AN INTERNAL COMMUNICATION AUDIT OF THE GHANA ATOMIC ENERGY COMMISSION

BY

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DECLARATION

I, Mark Kwasi Sarfo, declare that this dissertation is the result of my own research undertaken at the Department of Communication Studies, University of Ghana, Legon. The research was done under the supervision of Dr. Margaret Ivy Amoakohene. References to other people’s works have been duly acknowledged.

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Date: .................................... Date: ..............................
DEDICATION

I dedicate this work to my Heavenly Father for being there always, to my wife Patience Sarfo, for her sacrifices and finally to all my distinguished lecturers and students of the Department of Communication Studies, University of Ghana, Legon, for the immense help they have been to me.
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ABSTRACT

Effective internal communication is a vital requirement for the success of an organization. There is the need to assess and possibly improve organizational communication for the adequate execution of organizational objectives. Due to the nature of the activities of the Ghana Atomic Energy Commission (GAEC), it is critical that the communication of information to employees, especially in matters relating to security of radioactive materials, emergency situations, and instances of technical communication is clear, timely and unambiguous.

The purpose of this study was therefore to conduct an internal communication audit to assess the amount and types of information received and how they relate to performance, communication quality, preferences for communication channels and the overall communication satisfaction in the Commission. The research adopted both qualitative and quantitative methodological approaches using a semi-structured interview and a survey of management and staff respectively, to understand management and staff perspectives of communication effectiveness.

The study found that there was general satisfaction with communication within the Commission. It revealed that although durbars and notice boards were the dominant channels of communication, employees showed increasing preference for computer mediated and mobile telephony channels such as emails, “SMS” and “Facebook”. It also revealed that the types of information received were mainly on organizational policy and information specific to their work. However, the study revealed that employees were generally dissatisfied with the amount of information and that the feedback system of the Commission was inadequate and needed revitalization.
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CHAPTER ONE
INTRODUCTION

1.0 Introduction

Chapter One explores the background of internal communication and communication audits. It also provides a brief insight into the mandate and structure of the Ghana Atomic Energy Commission (GAEC). The research problem is identified and the objectives and research questions of the study are presented.

1.1 Background

Communication is the process of transmitting information and common understanding from one person to another (Keyton 2011). There are some cardinal elements in most communication processes. These are the sender, receiver, medium/channel and feedback. Problems encountered with any of these elements results in communication ineffectiveness (Keyton, 2011). Lutgen-Sandvik (2010) asserted that one of the most constraining factors to organizational effectiveness is a lack of adequate internal communication.

According to Katz and Kahn (1978), internal communication is the flow or exchange of information and the transmission of meaning within an organization. Internal communication is also defined as all kinds of Formal or Informal interactions that take place between members of an organization (Skinner et al., 2004). Hunt et al (2000) assert that internal communication encompasses both plain communication such as face-to-face and other forms such as body language. Mazzei (2010) also states that
internal communication is the communication flow among people within the boundaries of an organisation and Pearson et al (2003) add that internal communication involves information sharing and symbolic interaction. The importance of internal communication has been acknowledged widely (Tourish & Hargie, 2009, pp. 10–15, Skinner et al., 2004). Practitioners see internal communication as an important, challenging area (Robertson, 2005, FitzPatrick, 2004,) which affects the ability of organizations to engage with employees (Kress, 2005, p. 30) although business writers see it as a core process for organizations (Quirke, 2000).

Internal communication is an essential part of the inner workings of organizations providing information between the organization and its internal publics (Robertson, 2005). Ritter (2003) describes it as “an intangible organizational asset that promotes mutual understanding between the organization and its publics” (p. 44). Sambe (2009) also posits that it is one of the key factors necessary for the smooth running of organizations, describing it as “the nervous system” and life-blood of any human interaction (p. 62). According to Pandey and Garnet (2006), good communication has a direct bearing on performance due to its capacity to promote mutual understanding. Ferreira (2006) buttresses this point by asserting that employees use close to four out of five of their working time communicating, and therefore stresses that it is central to the success of organizations and increases their competitive advantage. Internal communication can be formal or informal, upwards, downwards or horizontal. It can be among employees, management and employees, within and across departments and at all levels within an organization.
Brownell (1994) suggests that management of organizations promote good internal communication due to its ability to motivate employees to work to achieve and advance the organizations vision. It has the capacity to build a mutually beneficial relationships between management and employees of an organisation, contributing to organisational success (Hartman and McCambridge, 2011). Also, effective internal communication has the capacity to strengthen team work while ineffective communication hinders progress and teamwork. This is supported by Welch (2012) who asserts that poor internal communication can be counter-productive and can pose threats to relationships within an organisation.

According to Jameson (2001), it is important to involve employees and management in internal communication to help in increasing the effectiveness of the communication system, by enabling the smooth transfer of meaning and understanding between management and employees. Researchers in communication such Cutlip Centre and Broom (2001) have stressed the importance of employees as the most important publics in an organization. It is therefore crucial for management to consciously develop a healthy communication culture and periodically assess communication effectiveness with employees through communication audits.

An internal communication audit is defined as “the process for acquiring data regarding communication usually in organizations for analysis” (Downs, 1977, p. 63). It is used to assist managers by providing them with knowledge of what is actually happening at the communication level, rather than what they thought, or have been told was happening (Hurst, 1991). It is clear that “In the information age, an organization's assets
include the knowledge and interrelationships of its people. Its business is to take the input of information, using the creative and intellectual assets of its people and process it in order to produce value” (Quirke, 2000, p. 21). Whereas internal communication is the core process by which businesses can create this value (Quirke, 2000), internal communication audit is the process by which the effectiveness of the internal communication processes can be ascertained.

Some tools employed in communications audit are, the Communication Satisfaction Questionnaire (CSQ), the International Communication Association (ICA) Audit, the Organizational Communication Development Audit and the Organizational Communication Scale (Clampitt, 2009). This research employed the Communication Satisfaction Questionnaire (CSQ) tool to assess the communication processes in the Ghana Atomic Energy Commission. It focused on employee communication needs, the internal communication processes and content, and the overall communication satisfaction in the organization.

1.2 Profile of the Ghana Atomic Energy Commission

Act 204 of 1963 was passed by parliament for the establishment of the Ghana Atomic Energy Commission (GAEC). It is the only organisation in Ghana with the mandate for all activities that relate to peaceful uses of atomic energy. Act 588 of 2000 has however superseded act 204 of 1963 enabling GAEC to commercialize its research and development activities. The vision of the Commission is to become the foremost institution that contributes to sustainable national prosperity by effectively utilizing nuclear, biotechnology and allied technologies. Its mission is to develop and propagate the usage of nuclear, biotechnology, and allied technologies for socio-economic
development. This can be achieved through research, training and commercialization of its activities. Its mission further includes serving as an advisor to government on key policies that concern peaceful applications of nuclear, biotechnology and allied technologies. The Commission is headed by a Director-General who is assisted by a Deputy responsible for all Scientific and Technical matters.

The Commission is made up of five institutes namely:

- **National Nuclear Research Institute (NNRI).**
  The NNRI conducts its activities through a number of facilities and laboratories. A 30 KW Ghana Research Reactor 1 (GHARRI-1) provides neutrons for activation analysis (NAA). It is used to analyse environmental and other samples from the Mining, Health and Agricultural industries.

- **Biotechnology and Nuclear Agricultural Research Institute (BNARI)**
  This institute conducts research on better agricultural productivity and development activities. It is also involved with other biotechnology and nuclear research.

- **Radiation Protection Institute (RPI).**
  This institute is responsible for regulating all the activities of GAEC and other institutions which are involved in using any form of radiations, such as X-rays used in hospitals and telephone masts used by the telecommunications industry. The institute is also involved with authorization and licensing.

