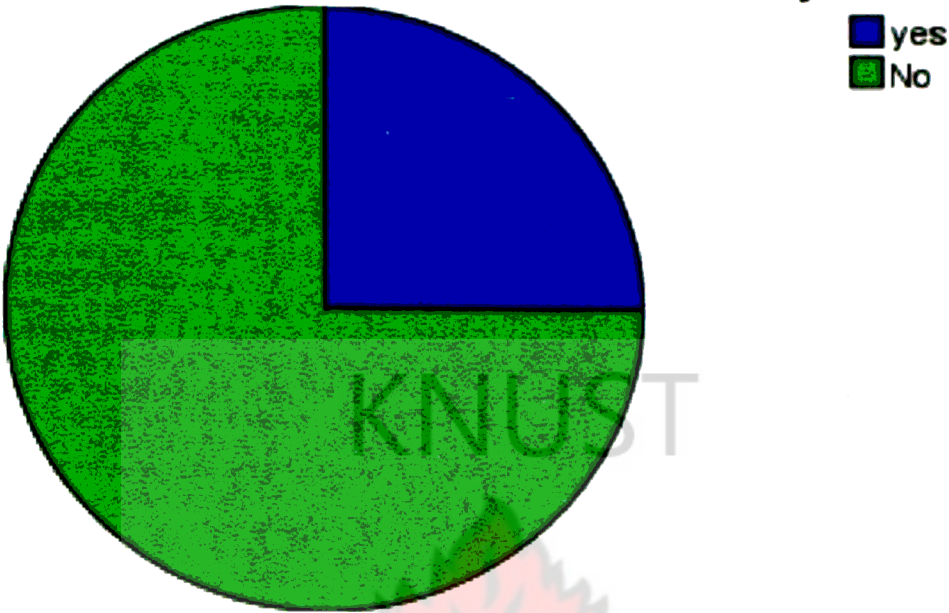
From the table above, it is noted that only 25% of respondents responded in the affirmative of their knowledge or having been educated on TQM. However, 15 respondents representing 75% said they have not been educated on TQM. This brings to mind the effectiveness of the strategy adopted by ECG in the pursuit of delighting the customer.

It is therefore worthy to note that for TQM to be successful there is no ending point to continuous improvement and regular education. Although TQM was embarked upon in 1994 by Electricity Company of Ghana (ECG), the sustainability of the program depends on the vigilance of both management and staff of the corporation.

The data is further processed and presented as a pie chart to give a vivid picture at a glance.

CHART 5

Have you been given any education on Total Quality Management as introduced by ECG?



ASSESSING KNOWLEDGE OF QUALITY CONTROL MEASURES

For any organization to exhibit excellent service delivery such an organization needs to put in place quality control measures to help achieve such an objective and it forms one of the strategies in implementing TQM. The researcher set out to find out what quality control measures are adopted and used by ECG and also whether the staffs are aware of such measures and are in fact committed to implementing the agreed measures. Questionnaire for ECG staff number 15(a) was used to solicit such information and the response gathered is interpreted by table 10 below as follows.

TABLE10

Is there any quality control measures put in place by management of ECG to ensure quality service delivery?

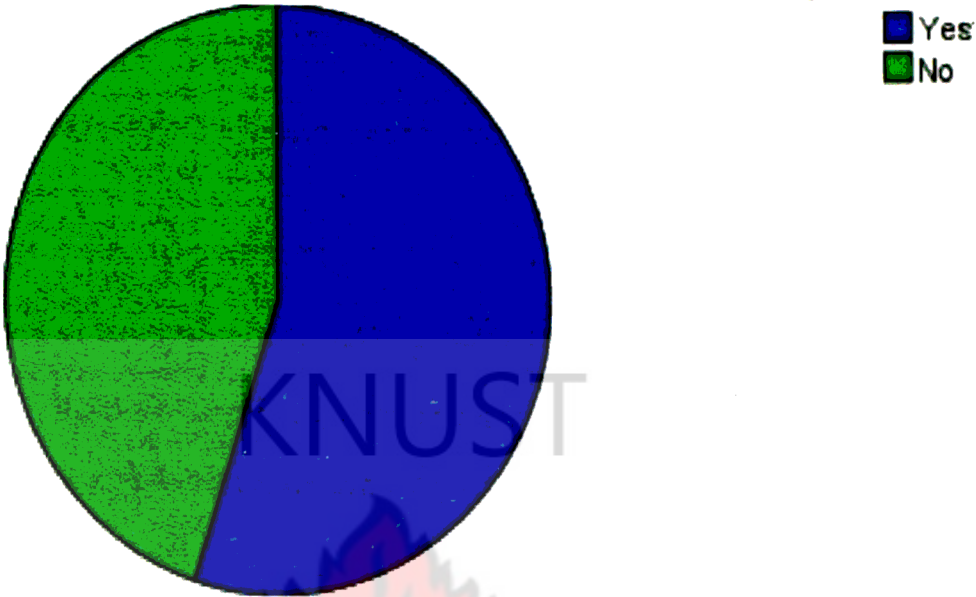
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	11	55.0	55.0	55.0
No	9	45.0	45.0	100.0
Total	20	100.0	100.0	

