UNIVERSITY OF EDUCATION, WINNEBA

AN INVESTIGATION INTO KNOWLEDGE MANAGEMENT EFFECT ON

PERFORMANCE OF EMPLOYEES OF TELECOMMUNICATION COMPANIES:

CASE OF MTN AND VODAFON IN KUMASI, GHANA

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A Dissertation in the Department of Management Studies, Faculty of Business

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**of Business Administration (Marketing)**

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DECLERATION

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

SIGNATURE:...............................……………

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SUPERVISORS'S DECLARATION

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis/ Dissertation / Project as laid down by the University of Education, Winneba.
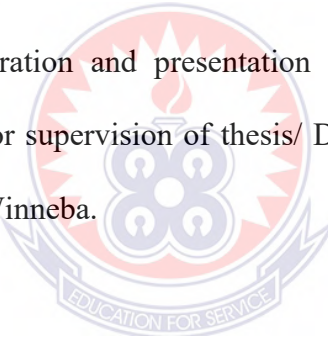
NAME OF SUPERVISOR: DR. BENJAMIN ANSU

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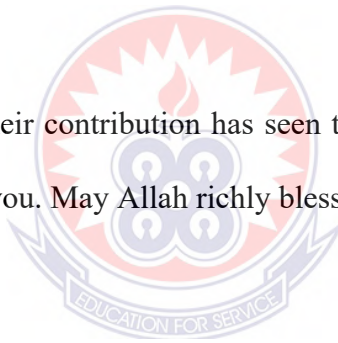
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ACKNOWLEDGEMENTS

DEDICATION

This work is dedicated to my loving wife Mohammed Nasira for her relentless

encouragement and support and to my children Suhuyini Zaid Adam Labbo and Naani Barika

Adam Labbo.

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ABSTRACT

Knowledge management have gained much prominence in recent years and is said to improve organizational performance. However, the effects of knowledge management practices on employees performance are not well known especially in the case of telecommunication companies in Kumasi, Ghana. The aim of this study was to investigate the effects of knowledge management practices on performance of employees of telecommunication companies in Kumasi, Ghana. This was a case study in which data were collected through questionnaire. The target population was 331 members of staff. The sample size for questionnaire was 119 respondents determined using Cochran's (1977) cross-sectional survey and the response variable simplified formula for sample size selection. Questionnaire respondents were selected through stratified random sampling. Closed ended question questionnaires were used to collect data from members of staff while open ended question questionnaires were administered to heads of various divisions and departments. Quantitative data were analyzed using frequencies, percentages and multiple correlations. Results were presented using cross tabulation tables. Qualitative data were analyzed thematically using content analysis. The study established that knowledge management practices have a strong and positive effect on performance of employees. Knowledge management of the telecommunication companies encountered challenges. The main challenge affecting the effectiveness of knowledge management is that employees feel they are not adequately rewarded for contributing new ideas. The study therefore recommends that the management should develop a knowledge management policy that includes realistic reward scheme and support knowledge management initiatives.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Organizations are beginning to realize that there is a vast and largely untapped asset diffused around the organizational knowledge as a result of intense competition and increasing dynamic environment (Guptal, *et al.,* 2000). Organisations of the twenty first century economy that wants to strengthen their long-term survival turn towards basic structural reforms that characterises many of the successful organisations (Danial *et al.,* 2013). These structural reforms range from deterministic models of optimisation input and output as well as focussing more on social and psychological factors of their employees (Danial *et al.,* 2013). Deterministic models describe behaviour on the basis of some physical law that are usually developed by statistical techniques such as linear regression or non-linear curve fitting procedures which essentially model the average system behaviours of an equilibrium or steady state relationship. In a service sector, a totally deterministic model is unlikely to include various dynamic random effects (or uncertainties), this uncertainty is commonly understood as factors related to imperfect knowledge of the system under concern, especially those being random in nature (Slideshare Sep 11, 2012). The latter include management practices that build high commitment of employees, excellent employees performance, high level of skill, high motivation, greater loyalty, etc., all of these which are geared towards one objective, namely an organisation that produces good results.

According to Costello (1996) knowledge management is defined as the process of managing the cycle of capturing knowledge from an organisational activities and learning in order to improve organisational effectiveness. Gupta *et al*., (2000) defined knowledge management as "a process that helps organisations to find, select, organise, disseminate and transfer

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important information and expertise necessary for activities. Filemon and Uriarte defined knowledge management as the broad process of locating, organising, transferring and using the information and expertise within an organisation. Knowledge management involves identifying existing knowledge within the organisation, sharing the knowledge, applying the knowledge, creating new knowledge and then share and use it. The cyclical process of knowledge store is harnessed as a means to facilitating the effective performance of the organisation employees.

There are a great number of critical success factors for knowledge management as this research contributes to the knowledge management research field through understanding those factors, their interrelations and the role of knowledge management in achieving a better employee performance. In view of Cranfield (2011) the expectation for knowledge management were that it would be able to improve growth and innovation, productivity and efficiency reflected in cost savings, customer relations, decision making, innovation, corporate agility, rapid development of new product lines, employee learning satisfaction and retention and management decision making. As elaborated by Kidwell *et al*., (2000), knowledge management promises to lead to better decision making capabilities, improve service and reduce cost. Therefore organisations are mounting knowledge management that tackle the consolidation of organisation structures, organisational growth strategy and effectively utilizing the organisational knowledge. With excellent knowledge management organisation are guaranteed of competitive advantage which will result in organisational success.

In Ghana, telecommunication network companies are crucial for the provision of basic telecommunication services such as fixed and mobile and also internet network. The continuous existence and growth of these telecommunication companies is therefore

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paramount. Conversely, knowledge management from these companies receives not much attention from marketing practitioners, human resource practitioners and academia. It is in this light that we are conducting this study to examine in detail the knowledge management practices of these telecommunication companies and how these practices affect their employee performance.

1.2 Problem Statement

Developing, sourcing, retaining and sharing knowledge effectively are a major challenge for all organisations. Ensuring that employees have access to the information they need has a critical effect on their effectiveness and, ultimately, the performance of the organization as a whole. The review of available literature on the subject highlights the important role played by knowledge in the growth and development of organizations. Given this important role, one expects organizations to use all available means to capture, retain and use organizational knowledge. However, knowledge has been seen as a difficult resource to capture and transfer. In most organisations little or no attention is paid to knowledge management because of this challenge. For instance Asmi *et al.,* (2009) established that capturing and sharing knowledge in organizations is not always easy, but can be done. However, marketing practitioners has seen knowledge as a difficult resource to capture and transfer. The telecommunication network service providers in Ghana is not exceptional to this phenomenon as it is observed that little attention is paid to knowledge management because of this challenge. Asmi *et al,.* (2009) established that capturing and sharing knowledge in organizations is not always easy, but can be done. This prompted the researcher to investigate the effect of knowledge management on employees performance at MTN Ghana and VODAFON Ghana in the Kumasi metropolis.

1.3 Objectives of the Study

The objectives of the study are classified into general and specific.

1.3.1 General Objective

The general objective of the study is to examine knowledge management practices of telecommunication network companies in Kumasi, Ghana with the view of ascertaining its effect on the performance of employees and organisational performance.

1.3.2 Specific Objectives:

1. To identify knowledge management practices/tools of telecommunication network companies in Kumasi, Ghana.

2. To ascertain the effect of knowledge management on the performance of employees in telecommunication network companies in Kumasi, Ghana.

3. Examine the challenges associated with knowledge management in telecommunication network companies in Kumasi, Ghana.

1.4 Research Questions

1. What are the effective ways that the telecommunication network companies in Kumasi, Ghana practiced knowledge management?

2. What are the impacts of knowledge management on the performance of employees in telecommunication network companies in Kumasi, Ghana?

3. What are the challenges associated with knowledge management practices in telecommunication network companies in Kumasi, Ghana?

1.5 Significance of the Study

This study which aims at assessing knowledge management practices and its effect on the performance of telecommunication network companies in Kumasi, Ghana will be of importance in the following under-listed ways:

The research study will provide additional data and information with respect to knowledge management (KM) practices in telecommunication network companies. Thus, the information gathered will provide a better understanding of the intricacies pertaining to their knowledge management practices. It will as well aid in the formulation and implementation of appropriate knowledge management policies which will be beneficial to the telecommunication network companies in particular and the general public as a whole.

The study would contribute through the development of fresh knowledge which the telecommunication network companies can use to deal with the emerging challenges in implementing knowledge management practices at various companies to enhance improved employee performance. The study could also add to the body of knowledge of knowledge management besides filing gaps in research which could prompt other researchers to do similar studies in different sectors of the economy. Moreover the findings will help business owners and managers to formulated policies that can increase productivity, financial performance, staff performance, innovation, work relationships and customer satisfaction.

Finally the findings of the study will contribute to the existing body of knowledge thereby extending the frontiers of knowledge in the field of knowledge management in telecommunication industry.

1.6 Methodology

Primary source of data will be adopted in our data collection. Respondents are employees of MTN Ghana and VODAFON Ghana at their Kumasi offices in the Ashanti Region - Ghana. A sample size of hundred and Nineteen (119) would be obtained to represent the target population. Purposive sampling is to be used to select sample size of employees from each telecommunication company and simple random technique was used to select respondents (employees) who formed the sample. Data from questionnaires would be analysed using

descriptive statistics such as frequency analysis and mean scores as well as relative importance index.

1.7 Scope of the Study

The researcher examined the knowledge management practices among telecommunication network companies in Kumasi, Ghana. The main issue considered included the practices of knowledge management, the effect of knowledge management on the performance of these companies as well as the challenges confronting these companies as far as knowledge management is concerned. The study is a cross-sectional study conducted between November, 2016 and August, 2017. The area in Kumasi examined includes all offices of MTN Ghana and VODAFON Ghana in Kumasi metropolis.

1.8 Limitation of the Study

The study was limited by time and resource constraint, and therefore could not capture all the employees of all the Kumasi offices of MTN Ghana and VODAFON Ghana in Kumasi metropolis. Also some employees of the two telecommunication network companies also declined to participate in the study.

1.9 Organisation of the Study

The study will be organized in five main chapters. First chapter dealt with the introduction of the study, which covered the background of the study, the problem statement of the study, the objectives and research questions of the study, a brief methodology, and significance of the study, limitations and organization of the study.

Second chapter reviewed relevant theoretical and empirical literature on the subject of knowledge management in telecommunication network companies.

Third chapter covered the methodology used to undertake the study which included the sampling method, research instrument and design, the various sources and methods of collecting data and the process used in analysing the data.

Fourth chapter provided detailed presentation, analysis, interpretation and discussion of the results of the study. Whilst the final chapter was devoted to the summary of the findings, conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews relevant theoretical and empirical literature on the subject of knowledge management. Specifically, the chapter review literature on knowledge management and employee performance, concepts of knowledge management and challenges associated with knowledge management in telecommunication companies. Also the chapter reviews the development of a conceptual framework.

2.2 Knowledge Management

Duffy (1999) defines knowledge management as "the identification, growth and effective application of an organisation's critical knowledge." However, Hirotaka Takeuchi proposes a contradictory view on Knowledge Management which advocates less control over employees and involving everyone in the organisation to create and share knowledge, which in turn fuels the organisation's innovative strategy. This different philosophy is shared by Sveiby (2000) who argues that knowledge is not something that can be "managed", and that the term to be "Knowledge Focused" is preferable. Sveiby (2000) also states that knowledge focused managers do not manage knowledge, since this is impossible but the environment in which knowledge is created.

In view of the above arguments the researcher chose to believe that knowledge can be managed. The conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action, in a ways that will strive to improve organizational performance is what O'Dell and Grayson (1998) referred to as knowledge management. Knowledge management entails different processes such as knowledge capture, acquisition, creation, distribution, storage and utilization. The effective

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utilization of knowledge will not only create competitive advantage but maintain it as well, that would improve organizational performance.

Employees are crucial on the achievement of organisations aim and vision. Indeed, it has been identified in academic literature that human capital is the most important asset of every organisation. The aim of every organisation is to improve the productivity and work rate of its employees, and knowledge management has been identified as one of the ways by which organisations can improve the performance of its employees. The relevant theory that helps significantly towards realizing the important role of knowledge management on employee performance is the knowledge-based theory. Soderberg and Holden, 2002; Spencer, 1996 proposed theory's that supposes that knowledge management practices such as knowledge acquisition, knowledge storage, knowledge creation, and knowledge sharing and knowledge implementation play a critical role in achieving high level employee productivity.

Exploratory studies in Malaysia on knowledge management outcomes on employee performance indicate that the perceived benefits include better decision-making, better understanding of customers, improved skill base, better quality and efficiency, better outputs and innovation, sharing of best practices, and faster response to key institutional issues (Rumesh Kumar 2003). Specifically it has been identified that knowledge management practices improves operational excellence, customer intimacy and product leadership, which are intended to improve performance of employee in the organization. According to Dahiya *et al.,* (2012) knowledge management develops, transfers, transmits, stores, and implement knowledge management in order to improve efficiency and effectiveness of the organization's manpower. In addition, Huang (2001) explains that effective knowledge management makes employees more efficient and innovative.

Though it was difficult to evaluate the effect of knowledge management on the performance of an employee and the organisations as a whole, various authors have tried to establish the

linkage between KM and employee performance. As evidence in the works of Davenport and Prusak, 1998, Massey *et al*., 2002, Choi and Lee, 2003 KM practices have been positively linked to employee and organizational performance. Specifically it has been identified that KM practices improves operational excellence, customer intimacy and product leadership, which are intended evidence of improve performance of employee in the organization. Gold *et al.,* (2001) conducted an empirical study to evaluate how knowledge management affects organizational performance. The result of the study indicated that knowledge infrastructure capabilities and knowledge processes capabilities affect organizational performance.