- **Radiological and Medical Sciences Research Institute (RAMSRI)**
  The institute is involved in research into Medical Applications of Nuclear and Isotopic Methods for cancer research in Public Health delivery. It also
undertakes research into Radiation Medicine, Treatment of Cancer, Medical Imaging techniques and research into Nutrition for improved Health delivery.

- Ghana Space Science and Technology Institute (GSSTI).
  This institute is involved in research into space science and use of drones for monitoring activities of mining, logging and other activities in remote areas where accessibility is limited.

All the institutes are headed by directors who form part of the Executive Committee of the Commission and serve as the main advisory group to the Director-General. They discuss issues pertaining to new initiatives, new policies and other critical issues that need exhaustive deliberations. They also aid in the implementation of resolutions and policies enacted by the GAEC board. The institutes are further divided into centres which handle specialized operations and are headed by managers who report directly to the directors of institute. The centres are also divided into units for further specialized operations and are coordinated by unit heads. The Commission also has auxiliary institutions such as the secretariat, basic school and clinic. It is also affiliated to the Graduate School of Nuclear and Allied Sciences of the University of Ghana, Legon.

Considering the variety of specializations and the myriad of activities undertaken by the Commission, effective internal communication is critical for its success. To this end, assessing the communication system for its effectiveness is well placed and this is what the study sought to do.
1.3 Problem statement

Gayeski (2000) has pointed out that increasingly, communication and learning constitute the critical infrastructure for becoming a high-performance organisation. He indicated that to achieve excellence, employees need to understand the organisation’s goals, culture and also know what is expected of them through effective communication. Kitchen (1997) also posits that effective participation of employees is dependent on how fully informed they are. He indicated that there is the need for employees to understand fully where they fit in an organisation’s strategy and how they can contribute to the attainment of the organisational aims and objectives.

Due to the security sensitive and possibly dangerous nature of the activities of the Ghana Atomic Energy Commission, it is critical that the communication of information to employees especially in matters relating to security of radioactive materials, emergency situations, and instances of technical communication are clear, timely and unambiguous. Smith (2006), however, observed that not much needed attention had been given to internal communication in organizations. The repercussions of such failures in the case of GAEC may not only affect the quality of work done, but also have the capacity to pose a health risk to the immediate community and the country at large.

As a large organization with close to one 1000 employees, there is the tendency to lump all employees together and treat them as a single entity without recourse to specific communication needs (L’Etang, 2008). However, communication within organizations is linked to higher levels of performance and service (Tourish & Hargie, 2009), generating communication capital (Malmelin, 2007) and social capital (Lee, 2009).
Welch and Jackson (2007) argue that, “research into employee preferences for channel and content of internal corporate communication is required to ensure it meets employees’ needs” (p. 187). This is echoed by Uusi-Rauva and Nurkka (2010) who assert that, “little research has focused on finding out what employees consider important in the internal ‘expert communication process’” (p. 303). Assessing and understanding communication satisfaction in an organization is therefore important and requires the use of a comprehensive internal communication audit.

Differences in levels of education, coupled with different employee specializations may lead to varied communication needs which, if not considered, may result in miscommunication and its associated risks. The problem being investigated is the degree of harmony among communication quality, channel preference and employee satisfaction at GAEC. An internal communication audit is critical to assess the communication quality, preferences for communication channels and the effectiveness of the overall communication climate of the Commission, to ensure workers’ satisfaction and performance to achieve organizational goals and objectives. Due to the crucial role of communication, it is imperative for managers to be able to assess internal communication for proper management and function.

1.4. Objectives

- To determine the amount and type of information received by GAEC employees about the Commission and how it relates to performance.
- To determine GAEC employee preferences for communication channels.
- To ascertain the quality of information flow in the Commission and the overall communication satisfaction of the employees.
1.5. **Research Questions**

- What is the Commission employee’s level of satisfaction with internal communication?

- What primary sources channels are used to disseminate internal communication at the Commission?

- To what extent is employee communication satisfaction related to the communication channel used?

- How does the prevailing communication climate (amount, type and quality of information) in the Commission relate to employee performance?

1.6 **Scope of the Study**

This study was limited to employees of the Ghana Atomic Energy Commission located in Kwabenya-Accra. The employees consisted of scientific, technical and non-scientific staff. The study was to ascertain the satisfaction levels of employees with the communicative processes of the Commission and the effects of communication on job performance. The employees were surveyed and selected management members were interviewed to ascertain their views about the communicative processes of the Commission.

1.7 **Significance of the study**

This study offered an understanding of the communication practices of a nuclear institution. It provided perspectives of the management and staff of GAEC, on effective internal communication by providing a holistic view on its effectiveness. Furthermore, empirical data gathered contributed to knowledge in the field of internal communication. Finally the recommendations presented at the end of the study offered
the Commission practical options to either maintain, improve or change various aspects of the internal communication processes and structures.

1.8 Operational Definition of Key Terms

The key terms used in this study are explained below.

- **Employees:** Refers to all staff/workers of the Ghana Atomic Energy Commission.

- **Communication climate:** The prevailing internal environment within which communication occurs (Anderson and West, 1998)

- **Internal communication:** Internal communication is defined as all kinds of formal or informal interactions that take place between members of an organization (Skinner et al., 2004)

- **Communication audit** A communication audit is defined as the process for acquiring data regarding communication usually in organizations for analysis (Downs, 1977)

- **Communication channel:** It is the medium that is used in the transmission of a message from sender to receiver.

- **Quantity of information:** Refers to volume or amount of information received by members of an organization.

- **Quality of communication:** Refers to the appropriate features (content, credibility, clarity and consistency) that make communication relevant.

- **Communication satisfaction:** An employee’s satisfaction with various aspects of communication taking place in an organization (Crino and White, 1981)

- **Employee performance:** Describes the job related activities that an employee is expected to perform and how well those activities are done
• **Information flow:** Refers to the transfer of information from one point to the other in a given communication process.

1.9 **Organisation of the Study**

This study is structured into five chapters. Chapter one deals with the introduction and overview of the study and looks at internal communication and communication audits. The chapter briefly looks at the profile of the Ghana Atomic Energy Commission, looks at the problem statement, objectives, research questions and the significance of the study. Finally it looks at the scope and definition of the key terms of the study.

Chapter two explores the theory adopted for the research which is the Two-way Symmetric model of communication. It also reviews literature on related works in internal communication audits in organizations. These works are discussed with regards to where and when research was conducted, methods/theories employed, and findings/conclusions made. Chapter three talks about the methodology employed for this study. It deals with data collection methods used, population, sampling and methods of analysis. Chapter four presents the findings made from the data collected from the survey and in-depth interviews. These findings are presented in tables, figures and charts. Finally, chapter five deals with discussions and conclusions made, limitations of the study, and recommendations suggested from the study.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction
This chapter explores the theory that served as basis for the study. It also discusses some of the studies that have been undertaken by previous researchers on internal communication, locally and internationally.

2.1 Theoretical Framework
This research is grounded in Grunig and Hunt’s (1984) two-way symmetrical model of communication which is one of the four models of public relations they postulated. These models which include, Press Agentry/Publicity Model, Public Information Model, and Two-way Asymmetrical Model, are widely used in public relations in varying degrees. This research has however adopted the two-way symmetrical model as its anchor due to its characteristics.

2.1.1 Two-way symmetrical model
The two-way symmetric model postulated by James E. Grunig and Todd Hunt as its name suggests is two-way in nature and relies on research and mutual understanding for effective communication. Matthee (2011) posits that the purpose of the two-way communication is gaining mutual understanding with balanced effects. The two-way symmetric model was postulated to address some issues posed by Press Agentry/Publicity models and the Public Information model which are unidirectional in nature and may not provide avenues for feedback and mutual understanding. It was also postulated to address some issues posed by the Two-Way Asymmetric model
which relies on imbalanced two-way communication using persuasion and manipulation to alter attitudes and behaviours to achieve a set objective (Grunig and Hunt, 1984).

