KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,

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Assessment of Quality of Construction Professional Project Services Received By Small Building Contractors in Ghana.

By

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College of Art and Built Environment

in partial fulfilment of the requirements for the degree of

MASTERS OF SCIENCE

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DECLARATION

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

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ABSTRACT

The fundamental needs of every client in the construction industry has been quality. By way of that, construction projects that are able to be accomplished with distinguishing quality will certainly empower to pleasure their clients. Owing that the industry's setting has wadded behind other sectors in enlightening the quality, it has also been a key provider to the economy of any country. Hence, professionals however faces the delinquent of high disintegration, variability, low efficiency, poor excellence and lack of standards and ethics. The aim of this study was to assess Quality of Construction professional project services received by small building contractors in Ghana. Questionnaires were directed to a sample of 44 D3K3 and D4K4 contractors and other professionals using random sampling approach. The Statistical Package for Social Science (SPSS Version 21) was used to analyze the data obtained and rating were used to assess the specific objectives of the study. Similarly, this study identified some elements of service quality which were ranked according to the responses obtained from respondents as professionals in these firms are consistently courteous to contactors. Modern looking equipment such as computers and other facilities to work with, professional quantity surveying firms understand the specific needs of contractors, working hours are convenient to contractors and sincere interest in solving contractors' problems were also identified. Also, some quality awareness of construction professionals level according to respondents on the quality of service received by their clients includes contractors are committed to quality in the organization, contractors provides a leadership role in quality management initiatives and critical resources essential in implementing service quality initiatives are made always available. Finally, the study recommends that, beneficiaries of projects when completed should be educated on the benefit they would derive from it and hence they should abstain from low quality construction products and services and welcome projects that would come their way in their various communities.

Key words: Contractors, Service, Quality, Professionals, Construction.

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DEDICATION

This thesis is dedicated to my family and my husband, Mr. Isaac Otuo Serebour for his support and encouragement.

CHAPTER ONE INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The servitisation of the construction industry has fashioned a new-fangled demand for understanding and accepting service quality and how service quality can be unhurried in the industry (Johansson, 2012). The author continued that services are different from products in numerous ways, not the least in the way quality is evaluated by the end users (customers) in the construction industry and hence, services are not only what the service delivers that is significant but also how it is delivered.

Over the past decades the construction industry has knowledgeable a move in the product-service continuum moving from wholesome product aids to adding services and complete solutions (Johansson, 2012). However, escalating race and rapid deregulation have steered many service in the construction industry to seek ways to distinguish themselves (Johansson, 2012). One stratagem which has been related to success in this industry is the delivery of high service quality as a prerequisite for success in all service industries (Gunning, 2000). Many construction-oriented firms have been gauging service quality to gauge how well they are meeting customer needs. These measures according to Gunning (2000) are often used interchangeably between both constructs indicating a failure to recognise the difference between them.

Cronin and Taylor, (1992) postulated that there is a great deal of similarity between both concepts, however there is a dissimilarity, which parts them. This difference is important to managers and professionals in the construction industry because service providers need to know whether their objective should be to have clients who are satisfied with their performance, or to deliver the maximum level of the perceived service quality. For service quality to be efficiently measured in the construction

industry, Mahmood (2008) accentuated that the ability to get the job done right the first time, which in turn cuts costs and perpetually leads to proprietor satisfaction in the industry.

It is fascinating to note that even from the perspective of the dictionary, quality has an assortment of meanings, all of which relate to each other but which vary to some extent. These choice of views also atlases to the factual world, where projects struggle to balance expectations and outcomes, and seek to settle on an appropriate balance of often challenging interests with respect to whether a delivered product or service is sufficient to satisfy the client's quality standards (Omachonu and Fischgrund, 2014).

As a result of the aforementioned assertions, the prospect of receiving quality service from housing construction relies on exaggeratedly used marketing terms such as customer care and customer focus.

To this far, service quality is not given high exception in the other industries as it clamps the key to survival, competitiveness, customer gratification and customer reliability. The study seeks to access the of quality of construction professional project services received by small building contractors in Ghana and how this can impact on standards of service to clients and the actual service delivered to customers.

1.2 PROBLEM STATEMENT

In implementing construction project, accomplishing quality among others is the eventual objective of all participants (Kissi *et al*, 2014).

Knowing that quality affords the foundation for prevailing communities and social inclusion. This is somewhat not the case in Ghana where there is massive housing challenges (Ghana Statistical Services Report, 2011). In Ghana poor housing delivery

is a national headache. In addition, housing problems are perceived as both qualitative and quantitative (Ghana Statistical Services Report, 2011). This together suggests the need to review the service quality rendered to clients as far as housing development delivery in Ghana is concerned.

Amoah *et al.* (2011) mutually hypothesizes that contractors perform awfully regarding quality of construction due to poor managerial skills, lack of technical and professional staff as well as poor skilled and unskilled labour. A typical example are the affordable housing project constructed half-way at Ayigya in the Ashanti region and also a collapse of a restaurant at the Top-High GOIL filling station in Kumasi near Bomso.

Conferring Johnson *et al*., (1988) cited in Mutua (2009), awareness of service quality has acknowledged almost no hypothetical measurement attention, notwithstanding the fact that it is thought to be of great importance in the success of service delivery in the construction industry. Most researchers and studies conducted have been one-sided and that is prejudiced towards customers and almost nothing on the service quality. Although some objective trials of service quality could be engaged as they are executed, such as number of errors in filling an order, time spent waiting and the like, according to Zeithaml (1990) cited in Mutua (2009), it becomes quickly apparent that such measures do not sufficiently capture the actual test of service quality of whether the customer was satisfied of the service delivered. A study conducted by Ahadzie (2007) revealed that there is lack of studies on housing end-users satisfaction as far service quality is concerned in the Ghanaian construction industry. Hence, the need for this study to assess quality of professional project services received by small building contractors in Ghana.

1.3 AIM AND OBJECTIVES

1.3.1 Aim

The aim of this study is to assess Quality of services rendered by small building contractors in Ghana by construction professionals

1.3.2 Objectives of the research

The core intents of the research are as follows:

i. To conduct literature review into service quality; ii. To ascertain the key elements of service quality in the construction industry; and iii. To assess the service quality cognizance of small construction firms in the

Ghanaian construction industry.

1.4 RESEARCH QUESTIONS

1. What is service quality?
2. What elements of service quality in the construction industry are delivered?
3. To what extent do you assess the quality cognizance small construction firms in the Ghanaian construction industry?

1.5 JUSTIFICATION OF THE STUDY

Within establishments in the construction industry, service quality with reputes to customer pleasure evaluations can have influential effects. Emphasis of personnel on the significance of gratifying clients prospects in the industry. When these evaluations dip, cautions of difficulties can affect transactions and profitability. When a make has dependable clienteles, it advances an optimistic word-of-mouth publicizing, which is mutually free and extremely effective. Enlightening service quality is of dominant

significance to many establishments including the construction industry for a number of reasons. It is perceived to be the riposte in attaining a competitive edge, assisting in increasing profitability, and is regarded as a foremost strategic variable in developing and preserving prolific and affluent relationships in different areas of the construction industry.

The study when successfully carried out is expected to expand the frontiers of knowledge with respect to how service quality on housing projects will meet client contentment and vice versa. It will also help contractors to improve quality based on customer awareness.

The study will also give other scholars an intuition which will act as a spur to rouse further research while at the same time assisting other sectors of the economy where quality of service delivered is supreme.

1.6 SCOPE OF THE STUDY

The research will focus on assessment of quality of construction professional project services received by small building contractors in Ghana. The research will focus explicitly on building contractors. D3/K3 contractors, D4/K4 contractors, and consultants in the construction industry in Ghana. The study will limit its geographical scope to the Ashanti Region within the Kumasi Metropolis.

1.7 RESEARCH METHODOLOGY

The research data was congregated from both primary and secondary sources. Primary data would be collected through the use of structured questionnaires which were intended and administered to contractors, quantity surveyors, structural engineers and other stakeholders in the construction industry.

Also, primary data were extracted from relevant reports, articles, textbooks, newspapers, journals and documents within the industry and elsewhere.

Purposive simple random sampling method was used in selecting the sample sizes from various actors and stake holders engaged in construction activities in the Ghanaian construction industry. However, due to privation of time and resource constraints, a comparable number of construction professionals were sampled for collection of research data. Contrariwise, the data collected was analysed using Statistical Package for Social Sciences (SPSS) software and Microsoft Excel 2013. This will assist in evaluating the responses received from the respondents to the questionnaire.