According to Bhatti and Qureshi (2007) knowledge management improves the decision making of employees and managers. This is because KM makes efforts to explore the tacit and explicit knowledge of individuals, groups, and organizations and to convert this treasure into organizational assets so that individuals and managers can use it in various levels of decision making. Apart from its contribution to effective decision making in the organization, an efficient KM practices improves the efficiency and effectiveness of employees, thereby improving their performance (Dahiya *et al.*, 2012). As stated in the work of Dahiya *et al.,* (2012) knowledge management develops, transfers, transmits, stores, and implement knowledge management in order to improve efficiency and effectiveness of the organization's manpower. In addition, Huang (2001) explains that effective knowledge management makes employees more efficient and innovative.

Through application of their knowledge, employees provide an organization with capabilities that competitors cannot easily copy (Teece, 2000). Firms that benefit from effective knowledge management should be better positioned to implement performance enhancing process, product and service innovations. Such firms will be more flexible and have better planning, problem solving and troubleshooting capabilities, which can lead to improved

customer service and satisfaction (Youndt & Snell, 2004). According to Hsu (2008), effective knowledge management leads to the development of human capital amongst employees, which in turn helps to transfer skills, as well as motivate and empower employees to improve their job performance. Additionally, knowledge sharing helps firms to leverage the accumulated experiences of employees and promotes teamwork in the resolution of problems and customer service needs.

2.3 Knowledge Management in Telecommunication Industry

Previous study by Nonaka (1994) has demonstrated that a company's individual and organizational knowledge serves as one of the cornerstones for its sustained competitive advantages. According to Alvesson (2000) the successes of firms depend largely on their ability to learn continually and apply their knowledge, anticipating market changes. Through superior knowledge companies can accomplish their results faster, cheaper and with higher quality than their competitors. Knowledge about customers, markets and other relevant factors of influence allows faster utilization of opportunities and more flexible reaction to threats (Gebert *et al.*, 2002).

In view of Yusof (1998), the expansion of the telecommunication industry into diversified functions to support the growth of technological advancement for better services demanded by any nation is greatly influence by the era of industrialization and information age. The evolution of today's business environment where the marketplace is increasingly competitive and the rate of innovation is rising, together with the pressure of the emergence of global knowledge-based economy (Snyman *et al.*, 2004). The only reliable source of competitive advantage as well as the crucial asset in reducing uncertainties in today's business environment is knowledge (Gorelik, 2002). As such, the management of knowledge has been

recognized as a competitive weapon for the telecommunication industry to move forward and to chart more successes in the uncertain future (Chong *et al.*, 2006).

2.4 Employee Performance

Employee performance can be looked at in terms of behaviour on the contrary it is always looked at in terms of outcomes (Armstrong 2000). Performance is a critical factor in individual and organizational success and that is why when managers are hiring, they must first hire employees with the right skills and qualifications for the job. Once hiring is completed, managers attempt to ensure that an employee's work is closely aligned to the organization's goals and objectives (Nonka, 1991). In view of Kenney *et al.,* (1992), employee's performance is measured against the performance standards set by the organization. Several measures are taken into consideration when measuring performance for example using of productivity, efficiency, effectiveness, quality and profitability measures (Ahuja 1992). As briefly explained hereafter.

2.3.1 Profitability - The ability to earn profits consistently over a period of time. According to Wood & Sangster (2002) the expressed ratio of gross profit to sales or return on capital employed is termed profitability.

2.3.2 Quality - Characteristic of products or services that bear an ability to satisfy the stated or implied needs (Kotler & Armstrong 2002). In view of Stoner (1996) it is increasingly achieving better products and services at a progressively more competitive price.

2.3.3 Efficiency and effectiveness - Efficiency is the ability to produce the desired outcomes by using as minimal resources as possible while effectiveness is the ability of employees to meet the desired objectives or target (Stoner 1996).

2.3.4 Productivity - The expressed ratio of output to that of input (Stoner, Freeman and Gilbert Jnr 1995). The quantification of how individual, organization and industry transform input resources into goods and services. The measure of how much output is produced per unit of resources employed (Lipsey 1989).

2.5 Importance of Knowledge Management

Dewe and Wright (2007) as cited in Wamundila (2008) suggest that managing knowledge in an organisation has the following benefits; More informed decision making, avoiding wasteful duplication of resources, avoiding loss of commercial opportunity and loss of knowledge when staff exits, increasing accessibility to the organizations recorded internal knowledge, improving information literacy of researchers, learners and administrators, increasing the discovery, transmission and use of recorded knowledge, and increasing the dissemination of new knowledge within the organization.

In Malaysia exploratory studies on knowledge management outcomes indicate that the perceived benefits include better decision-making, better understanding of customers, improved skill base, better quality and efficiency, better outputs and innovation, sharing of best practices, and faster response to key institutional issues (Rumesh Kumar 2003). Knowledge management if effectively implemented serves as a coordinating mechanism for transforming all available resources into capabilities and thus allows a firm to gain greater value from its resources. In view of Stankosky (2005) knowledge management practices will enhance competitive advantage, improved efficiency, effectiveness and innovation. Little research has been done to determine the effects of knowledge management practices on telecommunication companies especially in Ghana.

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2.6 The Concept of Knowledge Management

In the 21st century, one of the important tool for organizations to gain competitive advantage is knowledge management. The practices that make it possible for institutions to capture, store and disseminate knowledge have become important. According to Nonaka, 1991 the practice of identifying, capturing, storing and disseminating knowledge within an organisation is described as knowledge management. Knowledge management involves the transfer of knowledge from individuals and groups to other individuals and groups (Nonaka and Takeuchi 1995). In the view of Daroch and McNaughton (2002), gradually emerging as an important concept in businesses and is often cited as an antecedent of organizational innovation. Alavi and Leidner (2001) poise that the growing interest in organizational knowledge has necessitated the need for organizations to effectively manage knowledge for their benefits. They therefore defined knowledge management as conscious and systematic effort aimed at ensuring coordination of a firm's productive resources in order to add value through innovations. However, according to Wiig (1997), though knowledge management is a difficult concept to measure, it is important for the growth and success of organizations in the 21st century. Nonaka and Konna (1998) assert that given the important role play by knowledge management, it is important for organizations to treat it with strategic importance. Various authors have tried to propose a clear and general definition of knowledge management. This implies that in undertaking an examination of knowledge management in organisations, there is the need to also provide a definition of the perspective on knowledge management, and it's underpinning theories within the context of this research.

2.7 Knowledge Management Practices

Multiple choices of models have been proposed by various scholars to describe knowledge management practices. According to Nonaka *et al.,* 1996; Dahiya *et al.*, 2012; and Bhatti and

Qureshi, 2007 in the knowledge management literature, five main practices have been identified. In this research, five main practices are commonly employed. These practices include knowledge creation, acquisition, sharing, storage, and implementation and these are discussed below.

2.8 Approaches to Knowledge Management

In order to ensure effective knowledge management practices, knowledge needs to be extracted, stored and disseminated to the relevant employees. According to Hansen *et al.,* (1999), there exist two main approaches to knowledge management. These are codification strategy and personalization strategy. These are discussed at the next section.

2.8.1 The codification strategy

Codification strategy, according to the authors involves carefully codifying and storing knowledge in databases where it can be accessed and used easily by anyone in the organization. By this approach, knowledge is explicit and codified using a person–to–document approach. This strategy is therefore document driven. Knowledge is extracted from the person who developed it, made independent of that person and re-used for various purposes. According to Armstrong (2006), the extracted knowledge is usually stored in some form of electronic repository for people to use. This allows many people to search for and retrieve codified knowledge without having to contact the person who originally developed it. This strategy relies largely on information technology to manage databases and also on the use of the intranet.

2.8.2 Personalization Strategy

Unlike the codification strategy which takes the form of 'person–to–document' approach, the personalization strategy takes the form of 'person-to-person'. With this approach, knowledge is closely tied to the person who developed it and is shared primarily through person-to-

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person contacts. This approach is very good for sharing tacit knowledge, which is difficult or even impossible to codify and stored. In most cases, the exchange is made possible through the creation of networks that encourages face-to-face communication between individuals and teams by means of informal conferences, workshops, brainstorming and one-to-one sessions.

2.9 Types of Knowledge

Knowledge is generally grouped into two categories. These are tacit knowledge and explicit knowledge. The sections below provide explanation of the main types of knowledge.

Figure 2.1: The Explicit-Tacit Dimension

Source: Botha *et al*. (2008)

2.9.1 Tacit Knowledge

Tacit knowledge exists in a person's mind, but may be difficult to articulate.

Polanyi (Polanyi, 1966) stated that tacit knowledge is the background knowledge a person uses when trying to understand anything that is presented to him. Therefore, tacit knowledge can be viewed as including emotional and cultural knowledge. It may be characterized by

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intuition and impressions which can create incomplete memories (Ein-Dor, 2006). However, those memories can be made complete with the appropriate help. Tacit knowledge is the type of knowledge that can be accumulated through experience and learning. Reed and Defilippi (1990) describe this type of knowledge as "learning by doing". According to Smith (2001), tacit knowledge, unlike other types of knowledge, cannot be found in books and printed material. It resides in the person's mind and is made up of beliefs, perceptions, insight and assumptions. Put differently, tacit knowledge comes from informal sources.

2.9.2 Explicit Knowledge

This type of knowledge is formalized and codified, and is sometimes referred to as know-what (Brown & Duguid 1998). It is therefore fairly easy to identify, store, and retrieve (Wellman 2009). This is the type of knowledge most easily handled by KMS, which are very effective at facilitating the storage, retrieval, and modification of documents and texts. Unlike tacit knowledge that is revealed through its application, explicit knowledge is revealed through communication (Spender 1996). Explicit knowledge is usually formal and written down and communicated. It is usually captured in the form of text, diagrams, tables and illustrations. According to Nonaka (1991), explicit knowledge is "formal and systematic". For instance in an organization, the processes used to produce a particular good or service can be written down and communicated to other employees. Thus, it is easier to capture explicit knowledge than tacit knowledge. In other works, because explicit knowledge can easily be codified, it is easy to capture, store and transfer within and beyond an organisation. A typical illustration of explicit knowledge is the formula used in finding the area of a square. Since the formula is codified and available to all, it can easily be applied.

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2.10 Theoretical Perspectives of Knowledge Management: Organisational Learning

(Learning Theories)

Organisational learning process is a facilitator of knowledge management. It has been established that successful learning organizations create a conducive organizational environment that combines organizational learning with knowledge management. According to Pilbeam and Corbridge, 2006 whereas the focus of organizational learning is primarily concerned with the continuous generation of new knowledge, knowledge management on the other hand laid more emphasis on the formalization, storage, sharing and distribution and co-ordination of existing knowledge assets throughout the organization. In spite of the differences between these concepts, the inherent feature that is common to both is the sharing of ideas to create and develop new knowledge, enhanced by organizational structures and culture and supported by effective knowledge management systems (Pilbeam and Corbridge, 2006). Organisational learning has been identified as one of the approaches to knowledge management. In view of Armstrong (2007), organizational learning theory is concerned with how learning takes place in organizations. A number of learning theories have been proposed in the organizational behaviour. These include reinforcement theory, cognitive learning theory, experiential learning theory, and social learning theory. These theories are further discussed below.

2.10.1 Reinforcement Theory

The reinforcement theory takes it roots from the seminal work of Skinner (1974). It expresses the belief that changes in behaviour take place as a result of an individual's response to events or stimuli, and the resulting consequences (rewards or punishments). In other words, the theory postulates that behaviour is a function of its consequences. According to the theory, if a positive 'reinforcement' follows behaviour, the learner will repeat the desired behaviour. On the other hand, a negative reinforcement may also strengthen behaviour.

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2.10.2 Cognitive Learning Theory

Cognitive learning involves gaining knowledge and understanding by absorbing information in the form of principles, concepts and facts, and then internalizing it. Learners can be regarded as powerful information processing machines. This approach emphasizes on the importance of experience, meaning, problem-solving and the development of insights (Burns 1995, p 112). Burns notes that this theory has developed the concept that individuals have different needs and concerns at different times, and that they have subjective interpretations in different contexts.

2.10.3 Experimental Learning Theory

People are active agents of their own learning (Reynolds *et al.,* 2002). Experiential learning takes place when people learn from their experience by reflecting on it so that it can be understood and applied. Learning is therefore a personal 'construction' of meaning through experience. 'Constructivists' such as Rogers (1983) believe that experiential learning will be enhanced through facilitation – creating an environment in which people can be stimulated to think and act in ways that help them to make good use of their experience. Kolb (1992) and McGill and Beaty (1995) proposed an experiential learning model which is a four-stage learning process, shown in Figure 2.1. (McGill & Beaty, 1995). In fact, the process can begin at any of the stages and is continuous in that there is no limit to the number of cycles you can make in a learning situation. This theory posits that without reflection one would simply continue to repeat our mistakes.

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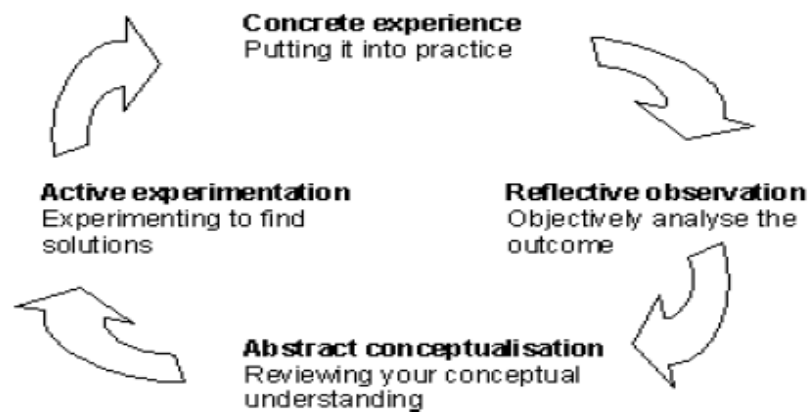
Figure 2.2: Kolb's experiential learning cycle

Source: McGill & Beaty (1995)

2.10.4 Social Learning Theory

Social learning theory states that effective learning requires social interaction. Wenger (1998) suggested that all people participate in 'communities of practice' (groups of people with shared expertise who work together) and that these are the primary sources of learning. Bandura (1977) views learning as a series of information processing steps set in train by social interactions.