According to Grunig and Hunt (1984), the two-way symmetric model of communication is grounded in the free exchange of information that is used to alter attitudes in both the organization and its publics. They indicated that formative research is used primarily to learn how the publics perceive the organisation and to determine what consequences organisational actions/policy might have on them. The results may be counselling management to take certain actions or change policies. In this model, evaluative research is used to assess a public relations effort and its effects on the publics’ understanding. This idea, also known as relationship building, seeks to have policies and actions that are mutually beneficial to both parties (Wilcox and Cameron, 2006).

Closer investigation proves that the two-way symmetric model relies on honest and open two-way communication and mutual give-and-take rather than one-way persuasion. It focuses on mutual respect and efforts to achieve mutual understanding. This model is sometimes described as the ‘ideal’ of public relations. This is supported by Theaker (2001) who commented that; “Communication in this model is fully reciprocal and power relationships are balanced. The terms ‘sender’ and ‘receiver’ are not applicable in such communication processes, where the goal is mutual understanding” (p. 27). Emphases is placed on negotiation and a willingness to adapt and make compromises. It requires organizations engaging in public relations to be willing to make significant adjustments in how they operate in order to accommodate
their publics. It is used mainly by non-profit organizations, government agencies, and heavily regulated businesses such as public utilities, than by competitive, profit-driven companies (Turney 1998).

The field of practice today includes organisations that engage in issues identification, crisis and risk management, and long-range strategic planning (Matthee 2011). According to Grunig and Grunig (1992) the two-way symmetrical model is not only the most ethical approach to public relations, but also the model that is most effective in meeting organizational goals due to its reliance on research and mutual understanding between an organization and its publics.

Communication is the key to developing strong relationships between organizations and their publics (employees, customers, shareholders, etc.). This makes the two-way symmetrical model ideal because it enables two groups of people to share ideas and gain something from the experience. This is an ideal way to communicate and technology has made it easier than ever before to do so. As a result, many companies are taking advantage of new web technologies to encourage two-way communication (Matthee 2011).

2.1.2 Critiques of the Two-way Symmetrical model

Lechtii (1997) has disputed the assertion that the two-way symmetric public relations is the best, and has stressed the importance of examining each situation to determine whether a public is open to collaboration, and whether or not there is a coherent basis for cooperation before adopting a relational approach. According to Lechtii (1997), “two-way symmetrical theory assumes that parties have a shared mission of social
progress” (p. 48). He disagrees with this statement, asserting that, “a shared mission is something to be achieved, not something to be assumed”. He argued that even when dealing with groups that may be open to collaboration, there are often cases where the interests of these groups are antagonistic to the goals and interests of other key publics. He maintained that “a particular rhetorical strategy may repair one organization-public relationship, but cause alienation in another organization-public relationship” (p. 48). In these cases symmetrical communication may be difficult or impossible.

Other critics such as Leitch & Neilson, (2001) argue that because stakeholders and corporations are seldom in equal positions, organisations will always benefit by looking after their own interests. This leads to asymmetrical communication because the power will lie with the organisation. They stated that, “It is simply absurd to suggest that an interaction between, for example a transnational corporation and a public consisting of unskilled workers in a developing country can be symmetrical just because the interaction is symmetrical in form. It is even more absurd to suggest the reverse – that the interaction between these workers/public and the corporation can be symmetrical if the workers adopt the correct attitude and are willing to compromise. In practice, in cases where access to resources is so unequal, attempting to practice symmetrical public relations might constitute a self-destructive discourse strategy for the least powerful participant” (p. 129).

2.1.3 Relevance of the two-way symmetric model to the study

The attributes of the two-way symmetrical communication which include mutuality in understanding, honest and open two-way communication rather than one-way persuasion, and research into communication needs are vital in achieving employee
needs as well as organizational goals. These attributes are vital for the Ghana Atomic Energy Commission in dealing with its employees and attaining organizational goals.

The two-way symmetric model of communication, according to Grunig (1992), asserts that excellent two-way communication includes; “learning the consequences of what organizations are doing to all of their relevant publics” (p. 525). Some of these relevant publics to the Ghana Atomic Energy Commission (GAEC) are its employees. This attribute of the two-way communication model will enable the organization have an understanding of the effects it has on the employees to enable it take mitigating steps, if these effects are negative, or promote them if they are positive.

Grunig (1992) went on to say that organizations should also employ two-way communication “to tell the publics what they are doing about any negative consequences” (p. 525) and involving participants early to gain mutual understanding and avoid possible opposition. Considering the activities of GAEC, the fact that they deal in possibly dangerous radioactive substances, makes this attribute of the two way communication model fit perfectly if employed for this research. The possible risk of terminal diseases and other complications that may result from improper use and handling of materials and equipment should be adequately communicated to the employees of the Commission. By creating and sustaining proper two-way channels of communication within an organization, controversy may be averted leading to trust and compromise especially during negotiations (Grunig 1992).

Cutlip et al. (2001) posit that employees constitute one of the most important internal publics of an organization. This assertion mandates the GAEC to use a communication
model that upholds the importance of the employees. A mutually beneficial communication model is thus necessary to enable employees appreciate their worth and understand their responsibility to the organization.

2.2 Related Works

2.2.1 Preferences for Internal Communication Channels

Lee (2010) undertook a research on face-to-face versus computer-mediated communication to determine employee preferences for effective communication channels. The study employed interviews for data collection of five service-oriented organisations in the Klang Valley in Malaysia. The researcher drew from the findings that a frequently used channel may not be the channel of choice for effective communication. The study found that although the computer-mediated communication channels were the most frequently used, respondents preferred face-to-face communication due to its effectiveness in transmitting meaning. The respondents indicated that face-to-face communication was their preferred choice due to its ability to use several cues to transmit meaning and ability to build relationships through frequent interactions. It was therefore concluded that despite the fact that the computer-mediated communication channel was the most used, traditional channels in the form of face-to-face communication was still preferred.

In another study, Chong (2007) undertook a research of Singapore Airlines in 2006 to examine the role internal communication played in infusing corporate principles and executing brand promise in the Singaporean airlines. He employed face-to-face interviews with senior management of the organization as well as observation of the Cabin Crew during a training program for the Cabin Crew trainees. Finally, he
conducted an analysis of corporate presentations by the airline and an analysis of publications on the airlines website. The grounded theory approach by Glaser and Strauss (1967) was used in the analyses of the interviews and observations.

It was observed that internal communication was of utmost importance if the battle for the customer was to be won. The study found that the airline had dedicated communication channels that were personalised to specific communication needs of the cabin crew and pilots. The frequency of face-to-face communication employed as the dominant channel enabled employees to interact and engage with management directly thereby enabling the company to meet the particular communication needs of the different employee groups.

In addition, occasions such as ward get-togethers also allowed staff and management to address specific issues and express their views on a face-to-face basis. Chong (2007) concluded that the usage of appropriate media for particular communication founded on strong corporate beliefs and values, could enable internal communication and training, aid in the transformation of key staff. This transformation can turn staff such as the cabin crew into the number one ambassadors of the company, serving as embodiments of the core beliefs/values, and focal points around which the brand promise could be realized.

In a study conducted by Ruck and Welch (2011) which sought to assess internal communication from both the management and employee perspective, the authors observed that minimal attention was given to what and how employees wanted their organization to communicate. In their work, the internal communication assessment
methods used included firstly, an adapted version of the International Communication Association (ICA) survey, set out by Hargie and Tourish (2009). In this comprehensive approach, one of the sections explored content and another explored channels, four sections were generally more about processes and volumes of information sent and received and two sections were tailored to specific organizational issues. The range of content topics was mainly job related; pay, performance, promotion, development, with only one question in the range related to wider organizational goals.