1.8 ORGANIZATION OF THE STUDY

The thesis will be plan in five chapters as shown in the diagram below:

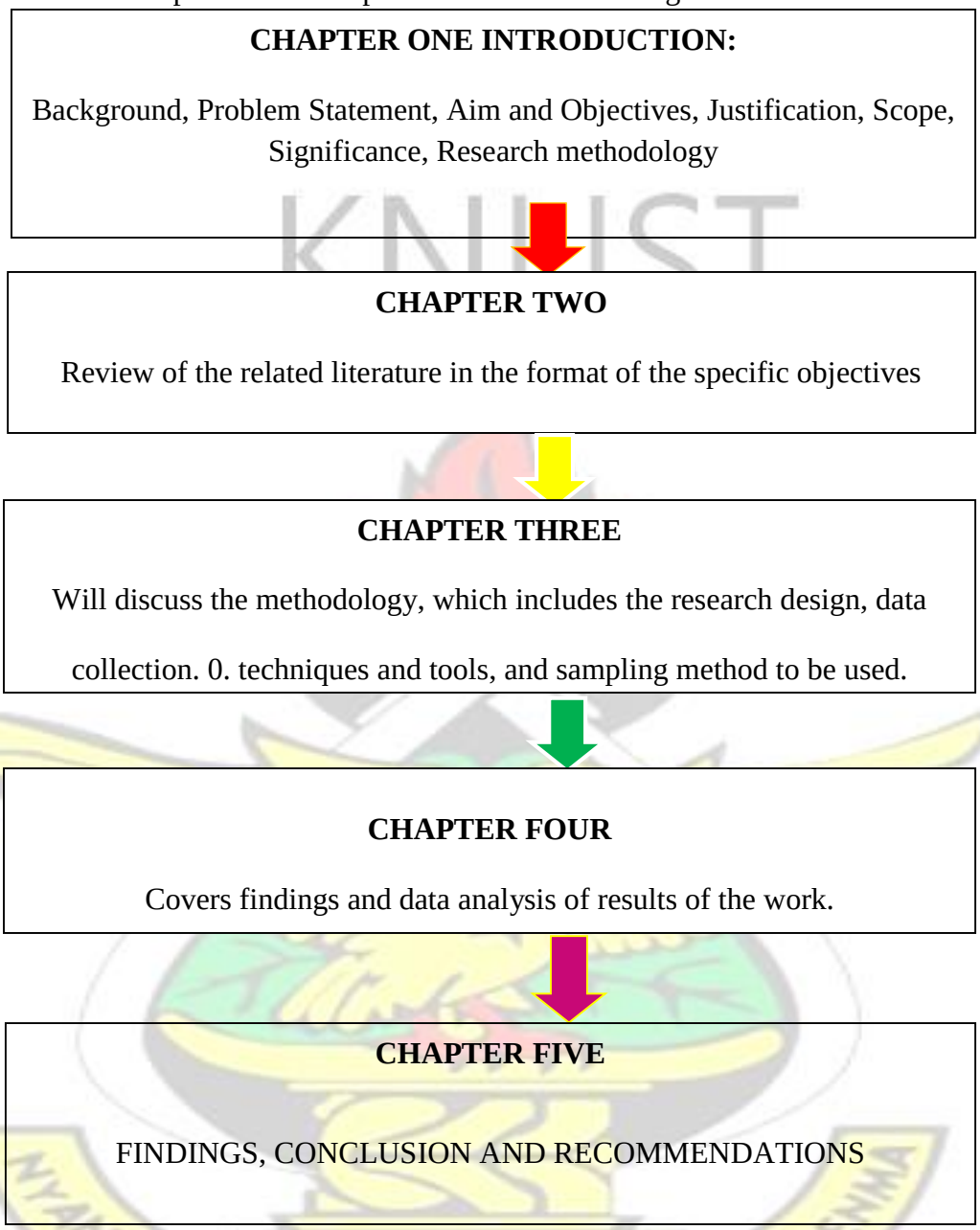

Figure1.1: Show a Summary of workflow for the Study

CHAPTER TWO LITERATURE REVIEW

2.1 INTRODUCTION

Consistency in quality of service in the design and construction of building projects is an imperative feature in the successful administration of building projects that ensures the success of client's necessities (Achi *et al.*, 2007). Bestowing to Abdul-Rahman and

Berawi (2002) uttered that, service quality in the construction industry comprises the quality of all which includes; quality control, quality assurance, quality improvements, and quality standards. In Ghana for instance, efforts have been made by the Government and its reputable agencies such as the Ghana Institute of Construction (GIOC), Ghana Institute of Civil Engineers (GIOCE) Institute of Civil Engineers (ICE) and the Ghana Institute of Surveyor (GIS) to enforce quality practices in the construction industry (Amoah *et al.,* 2007*).* These evidences has led to the adoption of the International Organization for Standardization's (ISO) 9000 series to ensure proper quality management as well as service quality in the industry.

Notwithstanding the aforesaid proclamations, the construction industry in Ghana is being regarded as one with poor quality prominence compared to other sectors (Windapo and Martins, 2010). The authors further posited that although many reproaches have been focused at the construction industry for substandard workmanship especially in the part of technology, trained manpower, design quality, durability, life span and sustainability of residential homes, as well as lack of systematic setting of standards, yardsticks and prioritisation of client needs (Windapo and Martins, 2010).

Hence, this chapter bequests a critical outline of service quality rendered by small contractors in the Ghanaian construction industry. A review of various elements of service quality such as service value and perceptions are considered to understand how they are instrumental in realizing service quality on housing. It is therefore tailed by a brief presentation of the contractor's profession in Ghana. Subsequently, a critical look at the purposes and functions of a construction contractors are presented and why it is important for knowledge quality management in professional firms such as D3/K3 and D4/K4 firms.

2.2 QUALITY DEFINED IN THE CONSTRUCTION INDUSTRY

With respect to every consideration of quality matters in construction, three main common terms facts which includes objective, definition and discussion. These together means quality in the construction industry.

There is therefore no clear-cut definition of quality, and though many of the forerunners of quality drive and experts such as; Deming, Juran, Crosby, Feigenbaum, Taguchi and others who had their peculiar distinct characterizations of quality. The ISO 9000 commonly defines “quality” as “the notch to which a set of essential features accomplish necessities” as cited in (Tricker, 2008). This however means that, in the construction industry, quality appears to be achieved whenever the needs of all those entities and individuals involved in projects and provision of services, such as consultants, constructors, project clients, and other related stakeholders, are contented. Undeniably, understanding the conceptions of quality is indispensable for a construction professional in executing quality services as strategic tool to gain assistances from the successful application of a quality structures.

In the context of construction according to Forsythe, Perry. (2008), defines quality management as that aspect of the overall management function that regulates and gears the quality policy, and quality system as the organisational structure, responsibilities, procedures, processes and resources for implementing quality management. Hoyle (1997) also postulated that the construction of desirable quality projects does not transpire by chance, but rather it must rely on the use of a quality system as the management suite to meet all of the time-honored quality goals. Therefore, the core of understanding quality in construction recounts to accomplishing quality in the

construction professional performance through the implementation of a quality management system.

Thorpe and Sumner (2004) supported this concept and describe a quality in firms as a formal statement of an organization professional policy, management responsibilities, processes and their controls. These reflects the most real and effectual techniques to meet the needed potentials of those it serves clients, whilst accomplishing its own key business objectives Thorpe and Sumner (2004). It is therefore largely true that, in the global construction industry, one of the aims of every construction firm is to win the trust and acknowledgment of clients as a means of gaining industry keenness and making greater profits. It is therefore necessary that this should also be one of the main reasons for quality of service delivered to clients in the industry to become a prime focus in every construction firm.

Quality has a number of components, and a focus on only one aspect may result in a loss of clients (Center for the Advancement of Process Technology 2011). The application of a quality systems in order to deliberate the significant features of the quality, is one of the key quality concepts reviewed by the writers on quality, these quality concepts including the following:

- a management commitment to reflect that quality issues must start from the top;
- management systems to guarantee reliability of operations;
- the use of statistics as the tool to run and evaluate processes as efficiently as possible; team work; and
- Training to provide teams with the required knowledge of management systems, statistics, and improvement methodologies (Ibid 2011).

2.3 THE CONCEPT OF SERVICE QUALITY IN THE GHANAIAN CONSTRUCTION INDUSTRY

The term service quality has a diversity of hypothetical definitions however, Parasuraman *et al.* (1985) emphasized that the degree of service quality is the fissure or gap between the consumers expectation level and actual experience encountered, which in this instance, extends to opinions formed before, during and after construction. While the majority of firms are ardent to afford product and service quality, many fall short simply because they do not have an accurate understanding of what clients anticipate from them (Zeithaml *et al.* 1990).

Service quality has been defined as client's decision or assertiveness relating to the overall excellence and superiority of the service (Zeithaml, 1988). A number of scholars established that the concept is multi-dimensional as far as the industry is concerned, while it appears that there has been no consensus regarding the number and the nature of the measurements (Parasuraman et al., 1988). The most common definition of service quality is the comparison clienteles make amid their outlooks and perceptions of the received service (Parasuraman et al, 1985).

However, service quality is often measured using servqual instrument, developed by Parasuraman et al. (1985; 1988). This consists of twenty-two items which amount five service quality essentials namely, tangibles, reliability, responsiveness, assurance (familiarity and politeness of employees and their capacity to stimulate trust and selfassurance), and empathy.