2.11 Challenges of Knowledge Management

In view of Peyman *et al.,* (2005) conducted a research to determine the factors that lead to failure of knowledge management systems. Peyman focused on the following factors; focusing KM efforts only within organizational boundaries, failure to understand and connect KM into individuals daily work activities, creation of repositories without addressing the need to manage content, resistance towards change, organizational culture, lack of familiarity of top management with dimensions of KM and its requirements and failure to align KM efforts with organizations strategic objectives. Ambrosio (2000) as cited in Peyman *et al.,*

2005 cites that the most common error in implementing knowledge management system is failing to coordinate efforts between information technology and human resources.

Effective KM demands that the organisation make conscious effort to change their organisational culture and embrace new management practices. However, it is sometimes difficult to obtain full support from management when it comes to knowledge management (Gupta *et al.*, 2004).

Knowledge Management may fail to deliver required result despite efforts to make it work. The extent to which knowledge management can be successful is mixed. According to Birkinshaw (2001) knowledge management promises so much but delivers very little. This admission by the author implies that knowledge management may not necessarily achieve intended objectives due to inherent challenges in the process. In view of Birkinshaw (2001) key a mound the challenges associated with knowledge management is that it is so central to the make-up of the firm that it cannot be separated out and acted upon in the way that a single business process or management system can. This makes it difficult for organizations to devote time and resources to the management of knowledge since they see it as part of the day-to-day processes of the firm.

Another challenge confronting knowledge management is how knowledge is acquired. The challenge here is to get hold of the information that is around, and turn it into knowledge by making it usable. This might involve, for instance, making tacit knowledge explicit, identifying gaps in the knowledge already held, acquiring and integrating knowledge from multiple sources (e.g. different experts, or distributed sources on the world wide web), acquiring knowledge from unstructured media(e.g. natural language or diagrams) (Armstrong 2009).

2.12 Conceptual Framework

Based on the literature reviewed in this chapter, the researcher attempts to develop a conceptual framework for investigating the effect of knowledge management on employee performance in a third world country (Figure 2.3). This framework is limited to the practices of knowledge management and depicts in Figure 2.3 employee performance variables such as employee output, increased productivity, quality of output and work relationship.
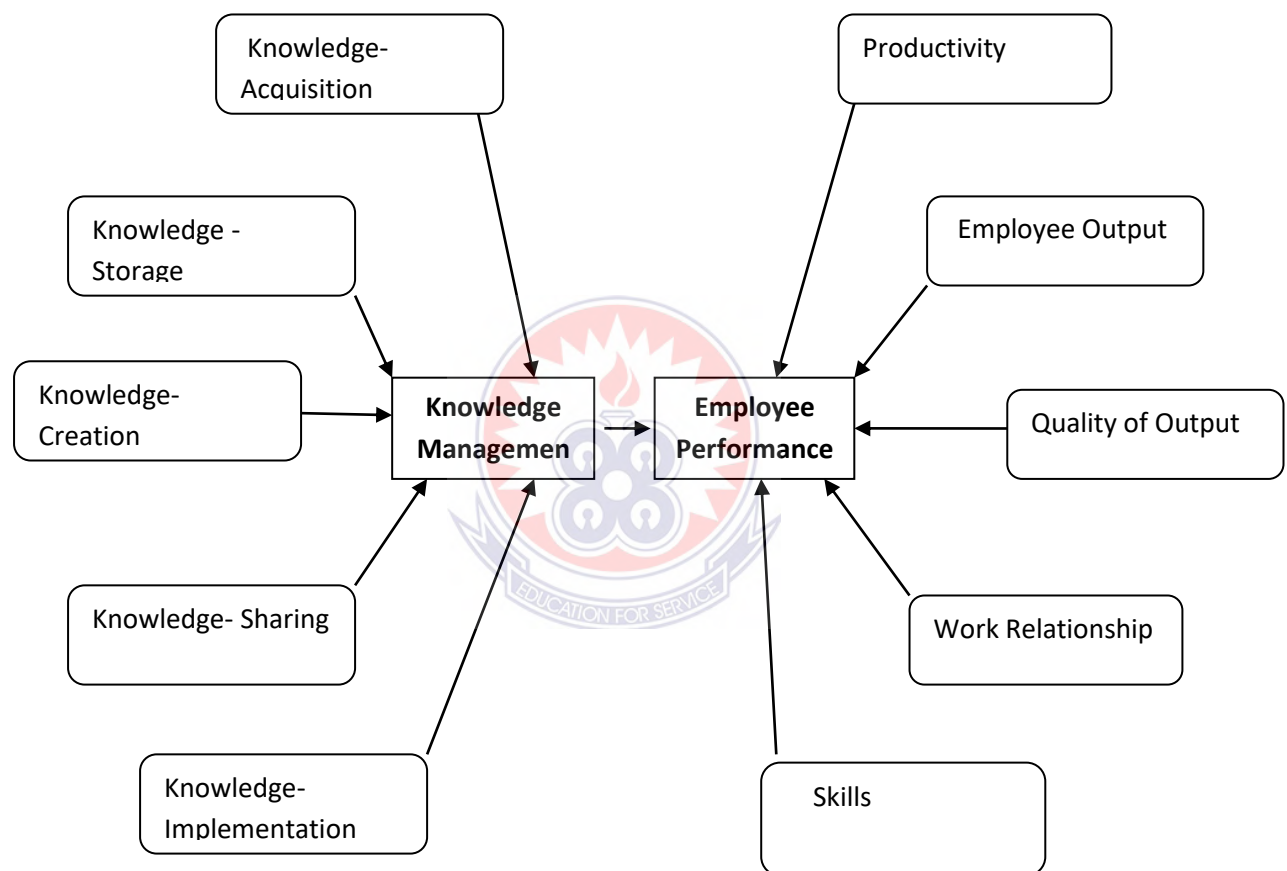
Figure 2.3. A conceptual framework for investigating the effect of knowledge management practices on employee performance

2.13 Review of Previous Studies

Detaille research was conducted by Zahidul *et al*., (2007) on the role of knowledge management practices on organizational context and effectiveness within selected Malaysian Multinational companies. The study focused on the role of cultural and structural

characteristics on organizational effectiveness. Data were collected through questionnaires and analyzed using Statistical Package for Social Sciences (SPSS) version 11 to analyze the relationship of organizational context, KM, and organizational effectiveness. The results indicated that knowledge management practices mediate the relationship between organizational context and organizational effectiveness. This was in agreement with a study of 222 Spanish firms in biotechnology and telecommunications industries conducted by Marques and Simon (2006). They surveyed senior business managers about their respective firms' KM practices and firm performance. They view KM practices as innovative organizational activities that bring important changes to business processes and to traditional management paradigms. Using a 7-point likert scale, they assessed KM practices in terms of six dimensions and measure firm performance via profitability, growth, efficiency, stakeholder satisfaction, and competitive position. Analysis of the survey data led to their conclusion that there is a strong and positive relationship between the implementation of KM practices and organizational performance. These findings were similar to another study by Asli *et al.,* (2013) on the influence of knowledge management on organizational performance on small and medium enterprises using structural equation modeling. The study found out that knowledge management practices positively and significantly influenced organizational performance. Another study by Ngah and Razak (2010) on the effect of knowledge sharing practices on organizational performance on SMEs in Malaysia found that knowledge sharing has a positive and strong influence on organizational performance. The study utilized convenience sampling to collect data and structural equation modeling to analyze data.

A study by Waheed *et al.,* (2010), on the effect of knowledge management practices on organizational performance focused on the integrative effect of processes, intellectual capital, culture and strategy with cohesion of all stake holders on knowledge management which

effects on organizational performance. It recommends that a sharing culture should be developed, to create knowledge sharing environment.

This study presents a conceptual framework model of process, intellectual capital, culture and strategy for successful implementation of knowledge management. Lee (2010) also conducted a study on the impact of knowledge management practices in improving students learning outcome in Singapore polytechnic, this study focused on knowledge management practices that influence student's performance. While research done by Wamundila (2008) focused on the identification of knowledge management practices at University of Zambia with the main purpose of developing a knowledge retention framework. The research only studied knowledge retention, transfer and acquisition practices leaving out several other knowledge management practices. However, some other studies contend that KM initiatives do not always positively impact business performance and often fail to result in improved task outcomes in organizations (Sabherwal and Becerra-Fernandez 2003). Another study by Mills and Smith (2011) studied the impact of knowledge management resources on organizational performance. The results show that some knowledge resources for instance structure and acquisition were directly related to organizational performance while other knowledge resources such as culture and technology were not related to organizational performance. These inconsistent observations indicate that KM's effects on firm performance are not yet well understood and still open for investigation (Smith and McKeen 2005). None of these studies focused on the effect of knowledge management practices on employee performance at telecommunication companies. This study is investigating the effects of knowledge management on employee's performance at MTN Ghana and VODAFON Ghana in the Kumasi metropolis. This is a case study in which data will be collected through interview schedules and questionnaire whereas the other studies were surveys on the effects of knowledge management practices on organizational performance.

2.14 Summary

The chapter reviewed theoretical and empirical literature on knowledge management. It began by examining the link between knowledge management and employee performance. It was observed that many empirical studies found a positive relationship between knowledge management and employee performance. The chapter also defined a number of concepts relating to the study. These included knowledge, knowledge management and types of knowledge. The chapter also reviewed literature on organisational learning. It was observed that organisational learning and knowledge management were not mutually exclusive. This meant that, knowledge management can only be effective if there was organisational learning. The review also examined the main theories of learning. Finally, the chapter examined the main challenges associated with knowledge management and observed that the main challenges associated with the concept were focusing KM efforts only within organizational boundaries, failure to understand and connect KM into individuals daily work activities, creation of repositories without addressing the need to manage content, resistance towards change, organizational culture, lack of familiarity of top management with dimensions of KM and its requirements and failure to align KM efforts with organizations strategic objectives.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The focus of this chapter is on the approach adopted for the study which describes the methodology that is adopted to gather data and techniques that will be used for the analysis of field data. As a result the chapter specifically will focus the discussion on, the research design, the organisational profile, population, data requirement and sources, sampling frame and techniques, the data collection tools and techniques, review of previous studies and the data analysis and presentation methods.

A comprehensive research methodology must seek to define what the activity of research is, how to proceed, how to measure progress and what constitutes success (Yin, 2003). Kumekpor (2002) also defines it as the methods, procedures and techniques used in an attempt to discover what we want to know.

3.2 Research Design

In view of Johnson and Christensen (2004) research design is the outline, plan or strategy used to arrive at findings for a research question. Research design provides a general view of the methods employed for a study and the reason behind the application of those methods (Saunders *et al.,* 2009). According to Newman and Benz (2000) unquestionably, the research approaches are not as discrete as they first appear. Quantitative and Qualitative approaches should not be viewed as rigid, distinct categories, polar opposites or dichotomies. Instead they represent different ends on a continuum. The selection of this design is mainly due to the aforementioned virtues associated with open ended question questionnaire and close ended question questionnaire and the need to have a detailed investigation of the effects of knowledge management practices on employee's performance of telecommunication

companies in Kumasi, Ghana. This research would adopt an open ended question questionnaire and close ended question questionnaire.

According to Babbie (2010) the description and explanation of phenomena allows quantitative research to focus on analysing numerical data whereas qualitative research deals with meanings, examining the attitudes, feelings and motivations of people. According to John W Creswell (2014, pp32.) qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data. This engages the researcher to honor an inductive style, focus on individual meaning and the importance of unraveling the effect of knowledge management on the performance of employees in the telecommunication industry. John W Creswell (2014, pp32.) also pointed out that quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables can be measured on instruments, so that numbered data can be analyzed using statistical procedures. Like qualitative researchers, those who engage in this form of inquiry have assumptions about testing theories deductively, building in protections against bias, controlling for alternative explanations, and being able to generalize and replicate the findings. In this study the quantitative approach is adopted with open ended questionnaire and close ended questionnaire instrument as a means answering the research question.

3.3 Target Population

In view of Aaker *et al.,* (2005) population refers to the total collection of elements. For the purposes of this study, the study population comprised of workers and management of two

telecommunication network companies (MTN Ghana and VDAFON Ghana) in Kumasi, Ghana.

3.4 Data Collection Procedure

Permit was obtained from the dean faculty of business education after a research approval by the graduate school. Through close ended question questionnaires and open ended question questionnaires primary data was collected for the purpose of finding answers to the research questions.

3.5 Data Analysis and Presentation

To understand a phenomenon researcher must pay attention in carefully analyzing a row data. In view of Saunders *et al*., (2009) data analysis is the breaking down of data with the view of clarifying the nature of the components parts in order to establish relationship between them. Since this study adopts a mixed approach to data collection that is close ended question questionnaire and open ended question questionnaire data are to be analyse using appropriate data analysis techniques. There are a number of data analysis techniques that can be used to analyse qualitative and quantitative data.

3.5.1 Questionnaire Data Analysis and Presentation

Quantitative data collected through the questionnaire are organized and then coded. This is done to ensure similar patterns from the answers given. The collected data were checked for errors and to identify unanswered questions before the data would be entered into Statistical Packages for Social Sciences (SPSS 19.0) software. Data analysis was then carried out after data entry for all questions captured in the questionnaires. Descriptive and inferential statistics were engaged to analyse quantitative data. The statistics used includes frequency percentages and multiple correlation analysis. The results of data analysis are presented using frequency distribution tables and bar graphs.