As observed from table 10 above, 11 respondents representing 55% said that indeed such quality control measures do exist and have been implemented by management. However, 9 respondents representing 45% differed and said no such control measures exist. For such group have no idea what such measures were.

However the majority comprising 55% gave some of the quality control measures as monitoring of field staff to give correct bills to customers, avoiding bill estimation, inspection and testing, maintenance of equipments etc. the data is further shown in a pie chart where the Yes represents 55% and No represents 45%. Below is the chart.

CHART 6

Is there any quality control measures put in place by management of ECG to ensure quality service delivery?



ASSESSING THE NEED FOR MORE WORKERS

The researcher gathered from staff questionnaire number 17 that many respondents advocated for the need for more workers to be engaged by management for various sections especially customer service, front line staff and field investigators. The respondents contend that it will help improve on service delivery to customers and also increase customer satisfaction. This is because although staff do care about complaints of customers, they are sometimes overstretched, powerless to do their utmost best where broad area such as billing section is concerned. The table below illustrates the above assertion.

TABLE 11

Do you think ECG needs more workers in your section?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	20	100.0	100.0	100.0

To drum home the importance of this assertion 100% of all respondents representing a frequency number of 20 staff, all supported the assertion claiming that overworked staff are prone to having unnecessary confrontation with customers which hampers good cordial relationship with the consuming public.

QUALITY MANAGEMENT AS SEEN IN THE VARIOUS SECTIONS OF ECG

Data collected under the above stated sub topic from staff of ECG as per the questionnaire number 4, gave the following findings;

Customer Service Section

- Regular checks on faulty meters
- Maintain standard voltage levels
- Welcoming customers problems and attending to them diplomatically

Faults and complaints section

- Prompt response to faults as reported by customers.
- Clean liners and proper maintenance of vehicles and other logistics.

Meter reading section

- Mass installation of meters at unmetered points
- Monitoring to curb system losses
- Ensure accurate meter reading meter reading and speedy of bills to customers.

Reconciliation Section

- Direct and guide customers to appropriate sections to reconcile payments.
- Issue proper receipts to customers
- Patience in discussing with customers on wrong billing
- Record proper data and analyze all complaints to forestall future occurrence.

THE APPROACH USED BY ECG TO EFFECT TQM IMPLEMENTATION

The researcher gathered that the following approach was used in effecting TQM at ECG;

- Organizing regular seminars for both senior and junior staff
- Formation of TQM coordinating teams to ensure effective implementation
- Educate workers on the need to make the customer supreme.
- Awarding jobs and major repairs on contract.
- Prompt attendance to faults and complaints.

The policies or approach outlined above was geared towards customer satisfaction. However literature have revealed for such a change in policy direction, there is a need to have time and fully conscientise staff to re- orient their mind sets before success can be achieved.

Although the right tools were used, for effective TQM, both management and staff have to be involved in every step of the way.

It was also revealed by staff that even though ECG has a quality manual only a handful of staff and management do have copies. All these leads to low consciousness of staff towards quality service delivery and their commitment to customer satisfaction.

In conclusion, although TQM still holds at ECG, its values are not being fully pursued practically by management.



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 INTRODUCTION

The study primarily concerned itself with assessing the Total Quality Management Strategies of Electricity Company of Ghana. It focused on the key areas like commitment of staff to the TQM strategies and satisfaction level of customers of the company and finally the researcher also looked at ways of improving the customer satisfaction.

In this chapter, the findings from the study are summarized and conclusions presented.

Recommendations for continuous improvement are made to enable the company improve its service delivery.