When the quality concept is measured from the perspective of construction and service industries, it is practical that it is very challenging to derive a standard quality concept in service industries due to the intangibility and concurrency characteristics of the service (Meyer . and Schwager, 2007). Service quality can be termed briefly as a

spectacle measured within the framework of clients' prospects and acuities about the service offered (Yilmaz, 2011). Hence, perceiving the same service as high quality by a client and as low quality by an alternative client based on the services delivered by the professionals. In other words, service quality depends on the client's awareness and perceptions (Meyer and Schwager, 2007).

The expectations of clients and acuities of service will regulate the quality of service. If the provided service does not meet or exceed the expectations of the customer, then the service quality will be perceived to be low; if it does exceed the expectations, then the service quality will be perceived to be high (Akbaba and Kilinc, 2001). Based on this approach, service quality can be defined as the difference between the client's anticipations about the service performance prior to the service delivery and the client insights of the service delivered (Asubonteng *et al*., 1996).

Parasuraman *et al*., (1985) termed service quality as the appraisal of anticipated service and apparent service performance and developed the servqual dimension system to measure the quality of service as such. Whereas quality of service is distinct by Grönroos (1984), as the notch of being able to chance the clients' potentials and to normalize their requirements and wants. Kandampully (1998) contributed a comparable delineation of satisfying the client's outlooks with the service delivered. On the other hand Collins (1996) well-defined service quality as the contrast of performance with ultimate standards.

Measurement of quality of construction professional project services received by small building contractors constitutes the first phase of quality of service enhancement and improvement process. If a contractor is able to gain entry to precise information about the present quality level of the industry, the necessary steps taken on what needs to be

done more efficiently (Abdel-Razek, (1998). A construction contractor that aspires and desires to improve the quality of their services should primarily determine its locus and position and then set out what needs to be done in order to advance the quality of service in the respective firm of operation.

Although the concept of service quality have been studied by many researchers' for several decades, there is no consensus about the conceptualization of service quality (Cronin and Taylor, 1992) as different researchers has focused on different aspect of service quality. Reeves and Bednar (1994), note that there is no universal, parsimonious or all-encompassing definition or model quality. Clearly, as Rodgers *et al.*, (1993) concludes that "It is apparent that there is a little consensus of opinion and much disagreement about how to measure service quality". Despite of all the debates, many researchers were traditionally agreed and accepted that service quality is a comparison between expectations with perceptions of performance.

Bitner and Hubbert (1984) defined quality as the consumer's overall impression of the relative inferiorit or superiority of a firm by comparing the service user expectations with actual performance (Groonroos, 1984; Lewis and Booms, 1983). Lewis and Mitchell (1990) defines service quality as the extent to which a service meets customer's needs or expectations. Been it believe that customer expectations are about service delivery that function as standard or reference points against which performance is judged (Zeithaml and Bitner, 2001).

Stuart and Tax (1996) have found that firms take little effort in planning for service quality. The costs associated with poor service quality and it's planning results in lower profits as a portion of the "cycle of service failures" and evaluation of quality planning

technique or quality function deployment suggest suitable modifications which would prevent service failures.

Also, the evaluation and monitoring of service quality has become a vital survey for construction managers and contractors. Hence, the central service quality skeleton shows that consumers consider both their own expectations and service provider performance when evaluating service quality in the construction industry. The relative breakdown to assess the service properties and diagnostic usefulness and also reviews the problems in the reading of service quality measures and presents the additional indicative meaning imputed to service quality scores and has developed extent standards (Brown and Bitner, 2001). Moreso, the vital standard measurements of quality of service include dependability, responsiveness, guarantee, understanding and tangibles as operationalized by the now well-known servqual survey instrument (Parasuraman et al., 1988).

2.4 ELEMENTS OF SERVICE QUALITY IN THE CONSTRUCTION INDUSTRY

It is very challenging to measure the quality of service because of the variances in the significances attributed to quality by the individual client (Ruetzler, 2005). Since services are disbursed by clients at the time they are built, a client is not only interested in the quality of the output that is produced as a result of invention as in the case of construction product quality, but also concerned in the quality of other elements of service with which the client interacts during the entire production process. This feature of the service has introduced the concept of service quality dimensions.

Scholars have proposed innumerable elements in order to determine the quality of the service delivered and tried countless methods. However, Parasuraman et al.(1988) constructed the service quality gap model in their study and recognized ten common

elements of service in order to determine the difference between client outlooks and acuities.

Parasuraman et al. (1988) gradually smeared the ten elements encompassed of physical features, reliability, responsiveness, competence, courtesy, credibility, security/safety, convenience, communication, and understanding the client on four different service sectors developed the SERVQUAL scale which consists of twenty-two propositions in five dimensions. These measurements according to Parasuraman et al. (1988) as follows;

2.4.1 Assurance

The employees are courteous, knowledgeable and able to create a sense of confidence in the clients.

However, the five dimensional construct of Parasuraman et al. (1988) happens to be the most commonly acknowledged and most lengthily used. Assurance has been defined as the "employees" knowledge and courtesy and the service providers ability to inspire trust and confidence" (Zeithaml *et al*., 1996).

According to Haupt (2004), this dimension may differ from one industry to the other. In some it may be very important, in others it may not. Andaleeb and Conway (2006) observed that assurance may not be so important relative to other industries where the risk is higher and the outcome of using the service is uncertain. They concluded that in the construction sector, for instance, assurance is a very much important dimension to clients assessing the field of operation.

2.4.2 Understanding

The firm puts itself in the clients' shoes, pays individual responsiveness to clients, and shows personal interest in clients.

Understanding has been found to be more suitable and important in enhancing service quality in industries where building relationships with clients and clients ensures the firms survival as opposed to "transaction marketing". (Andaleeb and Conway, 2006). Thus the argued that in quick service restaurant setting, the client look for quick service and whether the queues at the counters are long and in that context empathy may not be so important. (Haupt, 2004).

Empathy, according to Haupt (2004), is treating the client as if he is unique and special. It is defined as the caring, individualized attention the firm provides its clients (Zeithaml et al, 2006). Like the other dimensions, the importance of this factor differs from industry to industry.

2.4.3 Reliability

The capacity to afford the assured service in an exact and dependable manner.

Reliability is about the organization keeping its word. It is defined as "the ability to perform the promised service dependably and accurately" or delivering on its promises" (Zeithaml et al, 2006)

A firm is known to be reliable if it takes time to communicate to its clients how long it would take to get answers or have their problems dealt with (Haupt, 2004).

2.4.4 Responsiveness

Enthusiasm to aid the client and to provide swift service.

2.4.5 Tangible Features

Appearance of buildings, tools and equipment, and personnel during the service delivery of the firm.

Tangibles is defined as the physical appearance of facilities, equipment, and staff and written materials. Tangibles are used to convey images and to signal quality (Zeithaml et al 2006). Hayes (1997), states that some quality elements are generalized across many services, but some will apply only to specific type of services and it is necessary to understand quality measurements to be able to develop measures to assess quality of construction professional project services received by small building contractors.

2.5 THE CONCEPT OF CONTRACTORS AS PROFESSIONAL IN CONSTRUCTION

Professional project management as used in this context refers to the scenario where an independent entity, be it an individual or a consortium, is appointed besides the design team to take responsibility for the management of design and construction of project from conception to completion. In this respect, Goodman (1981) notes that the fundamental concept on which project management is based is that a single individual. The project manager is accountable for the success of a project. Thus, within this context the PM could be described as the individual who has the authority and responsibility for the management of both design and construction of MHBPs from inception to completion and who works primarily in the interest of the client and/or promoter of the development.

Admittedly, what should constitute the appropriate professional background of the PM remains a debatable subject. According to the Chartered Institute of Building, the PM could come from any professional background but would also need to have the requisite skills and competence in managing all aspects of projects from conception to

completion. Some authors have also noted that while the PM could come from any background, generally the consensus is the need to possess some degree of technical skills relating to the project at hand (Othman and Owen, 2001).

The contractors explained that there was a lack of qualified construction professional with basic knowledge in construction works (Laryea, 2010). There is also a problem with supervision and managerial aspects of construction work in Ghana (Laryea, 2010). Contractors complained that many workmen (artisans) lack the necessary training for carrying out their work. In current practice, "somebody just gets up and says I am a mason". There are no criteria or qualifications or a barrier to entry into artisanship.

Alternatively, others contend that any construction related professional could be a PM provided a good overall knowledge and experience of the industry is demonstrated (Owen, 2001). While the debate would definitely continue to be contextual because of the variety of stakeholder interest involved, it is agreeable that some form of postgraduate training in project management and membership of an appropriate professional body is an advantage (Othman, 2001).

Indeed the emerging growth of the Project and Procurement Management Committee in construction is now a universal phenomenon (Walker, 1997). The concept which first started in the United States of America (USA) in early 1950s and later Western Europe early 1960s is now practiced the world over. This expansive growth is reflected in the international nature of the membership of the Project Management Institute (PMI), USA and the International Project Management Association (IPMA), Europe (Austin, 2000). In developing countries as well, evidence of the recognition of the PPMC is manifest in the rising numbers of educational institutions offering construction project

management courses and papers recently published on the subject matter (Liu and Fellows, 2005; Ahadzie *et al*., 2008).