3.5.2 Questionnaire Administration

Questionnaires were delivered to the respondents and picked at an agreed time. After the collection of questionnaires and subsequent follow-up a total of 106 questionnaires were collected. The response rate was 89% and was deemed adequate to proceed with data analysis. For the purpose of the open ended questions an appointment for the administering of the open ended questions were secured to enable the respondents prepare adequately for the administering of the questionnaires and also to provide well thought responses. The administering of the questionnaires sessions lasted for fifteen minutes and the respondents were given the opportunity to provide accurate and objective answer to the questions.

3.6 Research Instrument

Close ended question questionnaires and open ended question questionnaires were the tools adopted for the purpose of collecting data for this research.

3.6.1 Questionnaire

The questionnaire design was based on the objectives of the study. Closed ended questions and open ended questions was use respectively and the content of the questionnaire were determined from the literature review. The close ended question questionnaire was in three broad parts. That is the introduction which introduces the research topic, objectives and instructions for answering the questions in the questionnaire, the background information of the respondent and the final part which contained the research questions that are self-explanatory. Multiple choice and likert scale questions was provided in which respondents were required to tick the appropriate choice. This was to increase the chances of completion of the questionnaire by the respondents.

The open ended question questionnaire had two broad parts. That is the introduction, in which the researcher introduced himself, the research topic and objectives, as well as

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instructions for answering the questions in the questionnaire. The second part contained the research questions and had four sections: Personal details, knowledge management practices, knowledge management policy, effect of knowledge management and challenges associated with knowledge management.

3.7 Sample Size and Sample Procedure

For the purpose of validity and mechanism of addressing the research undertaking, two sample frames was adopted. The first sample frame will constitute close ended question questionnaire and the second sample frame also will constitute open ended question questionnaire respondents.

3.7.1 Purposive Sampling

Sampling for close ended question questionnaires participants will be done through non-probability sampling technique called purposive sampling. In view of Creswell (2003) purposive sampling is the rationale for undertaking case study research. The close ended question questionnaire potential respondents presumed to be in possession of characteristics deemed suitable for the ability to provide required information and knowledge at MTN Ghana and VODAFON Ghana. In the open ended question questionnaire, respondents were drawn from heads of Human Resource, Mobile Financial Service, Customer Relationship, Technician and Marketing.

The above list comprised of individuals with diverse roles that is deemed adequate and representative of MTN/VODAFON operations. In administering the questionnaire the above participants are crucial for this study as they are bringing a different dimension with regard to the data collection. For instance, some of the data required could only be collected from individuals involved in management and as such, it is necessary to purposively select these individuals. The two telecommunication companies are to form the study unit and simple

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purposive sampling is used to select sampling units from each unit. Purposive sampling is used to select and administer close ended question questionnaires at MTN and VODAFON. The sample size for this study is calculated using the minimum sample size formula in equation (1), at a confidence level of 95% and a 9% margin of error. This formula is used since the study is a cross-sectional survey and the response variable is qualitative (Cochran, 1977).

$$\text{Sample size (n)} = \frac{\left(Z_{1-\frac{\alpha}{2}}\right)^2 P(1-P)}{E^2} \qquad (1)$$

Hence, $\text{Sample size (n)} = \frac{(1.96)^2(0.5)(0.5)}{(0.09)^2} = 118.57$

Which, when rounded up, is 119 sampling units to sample.

The sample size for each of the two telecommunication companies in consideration (MTN and VODAFON) will be determined proportional to the staff-strength of the company.

For MTN, the minimum sample size is

$$n = \frac{\text{Number of MTN workers in Kumasi}}{\text{Number of workers in both MTN and VODAFON in Kumasi}} \times 119 = \frac{176}{331} \times 119 = 63$$

n = 63

For VODAFON, the minimum sample size is

$$n = \frac{\text{Number of VODAFON workers in Kumasi}}{\text{Number of workers in both MTN and VODAFON in Kumasi}} \times 385 = \frac{155}{331} \times 119 = 56$$

n = 56

For this study, the total population of study at MTN/VODAFON is 331 When the formula is applied to the 331 potential respondents, it yielded a sample size of 119 The sample size of the members of staff is distributed among the various departments using proportionate sampling.

3.8 Organizational Profile

According to Henry Mintzberg (1992, 2009) organizational profile can be differentiated along three basic dimensions: (1) the key part of the organization, that is, the part of the organization that plays the major role in determining its success or failure; (2) the prime coordinating mechanism, that is, the major method the organization uses to coordinate its activities; and (3) the type of decentralization used, that is, the extent to which the organization involves subordinates in the decision-making process. This section will provide a description of the two telecommunication companies examined in this study. This is so because these two companies control a larger portion of the workforce in the telecommunication industry in Kumasi, Ghana. It is also in record that these companies enjoy a larger shear of the Ghanaian market and as such will be a suitable area for the study of the effect of knowledge management practices on employee's performance of telecommunication companies in Kumasi, Ghana.

3.8.1 MTN Ghana

Incorporated in 1994, MTN Group Limited is a multinational telecommunications company offering mobile communication and related products and services to individuals and businesses in three different continents. MTN has licenses in Twenty One (21) countries and internet service provider (ISP) in Thirteen (13) countries, mostly in Africa and The Middle East.

MTN Group Limited is a mobile operator. The Company offers voice, data and digital services to retail customers in approximately 20 countries where it has telecoms licenses, as well as enterprise solutions to corporate, small and medium enterprises (SME) and public sector customers in over 30 countries. The Company's segments include South Africa, Nigeria, Large opco cluster, Small opco cluster, Major joint venture-Iran, Head office companies and eliminations, and Hyperinflation impact. The Large opco cluster includes its operations in Ivory Coast, Ghana, Cameroon, Uganda, Sudan and Syria. Its voice and data services include voice bundles, data bundles, bonus on recharge and low-denomination recharge vouchers. Through partnerships, the Company offers various digital services, with a focus on financial services, e-commerce, media and entertainment, and lifestyle offerings. Its services include MTN Football, MTN VU, MTN Play, MTN Music, Gaming, MTN Mobile Money and Taxi hailing.

MTN is also investing in tower management companies in Ghana and Uganda. At the end of December 2011 MTN had 164.5 million subscribers. In 2011 total revenues reached R121.9 billion and during the year the Group invested R17.7 billion in developing its network infrastructure. Included in capital expenditure are investments in metropolitan and long-distance fiber optic cables. MTN continues accessing more broadband capacity on undersea cables.

MTN's vision is to be the leader in telecommunications in emerging markets. MTN's overriding mission is to be a vehicle for Ghana's economic growth and development, helping to promote Ghana's strong development potential from the provision of world-class telecommunications products and services, through to innovative and sustainable corporate social investment initiatives.

3.8.2 VODAFONE Ghana

Vodafone Group Plc is one of the world's largest telecommunications companies providing a wide range of services including voice, messaging, data, fixed broadband and TV. Vodafone have 470 million mobile customers, 14 million fixed broadband customers, 9.8 million TV customers and employ around 108,000 people. They have mobile operations in 26 countries, partner with mobile network providers in over 50 more and have fixed operations in 17 countries. The Group's operations are split into two geographic regions – Europe and Africa, Middle East and Asia Pacific (AMAP).

Vodafone in Ghana is one of the latest additions to Vodafone Group Plc, the world's leading mobile telecommunications company. This follows the successful acquisition of 70% shares in Ghana Telecommunications Company (GT) for $900 million dollars by Vodafone International Plc on July 23, 2008. On 3 August 2008 it was announced that Vodafone had agreed to acquire 70% of Ghana Telecom from the Ghanaian government at a cost of US$900 million and a total enterprise value of approximately US$1.3 billion. After the transaction closed, Vodafone had a 70% stake in the company, while the Ghanaian government retained a 30% stake. The sale was supported by president John Agyekum Kufuor but strongly opposed by the opposition party which would win the presidential elections a few months later. The new president John Atta Mills, head of the National Democratic Congress party (NDC) also launched an investigation into the deal after being elected president a claiming that the government "did not get value for money". Despite these claims Vodafone a few months later would write down the value of its stake in Ghana Telecom by £250m as the economic climate worsened, damaging the business's prospects. On 16 April 2009, the company was rebranded as Vodafone Ghana. As of 2015 Vodafone Ghana is the country's second largest operator with a market share for December 2015 was 21.74% and 18.39% of data behind African communications giant MTN Group.

Vodafone Group Plc is making significant in-roads in Africa and currently operates in Kenya, South Africa, Tanzania and Mozambique. It has significant presence in Europe, the Middle East, Asia Pacific and the United States through the company's subsidiary undertakings, joint ventures, associated undertakings and investments. Vodafone Group has more than 315 million customers, excluding paging customers, calculated on a proportionate basis in accordance with its percentage interest in these ventures. Operational in 31 countries, the company is ranked among the top 10 global companies by market capitalization.

Vodafone has a unique portfolio of products and services. We provide you with high speed access to the internet, mobile services and fixed lines. The company applies the latest industry technology and is keen on building the most versatile network. Vodafone go the extra mile to ensure that services on your mobile handset enable you to go out and conduct your business or have fun in the most enjoyable and relaxing manner. They are the market leader in providing broadband services which are among the most competitive in the market. The company has a deep sense of social responsibility and does this through responsible employee volunteerism, providing access to communication in deprived communities and investing hundreds of thousands of cedis through the Vodafone Ghana Foundation in social causes. Excellent customer care is one of our strengths and the Vodafone Group pride themselves in being the only telecommunications company in Ghana with as many customer service points - situated to meet you at your point of need.

3.9 Summary

The chapter examined the methodology and sources of data for the study. The chapter begin by examining the research design of the study. The chapter also provided an overview organizational profile of the telecommunication companies (MTN/VODAFONE) under study, target population as well as sample size and sampling procedure. The chapter further examine the various sources of data for the study. Both close ended question questionnaires

and open ended question questionnaires were chosen as the best means of gathering data for the study. The chapter also examined the techniques for the analysis, presentation of the result. This is to enable the researcher have accurate and realistic data to be able to analyse the effect of knowledge management on the performance of employees of telecommunication companies (MTN/VODAFONE) in Kumasi Ghana.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION OF RESULTS

4.1 Introduction

The focus of this chapter is to analyse the data gathered from the field in order to assess the effect of knowledge management on the performance of employees of telecommunication companies [MTN Ghana and VODAFON Ghana] in Kumasi, Ghana as the case study areas. The chapter initially considered the background features of respondents for the study and then presented the main findings. Data collected were subjected to statistical analysis with respect to assessing the correlation between knowledge management and employees performance within the telecommunication companies.

4.2 Quantitative Analyses and Response Rate

Quantitative data was generated for this study and was analyzed using Statistical Package for Social Science (SPSS). Analysis of the data was completed using descriptive statistics such as bar charts and cross tabulation tables. The researcher sent out 119 questionnaires to gather the data for the analysis but received 106 answered questionnaires representing 89% response rate. The relatively high response rate may be attributed to the persuasive nature of the researcher in administrating the questionnaires to respondents.

4.2.1 Background Features of Respondents

One hundred and six (106) administered questionnaires were collected and analysed, figure 4.1, figure 4.2, figure 4.3 and figure 4.4 presents the background features of the questionnaires respondents.
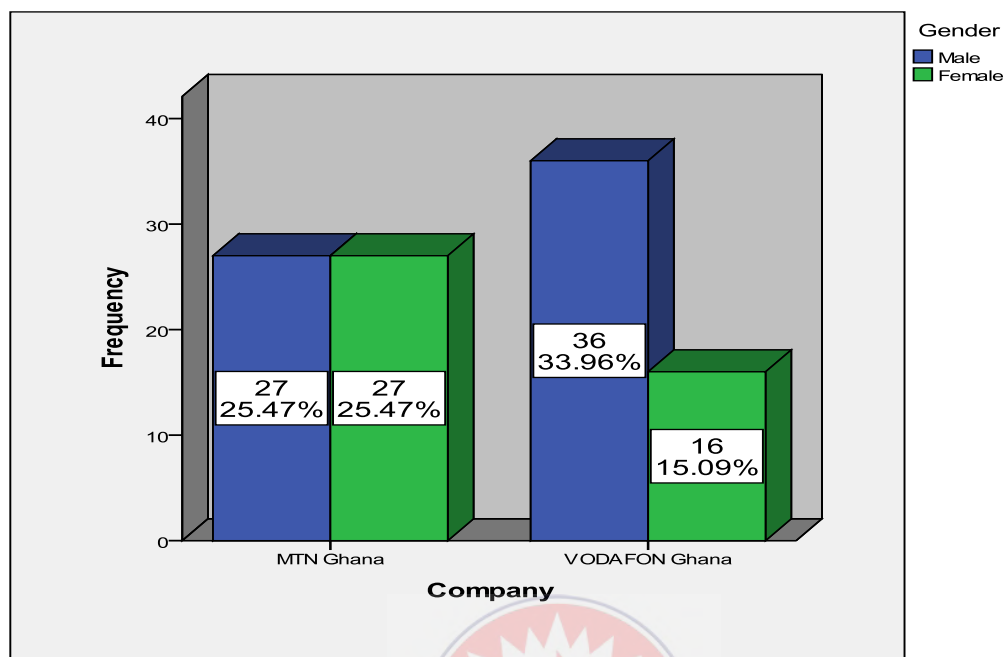
Figure 4.1 Gender of Questionnaire Respondent