The second assessment tool used was the Communication Satisfaction Questionnaire (CSQ) which takes a different approach to the ICA and concentrates on primary dimensions of communication satisfaction. These dimensions include: general organizational perspective, organizational integration, personal feedback, relations with supervisors, horizontal communication, relations with subordinates, media quality, and communication climate (Downs & Hazen, 1977). This approach is predominantly information specific to an individual and the job which is linked to productivity. The major findings in this work included the fact that internal communications in most organizations was seen from the perspective of management rather than the employee. They also found out that although most firms do well at communicating about their businesses, less than half of the firms studied reported that they were effective at communicating to employees regarding how their actions affect the customer or increase productivity. They therefore recommended that there should be more research into employee preferences for communication channels and content of internal communication to ensure it met employee needs.
In another study on channels used for internal organizational communication, Kelleher (2001) used a survey of members of the Public Relations Society of America to assess the relationship between public relations activities and the choice of a channel for communication. The study established that public relations practitioners employed the e-mail with people they frequently had interactions with such as other workers and customers. Kelleher (2001) also revealed that functions undertaken had a role to play in determining communication channel preferences. He ascertained that managers had a preference for face-to-face communication while technicians preferred written communication.

2.2.2 Satisfaction with the Internal Communication Processes

Hargie and Tourish (2002) undertook a study of communication audits and the effects of increased information on the National Health Service of the United Kingdom. They examined the extent to which changes in management communication practices within an organization could be realistically implemented and regularly evaluated. It was also to ascertain whether the particular management interventions that resulted from a typical audit had a positive or negative impact on the communication climate.

A modified version of International Communication Association (ICA) questionnaire was used in sampling views. A communication seminar was also conducted by the researchers for the entire senior management team followed by a workshop session to identify the key issues that confronted the organization. Findings obtained from the study revealed that provision of more information did not lead employees to want greater amounts of information. According to the uncertainty reduction theory by Berger (1987), “People have both predictive and explanatory needs about the future,
they need to be able to predict what is going to happen next, and explain why that is so” (p. 47). Thus, low levels of information flow from managers were likely to increase uncertainty and create a communication climate characterized by rumours. Furthermore, the research suggested that the most powerful effects of communication are obtained from attempts to improve face-to-face communication for staff and managers. Another important finding reported in the study was that employees with higher levels of training in communication skills had higher reported levels of satisfaction with communication.

Another study by Hogard et al. (2004) in the United Kingdom focused on using a communication audit to improve communication on clinical placement in pre-registration nursing. The research sought to identify levels of satisfaction and dissatisfaction with present communication processes in the practice placements of pre-registration nursing students and to identify ways of improving them.

A customized instrument called the Hogard–Barker Communication Audit for Placement (HBCAP) was piloted with a small sample of stakeholders to ensure comprehension and feasibility in a survey. The instrument used, draws on the demonstrated validity and reliability of both the original International Communication Audit (ICA) questionnaire (Goldhaber and Rogers, 1979) and Hargie & Tourish’s (2000) adaptation. The customizing of the instrument for this purpose enhanced face validity.
Firstly, the study found that more information need to be sent and received for satisfaction to be achieved. This applied particularly to the ward staff and students who did not feel that they got information as and when they needed it. Secondly, the study found that there was a lack of awareness between participants regarding both roles and the structure of the curriculum. Finally, the audit revealed shortfalls and inconsistencies in student support, possibly worsened by the increased numbers of students passing through the system.

White et al. (2012) also conducted a study in Tennessee, USA which was on how employees of a large organization with diverse branches looked at information flow from top management. They studied employee communication preferences in terms of amount, channels and types of information received. They also looked at the sense of belonging within the organization and the relationship between these preferences and perceptions and their willingness to serve as advocates of the organization.

The researchers interviewed 147 employees at all levels by telephone using a structured interview guide with open-ended questions. When there was an evidence of a phenomenon during the response of a particular question, (example about relationships with managers) probes were used to extract further information. Probes were also employed to further examine concepts that came up during the interview processes which had not been anticipated by the researchers. They found out that top management including the chief executive officer had personal direct influences that had an effect on communication satisfaction, and its consequent effect on how employees spoke about the organization to external stakeholders. They revealed that employees at all levels who had a direct relationship with the Chief
Executive Officer were more satisfied with the information they received and felt a greater responsibility to serve as advocates for the organization. They concluded that even the thought of a relationship with the chief executive officer led to communication satisfaction.

2.2.3 Communication and Organizational Performance

Joao (2013) undertook a study in Portugal in which he sought to show the importance of internal communication on the overall performance of stakeholders and their satisfaction. The study was on a 20-year old private university which had over 5,000 students, 260 teachers and 65 non-teaching staff.

Joao (2013) interviewed management and used surveys for other members of staff. The interview was semi structured and made up of 18 questions centring on their opinions of internal communication. In all, he interviewed 12 senior managers and 16 other respondents in the middle management level. The survey was done electronically via e-mail to all the teaching and non-teaching staff and to a total of 1015 students. The high numbers was to cover for the low response rate of the e-mail surveys. In all a total of 111 students accounting for about 11 %, 41 teachers accounting for about 15.8 % and 8 non-teaching staff accounting for about 12.3 % responded to the questionnaire.

The study found that insufficient internal communication was linked to lower levels of communication satisfaction both the internal and external stakeholders. He therefore concluded that good internal communications be made part of the organizations strategic orientations. This he said, will serve as an essential precondition for an improved individual, collective and the overall organizational performance. Since this
will increase the clarity of functions/responsibilities and attentiveness towards all stakeholders.

Another study by Robson and Tourish (2005) in the United Kingdom sought to explore what senior management thought they should undertake to improve upon communication in the organization and what they actually did. The research was a communication audit of a major European health-care organization which was undergoing key internal re-organization.

The research employed in-depth interviews of management and focus groups discussions of the staff. A total of six focus groups were held, attended by 23 people each, and a total of nine interviews were conducted. Participants in the focus groups discussions and the in-depth interviewees were all probed for their perceptions in terms of internal communication in general, their understanding of, and support for, new organizational structures; and how well they grasped the vision of the top management team.

They found that, senior management who over-worked were less likely to have the time to reflect on organizational communication and effect any consequent changes required. They also found that the absence of adequate upward communication had the tendency to mislead management to the full extent of their problems, which in turn guided them in their search for solutions. Finally, the work concluded that attempting to cover up weaknesses in communication by management working for longer hours
has the result of further disempowering people, and increasing rather than lessening the underlying difficulty

Abugre (2011) conducted a study which aimed at assessing internal organizational communication and its impact on worker satisfaction in Ghana. The research examined three carefully and conveniently selected public Ghanaian organizations namely; The Ghana Post, Bank of Ghana, and the University of Ghana Medical School. It focused on organizational communication and the results of effective organizational communication in terms of its ability to raise the level of worker satisfaction and its consequent increased work performance.

He employed a quantitative method by distributing ninety (90) self-developed and self-administered questionnaires of both closed and open ended questions to ninety respondents. This was to solicit for information on the role of organizational communication on worker satisfaction. He used a descriptive cross-sectional field survey to obtain primary data for his study. He administered 30 questionnaires in each organization by randomly selecting middle and senior level workers. A total of 81 questionnaires were properly filled and returned in the ratio of 26:30:24 from the Ghana Post, Bank of Ghana, and the University of Ghana Medical School respectively. This represented 90% of the questionnaires administered. Abugre (2013) did not take gender or age into consideration, but he ensured that the sample size covered all the departments, especially middle and senior management personnel.

The research found that there is a significant relationship that exists between efficient organizational communication and employee satisfaction. A total of 96.1% of all the respondents in all three organizations answered in the affirmative to this relationship.
He also found out that good organizational communication had a positive impact on employee understanding and performance. He further revealed that workers of the organizations preferred good leadership communication behaviour due to its positive effects. Based on these findings, he proposed that organizations in the formal sector will achieve their objectives if they paid proper attention to the communication processes through efficient organizational communication in the workplace.