Admittedly, Project and Procurement Management Committee is still evolving in developing countries but researchers and practitioners are strongly convinced that the concept has come to stay as a most plausible approach for achieving improved performance in management of construction projects (Owen, 2001).

2.5 SERVICE QUALITY COGNIZANCE OF SMALL CONSTRUCTION FIRMS IN THE GHANAIAN CONSTRUCTION INDUSTRY

Construction infrastructure projects are one of the most important factors in supporting the social economic development in the country. It could generate downstream economic activities and completely enhance productivity and competitiveness in the construction industry.

The small construction firms are the core of the construction industry development and play a main role in the urban and rural building. With the professional subdivision, the increasing of professional ability, and the improvement of project sub-contract system in the construction industry, the roles of the Industry Cluster of small construction firms will become more and more obvious, including stabilizing economic development, enlarging employment rate in the towns, and promoting technology innovation (Yonggui, 2003).

Contractors in Ghana are grouped into eight categories (A, B, C, S, D, K, E and G) according the type of works they carry out. These are;

- Roads, Airports, and Related Structures (A);
- Bridges, Culverts and other Structures (B);
- Labour based road works (C);

- Steel bridges and structures: construction rehabilitation and maintenance (S);
- General building works (D);
- General civil works (K);
- Electrical works (E); and
- Plumbing works (Ahadzie *et al*., 2008).

In each category, they are grouped into 4, 3, 2 and 1 financial classes in increasing order. In addition, Dansoh (2005) notes a combined category of AB for road contractors. According to Dansoh (2005) Class 4 contractors can tender for contracts up to $75,000; class 3 up to $200,000; class 2 up to $500,000. Class 1 take contracts of all amounts.

The research focused on projects undertaken by category D contractors, together with categories E and G being usually engaged as sub-contractors to this main contractor for general building works. Categories E and G contractors act as main contractors when the work is of a specialized nature. The industry is dominated by large number of small and medium-sized firms, that is, classes 3 and 4, especially in the categories D groups, E and G. This is mainly because such firms are able to register as little equipment as possible.

Mostly, they are sole proprietors, (few cases of partnerships), and are characterised by high attrition rate. This is because they are highly influenced by the boom and slum nature of the industry in Ghana. They are the least organised and because they lack the resources to employ and retain very skilful labour, their performance is usually below expectation and they have often by accused of producing 'shoddy' works. Because there are often more jobs within their financial class than those above their limits, and because they form the largest group, their performance impacts greatly on the performance of the industry. Because of this, the classification by the Ministry has been criticised as

being too general and obsolete with the registration criteria, list of contractors and monetary thresholds not regularly updated (Eyiah and Cook, 2003;

World Bank, 1984).

The two upper classes (D1 and D2) are more organized and hence more stable, taking on both bigger and smaller works. However, these firms (especially the D2 firms) do not always employ the very qualified workers. The Ghanaian-based foreign contractors are able to do this and hence performance better. Miles and Ward (1991) notes that because of the poor performance of Ghanaian local contractors most of the nation's major projects are usually awarded to foreign contractors.

2.6 LEVEL OF SATISFACTION SMALL CONSTRUCTION FIRMS HAVE WITH SERVICE RECEIVED FROM CONSTRUCTION PROFESSIONALS

According to Zeithaml *et al.* (1996), customer expectations are beliefs about a service delivery that serve as standard against which performance is done. Davidow and Uttal (1989) proposed that customer expectations are formed by many uncontrollable factors,, which include previous experience with other companies, and their customer psychological condition at the moment the service is delivery, customer background and values and the images of the buying product. Zeithaml *et al*., (1990) stated that customer's service expectation is built on complex considerations, including their on pre –purchase brief and other people's opinions. Miller also stated that customer expectation related to different levels of satisfaction.

Customers´ expectations and perceived service quality are the functions of customer satisfaction. Generally, the majority of researchers agree that the overriding model of satisfaction is the confirmation/disconfirmation model. The well know models of perceived service quality, which are based on the disconfirmation paradigm, have been presented by Parasuraman et al. (1988). The disconfirmation model assumes that

customers have certain preconceived expectations of a product or service before actually consuming it. These expectations create a frame of reference by which one makes comparative judgments and gains satisfaction. Customers compare the perceived performance of a product (service, good) with some performance standard. Customers are satisfied when the perceived performance is greater than standard (positively disconfirmed) (Parasuraman *et al*., 1988). Dissatisfaction is perceived when the performance falls short of the standard (negatively disconfirmed). When quality is ambiguous or difficult to evaluate, then expectations play a greater role in determining satisfaction. In addition, quality that falls short of expectations has a greater impact on satisfaction and repurchase intentions than quality that exceeds expectations (Andersson and Sullivan, 1993).

There has also been debate among researchers concerning the distinction between service quality and customer satisfaction. A wide range of recent literature suggests that service quality and customer satisfaction are conceptually distinct but closely related constructs, and recent evidence suggest that satisfaction is an antecedent of service quality. Perceived quality precedes satisfaction, which is closely related to the customers' behavioral responses (Bitner et al, 1990; Cronin and Taylor, 1992). The authors' associates service quality with the words "evaluation" and "opinion", and satisfaction with the word "feeling".

Customer satisfaction can be experienced at the specific encounter level or at an overall level of satisfaction. Service encounter satisfaction is the customer's satisfaction or dissatisfaction with a discrete service encounter. Overall satisfaction is the customer's overall satisfaction or dissatisfaction with the organization based on all encounters and experiences with that particular organization. It is a question of the accumulation of

satisfaction in the relationship. Cumulative satisfaction is a more fundamental indicator of the firm's past, current, and future performance. According to Andersson *et al*., (1994), it is the cumulative satisfaction that motivates a firm's investment in customer satisfaction. A customer can be dissatisfied with a specific service encounter, but satisfied overall based on evaluation of the total purchase.

We argue that benefits of high customer satisfaction in the construction are not as straightforward as stated in other areas of production (Cronin and Taylor, 1992). The main reason for this is the temporary, unique and one-off nature of construction. As stated earlier, distinguishing characteristics of projects will broadly affect the relationship between the customer and the contractor.

Thus, customers´ expectations play an important role in the evaluation of performance. Customer satisfaction in the construction industry can be defined as how well a contractor meets the customer's expectations. The customer formulates expectations as to what will happen as a results of an action when selecting a particular contractor (Bleomer and Ruyter, 1998). The customer expectation of construction are a function of several factors: the customer past or direct experiences with the contractor and a similar contractors. In addition, a contractor marketing activities and image and customer own investment in the project and relationship affect customer's expectation.

In construction, customer satisfaction does not guarantee loyalty (future work with that customer). A contractor's selection criteria are mainly based on price but also on the contractor's technical and financial capability and previous experiences of the contractor's competence. Satisfaction is therefore reflective of customers´ experiences of and confidence in the contractors´ abilities and co-operation (Teas, 1993). A dissatisfied customer will not work with that contractor in the future but a satisfied

customer would not necessarily guarantee future projects to contractor. Therefore, the main benefit of high customer satisfaction for a contractor is the opportunity to remain a customer's potential partner in the future. However, the essential objective in improving customer satisfaction is to achieve client loyalty, which can lead, for example, to partnering arrangements. A customer also perceives how he receives the product and how he experiences the simultaneous production and consumption process, which emphasis the meaning of contractors´ ability to co-operate (Grönroos, 2000). Customers have different kinds of expectation about service quality, the reference points against which service delivery is compared. The topmost level can be termed as 'desired' service or level of performance. It is called so because the expectation at that level reflects the hopes and wishes of the customer. The lowest level can be called 'adequate 'service that is their minimum tolerance expectation (Hodges and Baah, 2006).

CHAPTER THREE RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter attends to the detailed discussion of the methodology used for the study. Key issues bothering the philosophical stance of the research as well as the strategies adopted for the study is clearly deliberated. Also, a brief discussion of the approach used in the questionnaire design, the target respondents, the sample size required and the questionnaire administration. Lastly, the mode of data presentation in addition to the statistical tools used for the critical analysis of the data gathered is discussed.

3.2 PHILOSOPHICAL DELIBERATIONS OF THE RESEARCH

Three key hypothetical contemplations (ontology, epistemology and axiology) were espoused as a guide in the data collection, analysis and the succeeding clarification of the findings in order to accomplish a determined research devoid of the researcher's opinion and influence. It is agreed by Koeting (1996) and Christou et al., (2008) that philosophical matters such as existence knowledge and value have momentous influence in the study strategy. Therefore, such ethical concerns of ontology, epistemology and axiology must be evidently addressed as they form the standpoint and choice of the research expectations.