5.1 SUMMARY

Total quality management simply implies managing for the future and it involves a holistic approach which combines continuous improvement with the strategy of the company to ensure quality service delivery and customer satisfaction. It is clearly noted from the onset of the study that management's responsibility to quality is indeed prevalent; however the approach to the program will determine the success rate or the failure rate.

Indeed there is no one approach to implementing TQM, but the consistency with which one attaches to the values of the program, which will lead to enhanced performance,

satisfied customers and enable the company remain competitive in a global economy. It is further noted that Electricity Company of Ghana has these among other problems to address; they are system losses, obsolete equipment, illegal connections, low capital base and low tariff rates.

The introduction of Total Quality Management concept which seeks to improve on quality and the lot of customers by solving these problems was therefore timely and very relevant.

The introduction of TQM philosophy has yielded some positive impact on workers attitude to work and customer satisfaction.

The whole study was chaptered into five with the first chapter concentrating on general introduction and background of the study.

Chapter two reviewed relevant literature on the topic and the researcher having gone through these sources became enriched with knowledge about the topic of study and concluded that although all the authors like Juran, Deming and Crosby looked at the topic from different perspectives, they however hold a common fact that customer satisfaction is paramount in goods and service industry.

It was with good intentions to assess the customer satisfaction and commitment of staff to TQM strategies that the study sent out 34 items to both customers and ECG staff consisting of 17 items each on each set of questionnaire.

The responses gathered was analyze in chapter four with SPSS programme despite difficulty in getting responses since most staff are not willing to give certain information which may be deemed confidential.

From the responses gathered, it was realized that customer dissatisfaction in terms of power supply, apologies before voluntary power cuts, response to customer complaints were very high , however bill delivery, and commitment of staff to TQM strategies was quite appreciable. On the knowledge of TQM a higher proportion had no idea and hence it is attributed to the fact that it has been a while since TQM was introduced in ECG and hence more refresher courses are advocated for the staff.

5.2 CONCLUSION

In conclusion, TQM is managing for the future and the principle of continuous improvement is a lifelong policy that should be pursued.

In fact, Deming put it that once TQM is successful, then the battle has just began since all efforts must be put in to sustain the success in order to reap the results of customer satisfaction which may not be immediate but takes time to bear fruit. TQM enhances general performance, quality service delivery, satisfied customer, hence to remain competitive in a global economy, utility companies must adopt Total Quality Management to remain competitive and gain the advantages thereof.

5.3 RECOMMENDATIONS

The introduction of Total Quality Management has although yielded positive results in areas like bill delivery and power supply, however, the dissatisfaction amongst the

consuming public in terms of information flow to general public before voluntary power cuts and customer complaint is quite high. The researcher therefore recommends the following to staff and management of ECG.

- There should be regular refresher courses organized for staff and since the program involves change process, then the re-orientation of the staff towards quality management practices and ensure that staff have the feel of owning the program to make it successful.
- To avoid frequent power cuts and fluctuations, old cables, undersized and overstretched transformers need to be renovated and new ones procured to curb such occurrence.
- Educational campaign for customers should be intensified for the consuming public to become aware that of the possible effects of illegal connections, reconnections , efficient use of power and the need to make complaint whenever faced with any faults on their fixed and prepaid meters. When this education is effectively carried out the system losses and loss of revenue will be curtailed.
- Many staff complained of their willingness to attend to customers promptly, however in most cases they are few at their various sections and overworked. The researcher therefore recommend engaging additional staff for busy sections like front line staff and customer service points and ensure clear job description to make optimum use of the human resource base of the company.
- It is also recommended that employees of ECG be made part of decision and policy making. Staff should be well motivated to increase total commitment in work performance by providing such motivational packages like canteen services,

rewarding hardworking staff, end of year bonuses and infrastructure and facility facelift.

- The management of ECG should liaise with the Utility Service Commission in determining tariff levels taking into consideration the plight of consumers.
- The researcher recommends that any future change process should be linked to the organizations strategy and involve the companywide coordination in implementation.
- The researcher gathered that although the corporation has quality manual, it not every staff that has a copy, hence to imbibe quality consciousness into the staff, it is recommended that every staff is henceforth given a copy of the corporations quality manual to serve as a constant reminder on their performance standards.
- It recommended that management see the implementation of TQM as a continuing effort and not a quick fix.