These studies reviewed were important because they addressed issues such as Communication and Organizational Performance, Satisfaction with the Internal Communication Process and Preferences for Internal Communication Channels, which were relevant to achieving the objectives of this research. The next chapter looks at the methods used for the research.
CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter looks at the methods employed in addressing the objectives set for the study. It looks at the general approach to the research in terms of sampling techniques, approaches employed in collecting data and data processing techniques used.

3.1 Research Design

The study combined both the quantitative and qualitative research methodologies by employing the survey and the in-depth interview methods respectively. The research was conducted using triangulation because it offered a deeper understanding of the factors that affect the internal communication practices in the Commission. The surveys offered the staff perspective while the in-depth interviews provided elucidation from the management perspective. The combination of these perspectives gave a fuller understanding of the perception on quality, quantity, channel preferences and the overall communication satisfaction in the Commission. According to Barker (1999), triangulation is “drawing together multiple types of evidence gathered from different sources using different methods of data collection” (p. 483).

“Triangulation helps create the opportunity of developing a more complex picture of integration of communication, thereby creating the most comprehensive picture possible and help increase the validity of the research and its findings” (Rice and Ezzy, 1999, p. 36).
3.2 Qualitative Method

3.2.1 Population

The study population is all individuals having common observable characteristics in which the researcher is interested (Saunders Lewis & Thornhill, 2007). The population for this research was made up of 978 employees of the Ghana Atomic Energy Commission categorized into 308 research scientists/senior members, 296 senior staff, and 374 junior staff respectively. These sub-sections were important because L’Etang (2005) suggested the tendency for internal communication researchers to treat employees as a single entity.

The samples (employees) were selected from all the various employee sections to give a representative sample (Zickmund, 1991). According to Zickmund (1991) “Researchers usually cannot make direct observations of every individual in the population they are studying; instead they collect data from a subset of individuals (a sample) and use those observations to make inferences about the entire population” (p. 40).

The qualitative method involved the use of in-depth interviews to elicit information. The procedure involved in the qualitative research is presented below.

3.2.2 Sampling (Purposive)

The purposive sampling technique which according to Wimmer and Dominick (2005), is based on the judgement of the researcher was used to select participants for the in-
depth interviews. It is a non-probability sampling method which involves a researcher deliberately choosing an informant who has the capacity to give the required information. The conditions adopted for selecting the participants were; the individual must be in the management team and they must be involved in the day-to-day internal communications activities of the Commission. The individual must have the capacity to provide the most information to achieve the objectives of the research. A total of two people were selected out of seven for the interviews; the Director of Administration and the Director General of the Commission due to their direct involvements in the internal communication of the Commission. The Director General is responsible for the running of the Commission after policies have been formulated by the GAEC “Board”, of which he is a member. Almost all communication in the commission is sent to and received from the Director General. The other informant who is the Director of Administration on the other hand is in charge of all the administrative activities. He is responsible for sending out all communication to the various institutes, centres and staff of the Commission after receiving from the Director General. For the purposes of this research, the informants have been named 1 and 2.

3.2.3 Data Collection (Interviews)

According to Neuman (2000), an in-depth interview is a joint venture between the researcher and the interviewee. Also, Van Vuuren, et al (1998 p406) maintain that, because of the personal contact with respondents, there is a high question completion and response rate during face-to-face personal interviews.

An interview guide was developed and used in the collection of all the information needed from respondents. An initial interview session was conducted with the head of public
relations of the Commission to have a general background of the communication processes and to help fine-tune the interview guide. According to Kumekpor (2002), interviews should be conducted in a congenial and relaxed atmosphere. Based on this, the interviews were held in the respective offices of the directors. Schedules were negotiated before times were fixed for each interviewee, giving precedence to their choice of time. In all, a total of one hour each was spent on the interviews and a total of eight hours was spent on transcription to ensure that every detail was properly transcribed. The interviews gave the opportunity to gain a broader knowledge of how communication was viewed at the management level and offered deeper understanding when coupled with the survey from the staff.

3.2.4 Data Collection Instrument (Interview Guide)

Semi-structured interviews were adopted for the research using an interview guide. An interview guide was comprehensively developed for collecting all the data required from the respondents. The guide served to keep the interviews in agreement with the set objectives without digressing too far from them. Open ended questions were used to elicit required information. The interviews centred on questions pertaining to the quality and quantity of information, channels used for communication, communication and performance and the overall communication satisfaction. Opportunities were given to other areas of importance to the research that may not have been captured in the guide but surfaced during the interview process. This enabled the deduction of a wide range of perspectives from the participants and enhanced the interaction process between the researcher and the participants.

Observations were employed to enhance the lines of questioning. Rossman and Rallis (1998) stated that observations are important supplementary techniques for any
research that uses interviews. It provides guidance as to when the interviewer may explore further, offer help to encourage the participant or when to abandon a particular line of questioning.

### 3.2.5 Data analysis

Research that can produce vast amounts of data include qualitative research. Much data is generated due to the transcription of recorded material, notes taken by the researcher, and observations made during the research may all add up to the volume of data generated (Pope et al., 2000). The recorded data obtained from the interview process was transcribed and then categorized into themes based on the research objectives. Member checking which involves verifying data with the respondents was done to ensure that the data obtained agreed with what the respondents said (Straus and Corbin, 1990). The data was analysed immediately to ensure that every aspect was captured. According to Merriam (1998), “The right way to analyse data in a qualitative study is to do it simultaneously with data collection . . . The final product is shaped by the data that are collected and the analysis that accompanies this entire process” (p. 162).

Creswell (2003) stated that “the general pattern of understanding qualitative work emerges when broad themes are developed and merged into a grounded theory of broad interpretations” (p. 22). Creswell (2003) and Merriam (1998) statements formed the guiding principles for the analysis of data. Several readings of field notes, transcribed interviews, comments and observations were done and compared to recorded material to ensure that nothing was left out. The transcriptions from the respondents were renamed. Similarities and differences were determined from their answers to the interview questions. Cross case analysis of the responses were then done, taking into
account the similarities and differences across the participants’ responses. This, enabled easier tracing of the responses and quotes. The themes were then refined through the linkages, associations and differences of the responses.

3.3 Quantitative Approach

The quantitative approach was employed to ascertain the perspectives of employees of the Commission on communication satisfaction. The quantitative approach is explained below.

3.3.1 Sampling Method and Procedure

The stratified and the systematic sampling methods were adopted for this research. The entire population was first placed into strata of research scientists/senior members, senior staff, and junior staff groupings. The systematic random sampling method was then used to select the candidates from a comprehensive list of each group obtained from the human resource department of the Commission. A total of 198 employees in the Commission were surveyed. A total of 66 people were selected from each staff category. A comprehensive list of all employees in each staff grouping was placed in a bowl. An initial random name was picked and used as the starting point for selection from the comprehensive list. The sampling interval used for the selection was based on the formula:

\[
\text{Number of employees in each group} = \text{Nth value (sample interval)} \\
\text{Total number required from each group}
\]
Selection continued until the required number was obtained from each staff grouping list. According to Wimmer and Dominick (2003), this enables the attainment of adequate information about each sub-group in the entire sample. The stratified and the systematic sampling techniques were adopted due to the groupings within the Commission to obtain views from all aspects of the Commission. Names of the selected participants were not included in the final report to protect confidentiality.