Two writers, Marsh and stoker (2002) expounded that the term ontology refers to the questioning of the presence of a 'real' world that is autonomous of our knowledge, thus, the theory of living beings. It can therefore be inferred that, ontology implies the actuality of manifestation where things appear in diverse ways in diverse traditions of philosophical thinking. This consideration is thus pertinent for this research because the need for the quality of service delivered by contractors in the building construction industry has lost generalization and hence inconsistent pragmatic conclusions are

arrived at by different authors. The stance adopted by the researcher is that of objectivism.

Bestowing to De Vos (1998) postulated that epistemology is relates to the connection of the researcher to authenticity and the road that will be followed in search for the truth, thus, the question of 'how knowledge is created?' To this upshot, literature identifies two epistemological stands: positivism and interpretivism. Whilst for positivist, scientific knowledge is recognized through the accumulation of facts verified (free from the researcher's effects), interpretivist on the other hand, uphold that social phenomenon do not exist independently of our interpretation or meaning of them, rather it is this interpretation or meaning of social phenomenon which affects social reality as noted by (Osei-Hwedie, 2010) and (Bryman, 1992). The researchers nevertheless, adopts the positivist stance of knowledge in this study; hence, the researchers are of the view that the need for the quality of service by D4/K4 and D3/K3 contractors in the building construction industry must be carried out in an objective way which can be faux.

In conclusion, Bosse (2006) explicates axiology as an arena of philosophical examination which considers complications like the difference between a matter of fact and value. The author further added that the axiology position can be realism or social constructivism. Social constructionist are of the view that researchers have value and these values helps to determine what are recognized as facts and interprets which are made; whilst the realists hold the view that the choice to study can be examined by an objective criteria. Hence, the stance of the researcher in this regard is that of realism.
The researcher is of the view that the need for quality of service by D4/K4 and D3/K3 contractors in the building construction industry must be determined by objective criteria (Osei-Hwedie, 2010). The sum of the above considerations are that, the research

adopts a scientific and a positive rather than a normative position in determining what were renowned as facts and their corresponding interpretations which are made in addressing the research concerns.

3.3 RESEARCH STRATEGY

A research strategy is defined as the way in which the research objectives can be questioned (Naoum, 1998). It is also the approach implemented by the scholar that is reliant on on the purpose of study and convenience of information. The writer further itemized that two categories of research approaches exist that is, 'quantitative research' and 'qualitative research'. However, the study, type and information available for the research work determine the particular strategy to adapt (Bergs, 2001). Hence, both quantitative and qualitative approaches consisting of both desktop and field study was adopted. Quantitative research collects numerical data in order to explain, predict and / or control phenomenon of interest (Polit and Hungler, 1999). Quantitative research is associated with the use of structured questionnaires where response options have been predetermined and a large number of respondents are involved. The study as asserted earlier will employ both the qualitative and quantitative strategies because the experience and numerical values will be of paramount importance to this study. More importantly, questionnaires containing close-ended open-ended questions would be used. The goal is to develop generalization that contributes to theory and knowledge that enables the researcher to predict, explain and understand phenomenon. The researcher remains distant and independent of what is being researched.

The results of which are numbers or series of numbers presented in tables, graphs or other form of statistical representation as well as the Relative Importance Index.

3.4 RESEARCH DESIGN

These research works adopts both qualitative and quantitative strategy with structured and unstructured questionnaires in the quest to assess the quality of construction professional project services received by small building contractors in the Ghanaian construction industry. The structured questionnaire is probably the most widely used data collection technique for conducting surveys to find out facts, opinions and views (Naoum, 1998). The survey questionnaire is selected because of the need for simplification on the findings across the construction industry. It also enhances the reliability of observations and improves replications because of the inherent standardized measurement and sampling procedures (Dawson, 2007).

In other to design a comprehensive survey instrument which addresses the aim for the research work, an in-depth literature review pertinent to the study was first conducted. Simple and straightforward words and sentences were used in the instrumentation, thus, making it easy to understand and hence, providing a more precise and consistent data from the respondent. The questionnaire was divided into two main sections: the first section was the respondent's profile and the second section addressed the specific objectives. The questionnaires was designed to include both scaled-response and open ended questions. However, five point Likert scale was employed to measure the strength or intensity of respondent's opinion.

3.5 RESEARCH PROCEDURE

The sampling method, data collection instruments, and procedures are addressed in this section of the research methodology. It entails justifications for each of the methods employed and implemented to discourse the aim, objectives, and research questions.

3.6 POPULATION AND SAMPLE SIZE

The populations for the study are D4/K4 and D3/K3 contractors. These professionals relates to only the building industry.

Sample size;

n= $n1\frac{1+n1}{N}$, (Kish, 1965) ……Eqn. 1

Where n = sample size n1

= S2/V2

N = total population

V = standard error of sampling distribution (0.05)

V2 = (0.05) (0.05) = 0.0025

S = maximum standard deviation of the population elements

S2 = P (1-P) = 0.5(1-0.5) = 0.25

P = Proportion of the population elements that belong to the defined category.

Calculating 95% confidence limit for the proportion of the population elements that belong to the defined category; 1 – α = 0.95 => α = 0.05 i.e. Z α/2 = 0.025

Standard error Se = 0.05

Now considering 95% confidence limit;

Implies that, P ± Z α/2 Se = 0.5 ± 1.96 (0.05)

= 0.05 ± 0.098

A 95% confidence interval will be from (0.5 – 0.098) to (0.5 + 0.098)

= 0.402 to 0.598.

Rounding to two (2) decimal places gives 0.40 to 0.60

Substituting the total number of 78 of D4/K4 and D3/K3 contractors into the Kish formula gives, $n = (0.25 \div 0.0025) / (1 + 100/78)$

$= 100 / (1 + 1.2821)$

$= 43.819 \Rightarrow 44$

A sample size of 44 is required for the study.

3.7 SAMPLING TECHNIQUE

Webster (1985) defines 'sample' as a finite part of a statistical population whose properties provide information about the whole population. 'Population' on the other hand is a group of individuals, objects or items from which samples are chosen for measurement (Mugo, 2002). The researcher adopts the snowball sampling technique to locate the professionals because of the difficulties encountered in assessing the population size. Kumar (1996) describes the snowball sampling technique as a process of selecting a sample by networking. The snowball sampling is an approach for locating information on rich-key informants. De Vos (1998) affirmed that snowball sampling is valuable in research since it is directed at individuals that are difficult to identify. Using this approach, a few potential respondents was contacted and then asked whether they knew any other respondent with the characteristics that the research sort for. This technique was adopted to reach hard-to-get respondents.

3.8 QUESTIONNAIRE ADMINISTRATION

Data collection is a term used to describe a process used to obtain information to keep on record, to make decisions about important issues, and to pass information on to others. The developed questionnaires would be distributed to and retrieved from the building construction professionals. This process of distribution and retrieving of the questionnaires in person would be conducted for two reasons as suggested by Ahadzie (2007). Firstly, to make sure that the questionnaires gets to the intended recipients and

secondly, to help improve the response rate. The top management professionals (D4/K4 and D3/K3) were given the questionnaires for responses. Follow-ups would be made to the respondents to remind them to complete the questionnaires via telephone calls and personal visits.

3.9 DATA PRESENTATION AND STATISTICAL ANALYSIS

The questionnaires once collected from the respondents were accumulated to give a large unit for the analysis. Two statistical softwares that were used in the analysis are Statistical Packages for Social Sciences (SPSS version 16) and Microsoft Office Excel 2013 respectively. The findings from the analyzed data presented in a form of numbers or series of numbers, charts and tables as well as the Relative Importance Index would be adopted.

Descriptive statistics and Relative Importance Index was used to analyze because the extant literature pertaining to the assessment of the quality of construction professional project services received by small building contractors in the Ghanaian construction industry. These presented too much surface complexity and thus requires a deeper understanding of the pattern between measures.

3.10 CHAPTER SUMMARY

This chapter address the research methodology of this study, explains the research strategy, design, sample selection, and describes the procedure that was used in designing the instrument and collecting the data, and provide an explanation of the statistical procedures that would be used to analyze the data.

The next chapter will focuses on the analysis and discussion of the survey results.

CHAPTER FOUR DATA ANALYSIS AND DISCUSSION

4.1 INTRODUCTION

In this chapter, the data collected from the survey was systematically subjected to scientific analyses and explanations. The discussions largely hub's on the objectives of the research. Descriptive statistics was used to analyze the background study of each study area and relative importance index (RII) and the mean score method are the main statistical techniques used to analyze the variables identified in the extant literature pertinent to the quality of construction professional project services received by small building contractors in Ghana.

The first section deals with the demographic profile of the firms, professionals and the influence such traits have on the research while the other parts deals with the detailed analysis of the specific objectives of the study in relation to quality of construction professional project services received by small building contractors in Ghana.

The researcher thoroughly discussed the empirical analysis of the key elements of service quality in the construction industry, service quality cognizance of small construction firms in the Ghanaian construction industry, and the level of satisfaction small construction firms have with service received from construction professionals.