Source: Research Data

With respect of gender, figure 4.1 indicates that twenty five percent of the MTN Ghana respondents were twenty (27) males while twenty seven (27) were also females, VODAFON Ghana also recorded thirty six (36) and sixteen (16) for males and females respectively.
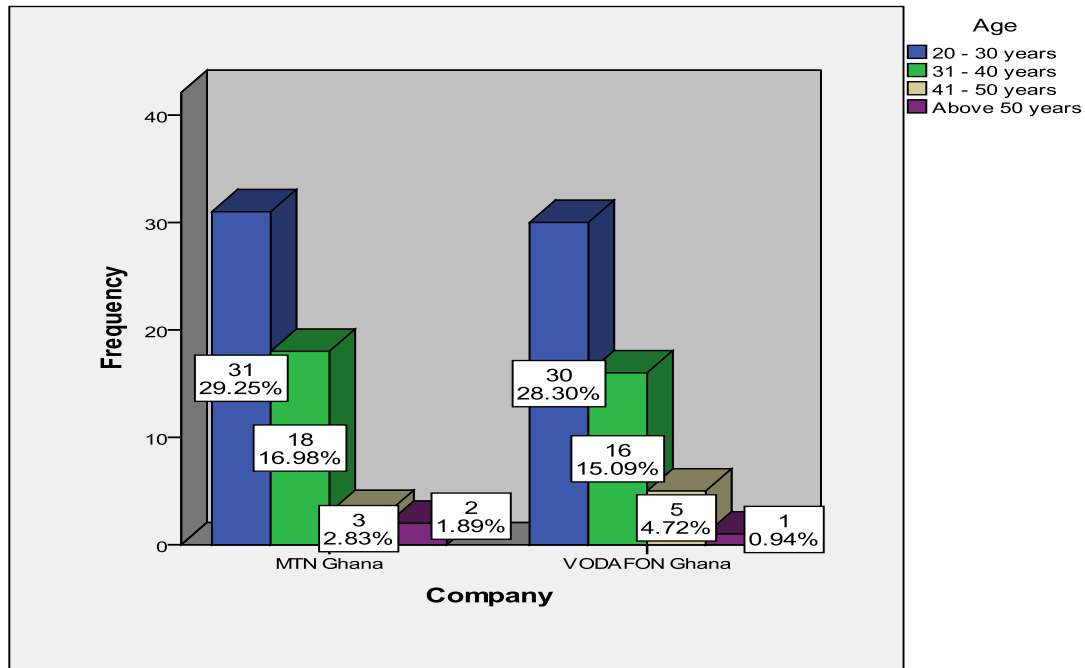
Figure 4.2 Age Distribution of the Respondents

Source: Research Data

Data collected from the questionnaires as shown in the above figure 4.2 show that MTN Ghana had thirty one (31) of the respondents between 20 – 30 years, eighteen (18) of the respondents between 31 – 40 years, three (3) of the respondents between 41 – 50 years and two (2) for employees above 50 years. Also VODAFON Ghana respondents recorded thirty (30) for 20 – 30 years, sixteen (16) for 31 – 40 years, five (5) for 41 – 50 years and one (1). The result also showed that majority of the respondents from both MTN and VODAFON constituting fifty eight percent (57.55%) were within the 20 - 30 years bracket. Also, it can be observed that three percent (2.83%) of the respondents were over the age of 50 and are very close to retirement.
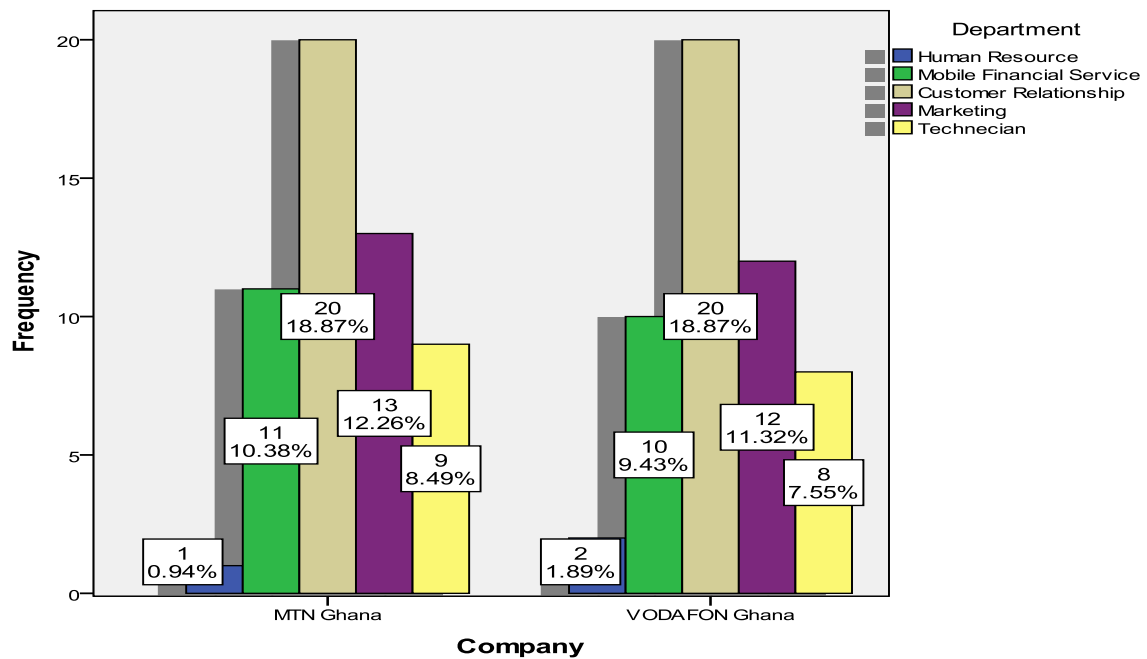
Figure 4.3 Respondents department of Work

Source: Research Data

It can be observed from Figure 4.3 that at MTN Ghana one (1) respondent was in the Human Resource department, eleven (11) respondents were in Mobile Finance Service department, twenty (20) respondents were in Customer Relationship department, thirteen (13) respondents in Marketing department and nine (9) respondents were also in the Technician department. Also the observation at VODAFON Ghana was that respondents were two (2), ten (10), twenty (20), twelve (12) and eight (8) from the Human Resource department, Mobile Financial Service department, Customer Relation department, Marketing department and Technician department respectively.

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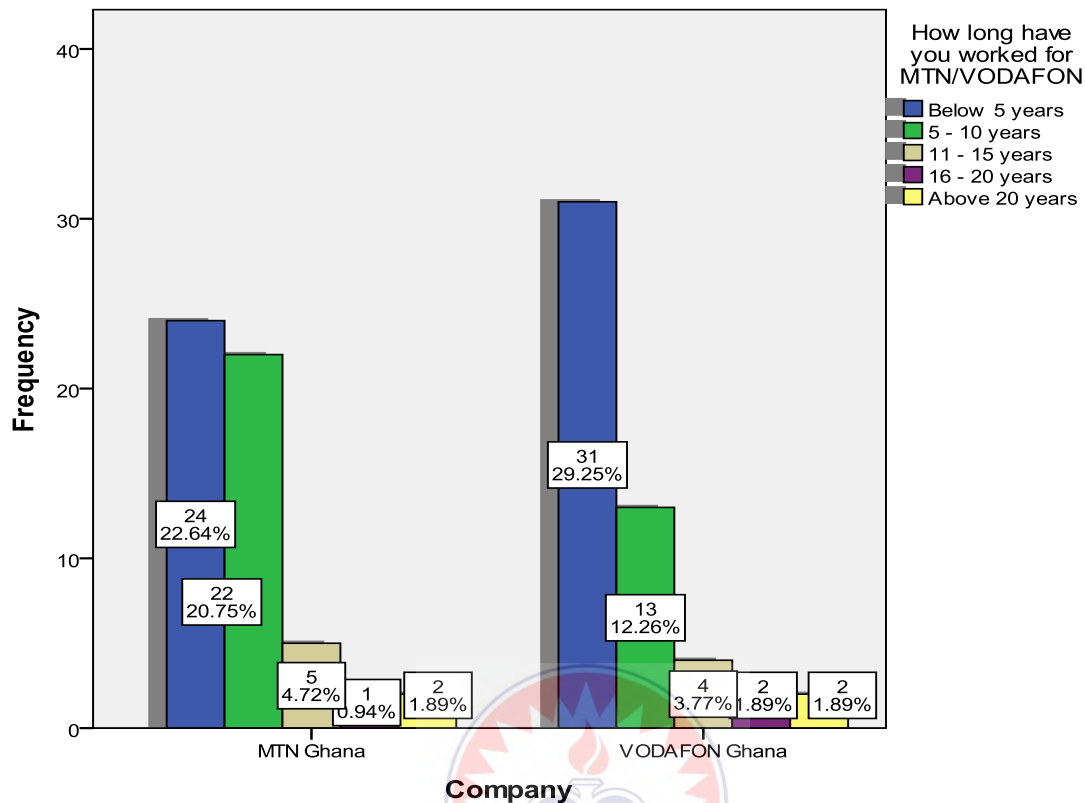
Figure 4.4 Work Experience

Source: Research Data

Figure 4.4 reveals that MTN Ghana employees who have worked below 5 years were twenty four (24), 5 – 10 years were twenty two (22), 11 – 15 years were five (5), 16 – 20 years was one (1) and above 20 years were two (2). VODAFON Ghana employees who have worked below 5 years were thirty one (31), 5 – 10 years were tthirteen (13), 11 – 15 years were four (4), 16 – 20 years were two (2) and above 20 years were two (2). The results further revealed that   about 52% of the respondents had served their respective companies for below 5 years. This meant that the workers of the selected companies had acquired little or no experience and therefore there is the need for effective knowledge management policies of the companies as a means of improving and sustaining the performance of employees.

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4.2.2 Main Findings

Quantitative analysis here focuses on the three objectives and therefore ensures that the analysis was done as clear as possible. Achieving this objective, respondents (119) were distributed to respondents out of which the researcher received 106 answered questionnaires representing 89% response rate expressing their views on the extent to which key knowledge management practices were implemented. Twenty two (22) key dimension of knowledge management were accessed to determine how they were applied at selected telecommunication companies in Kumasi, Ghana. The responses were rated on a Likert scale (1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 - Strongly Agree).

Table 4.1 Employees acquire knowledge from external source

Company * Employees acquire knowledge from external source Cross tabulation						
Company	Employees acquire knowledge from external source					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	4	1	10	25	14	54
	7.4%	1.9%	18.5%	46.3%	25.9%	100.0%
VODAFON Ghana	1	2	5	31	13	52
	1.9%	3.8%	9.6%	59.6%	25.0%	100.0%
Total	5	3	15	56	27	106
	4.7%	2.8%	14.2%	52.8%	25.5%	100.0%

Source: Research Data

On the question whether employees acquire knowledge from external source the answers provided by MTN Ghana respondents were analyse as follows seven percent (7.4%) strongly disagree, two percent (1.9%) disagree, nineteen percent (18.5%) neutral, forty six percent (46.3%) agree and twenty six percent (25.9%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, four percent (3.8%) disagree, ten percent (9.6%) neutral, sixty percent (59.6%) agree and twenty five percent (25.0%) strongly

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agree. Averagely five percent (4.7%) strongly disagree, three percent (2.8%) disagree, fourteen percent (14.2%) neutral, fifty three percent (52.8%) agree and twenty six percent (25.5%) strongly agree were the response as analyse.

Table 4.2 Employees to some extent acquire new knowledge from business partners

Company	Employees to some extent acquire new knowledge from business partners					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	0	10	18	26	0	54
	.0%	18.5%	33.3%	48.1%	.0%	100.0%
VODAFON Ghana	1	5	15	20	11	52
	1.9%	9.6%	28.8%	38.5%	21.2%	100.0%
Total	1	15	33	46	11	106
	.9%	14.2%	31.1%	43.4%	10.4%	100.0%

Source: Research Data

The question whether employees to some extent acquire new knowledge from business partners the answers provided by MTN Ghana respondents were analyse as follows zero percent (0.0%) strongly disagree, nineteen percent (18.5%) disagree, thirty three percent (33.3%) neutral, forty eight percent (48.1%) agree and zero percent (0.0%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, ten percent (9.6%) disagree, twenty nine percent (28.8%) neutral, thirty nine percent (38.5%) agree and twenty one percent (21.2%) strongly agree. Averagely less than one percent (0.9%) strongly disagree, fourteen percent (14.2%) disagree, thirty one percent (31.1%) neutral, forty three percent (43.4%) agree and ten percent (10.4%) strongly agree were the response as analyse.

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Table 4.3 Employees are constantly motivated to exchange knowledge with co-workers

Company * Employees are constantly motivated to exchange knowledge with co-workers Cross tabulation

Company	Employees are constantly motivated to exchange knowledge with co-workers					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	2	5	14	26	7	54
	3.7%	9.3%	25.9%	48.1%	13.0%	100.0%
VODAFON Ghana	0	3	8	31	10	52
	.0%	5.8%	15.4%	59.6%	19.2%	100.0%
Total	2	8	22	57	17	106
	1.9%	7.5%	20.8%	53.8%	16.0%	100.0%

Source: Research Data

On the question whether employees are constantly motivated to exchange knowledge with co-workers the answers provided by MTN Ghana respondents were analyse as follows four percent (3.7%) strongly disagree, nine percent (9.3%) disagree, twenty six percent (25.9%) neutral, forty eight percent (48.1%) agree and thirteen percent (13.0%) strongly agree. On the part of VODAFON Ghana respondents zero percent (0.0%) strongly disagree, six percent (5.8%) disagree, fifteen percent (15.4%) neutral, sixty percent (59.6%) agree and nineteen percent (19.2%) strongly agree. Averagely two percent (1.9%) strongly disagree, eight percent (7.5%) disagree, twenty one percent (20.8%) neutral, fifty four percent (53.8%) agree and sixteen percent (16.0%) strongly agree were the response as analyse.