The researcher hopes that when the above recommendations are taken seriously, Electricity Company of Ghana and other utility providers would attain a higher customer satisfaction which will emanate from quality service delivery.

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APPENDIX A

QUESTIONNAIRE FOR CUSTOMERS

Dear customer,

This questionnaire seeks to collect data about ECG service to their customers in the provision of utility service. The information collected will be used for academic purpose only. Please take some time to answer the questions that follow. Please tick or provide your own answers where applicable. Thank you.

1. Where do you belong in the use of electricity?

- a) Hotel service b) medium/small scale business
- c) Domestic/ Residential d) industrial

2. a) How do you assess the power supply?

() () () () ()

Excellent Good Fair Poor Very bad

b)

.....

.....

3. How do you assess current?

() Satisfied () Fairly satisfied () Dissatisfied

4. a) How satisfied are you with the corporations' education campaign on safe and efficient use of electricity?

☐ Satisfied ☐ Fairly satisfied ☐ Dissatisfied

b) Why the answer in (question (a) above.

.....

.....

5. How do you assess announcement before voluntary interruption of power and apologies after interruption of power.

☐ Satisfied ☐ Fairly Satisfied ☐ Dissatisfied

6. Response to customer complaints on faults and repairs.

a) Immediate b) Delayed with excuse c) Wait for longer days

d) Don't care

7. What suggestions do you have generally concerning improving of faults/ repairs by the

Corporation?

.....

.....

8. How are your charges? ☐ Meter ☐ Fixed charge

9. Satisfaction levels in terms of meter reading

☐ Very Satisfied ☐ Satisfied ☐ Fairly Satisfied

☐ Dissatisfied

9b) Why the answer in question (9) above?

.....

.....

10. How are bills delivered? ☐ Monthly ☐ Bi-monthly ☐ Unpredictable

11. a) Are you satisfied with accuracy of bill? ☐ Yes ☐ No

b) If no why?

.....

.....

12. (a) Do you think tariffs on power are a reflection of general price increase?

☐ Yes ☐ No

(b) If no why?

.....

.....

13. (a) Is there any revenue and complaints office ECG in your area?

☐ Yes ☐ No

(b) If no why?

.....

.....

14. How do you assess the concern employees of ECG show to customers or you?

() Friendly and respectful () Care for our problems () Attend immediately to us

() Have no time for us () impolite and rude to us.

15. How do you assess the infrastructure of or properties of ECG?

() Needs a lot of improvement () Well looking and attractive

() Needs to be maintained regularly

16. What are some of the corporation’s activities that need commendation?

.....

.....

17. What general suggestions have you to help the corporation to improve their services to you as a customer?

.....

.....

.....

APPENDIX B

QUESTIONNAIRE FOR ECG STAFF

This questionnaire seeks to collect data about ECG service to their customers in the provision of utility service. TQM is providing quality service and continuous improvement. The information collected will be used for academic purpose only. Please take some time to answer the question that follow. Please tick or provide your answers where applicable. Thank you.

1. (a) Gender male (☐) female (☐)

(b) Qualification

(c) Section or Department

2. For how long have you worked with ECG?

3. (a) Have you been given any education on total quality management as introduced in ECG?

Yes (☐) No (☐)

(b) If yes to 3(a) what are some of the areas that TQM seeks to address in the Corporation's activities?

4. How is TQM seen in the work you perform?

.....
.....

.....
.....
5. Do you come into contact with the external customers of ECG in your day to day work?

Yes () No ()

6. If yes, how do you satisfy them?

.....
.....
.....

7. If no, how do you assist in satisfying them?

.....
.....
.....

8. What do you think are some of the policies management has put in place to ensure effective implementation of TQM?

.....
.....

9. What other policies would you want management to put in place to help in TQM implementation?

10. What major changes have you seen in ECG with the introduction of TQM?

.....

.....

11. Suggest ways you can contribute to customer satisfaction?

.....

.....

.....

KNUST

12. When do you report to work and when do you normally close from work?

13. What is the channel of communication in ECG?

14. How do management introduce any change process into the company?

15. (a) Is there any quality control measures put in place by management of ECG to ensure quality service delivery?

Yes () No ()

(b) If yes, what are some of the control measures?

.....

.....

16. Does ECG have a quality service manual and do all staff have copies of these manuals?

17. Do you think ECG needs more workers in your section? Yes () No ()

If yes, why.....