4.2 PRESENTATION AND DESCRIPTIVE ANALYSIS OF DATA (DEMOGRAPHIC DATA)

4.2.1 Positions of Respondents in their firms

In this section respondents were asked to indicate the classification of their positions per the category they belong to. However, the data obtained in the figure 4.1 below shows that 42% respondents representing the majority of the respondents are contractors. However, 16% were Artisans from the construction industry in the

respective firms of operation, 11% were project managers, 24% Engineers which denotes the second highest population of the respondents. While Architects and Quantity surveyors recorded the lowest numbers accounting to 7% and 5% respectively (See Figure 4.1 below).

It was therefore deduced from the data obtained in the figure below that, the target for this study was met since the study considers contractors and the focal respondents and the data obtained confirms it.

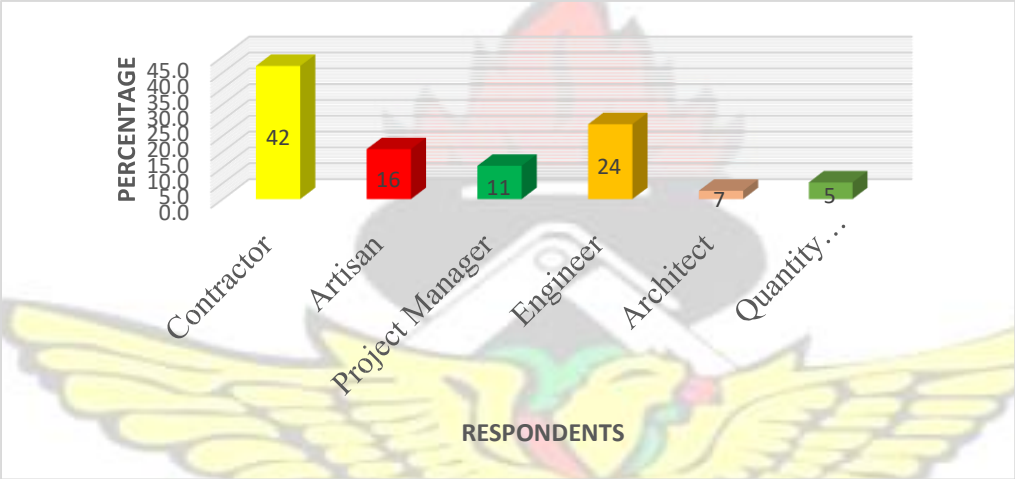

Figure 4.1 Positions of Respondents (Field Survey, 2016)

4.2.2 Types of firm

The intent of this section was to ascertain the number of D4K4 and D3K3 contractors in the construction of the Ashanti region of Ghana. As evident in the figure below, the responses obtained from respondents indicated that 32% of the firms are D4K4 contractors operating in the construction industry whiles majority of the respondents combated that most contractors operating in the region have financial class of D3K3 standing as confirmed in Figure 4.2 below.

This can therefore be deduced that the D3K3 class of contractors dominates that of the D4K4 class of contractors in the Ashanti region of Ghana which is also confirmed in the data collected from the Register Generals Department (see figure 4.2 below).

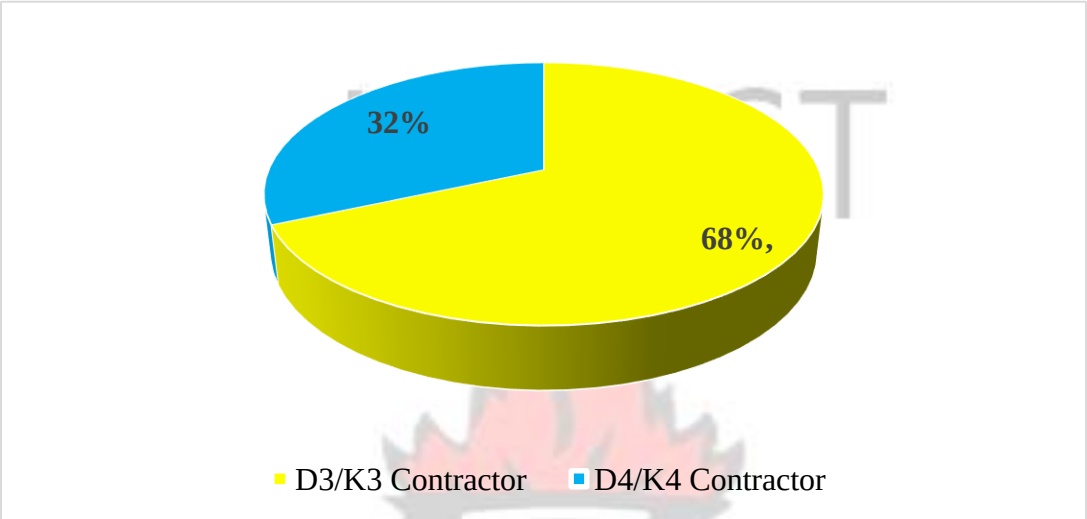

Figure 4.2 Types of firm (Field Survey, 2016)

4.2.3 Age categories of Respondents

The intention of this section was to obtain from respondents their age categories in the construction industry as far as the quality of project delivered is concerned and how their age difference influence the study.

From Table 4.1 below, it can be evidenced that 9 respondents corresponding to a total of 24% of the respondents were between the ages of 20-30 years. 40% of the were between the ages of 31-40 years while 26% representing a total of 10 respondents range between the ages of 41-50 years and the remaining 11% representing 4 respondents had their ages above 51 years.

As practically evidenced in the construction industry per the age range of respondents and confirmed in the table below, majority of the respondents were confirmed to be in the age range of 31 – 40 years respectively. Hence, it can be concluded that the industry

per their class of operation are mostly dominated with professionals ranging between the ages of 31 – 40 years respectively (See Table 4.1 below).

Table 4.1 Age categories of Respondents

Years	*20-30 yrs.*	*31-40 yrs.*	*41-50 yrs.*	*Above 51 yrs.*	*Total*
Response(%)	*24*	*40*	*26*	*11*	*100*
Number	*9*	*15*	*10*	*4*	*38*

4.2.4 Level of Education of Professionals

The intent of this questionnaire was to establish from respondents the educational background as well as their scholarly qualifications they have in functioning in their respective firms. From Figure 4.3 below, it was established from respondents that 29% of the respondents' holds High National Diploma Certificates, 31% of the respondents with BSc. Degree certificates, while the majority of the respondent holds Master's degree totaling 32% respondent and 8% holding other certificate which was not specified in the questionnaire. It can therefore be inferred from the above results that, most of the workers have certain levels of educational background to operate and produce the expected outputs and hence dominated mostly with Degree holders (MSc and BSc. Degrees explicitly).

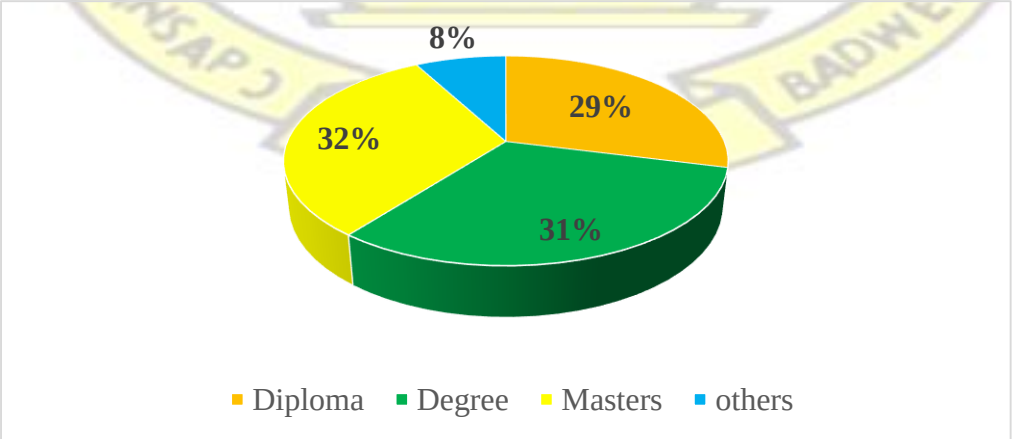

Figure 4.3 Level of Education of Professionals (Field Survey, 2016)

4.2.4. Regions of construction industry that firms operate

This section of the questionnaire sought to find out the segments of operation of construction firms in Ghana. Respondents were asked to indicate the regions their firms frequently operated in. From Figure 4.4 below, Ashanti region recorded 76% respondent representing who are native contractors in the Ashanti region of Ghana. This is followed by 13% respondents representing the percentage of contractors who are based in the Ashanti region of Ghana but operates in the Northern region of Ghana. Lastly, the study gathered 11% of the respondents who also operates in the Western region of Ghana but are based in the Ashanti region.