Table 4.4 Employees strongly depend on experience and practical knowledge while executing their work

Company * Employees strongly depend on experience and practical knowledge while executing their work Cross tabulation						
Company	Employees strongly depend on experience and practical knowledge while executing their work					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	3	8	7	26	10	54
	5.6%	14.8%	13.0%	48.1%	18.5%	100.0%
VODAFON Ghana	1	1	8	26	16	52
	1.9%	1.9%	15.4%	50.0%	30.8%	100.0%
Total	4	9	15	52	26	106
	3.8%	8.5%	14.2%	49.1%	24.5%	100.0%

Source: Research Data

When the views of respondents were sought on whether employees strongly depend on experience and practical knowledge while executing their work the answers provided by MTN Ghana respondents were analyse as follows six percent (5.6%) strongly disagree, fifteen percent (14.8%) disagree, thirteen percent (13.0%) neutral, forty eight percent (48.1%) agree and nineteen percent (18.5%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, two percent (1.9%) disagree, fifteen percent (15.4%) neutral, fifty percent (50.0%) agree and thirty one percent (30.8%) strongly agree. Averagely four percent (3.8%) strongly disagree, nine percent (8.5%) disagree, fourteen percent (14.2%) neutral, forty nine percent (49.1%) agree and twenty five percent (24.5%) strongly agree were the response as analyse.

Table 4.5 Employees are motivated to sharing their knowledge orally at meeting or informal gathering

Company * Employees are motivated to sharing their knowledge orally at meeting or informal gathering Cross tabulation						
Company	Employees are motivated to sharing their knowledge orally at meeting or informal gathering					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	1	20	16	13	4	54
	1.9%	37.0%	29.6%	24.1%	7.4%	100.0%
VODAFON Ghana	2	9	19	14	8	52
	3.8%	17.3%	36.5%	26.9%	15.4%	100.0%
Total	3	29	35	27	12	106
	2.8%	27.4%	33.0%	25.5%	11.3%	100.0%

Source: Research Data

On the question whether employees are motivated to sharing their knowledge orally at meeting or informal gathering the answers provided by MTN Ghana respondents were analyse as follows two percent (1.9%) strongly disagree, thirty seven percent (37.0%) disagree, thirty percent (29.6%) neutral, twenty four percent (24.1%) agree and seven percent (7.4%) strongly agree. On the part of VODAFON Ghana respondents four percent (3.8%) strongly disagree, seventeen percent (17.3%) disagree, thirty seven percent (36.5%) neutral, twenty seven percent (26.9%) agree and fifteen percent (15.4%) strongly agree. Averagely three percent (2.8%) strongly disagree, twenty seven percent (27.4%) disagree, thirty three percent (33.0%) neutral, twenty six percent (25.5%) agree and eleven percent (11.3%) strongly agree were the response as analyse.

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Table 4.6 Employees are motivated to sharing their knowledge through formal procedures

Company * Employees are motivated to sharing their knowledge through formal procedures Cross tabulation						
Company	Employees are motivated to sharing their knowledge through formal procedures					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	5	5	15	19	10	54
	9.3%	9.3%	27.8%	35.2%	18.5%	100.0%
VODAFON Ghana	2	5	19	18	8	52
	3.8%	9.6%	36.5%	34.6%	15.4%	100.0%
Total	7	10	34	37	18	106
	6.6%	9.4%	32.1%	34.9%	17.0%	100.0%

Source: Research Data

When the views of respondents were sought on whether employees are motivated to sharing their knowledge through formal procedures the answers provided by MTN Ghana respondents were analyse as follows nine percent (9.3%) strongly disagree, nine percent (9.3%) disagree, twenty eight percent (27.8%) neutral, thirty five percent (35.2%) agree and nineteen percent (18.5%) strongly agree. On the part of VODAFON Ghana respondents four percent (3.8%) strongly disagree, ten percent (9.6%) disagree, thirty seven percent (36.5%) neutral, thirty five percent (34.5%) agree and fifteen percent (15.4%) strongly agree. Averagely seven percent (6.6%) strongly disagree, nine percent (9.4%) disagree, thirty two percent (32.1%) neutral, thirty five percent (34.9%) agree and seventeen percent (17.0%) strongly agree were the response as analyse.

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Table 4.7 Employees consider their knowledge as an organizational assets and not their own source of strength.

Company * Employees consider their knowledge as an organizational assets and not their own source of strength. Cross tabulation						
Company	Employees consider their knowledge as an organizational assets and not their own source of strength.					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	4	13	12	22	3	54
	7.4%	24.1%	22.2%	40.7%	5.6%	100.0%
VODAFON Ghana	2	8	12	22	8	52
	3.8%	15.4%	23.1%	42.3%	15.4%	100.0%
Total	6	21	24	44	11	106
	5.7%	19.8%	22.6%	41.5%	10.4%	100.0%

Source: Research Data

As shown in Table 4.7 the question whether employees consider their knowledge as an organizational assets and not their own source of strength the answers provided by MTN Ghana respondents were analyse as follows seven percent (7.4%) strongly disagree, twenty four percent (24.1%) disagree, twenty two percent (22.2%) neutral, forty one percent (40.7%) agree and six percent (5.6%) strongly agree. On the part of VODAFON Ghana respondents four percent (3.8%) strongly disagree, fifteen percent (15.4%) disagree, twenty three percent (23.1%) neutral, forty two percent (42.3%) agree and fifteen percent (15.4%) strongly agree. Averagely six percent (5.7%) strongly disagree, twenty percent (19.8%) disagree, twenty three percent (22.6%) neutral, forty two percent (41.5%) agree and ten percent (10.4%) strongly agree were the response as analyse.

Table 4.8 Management encourages cooperation and exchange of experience among employees

Company * Management encourages cooperation and exchange of experience among employees Cross tabulation						
Company	Management encourages cooperation and exchange of experience among employees					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	6	1	10	25	12	54
	11.1%	1.9%	18.5%	46.3%	22.2%	100.0%
VODAFON Ghana	1	1	10	20	20	52
	1.9%	1.9%	19.2%	38.5%	38.5%	100.0%
Total	7	2	20	45	32	106
	6.6%	1.9%	18.9%	42.5%	30.2%	100.0%

Source: Research Data

As shown in Table 4.8 the question whether management encourages cooperation and exchange of experience among employees the answers provided by MTN Ghana respondents were analyse as follows eleven percent (11.1%) strongly disagree, two percent (1.9%) disagree, nineteen percent (18.5%) neutral, forty six percent (46.3%) agree and twenty two percent (22.2%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, two percent (1.9%) disagree, nineteen percent (19.2%) neutral, thirty nine percent (38.5%) agree and thirty nine percent (38.5%) strongly agree. Averagely seven percent (6.6%) strongly disagree, two percent (1.9%) disagree, nineteen percent (18.9%) neutral, forty three percent (42.5%) agree and thirty percent (30.2%) strongly agree were the response as analyse.

Table 4.9 Management/leadership motivate employees so they may freely share knowledge

Company * Management/leadership motivate employees so they may freely share knowledge Cross tabulation						
Company	Management/leadership motivate employees so they may freely share knowledge					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	2	5	7	31	9	54
	3.7%	9.3%	13.0%	57.4%	16.7%	100.0%
VODAFON Ghana	0	2	9	22	19	52
	.0%	3.8%	17.3%	42.3%	36.5%	100.0%
Total	2	7	16	53	28	106
	1.9%	6.6%	15.1%	50.0%	26.4%	100.0%

Source: Research Data

On the question whether management/leadership motivate employees so they may freely share knowledge the answers provided by MTN Ghana respondents were analyse as follows four percent (3.7%) strongly disagree, nine percent (9.3%) disagree, thirteen percent (13.0%) neutral, fifty seven percent (57.4%) agree and seventeen percent (16.7%) strongly agree. On the part of VODAFON Ghana respondents zero percent (0.0%) strongly disagree, four percent (3.8%) disagree, seventeen percent (17.3%) neutral, forty two percent (42.3%) agree and thirty seven percent (36.5%) strongly agree. Averagely two percent (1.9%) strongly disagree, seven percent (6.6%) disagree, fifteen percent (15.1%) neutral, fifty percent (50.0%) agree and twenty six percent (26.4%) strongly agree were the response as analyse.

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Table 4.10 At MTN/VODAFON, data on implemented projects, tasks and activities are constantly monitored and stored electronically

Company * At MTN/VODAFON , data on implemented projects, tasks and activities are constantly monitored and stored electronically Cross tabulation						
Company	At MTN/VODAFON , data on implemented projects, tasks and activities are constantly monitored and stored electronically					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	4	7	11	21	11	54
	7.4%	13.0%	20.4%	38.9%	20.4%	100.0%
VODAFON Ghana	2	10	9	19	12	52
	3.8%	19.2%	17.3%	36.5%	23.1%	100.0%
Total	6	17	20	40	23	106
	5.7%	16.0%	18.9%	37.7%	21.7%	100.0%

Source: Research Data

The question whether at MTN/VODAFON, data on implemented projects, tasks and activities are constantly monitored and stored electronically the answers provided by MTN Ghana respondents were analyse as follows seven percent (7.4%) strongly disagree, thirteen percent (13.0%) disagree, twenty percent (20.4%) neutral, thirty nine percent (38.9%) agree and twenty percent (20.4%) strongly agree. On the part of VODAFON Ghana respondents four percent (3.8%) strongly disagree, nineteen percent (19.2%) disagree, seventeen percent (17.3%) neutral, thirty seven percent (36.5%) agree and twenty three percent (23.1%) strongly agree. Averagely less than six percent (5.7%) strongly disagree, sixteen percent (16.0%) disagree, nineteen percent (18.9%) neutral, thirty eight percent (37.7%) agree and twenty two percent (21.7%) strongly agree were the response as analyse.

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Table 4.11 IT tools are used to store information on suppliers third parties and customers

Company * IT tools are used to store information on suppliers third parties and customers Cross tabulation						
Company	IT tools are used to store information on suppliers third parties and customers					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	3	3	17	22	9	54
	5.6%	5.6%	31.5%	40.7%	16.7%	100.0%
VODAFON Ghana	0	4	22	17	9	52
	.0%	7.7%	42.3%	32.7%	17.3%	100.0%
Total	3	7	39	39	18	106
	2.8%	6.6%	36.8%	36.8%	17.0%	100.0%

Source: Research Data

The question whether IT tools are used to store information on suppliers third parties and customers the answers provided by MTN Ghana respondents were analyse as follows six percent (5.6%) strongly disagree, six percent (5.6%) disagree, thirty two percent (31.5%) neutral, forty one percent (40.7%) agree and seventeen percent (16.7%) strongly agree. On the part of VODAFON Ghana respondents zero percent (0.0%) strongly disagree, eight percent (7.7%) disagree, forty two percent (42.3%) neutral, thirty three percent (32.7%) agree and seventeen percent (17.3%) strongly agree. Averagely less than three percent (2.8%) strongly disagree, seven percent (6.6%) disagree, thirty seven percent (36.8%) neutral, thirty seven percent (36.8%) agree and seventeen percent (17.0%) strongly agree were the response as analyse.

Table 4.12 IT tools in our organization are easy to use and have a user friendly interface

Company * IT tools in our organization are easy to use and have a user friendly interface Cross tabulation

Company	IT tools in our organization are easy to use and have a user friendly interface					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	2	5	12	23	12	54
	3.7%	9.3%	22.2%	42.6%	22.2%	100.0%
VODAFON Ghana	1	2	14	23	12	52
	1.9%	3.8%	26.9%	44.2%	23.1%	100.0%
Total	3	7	26	46	24	106
	2.8%	6.6%	24.5%	43.4%	22.6%	100.0%

Source: Research Data

As captured in the above Table 4.12 the question whether IT tools in our organization are easy to use and have a user friendly interface the answers provided by MTN Ghana respondents were analyse as follows four percent (3.7%) strongly disagree, nine percent (9.3%) disagree, twenty two percent (22.2%) neutral, forty three percent (42.6%) agree and twenty two percent (22.2%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, four percent (3.8%) disagree, twenty seven percent (26.9%) neutral, forty four percent (44.2%) agree and twenty three percent (23.1%) strongly agree. Averagely three percent (2.8%) strongly disagree, seven percent (6.6%) disagree, twenty five percent (24.5%) neutral, forty three percent (43.4%) agree and twenty three percent (22.6%) strongly agree were the response as analyse.

Table 4.13 The advantage of IT is felt greatly in the preservation of knowledge in our organization

Company * The advantage of IT is felt greatly in the preservation of knowledge in our organization Cross tabulation						
Company	The advantage of IT is felt greatly in the preservation of knowledge in our organization					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	4	2	7	35	6	54
	7.4%	3.7%	13.0%	64.8%	11.1%	100.0%
VODAFON Ghana	0	5	7	29	11	52
	.0%	9.6%	13.5%	55.8%	21.2%	100.0%
Total	4	7	14	64	17	106
	3.8%	6.6%	13.2%	60.4%	16.0%	100.0%

Source: Research Data

When the views of respondents were sought on whether the advantage of IT is felt greatly in the preservation of knowledge in our organization the answers provided by MTN Ghana respondents were analyse as follows seven percent (7.4%) strongly disagree, four percent (3.7%) disagree, thirteen percent (13.0%) neutral, sixty five percent (64.8%) agree and eleven percent (11.1%) strongly agree. On the part of VODAFON Ghana respondents zero percent (0.0%) strongly disagree, ten percent (9.6%) disagree, fourteen percent (13.5%) neutral, fifty six percent (55.8%) agree and twenty one percent (21.2%) strongly agree. Averagely four percent (3.8%) strongly disagree, seven percent (6.6%) disagree, thirteen percent (13.2%) neutral, sixty percent (60.4%) agree and sixteen percent (16.0%) strongly agree were the response as analyse.