### 3.3.2 Data Collection (The Communication Satisfaction Questionnaire)

Communication satisfaction can be thought of as the summation of a person’s satisfaction based on information flow and relationship variables (Pincus, 1986). Keyton (1991) also asserts that communication satisfaction is a global phenomenon which is influenced by different variables. Employee communication satisfaction has been a significant factor in organizational communication audits (Gray, 2004). Different researchers have introduced varied measurement tools such as Communication Satisfaction Questionnaire (Downs and Hazen, 1977), Organizational Communication Scale (Roberts & O’Reilly, 1979), and International Communication Association Communication Audit (Goldhaber and Krivonos, 1977), for analysis of communication practices in organizations. Communication satisfaction instruments have been employed in three distinct areas. These are interpersonal, group and organizational communication satisfaction (Hecht, 1978) but, the Communication Satisfaction Questionnaire has been one of the most widely employed instrument in different sectors and organizations (Greenbaum et al., 1988).

The Communication Satisfaction Questionnaire (CSQ) was developed by Downs and Hazen (1977) and has been one of the most frequently used instrument for measuring organizational communication satisfaction. The communication satisfaction
The questionnaire is multidimensional and comprises eight aspects namely; supervisory communication, subordinate communication, communication climate, personal feedback, organizational perspective, organizational integration, horizontal communication and media quality. According to Downs and Hazen’s (1977) and Downs’ (1990), communication satisfaction is an individual’s satisfaction with different facets of communication in the organization. Although the Communication Satisfaction Questionnaire was developed several years ago, it is one of the most important instruments for the measurements for communication satisfaction. Its high degree of validity and reliability throughout the various organizations has contributed to its high acceptance (Nakra, 2006).

In this study, the purpose of the questionnaire survey was to explore and understand the general attitudes, opinions and perceptions of the general staff of the Commission towards communications. The format of the survey used was a modified version of the Communication Satisfaction Questionnaire (CSQ) (Downs & Hazen, 1977). According to Downs and Hazen (2004), the CSQ is an efficient and recognised instrument used to audit the communication structures and practices of organisations. Also, Mount and Back (1999) claim that the CSQ is one of the most widely used instruments for measuring communication satisfaction within organisations. The CSQ for this study was made up of four sections which covered communication satisfaction levels, preference for communication channels, quality and quantity of information and effects of communication. There were 22 questions in the CSQ, made up of both close-ended and open-ended questions to obtain as much information as possible. Questionnaire distribution was done in all the institutes and centres of the Commission, based on the employees selected from the stratified and systematic sampling techniques. About
seven working days were devoted to the questionnaire administration and retrieval. Questionnaires were retrieved by the researcher personally. A total of 196 questionnaires were successfully retrieved accounting for 98 % of the total administered questionnaires.

### 3.3.3 Data Analysis

The Statistical Package for the Social Sciences (SPSS) software and the Excel spreadsheet were used to analyse the data. Frequencies, bar graphs and pie charts were used to indicate levels of communication satisfaction in the Commission. The charts were used to describe and explain the various variables such as preference for channels, quality of information and the quantity of information received in the Commission.

### 3.4 Ethical Consideration

Ethical considerations were made by explaining to all the respondents the purpose of the research. The respondents’ anonymity and confidentiality were assured to the effect that the information provided was for research purposes only and there were no adverse effects to their personalities if they participated. They were also at liberty to stop the interviews or answering the questionnaires at any time without any consequences.
CHAPTER FOUR

FINDINGS

4.0 Introduction

Chapter four presents the results of the research which sought to ascertain the amount and types of information received and how they relate to performance, communication quality and preference for communication channels. The research also aimed at ascertaining the communication satisfaction in the Commission and to suggest ways of improving communication effectiveness. 198 questionnaires were distributed to 198 employees, who represented the survey sample size of this study. 196 questionnaires were retrieved, representing a response rate of 98.9%. The findings reported below are results of the 196 successfully-retrieved questionnaires and the responses from the interview sessions.

The purpose of the in-depth interviews however, was to obtain a broader understanding of internal communication processes from the management perspective, in order to compare and contrast views with those of the employees on the communication processes of the Commission. Two participants from top management were interviewed for their views on the prevailing conditions on communication. An interview guide (Appendix 1) was used to elicit information from the Director General and the Director of Administration of the Commission.
4.1 Demographic Data

Selected demographic characteristics such as gender, number of years spent in the Commission and the current rank were considered. Although gender was not a limiting factor in the questionnaire administration, the respondents were dominated by males of more than three in five (65.4%) respondents. The remaining close to one in three (34.6%) represented females. The number of years spent in the Commission was dominated by the 1-5 years range with a percentage of a little less than three in every five (57.7%) respondents. This was followed by the 6-10 years range representing about a quarter (25.0%) of the respondents. The respondents who had spent 20 years and above represented just about 1.9%. Those who had spent less than a year and those between 11-15 years had (7.7%) and (5.8%) respondents respectively. It was evident from the responses that the Commission was dominated by relatively new employees. Out of the total number of respondents, close to two in every five (38.5%) belonged to the senior staff rank. A quarter (25.0%) belonged to the junior staff and close to two in every five (36.5%) belonged to the senior member rank.
4.2 Information Received and its Relationship to Performance

Table 1 Information Received and its Effects on Employee Work

<table>
<thead>
<tr>
<th>What type(s) of information about the Commission do you usually receive?</th>
<th>In what way(s) does information about the Commission affect how you work?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Motivation</td>
<td>Aids in decision making</td>
</tr>
<tr>
<td>Job related issues</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>40.0%</td>
<td>35.0%</td>
</tr>
<tr>
<td>Corporate events</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Issues on security</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Issues on organizational policy or goals</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>40.0%</td>
<td>45.0%</td>
</tr>
<tr>
<td>Issues on performance</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Emergency response</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Social events</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>20.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Financial issues</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The first objective of the research sought to find out the amount and types of information received and how it relates to performance. More than two in every five (40.4 %) respondents indicated that the information received from the Commission affected the way they worked. One quarter (25 %) said that it did not affect them in any way. Close to a third (30.1 %) of the people surveyed also said it affected their work.
sometimes. About two percent said that they did not know whether it affected them or not.

Table 1 is a cross tabulation of types of information received and ways in-which information about the Commission affected their work. Close to two in every five (37.5 \%) of the respondents indicated that the information received aids in decision making, a little less than one-fifth (18.8 \%) said the information about the Commission disrupts work progress. Also, close to one in ten (10.4 \%) said it motivates them and about a third (27 \%) said they had not taken note of how it affects them. In furtherance to the statement “help in the decision making process”, one of the respondents said: “it sometimes helps you to prioritize your work”. Another respondent in agreement with the statement, “it disrupts work progress” said: “it sometimes slows down productivity and also it interferes with your plan for the day, that is, if the information came late”.

In reference to the types of information received from the Commission, close to one out of every three (33.3 \%) indicated that they received information pertaining to issues on organizational policy and goals. A similar number (29.1 \%) also indicated that the information they received were job related. About (1.9 \%) of the respondents indicated emergency issues, issues on performance and corporate events as the types of information received. Close to one in ten (9.6 \%) indicated financial issues and about one in five (17.3 \%) said they received information pertaining to social events.

From the interview sessions, when the respondents were asked about the type of information sent and how to measure its bearing on performance, they indicated that
the information sent is of policy in nature and about the programmes being carried out
in the Commission. They were however unable to say how to directly measure its
relationship to performance.

The information we usually send to employees are of policy in nature,
we communicate to them some of the policies we have as a Commission
and also some of the projects or programs that we are carrying out. As
for effects on performance, we do not have a way of measuring directly,
but we assume that so long as the work gets done it has the required
effects (respondent 2).

They went on to say that sometimes information sent may not have the desired effects
due to the lack of understanding.

“It is like maybe in giving out information, the clarity may not be there so
it does not achieve the desired results. This becomes an error on our part.
Sometimes however, when we realize it we feel the need to put more flesh
for better clarity” (respondent 1).
4.3 Quality and Quantity of Information

4.3.1 Quantity of Information Received

Figure 1 Satisfaction with Amount of Information

Figure 1 shows the responses to the quantity of information received. Majority of the respondents (46.15%) said that they did not receive adequate information. Only about a quarter of the people surveyed indicated that they received adequate information. Close to one in five (21.2%) also said they sometimes got enough information. Interestingly, about 5.8% of the respondents said they received too much information.
4.3.2 Quality of Information Flow in the Commission.