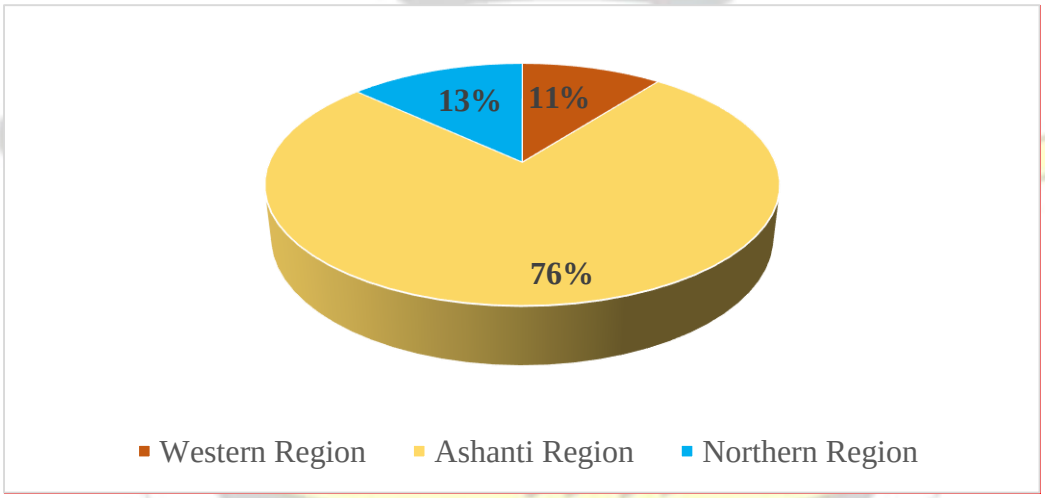

Figure 4.4 Regions of construction industry that firms operate (Field Survey, 2016)

4.2.5 Years of experience of respondents in the industry

The intention of this question was to identify the level of experience of the various respondents and professionals in the construction industry because how long they have been in industry will affect the quality of responses that will be given. Table 4.2 below indicates the number of years of the respondent's in the construction industry. Respondents were asked to indicate how long they have existed in their firms of operation.

As evidenced in Table 4.2 below, 53% of the respondents corresponding to a total of 20 respondents have operated in the industry with their firms for less than 5 years. 40% representing the second highest of responses were recorded to have been operating within the year range of 5 – 10 years and the remaining 3 respondents representing 7% respondents have existed and worked with their firms between 11 – 15 years respectively (See Table 4.2 below).

Table 4.2 Years of experience of respondents in the industry

Years	***Less than 5yrs***	***5-10 yrs.***	***11-15yrs***	***Total***
%Response	*53*	*40*	*7*	***100***
Number	*20*	*15*	*3*	***38***

A critical study of table 4.2 above suggests that, majority of the respondents' have existed for considerable number of years and therefore have the required experience for generalization and realistic view as far as this research is concerned.

4.3 RELATIVE IMPORTANT INDEX (RII) FOR THE ELEMENTS OF SERVICE QUALITY

This section of the study sort to provide respondents the opportunity to indicate on a five point Likert scale their level of agreement to ascertain the key elements of service quality in the construction industry.

4.3.1 Elements of Service Quality

With reference to Table 4.3 below, the appearance of neat and smart looking professionals at work ranked first as the most importance element of service quality in the construction industry with a Relative Importance Index of 0.8947 and a mean value of 4.4737 respectively. Zeithaml et al., (2006) affirms in the literature that the

appearance of buildings, tools and equipment, and personnel during the service delivery of the firm is very necessary to meet the clients' desire as well as the physical appearance of facilities, equipment, and staff and written materials. This was closely followed by visual appealing of firms' resources with an RII of 0.8895 and a corresponding mean of 4.4474. "Attractive and comfortable working environment" ranked third with an RII of 0.8737 and a mean of 4.3684 accordingly.

The fourth ranked element of service quality according to the data obtained from respondents was "professional quantity surveying firms understand the specific needs of contractors" which was evident with an RII of 0.8684 and a mean value of 4.3421. This can be confirmed in the literature as postulated by Lewis and Booms (1983) that, measurement of quality of construction professional project services received by small building contractors constitutes the first phase of quality of service enhancement and improvement process. If a contractor is able to gain entree to precise information about the present quality level of the industry, the necessary steps taken on what needs to be done more efficiently.

Notwithstanding the aforementioned assertion, "convenient working hours are to contractors and sincere interest in solving contractors problems" ranked fifth with an RII of 0.8421 and a mean value of 4.2105 respectively.

Aside the first five ranked elements of service quality in the construction industry, some other elements were not seen as vibrant elements according to the views of professionals in the industry. However, "the willingness to solve contractors' problems with regards to contract management issues" and "professionals in firms have the required knowledge and skills to deal with problems faced by contractors during the execution

of a project" ranked thirteenth with a mean value of 3.8421 and a relative importance index of 0.7684.

Also, the behaviour of professionals in quantity surveying firms instils confidence in contractors was the fourteenth ranked element of construction service quality with a mean value of 3.8158 and an RII of 0.7632. Professionals in these firms are able to offer individualized attention to contractors when approached.

Table 4.3 Elements of Service Quality

ELEMENTS OF SERVICE QUALITY	Mean	RII	Rank
Professionals appear neat and smart looking at work	3.026	0.6553	***16th***
The resources in their firms are visually appealing	4.2105	0.80421	***10th***
Professionals in these firms are consistently courteous to contactors	4.4737	0.8947	***1st***
They have modern-looking equipment such as computers and other facilities to work with	4.4474	0.8895	***2nd***
Their work environment generally is attractive and comfortable	4.3684	0.8737	***3rd***
Professional quantity surveying firms understand the specific needs of contractors.	4.3421	0.8684	***4th***
Their working hours are convenient to contractors	4.2105	***5th***	They show sincere interest
in solving contractors problems	4.2105	0.8421	***5th***
They perform services to contractors right the first time	4.1842	0.8368	***7th***
They provide correct and accurate information to contractors	4.0789		***8th***
They provide prompt services to contractors during project execution	4.0526	0.8105	***9th***
Contractors can confidently trust professional quantity surveying firms during project execution	3.9211	0.7842	***11th***
They provide services at the time they promised to do so	3.8684	0.7737	***12th***
They are always willing to solve contractors problems with regards to contract management issues	3.8421	0.7684	***13th***
Professionals in these firms have the required knowledge and skills to deal with problems faced by contractors during the execution of a project	3.8421	0.7684	***13th***
The behaviour of professionals in quantity surveying firms instils confidence in contractors	3.8158	0.7632	***14th***

Professionals in these firms are able to offer individualized attention to contractors when approached	3.3421	0.6684	***15th***
When they promise to render services such as preparation of contractor's payment certificates, claims, visit sites for measurement etc. by a certain time, they do so	2.5789	0.5158	***18th***
They are never too busy to respond to contractors request	2.4737	0.4947	***19th***
One can confidently say that these firms have contractors best interest at heart	2.0526	0.4105	***20th***

Source: Field Survey (2016)

4.4 RELATIVE IMPORTANT INDEX (RII) FOR THE OF QUALITY AWARENESS OF CONSTRUCTION PROFESSIONALS

This section of the questionnaire sort to provide respondents the opportunity to indicate on a five point Likert scale their level of agreement on the quality awareness of construction professionals in the construction industry.

4.4.1 Quality Awareness of Professionals

Discussing Table 4.4 below, the views of respondents as professionals in the construction industry were sort on their awareness as far as the quality of construction professional project services received by small building contractors in Ghana is concerned.

From the data gathered, analyzed and ranked in Table 4.4 below, "Contractors are committed to quality in the organization" ranked first with a relative importance index of 0.8789 and a mean value of 4.3947. This was closely followed by "Contractors provides a leadership role in quality management initiatives" with an RII of 0.8789 and a mean value of 4.3947 respectively. However, quality management in construction has become essential in modern construction practices and has incorporated quality management principles and initiatives in their activities.

The third ranked quality awareness factor according to professionals in the industry was "critical resources essential in implementing service quality initiatives are made always available". This assertion obtained an RII of 0.8579 and a mean value of 4.2895 as evidenced in the table below. This can therefore be inferred that professionals in the construction industry are much aware of level of quality offered by professionals in the industry to their respective clients. More so, "Employee's concepts on ways to mend service quality are welcomed by the Contractors" was the fourth ranked with a mean of 4.2368 and an RII of 0.8474. This was followed by "Participation in all quality management programs" with an RII of 0.8211 and a mean score of 4.1053. Hence, delivering quality in construction requires a stable level of workload while encouraging and assisting construction firms to develop quality standards, including industry-wide programs to advance quality standards.

"Top Management Assurance, accepted quality management structure, and organizational quality mission and Policies" were ranked as the least among all the others with RII of 0.7474, 0.6263 and 0.4526 with their corresponding mean values of 3.7368, 3.1316 and 2.2632 respectively as evident in Table 4.4 below.

Quality Management is the assembly and management of all activities aimed at the production of quality by organizations of various kinds. An advanced civilizations that supported the arts and crafts allowed clients to choose goods meeting higher quality standards rather than normal goods. The operational techniques and activities that are used to satisfy quality requirements must factor quality assurance. Quality is one of the main factors in the success of construction projects. Quality of construction projects, as well as project success, can be regarded as the fulfillment of expectations of the project

participants. Quality, cost and time have been recognized as the main factors concerning the client.