Table 4.14 The company explicitly recognize knowledge as a key element in its strategic planning exercise

Company * The company explicitly recognize knowledge as a key element in its strategic planning exercise Cross tabulation

| | The company explicitly recognize knowledge as a key element in its strategic planning exercise | | | | | |
| | Strongly | | | | Strongly | |
Company	Disagree	Disagree	Neutral	Agree	Agree	Total
MTN Ghana	3	5	7	34	5	54
	5.6%	9.3%	13.0%	63.0%	9.3%	100.0%
VODAFON Ghana	0	1	9	29	13	52
	.0%	1.9%	17.3%	55.8%	25.0%	100.0%
Total	3	6	16	63	18	106
	2.8%	5.7%	15.1%	59.4%	17.0%	100.0%

Source: Research Data

As captured in the above Table 4.14 The company explicitly recognize knowledge as a key element in its strategic planning exercise the answers provided by MTN Ghana respondents were analyse as follows six percent (5.6%) strongly disagree, nine percent (9.3%) disagree, thirteen percent (13.0%) neutral, sixty three percent (63.0%) agree and nine percent (9.3%) strongly agree. On the part of VODAFON Ghana respondents zero percent (0.0%) strongly disagree, two percent (1.9%) disagree, seventeen percent (17.3%) neutral, fifty six percent (55.8%) agree and twenty five percent (25.0%) strongly agree. Averagely three percent (2.8%) strongly disagree, six percent (5.7%) disagree, fifteen percent (15.1%) neutral, fifty nine percent (59.4%) agree and seventeen percent (17.0%) strongly agree were the response as analyse.

Table 15: The organization has mechanism in place to acquire knowledge from various Sources

Company * The organization has mechanism in place to acquire knowledge from various sources Cross tabulation						
Company	The organization has mechanism in place to acquire knowledge from various sources					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	3	6	15	25	5	54
	5.6%	11.1%	27.8%	46.3%	9.3%	100.0%
VODAFON Ghana	1	2	21	15	13	52
	1.9%	3.8%	40.4%	28.8%	25.0%	100.0%
Total	4	8	36	40	18	106
	3.8%	7.5%	34.0%	37.7%	17.0%	100.0%

Source: Research Data

On the question whether the organization has mechanism in place to acquire knowledge from various sources the answers provided by MTN Ghana respondents were analyse as follows six percent (5.6%) strongly disagree, eleven percent (11.1%) disagree, twenty eight percent (27.8%) neutral, forty six percent (46.3%) agree and nine percent (9.3%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, four percent (3.8%) disagree, forty percent (40.4%) neutral, twenty nine percent (28.8%) agree and twenty five percent (25.0%) strongly agree. Averagely four percent (3.8%) strongly disagree, eight percent (7.5%) disagree, thirty four percent (34.0%) neutral, thirty eight percent (37.7%) agree and seventeen percent (17.0%) strongly agree were the response as analyse.

Table 4.16 Individuals and groups who contribute new ideas in the Company are rewarded

Company	Individuals and groups who contribute new ideas in the Company are rewarded					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	6	13	9	20	6	54
	11.1%	24.1%	16.7%	37.0%	11.1%	100.0%
VODAFON Ghana	1	19	7	11	14	52
	1.9%	36.5%	13.5%	21.2%	26.9%	100.0%
Total	7	32	16	31	20	106
	6.6%	30.2%	15.1%	29.2%	18.9%	100.0%

Source: Research Data

When the views of respondents were sought on whether Individuals and groups who contribute new ideas in the Company are rewarded the answers provided by MTN Ghana respondents were analyse as follows eleven percent (11.1%) strongly disagree, twenty percent (24.1%) disagree, seventeen percent (16.7%) neutral, thirty seven percent (37.0%) agree and eleven percent (11.1%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, thirty seven percent (36.5%) disagree, fourteen percent (13.5%) neutral, twenty one percent (21.2%) agree and twenty seven percent (26.9%) strongly agree. Averagely seven percent (6.6%) strongly disagree, thirty percent (30.2%) disagree, fifteen percent (15.1%) neutral, twenty nine percent (29.2%) agree and nineteen percent (18.9%) strongly agree were the response as analyse.

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Table 4.17 The organizational culture of MTN/VODAFON is that people respect knowledge and knowledge ownership

Company	The organizational culture of MTN/VODAFON is that people respect knowledge and knowledge ownership					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	4	9	9	29	3	54
	7.4%	16.7%	16.7%	53.7%	5.6%	100.0%
VODAFON Ghana	1	14	10	19	8	52
	1.9%	26.9%	19.2%	36.5%	15.4%	100.0%
Total	5	23	19	48	11	106
	4.7%	21.7%	17.9%	45.3%	10.4%	100.0%

Company * The organizational culture of MTN/VODAFON is that people respect knowledge and knowledge ownership Cross tabulation

Source: Research Data

When the views of respondents were sought on whether the organizational culture of MTN/VODAFON is that people respect knowledge and knowledge ownership the answers provided by MTN Ghana respondents were analyse as follows seven percent (7.4%) strongly disagree, seventeen percent (16.7%) disagree, seventeen percent (16.7%) neutral, fifty four percent (53.7%) agree and six percent (5.6%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, twenty seven percent (26.9%) disagree, nineteen percent (19.2%) neutral, thirty seven percent (36,5%) agree and fifteen percent (15.4%) strongly agree. Averagely five percent (4.7%) strongly disagree, twenty two percent (21.7%) disagree, eighteen percent (17.9%) neutral, forty five percent (45.3%) agree and ten percent (10.4%) strongly agree were the response as analyse.

Table 4.18 The culture of the company encourages debates and stimulates discussions

Company	The culture of the company encourages debates and stimulates discussions					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	4	10	12	24	4	54
	7.4%	18.5%	22.2%	44.4%	7.4%	100.0%
VODAFON	0	22	6	13	11	52
Ghana	.0%	42.3%	11.5%	25.0%	21.2%	100.0%
Total	4	32	18	37	15	106
	3.8%	30.2%	17.0%	34.9%	14.2%	100.0%

Company * The culture of the company encourages debates and stimulates discussions Cross tabulation

Source: Research Data

As captured in the above Table 4.17 the question whether the culture of the company encourages debates and stimulates discussions the answers provided by MTN Ghana respondents were analyse as follows seven percent (7.4%) strongly disagree, nineteen percent (18.5%) disagree, twenty two percent (22.2%) neutral, forty four percent (44.4%) agree and seven percent (7.4%) strongly agree. On the part of VODAFON Ghana respondents zero percent (0.0%) strongly disagree, forty two percent (42.3%) disagree, twelve percent (11.5%) neutral, twenty five percent (25.0%) agree and twenty one percent (21.2%) strongly agree. Averagely four percent (3.8%) strongly disagree, thirty percent (30.2%) disagree, seventeen percent (17.0%) neutral, thirty five percent (34.9%) agree and fourteen percent (14.2%) strongly agree were the response as analyse.

Table 4.19 Employees in MTN/VODAFON are encouraged to access and use information and knowledge saved in our company systems

Company * Employees in MTN/VODAFON are encouraged to access and use information and knowledge saved in our company systems Cross tabulation						
Company	Employees in MTN/VODAFON are encouraged to access and use information and knowledge saved in our company systems					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	2	1	19	25	7	54
	3.7%	1.9%	35.2%	46.3%	13.0%	100.0%
VODAFON	0	2	24	17	9	52
Ghana	.0%	3.8%	46.2%	32.7%	17.3%	100.0%
Total	2	3	43	42	16	106
	1.9%	2.8%	40.6%	39.6%	15.1%	100.0%

Source: Research Data

As captured in the above Table 4.18 the question whether employees in MTN/VODAFON are encouraged to access and use information and knowledge saved in our company systems respondents were analyse as follows four percent (3.7%) strongly disagree, two percent (1.9%) disagree, thirty five percent (35.2%) neutral, forty six percent (46.3%) agree and thirteen percent (13.0%) strongly agree. On the part of VODAFON Ghana respondents zero percent (0.0%) strongly disagree, four percent (3.8%) disagree, forty six percent (46.2%) neutral, thirty three percent (32.7%) agree and seventeen percent (17.3%) strongly agree. Averagely two percent (1.9%) strongly disagree, three percent (2.8%) disagree, forty one percent (40.6%) neutral, forty percent (39.6%) agree and fifteen percent (15.1%) strongly agree were the response as analyse.

Table 4.20 I believe knowledge management in the company has helped me to acquire additional knowledge in my field of work

Company	I believe knowledge management in the company has helped me to acquire additional knowledge in my field of work				Total
	Strongly Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	3	9	32	10	54
	5.6%	16.7%	59.3%	18.5%	100.0%
VODAFON Ghana	1	10	27	14	52
	1.9%	19.2%	51.9%	26.9%	100.0%
Total	4	19	59	24	106
	3.8%	17.9%	55.7%	22.6%	100.0%

Company * I believe knowledge management in the company has helped me to acquire additional knowledge in my field of work Cross tabulation

Source: Research Data

On the question whether I believe knowledge management in the company has helped me to acquire additional knowledge in my field of work respondents were analyse as follows six percent (5.6%) strongly disagree, percent (%) disagree, seventeen percent (16.7%) neutral, fifty nine percent (59.3%) agree and nineteen percent (18.5%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, percent (%) disagree, nineteen percent (19.2%) neutral, fifty two percent (51.9%) agree and twenty seven percent (26.9%) strongly agree. Averagely four percent (3.8%) strongly disagree, percent (%) disagree, eighteen percent (17.9%) neutral, fifty six percent (55.7%) agree and twenty three percent (22.6%) strongly agree were the response as analyse.

Table 4.21 Overall, I think knowledge management in the company has had a positive effect on my performance

Company * Overall, I think knowledge management in the company has had a positive effect on my performance Cross tabulation						
Company	Overall, I think knowledge management in the company has had a positive effect on my performance					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	1	1	13	26	13	54
	1.9%	1.9%	24.1%	48.1%	24.1%	100.0%
VODAFON Ghana	0	1	9	28	14	52
	.0%	1.9%	17.3%	53.8%	26.9%	100.0%
Total	1	2	22	54	27	106
	.9%	1.9%	20.8%	50.9%	25.5%	100.0%

Source: Research Data

As captured in the above Table 4.20 the question whether Overall, I think knowledge management in the company has had a positive effect on my performance respondents were analyse as follows two percent (1.9%) strongly disagree, two percent (1.9%) disagree, twenty four percent (24.1%) neutral, forty eight percent (48.1%) agree and twenty four percent (24.1%) strongly agree. On the part of VODAFON Ghana respondents zero percent (0.0%) strongly disagree, two percent (1.9%) disagree, seventeen percent (17.3%) neutral, fifty four percent (53.8%) agree and twenty seven percent (26.9%) strongly agree. Averagely less than one percent (0.9%) strongly disagree, two percent (1.9%) disagree, twenty one percent (20.8%) neutral, fifty one percent (50.9%) agree and twenty six percent (25.5%) strongly agree were the response as analyse.

Table 4.22 The current knowledge management strategy is good and should be maintained.

Company	The current knowledge management strategy is good and should be maintained.					Total
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
MTN Ghana	1	2	14	26	11	54
	1.9%	3.7%	25.9%	48.1%	20.4%	100.0%
VODAFON Ghana	1	2	16	17	16	52
	1.9%	3.8%	30.8%	32.7%	30.8%	100.0%
Total	2	4	30	43	27	106
	1.9%	3.8%	28.3%	40.6%	25.5%	100.0%

Company * The current knowledge management strategy is good and should be maintained. Cross tabulation

Source: Research Data

When the views of respondents were sought on whether the current knowledge management strategy is good and should be maintained respondents were analyse as follows two percent (1.9%) strongly disagree, four percent (3.7%) disagree, twenty six percent (25.9%) neutral, forty eight percent (48.1%) agree and twenty percent (20.4%) strongly agree. On the part of VODAFON Ghana respondents two percent (1.9%) strongly disagree, four percent (3.8%) disagree, thirty one percent (30.8%) neutral, thirty three percent (32.7%) agree and thirty one percent (30.8%) strongly agree. Averagely two percent (1.9%) strongly disagree, four percent (3.8%) disagree, twenty eight percent (28.3%) neutral, forty one percent (40.6%) agree and twenty six percent (25.5%) strongly agree were the response as analyse.

4.3 Discussions

The general objective of the study was to examine the knowledge management practices of telecommunication companies in Kumasi, Ghana and how such practices affect the performance of employees. Out of this general objective, three specific objectives were derived. The first identified the knowledge management practices of the selected telecommunication network companies in Kumasi, Ghana, the second ascertained the effect of knowledge management on the performance of employees in the selected telecommunication companies in Kumasi, Ghana and finally to examine the challenges associated with knowledge management in the telecommunication companies in Kumasi, Ghana.

4.3.1 Identified the knowledge management practices of the selected telecommunication network companies in Kumasi, Ghana

The first objective of the study was to examine the knowledge management practices MTN Ghana and VODAFON Ghana. In achieving this objective, respondents were to provide their views on the extent to which key knowledge management practices were implemented.

On the question of whether the advantage of IT is felt greatly in the preservation of knowledge in our organization, generally respondents agree to the question, with a percentage score 60.4%, which means that employees generally agree to the statement.

This result means that management within the selected companies encourages their employees to electronically preserve knowledge within the companies to improve on their individual and collective performance. The result also shows that 59.4% of the respondents 'agree' the companies explicitly recognize knowledge as a key element in their strategic planning exercise.

The question of whether employees are motivated to exchange knowledge with co-workers, the respondents generally agree to the question with a percentage score of 53.8%, which means that employees generally agree to the statement.

This result means that within the selected companies management encourages their employees to exchange knowledge with co-workers to improve their individual and collective performance.