Another objective of the study was to ascertain the quality of information flow in the Commission and the overall communication satisfaction of employees. Figure 2 shows results of levels of satisfaction with individual attributes (content, clarity, credibility and consistency/regularity) of the quality of information received.

From the results on quality of information received, the respondents were generally satisfied and to some extent very satisfied with the quality attributes of information received. More than half of the respondents (55.8 %) were satisfied with the content, close to a third of the respondents (30.77 %) were also very satisfied with the credibility, a little less than a quarter were satisfied with the regularity and more than two in five people (42.3 %) were satisfied with the clarity of information received. A relatively small percentage were however dissatisfied with the quality of information received.
Figure 3 also shows their overall levels of satisfaction with the quality of information received. More than two in five (40.38%) people indicated as satisfactory their overall satisfaction with the quality of information. A little over one in five (21.15%) said there was more room for improvement and close to one in ten (7.7%) said it was very good. A good proportion (17.3%) however indicated that their overall communication satisfaction was poor. This indicates that although a large proportion of the staff of the Commission were satisfied with the quality of information, a sizeable number were dissatisfied. One of the respondents stated: “On the whole it is okay, but my problem is with the promptness”. Another respondent simply stated: “it is good”

From the interviews, respondents were then asked about how to ensure the quality of information flow in the Commission in terms of content, credibility, clarity and regularity/consistency. To this, they indicated that the quality is left in the hands of the one encoding the message. The quality may therefore vary depending on who is encoding the message.
And also, with the elements of quality of information, sometimes decisions are taken and maybe memos or circulars are written, people may not understand exactly what the memo is saying, or may differ in understanding from one person to the other. This happens because the words that are used depend on the one encoding the message. How the words are captured in the sentence may connote a different meaning to what management is saying. So sometimes it throws some confusion in the people’s minds (respondent 1).

Following the quality of information, respondents were then asked about the quantity (amount) of information they sent to employees. Respondents indicated that they did not have a means of determining the adequacy of information sent, but they sometimes relied on leaders of employee associations for feedback which also included feedback on the adequacy of information. They indicated that as long as they had ensured that the information had been communicated, the amount was not a factor.

We don’t really have a way of determining the adequacy of information, we give the information when the need arises. If we are sure that the information has been communicated, that is fine by us. Sometimes too, we get feedback from the association leaders, SSA and RSA to find out how some of the communication is faring with them (respondent 2).
4.4 Employee Preferences for Communication Channels

Table 2: Channels Preferred versus Channels Available

<table>
<thead>
<tr>
<th>By what channels do you usually receive information from the commission?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directors/Managers &amp; E-mails/Social media/SMS Alert</td>
<td></td>
</tr>
<tr>
<td>Durbars</td>
<td>Not sure</td>
</tr>
<tr>
<td>Directors/Managers</td>
<td>16</td>
</tr>
<tr>
<td>E-mails/Social media/SMS Alert</td>
<td>16</td>
</tr>
<tr>
<td>Colleagues</td>
<td>4</td>
</tr>
<tr>
<td>Notice board</td>
<td>8</td>
</tr>
<tr>
<td>Phone calls</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
</tr>
</tbody>
</table>

Table 2 shows the result of cross tabulation of preferred communication channels and channels available for receiving information. The results show that there were some differences in how respondents usually received information and how they preferred to receive information respectively. More than a quarter of the respondents chose durbars (26.9%) as their preferred means for receiving information whereas, close to two in five (36.7%) indicated durbars as their usual means of receiving information from the Commission. Also, more than one in five (20.4%) chose notice boards as their usual means of receiving information and a similar number (23.5%) chose the same channel as their preferred means of receiving information. A marked point of difference occurred in emails/social media/SMS alert channels of communication where close to
one in five (17.3%) people chose it as their preferred channels but only close to one in ten (10.2%) indicated it as the usual channels for receiving information. Another significant point of difference occurred in receiving information directly from directors/managers. More than one in ten (15.4%) showed a preference for directly receiving information from them whereas only 4.7% indicated them as their usual source of information. An unusual result was that, about (5.8%) of the respondents indicated that they preferred to receive information from colleagues although it was a marked drop from close to one in five (20.4%) who said they usually received information from colleagues.

The two respondents from the interview session agreed with the fact that there were a variety of channels used for communication, but for increased effectiveness, they needed more computer mediated and mobile telephony channels. This was their response when asked about the choice of communication channels for information dissemination and their effectiveness.

As for the communication channels, they are a lot, from durbars, memos, notice boards and others. If it is at the Director level, we may decide to do some presentations, if it is Heads of Department, we can organize a meeting to discuss and share some information with them. To make communication with our staff more effective however, we are now trying the text messaging, emails and other social media such as “Facebook”. They are all available now (respondent 1).

Management by this response has shown its reliance on tradition media such as notice boards and durbars for information dissemination. It also shown its shift towards mobile
telephony and computer mediated channels for increased efficiency in information dissemination.

4.5 Feedback System of the Commission

Although the feedback system was not a direct objective of the study, an assessment of the system was done to ascertain whether employees had the opportunity to respond to any information they received. One in two (50\%) respondents said they did not have any opportunity at all to respond to any information while close to one in three (32.7\%) said they sometimes had the opportunity and only less than one in five (17.3\%) respondents answered in the affirmative.

Respondents apart from indicating some specific communication they responded to, also gave circumstances under which they could respond to communication. Close to one in three (34.6\%) of the people gave policy issues as the kind of communication they responded to. A little above one in five (21.2\%) said they had opportunity to respond to issues discussed at durbars/meetings. More than one in ten (13.5\%) said they had no opportunity to respond to any communication at all. In stark contrast however, (13.5\%) also indicated that they had opportunity to respond to all the kinds of communication. Other types of communication such as query letters, email conversation, information on notice boards and personal records had (7.7\%), (3.85\%), (1.9\%) and (3.86) of respondents who said they responded to such information respectively.
As to how respondents from the interviews obtained feedback and were able to determine the overall communication satisfaction of employees, they indicated that they relied on feedback from the leadership of employee associations since there wasn’t a well-developed feedback system. They also said that the only time feedback was sought from the entire staff was a recent employee survey that was used to assess satisfaction from staff, and that was the first time such a thing had happened in the Commission.

Sometimes we find a way to get feedback from the staff as we don’t have a well-developed feedback system. We get it from the association leaders, SSA RSA and junior staff. Quite recently, we asked the Office of Communication and Public Affairs to do a survey to see how a cross section of the staff are responding to communication we send out. Although it was our first time, it was quite positive. So these are some of the feedback we get, and when we get the feedback we respond to it. (respondent 2)

This chapter presented the results in tabular and graphical representations depicting the variations in responses. It also showed responses obtained from the interviews. The next chapter discusses these findings in relation to literature and draws conclusions from the findings.
CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

5.0 Introduction

Chapter five gives an analysis of the findings of the study together with discussions of those findings in relation to similar studies and theories. The purpose of the study was to determine the amount and type of information received about the Commission and how it affects performance, communication quality and preferences for communication channels to determine the overall communication satisfaction. The first part of the chapter was devoted to discussions on the findings and the subsequent parts were for recommendations and conclusions.

5.1 Discussion of Findings

This section deals with the analysis of the research findings in relation to the research objectives, theories and the literature that were used in this study.