According to Bednar (2010), the guidelines to ensure the quality in planning are: Ensure that all relevant parties involved including consultants, subcontractors and suppliers are included in the task of quality planning for the project; Establish and define the purpose of the quality system; In the plan, minimize the effort required to amend copies of documents; Set up a quality system development team so that the team can produce an effective plan; Ensure that throughout the quality planning task constantly focused on the customer requirements.

Table 4.4 Quality Awareness of Professionals

QUALITY AWARENESS OF PROFESSIONALS	Mean	RII	Rank
Contractors are committed to quality in the organization	*4.3947*	*0.8789*	***1st***
Contractors of your organization provides a leadership role in quality management initiatives.	*4.3947*	*0.8789*	***2nd***
Critical resources essential in implementing service quality initiatives are made always available.	*4.2895*	*0.8579*	***3rd***
Employee's concepts on ways to mend service quality	*4.2368*	*are*	***4th***
Participation in all quality management programs	*4.1053*		***5th***
Top Management Assurance	*3.7368*	*0.7474*	***6th***
Your organization has a accepted quality management structure	*3.1316*	*0.6263*	***7th***
Your firm has an organizational quality mission and Policies	*2.2632*	*0.4526*	***9th***
Your organization practices a proper quality delivery to clients	*4.3947*	*0.8789*	***2nd***
welcomed by the Contractors.	*0.8474* / *0.8211*		

Field Survey, 2016

CHAPTER FIVE SUMMARY OF FINDINGS AND RECOMMENDATION

5.1 INTRODUCTION

This section affords a summary of the core results and discoveries, accomplishments and influences of this research. It is therefore instigates by summarizing the rational for the study and also hints on how it was carried out and then documents a summary of its main findings. The study consequently looks at activities of the research as well as the attainment of the aim and explicit objectives of the research. It additionally documents the contributions this research has made to knowledge and information with respect to Quality of Construction professional project services received by small building contractors in the construction industry as well as its ethical contributions. Last of all, the study marks the recommendations for further researchers and frameworks its limitations.

5.2 SUMMARY OF THE FINDINGS

5.2.1 Elements of service quality in the construction industry

The first objective of the study has been successfully identified. A total of twenty factors that serves as the elements of service quality in the construction industry in the Ghanaian construction industry were identified. Among these elements were the top five most important elements of service quality that contributed to the includes; Professionals in these firms are consistently courteous to contactors, They have equipment such as computers and other facilities to work with, Their work environment generally is attractive and comfortable, Professional quantity surveying firms

understand the specific needs of contractors, working hours are convenient to contractors, and showing sincere interest in solving contractors problems.

5.2.2 Service quality cognizance of small construction firms in the Ghanaian construction industry

The second objective of this research was to pin point the service quality cognizance of small construction firms in the Ghanaian construction industry. This objective has been successfully achieved. The study identified nine service quality cognizance of small construction firms (D3/K3 and D4/K4 contractors) in the Ghanaian construction industry. Out of this, the most ranked according to respondents includes: contractors are committed to quality in the organization, contractors of your organization provides a leadership role in quality management initiatives, critical resources essential in implementing service quality initiatives are made always available, employee's concepts on ways to mend service quality are welcomed by the contractors, participation in all quality management programs and top management assurance.

5.3 CONCLUSION

The implementation of construction project, accomplishing quality among others is the eventual objective of all participants. However, Contractors perform awfully regarding quality of construction due to poor managerial skills, lack of technical and professional staff as well as poor skilled and unskilled labour.

Hence, the objectives of this study have been achieved.

5.4 RECOMMENDATION

Technical service providers are offering a various type of services from consultation, project management, maintenance to construction, imminent studies can be lessened

down to merely one facet of the services. An instance is design quality or project management service quality instead of generalizing to all the services in the industry. These sections can then be examined by the comparative significance of the five elements and dimensions in influencing service quality of those specific services in the Ghanaian construction industry.

However, the beneficiaries of projects when completed should be educated on the benefit they would derive from it and hence they should devoid from low quality construction products and services and welcome projects that would come their way in their various communities.

Also, construction firms should agree that the outcomes of service would be enhanced if their clients had more knowledge of the construction industry. While construction services' clients may understand their needs, what is not clear is how well they explain their needs to the representatives of the construction firms

With constricting down the emphasis of the study, the researcher would be able to target specific quality programs and services based on the type of services offered. Additionally, the pattern of service quality expected in the construction industry can be seen.

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APPENDIX

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ART AND BUILT ENVIRONMENT

DEPARTMENT OF BUILDING TECHNOLOGY

QUESTIONNAIRES

TOPIC:

Assessment of Quality of Construction professional project services: Perspective of the D3/K3 and D4/K4 Contractors. A case study of D3/K3 and D4/K4 Contractors in the

Ashanti Region of Ghana.

DEAR RESPONDENT,

I am a student of Kwame Nkrumah University of Science and Technology, College of Arts and Built Environment in the Department of Building Technology. This questionnaire is designed to aid a research by an ***MSc Construction Management*** final year student on the above cited topic. Your responses to this questionnaire will make available the needed information to enable the researcher complete this study. Pleas you are therefore assured of absolute confidentially of opinion you share, hence do not provide your name on the script.

Thank you in advance for your participation and assistance with this study.

Instruction

Please choose your choice of answers from the options provided or provide your own answers in the space provided as required. Thank you.

PART ONE:

DEMOGRAPHIC INFORMATION

Please specify your response by placing a tick (√) mark on the relevant options provided. The following questions will be used only in determining our sample demographics.

1. Please indicate your position in the firm…….. 2.

Type of organization/firm

a. D3/K3 Contractor [ ]

b. D4/K4 Contractor [ ]

c. Others (please specify)……

3. Which of these age sets do you fall?

a. 20 – 30years [ ]

b. b. 31 – 40years [ ]

c. c. 41 – 50years [ ]

d. d. 51years and above [ ]

4. What is your utmost level of Education?

a. Diploma [ ]

b. Degree [ ]

c. Masters [ ]

e. others (please specify)……

5. Which region do you mostly operate?

a. Western Region [ ]

b. b. Ashanti Region [ ]

c. Northern Region [ ]

d. d. Others (please specify)……..

6. How long have you been in the industry as an individual?

a. Less than 5 years [ ]

b. between 5 – 10 years [ ]

c. between 11 – 15 years [ ]

c. 16years and above [ ]

SECTION TWO:

ELEMENTS OF SERVICE QUALITY IN THE CONSTRUCTION INDUSTRY

7. Please indicate your level of agreement with the elements of service quality in the Ghanaian construction industry in the table provided below:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

ELEMENTS OF SERVICE QUALITY	1	2	3	4	5
Responsiveness					
1. They are always willing to solve contractors problems with regards to contract management issues 2. They are never too busy to respond to contractors request					
3. They provide prompt services to contractors					
Empathy					
4. Their working hours are convenient to contractors					
5. One can confidently say that these firms have contractors best interest at heart					
6. Professional quantity surveying firms understand the specific needs of contractors					
7. Professionals in these firms are able to offer individualized attention to contractors when approached					
Reliability					
8. When they promise to render services such as preparation of contractor's payment certificates, claims, visit sites for measurement etc. by a certain time, they do so 9. They perform services to contractors right the first time					
10. They provide correct and accurate information to contractors during project execution					
11. They provide services at the time they promised to do so					
12. They show sincere interest in solving contractors problems					
Assurance					
13. Contractors can confidently trust professional quantity surveying firms during project execution					
14. Professionals in these firms are consistently courteous to contactors					
15. Professionals in these firms have the required knowledge and skills to deal with problems faced by contractors during the execution of a project					
16. The behaviour of professionals in quantity surveying firms instils confidence in contractors					
Tangibles					

17. Professionals appear neat and smart looking at work						
18. The resources in their firms are visually appealing						
19. Their work environment generally is attractive and comfortable						
20. They have modern-looking equipment such as computers and other facilities to work with						

SECTION THREE

8. The following statements relate to the service quality cognizance of small construction firms in the Ghanaian construction industry.

Using the keys in the table below, Tick suitably according to the degree which you agree or disagree with the statements.

Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
1	**2**	**3**	**4**

Statement	**1**	**2**	**3**	**4**
Contractors are committed to quality in the organization				
Contractors of your organization provides a leadership role in quality management initiatives.				
Critical resources essential in implementing service quality initiatives are made always available.				
Employee's concepts on ways to mend service quality are welcomed by the Contractors.				
Participation in all quality management programs				
Top Management Assurance				
Your organization has a accepted quality management structure				
Your organization has an organizational quality mission and Policies				
Your organization practices a proper quality				

SECTION THREE:

9. With your know-how, what the level of satisfaction small construction firms have with service received from construction professionals?

……

……

……

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……

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……

……

10. Do the activities of construction professionals inspire trust and confidence in you as a result of the quality of service rendered? Please explain.

……

……

……

……

11. In order to meet client's anticipations, how do you envision professional contracting firms' physical facilities to be? Examples are office space/building, environment etc.

……

……

……

……

12. What can you say about the level of responsiveness given to you by these professionals during project completing?

……

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……