4.3.2 Ascertained the effect of knowledge management on the performance of employees in the selected telecommunication companies in Kumasi, Ghana

In response to the question as to whether employees believe knowledge management in the company has helped them to acquire additional knowledge in their field of work knowledge, quite a number of the respondents agreed that knowledge management was influencing employee's performance. The responses in table 4.20 indicated that majority of the respondents (55.7%) agreed that knowledge management practices within their company was helping to acquire additional knowledge to improve their work performance. The result clearly showed that employees of the selected companies believed that the practice of knowledge management was effecting positively on their performance.

Some of these responses are in line with the findings of the quantitative analysis and as well as Zack *et al.,* (2009) who explained that knowledge management has become part and parcel of modern organization because of its benefits

Effective management of knowledge is expected to improve the skills and experience of employees and boost their work performance. Against this backdrop, the second objective of the study which ascertained the effect of knowledge management on the performance of employees in the selected telecommunication companies [MTN Ghana/VODAFON Ghana]

in Kumasi, Ghana. The researcher began by asking the employees whether Overall, they think knowledge management in the company has had a positive effect on their performance. In attempt to find out the overall impression from respondents the response in Table 4.21 indicated that majority of the respondents (50.9%) agreed that knowledge management practices has positively affected employee performance.

4.3.3 Examine the challenges associated with knowledge management in the telecommunication companies in Kumasi, Ghana

However, the result indicates that respondents do not really know whether they are to access information stored at the company system. For instance, on the statement of whether employees in MTN/VODAFON are encouraged to access and use information and knowledge saved in the company systems, the percentage score of 40.6% neutral was obtained, meaning that employees are not sure whether they are adequately encouraged to access and use information and knowledge saved in the company systems. The implication of this result is that management must do more to encourage employees to access and use information and knowledge stored in the company to advance their knowledge and improve on their performance.

 This will go a long way to encourage employees not only to access and use information and knowledge stored in the system but also to feed the system with more and improved knowledge. The result further shows that respondents do not believe that they are adequately motivated to sharing their knowledge orally at meetings or informal gatherings. Since motivation is vital to the effectiveness of knowledge management within companies, it is important for management to consider formalizing their motivation policies and making it a strategic knowledge management tool. The result implies that the telecommunication

companies are aware of the important role that knowledge management plays in the achievement of its strategic goal.

The result obtained here is supported by Gold *et al.,* (2001) who explained that knowledge management can be successful only if organizations treat these dimensions with the utmost importance they deserve. Based on the result obtained it can be concluded that the knowledge management practices of the utility companies are not in line with what Gold *et al.,* (2001) recommends.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

Findings from the data analysis in the previous chapter have been summarized in this chapter. The chapter consequently presents on the summary of findings, conclusion and recommendations made on investigating the effect of knowledge management on performance of employees of telecommunication companies [MTN Ghana/VODAFON Ghana] in Kumasi, Ghana.

5.2 Summary of Findings

The study was to accessing the effect of knowledge management on performance of employees of telecommunication companies [MTN Ghana/VODAFON Ghana] in Kumasi, Ghana. The effect of growing competition and increasing dynamic environments compel organizations to begin to realize that there is a largely untapped asset diffused around the organization knowledge (Gupta *et al.,* 2000). Stankosky (2005) also notes that knowledge management practices will enhance competitive advantage, improved efficiency, effectiveness and innovation. With regards to telecommunication network companies in Kumasi, Ghana, the knowledge management practices were grouped under knowledge acquisition, knowledge storage, knowledge created, knowledge sharing and knowledge implemented knowledge management policies and strategies were studied to ascertain their effects on employees performance. The results and discussion were presented in chapter four. These results show a number of effects of knowledge management practices on employees performance in telecommunication companies.

Objectives were stated as follows: The first identified the knowledge management practices of the selected telecommunication network companies [MTN Ghana/VODAFON Ghana] in

Kumasi, Ghana, the second ascertained the effect of knowledge management on the performance of employees in the selected telecommunication companies [MTN Ghana/VODAFON Ghana] in Kumasi, Ghana and finally to examine the challenges associated with knowledge management in the telecommunication companies [MTN Ghana/VODAFON Ghana] in Kumasi, Ghana. The findings obtained are examined under each of the aforementioned objectives.

5.2.1 Knowledge management practices of the selected telecommunication network companies

Findings obtained from the data analysis indicated that the companies are doing quite well in managing knowledge. For instance, it was established that employees in all the companies were aware of knowledge management structures set in place to acquire, store, create, share and implement knowledge across the company. Similarly, it was established that the company strongly inspires employees to freely share their knowledge with their colleagues. It was further discovered that various seminars and training programs are organized occasionally to enhance the knowledge base of employees. Thus, it can be concluded based on the result obtained that knowledge is effectively managed in the selected companies.

5.2.2 The effect of knowledge management on the performance of employees in the selected telecommunication companies

Sampled respondents for the study were of the view that knowledge management within their company has helped to improve their performance. They cited the existence of user friendly IT tool and the exchange and sharing of ideas as some of the factors that have contributed to the improvement of their performance.

5.2.3 The challenges associated with knowledge management in the telecommunication companies

Finding from the study establish that a number of challenges affect the knowledge management framework of the selected companies. For MTN Ghana/VODAFO Ghana, the main challenge affecting the effectiveness of knowledge management is that employees feel they are not adequately rewarded for contributing new ideas. As far as VODAFO Ghana is concerned, the challenge identified is that the organizational culture does not encourage debate nor stimulate discussions. Also as far as MTN Ghana is concerned, acquiring new knowledge from business partner is a challenge for employees.

5.3 Conclusion

Knowledge management has become an important managerial tool to acquire, store, create, share and implement within the company. The objective of KM practice in every company is to ensure that knowledge, both explicit and tacit, can be transferred across the company for continuity and improvement in production and services. Given the important role played by telecommunication companies in Kumasi, Ghana, the study sought to examine the knowledge management practices of MTN Ghana/VODAFON Ghana and how it affects the performance of employees. Both management and employees of the selected companies were sampled to provide the needed information regarding the topic. Questionnaires were the main data collection instrument adopted. The data collected was subjective to some form of statistical analysis.

Considering that KM practices had a positive effect on employees performance. It was however noted that the telecommunication company lacks a formal knowledge management policy or strategy and a department in charge of knowledge management practices should be established. This should ensure formalization of all knowledge management practices,

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implement all the mitigation measures to overcome the challenges in knowledge management at the telecommunication company. The researcher therefore, purposes that the telecommunication company should consider the formulation of a well-coordinated and integrated approach for managing knowledge in other to improve the employees performance.

5.4 Recommendation

Based on the analysis of the study, the researcher wishes to make the following recommendations;

i. Telecommunication company should ensure that employees are adequately rewarded and the reward system formalized by way of policy within the company. This is to ensure sufficiency in operational knowledge at telecommunication company [MTNGhana/VODAFON Ghana].

ii. Telecommunication company should also implement the following knowledge sharing practices; succession planning, communities of practice, mentorship, phased retirement, coaching and orientation. This is to ensure identification of relevant operational knowledge in the company, and facilitate the sharing of available knowledge in the company.

iii. Telecommunication company should develop a knowledge management policy, this should enhance effective management of knowledge in telecommunication company with the aim of improving their employees performance.

iv. The company should ensure its policies are located in a central place and are accessible to all employees.

v. The government should increase funds to telecommunication company to enable it support knowledge management initiatives with the aim of improving employees performance.

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APPENDIX: QUSTIONNAIRE

APENDIX A: CLOSE ENDED QUESTION QUESTIONNAIRE

UNIVERSITY OF EDUCATION

COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

FACULTY OF BUSINESS EDUACATION

GRADUATE SCHOOL

CLOSE ENDED QUESTION QUESTIONNAIRE

INTRODUCTION

My name is ADAM ISSAH LABBO. I am carrying out a research for my masters' theses at UNIVERSITY OF EDUCATION. My title for the research is **"An Investigation into Knowledge Management Effect on Performance of Employees of Telecommunication Companies"**. Your responses to this questionnaire will be very much valued and the information provided will be purely for academic purpose and will be treated with strict confidentiality. Kindly tick (√) or write your opinion where appropriate.

Thank you.

Questionnaire for Employees

SECTION A: BACKGROUND INFORMATION OF EMPLOYEES

1. Gender: Male [   ]   Female [   ]

2. Age: Below 20 years [   ]

    20 -30 years [   ]

    31 - 40 years [   ]

    41 - 50 years [   ]

    Above 50years [   ]

3. Department: --

4. Designation: --

5. How long have you worked for MTN/VODAFON?

Below 5years [   ]   5-10 years [   ]   11-15 years [   ]

16-20 years [   ]   Above 20 years [   ]

SECTION B: KNOWLEDGE MANAGEMENT PRACTICES AND ITS EFFECT ON EMPLOYEE PERFORMANCE

Please indicate the extent to which you agree or disagree with the following statements. Please tick the appropriate boxes

1 – Strongly Disagree   2 – Disagree   3 – Neutral

4 – Agree   5 - Strongly Agree

Please kindly tick [√] the appropriate boxes.

	STATEMENT	1	2	3	4	5
1	Employees acquire knowledge from external source (e.g. through seminars , educational courses, subscription journals, professional network)					
2	Employees to some extent acquire new knowledge from business partners (e.g. suppliers, third parties, customers)					
3	Employees are constantly motivated to exchange knowledge with co-workers.					
4	Employees strongly depend on experience and practical knowledge while executing their work					

5	Employees are motivated to sharing their knowledge orally at meetings or informal gatherings (e.g. during lunch)					
6	Employees are motivated to sharing their knowledge through formal procedures (e.g. project report, reports and company publication)					
7	Employees consider their knowledge as an organizational assets and not their own source of strength.					
8	Management encourages cooperation and exchange of experience among employees					
9	Management/leadership motivate employees so they may freely share knowledge					
10	At MTN/VODAFON , data on implemented projects, tasks and activities are constantly monitored and stored electronically					
11	IT tools are used to store information on suppliers third parties and customers					
12	IT tools in our organization are easy to use and have a user friendly interface					
13	The advantage of IT is felt greatly in the preservation of knowledge in our organization					
14	The company explicitly recognize knowledge as a key element in its strategic planning exercise					
15	The organization has mechanism in place to acquire					

	knowledge from various sources					
16	Individuals and groups who contribute new ideas in the Company are rewarded					
17	The organizational culture of MTN/VODAFON is that people respect knowledge and knowledge ownership					
18	The culture of the company encourages debates and stimulates discussions					
19	Employees in MTN/VODAFON are encouraged to access and use information and knowledge saved in our company systems					
20	I believe knowledge management in the company has helped me to acquire additional knowledge in my field of work					
21	Overall, I think knowledge management in the company has had a positive effect on my performance					
22	The current knowledge management strategy is good and should be maintained.					

Thank You

APPENDIX B: OPEN ENDED QUESTION QUESTIONNAIRE

UNIVERSITY OF EDUCATION

COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

FACULTY OF BUSINESS EDUACATION

GRADUATE SCHOOL

OPEN ENDED QUESTION QUESTIONNAIRE

INTRODUCTION

My name is ADAM ISSAH LABBO. I am carrying out a research for my masters' theses at UNIVERSITY OF EDUCATION. My title for the research is **"An Investigation into Knowledge Management Effect on Performance of Employees of Telecommunication Companies"**. Your responses to this questionnaire will be very much valued and the information provided will be purely for academic purpose and will be treated with strict confidentiality. Kindly tick (√) or write your opinion where appropriate.
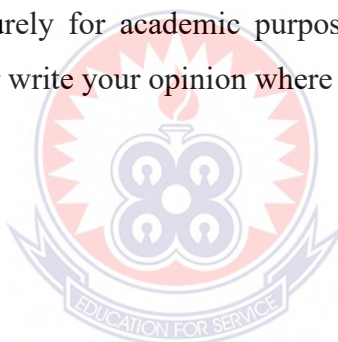
Thank you.

OPEN ENDED QUESTION QUESTIONNAIRE (For Management)

Date;……………… …………………...…………………………………….……………

Place;…………….…………………...…………………………………….………...

Rank of respondent: …………………...…………………………….……………

Gender of respondent: …………………………………………………….……………

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Section A: Knowledge Management Practices At MTN/VODAFON

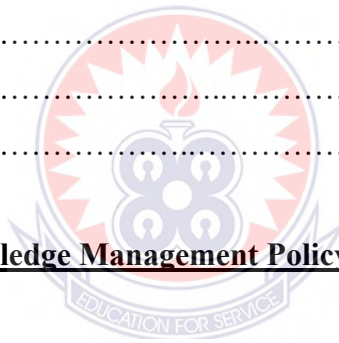1. Please briefly describe the knowledge management practices in your Company?

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2. Please describe how the company encourages organizational Learning

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3. How does the company manage both tacit and explicit Knowledge?

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Section B: Knowledge Management Policy of the Company

4. Does the company have knowledge management policy ……………………….…………

5. If your answer is YES, please describe the content of the policy?

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6. Is the company implementing the content of the Knowledge management policy?

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7. To what extent are employees aware and implementing the knowledge management policies of the Company?

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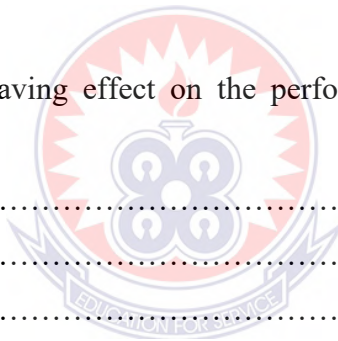
…………………………………………………………...………………….……...………..

Section C: Effect of Knowledge management in the company

8. Do you think the company is reaping some benefit from knowledge management practices? If YES, what are some of these benefits?

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9. Is knowledge management having effect on the performance of the employees of the company?

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10. In what ways does knowledge management practices have effect on employee performance?

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Section D. Challenges Associated with Knowledge Management

11. Please indicate the key challenges your company face as far as knowledge management is concerned?

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12. What are the measures being put in place to overcome the challenges indicated above?

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Thank You

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