5.1.1 Types of Information received and impact on Performance

“Job-related issues” and “issues on organizational goals and policies” were found as the two main types of information employees of GAEC receive. This is in spite of the fact that they receive other types of information. This finding is consistent with Chong (2007) whose study showed that workers are mainly concerned with information relating to the core activities of their organization.
Many studies (Abugre, 2011; Keyton, 2011; Lutgen-Sandvik, 2010; Chong, 2007) have established a correlation between communication and employee performance. The findings of this study are consistent with the above-mentioned studies. Chong (2007) found that communication was important to keep employees informed about the organizations policy and goals, corporate principles and executing the organizations brand promise. This finding does not differ from the findings of the current study, where majority of the survey respondents said the information they receive affect how they work and perceive the policies, mission and vision of GAEC. This indicates that communication is key to the success of every organization, as Keyton (2011) and Lutgen-Sandvik (2010) assert. Similarly, Abugre (2011) links effective internal communication to employee satisfaction, performance and understanding.

While effective communication is critical to the success of organizations, it must be emphasized that communication can sometimes have little or no consequences on employees. Joao (2013) asserts that insufficient, incoherent and ambiguous internal communication was linked to lower levels of communication satisfaction among both the internal and external stakeholders. This is evident in this study where a little above 20% of the employees surveyed said the information they receive disrupt work progress. This was corroborated by the interview participants who indicated that not all communication activities they implemented inured to the benefit of employees. The reasons that account for this include lack of understanding on the part of the employees and dissemination of unclear messages.
5.1.2 Quantity and Quality of Information Flow in the Commission

The study found that majority of the respondents were generally satisfied with the various indicators (content, clarity, credibility and consistency) of the quality of communication. Only 30% of the respondents were unsatisfied with the consistency of information flow in the organization. This finding is consistent with White et al. (2012) who found that the employees were generally satisfied with communication in a large organization with diverse branches.

Almost half of the respondents said they do not receive adequate information. The inadequacy of information from management often compelled employees to rely on their colleagues for their informational needs. This may be due to the unavailability of adequate information and/or appropriate channels for information dissemination, giving rise to rumour mongering and a state of uncertainty. This finding is at variance with Hargie and Tourish (2002) who assert that the provision of adequate information to employees of an organization reduces the incidence of rumours and the state of uncertainty amongst employees of the organization. Hargie and Tourish (2002) also buttressed the point that this study found, that inadequate information can lead to rumour mongering and circulation of fabricated messages.

5.1.3 Employee Preferences for Communication Channels

The study found that face to face means such as durbars, interpersonal communication with colleague workers and managers were the most commonly used communication channel among the employees. This is consistent with Lee (2010) who after comparing computer-mediated and face to face means of communication, concluded that the latter
is still preferred in organizations. Chong (2007) also assert that receiving information directly from directors and managers was another preferred channels for receiving information. Hargie and Tourish (2002) also confirm that the most powerful effects of communication are obtained from face-to-face communication.

However, emails, short messaging service (SMS) and social media were identified to be increasingly popular and preferred among the employees in this study. This finding agrees with Ruck and Welch (2011) who found that minimal attention was given to employees’ preferred communication channels. This study has shown that although employees have shown increasing interest in computer mediated and mobile telephony channels, management have mainly depended on the traditional durbars and notice boards for information dissemination. The findings of Lee (2010) differed from this study to the effect that, Lee (2010) found out that computer mediated channels were the dominant channels for communication in the organizations he studied, though the same study reported the employees preferred the face-to-face form of communication due to its richness and ability to build relationships.

The preference for face to face form of communication makes a case for the two-way symmetry model of communication. Grunig and Hunt (1984) postulate that this is the most ideal and effective model for public relations practitioners to communicate with its publics, both internal and external.
5.1.4 Feedback System

It was observed that one out of every two people said they did not have any opportunity to give feedback, only close to one out of every three said they sometimes had opportunity to give feedback, and less than one in five responded in the affirmative. This was in sharp contrast to the findings of Van Vurren (2007) who found that feedback is the most important part of communication between management and their employees. He concluded that feedback is an indispensable part of communication if effectiveness is to be achieved. This suggests that for increased efficiency in communication at GAEC, frequent opportunities must be given for feedback from the employees.

Management supported the findings from the survey and said that, they relied mainly on feedback from the leadership of the employee associations. They added that the only feedback they obtained from the entire employee body was a recent survey conducted by the Commission to assess communication satisfaction. This finding goes against the tenets of the two way symmetrical communication which relies greatly on feedback and mutual understanding (Grunig and Hunt 1984).

5.2 Recommendations

The study recommends that the Commission adopts a comprehensive feedback mechanism in its communication strategy by providing, among others, suggestion boxes at vantage points and regular surveys for anonymous information on communication satisfaction. This will afford the opportunity to always fine-tune its
communication processes for a more effective communication system and to promote two way symmetric communication which is important for organizations.

The study also recommends that communication to employees is targeted and more specific to reduce the incidence of misunderstanding and confusion. Furthermore, the research recommends that there should be strict checks and balances of every piece of information before being sent out to increase its quality. It is also recommended that although durbars and notice boards are indispensable in the communication system, management should incorporate more computer mediated channels such “short messaging services” (SMS), “electronic mails” (emails) and the use of social networking sights such as “Facebook” in their channels of communication.

The research also recommends the timely release of information to enable employees better prepare and react to any information accordingly. The research also recommends that information regarding security and emergency response drills be made major elements of the communication system considering the nature of activities of the Commission. Also, adequate measures, such as regular surveys must be put in place to ascertain employees’ satisfaction with amounts of information to curtail a state rumours and uncertainty which results from reliance on colleagues and friends for information. Finally, the research recommends a more detailed assessment of the various aspects of communication and on a regular basis to obtain a more comprehensive analysis of such features as channels, quality and quantity to ensure that standards are maintained.
5.3 Conclusion

Effective communication within organizations is vital in ensuring employee satisfaction and performance at the work place. The effectiveness of organizational communication is achieved if management responsible for communication within the organization adopt and use methods and standards appropriate for good communication among employees of the organization. Low organizational communication satisfaction can result in adverse implications in employee performance on work. Findings from this work have practical and theoretical importance especially to the Ghana Atomic Energy Commission. Practically, the findings have shown that there is a direct relationship between effective organizational communication and employee satisfaction.

The findings have also shown that although there was a reliance on traditional channels such as notice boards and durbars, there was the gradual shift towards computer mediated and mobile telephony channels. The findings have also shown that the communication of information about the Commission can affect employee work output. Finally, the research has also provided some suggestions to management on ways to improve the effectiveness of internal communication in the Commission. This is critical for the successful running of a high security organization such as GAEC. Theoretically, the research has shown that the two-way symmetrical model of communication is applicable to scientific institutions such as GAEC and its tenets are relevant in the Ghanaian situation. Findings have thrown some light on some communication practices in a high security Ghanaian organization and calls for more research into similar organizations.
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APPENDIX 1
INTERVIEW GUIDE

Communication and Performance

- What types of information do you usually send to your employees? (security, job, policy, finance, social events etc.)
- How often do you send each type of information?
- How do you determine the adequacy of the information sent?
- In what ways does the information sent affect performance?

Information Quality

- How do you ensure that information sent is relevant to employees?
- How do you ensure that information sent can be trusted?
- What do you do to ensure that information sent out is understood by employees?
- What measures do you have in place to ensure consistency/regularity of information?
- What measures do you have in place to ensure easy understanding of information by different employee categories?
- What is the amount of information you regularly send to employees and why?

Communication Channels

- What factors do you consider when choosing a channel to communicate information relating to
  - Corporate events
  - Issues on organizational policy/goals
  - Emergency response,
  - Financial issues
  - Social events,
  - Job related issues,
  - Issues on security,
  - Issues on performance
- What is your assessment of the effectiveness and efficiency of the channels?
• Do you usually receive feedback from employees?
• What forms do the feedbacks usually take
• Can you briefly describe how the feedback system works in the Commission?

**Communication Satisfaction**

• How are you able to assess employee satisfaction with the type of information you send to them?
• What can be done to improve internal communication in the Commission?

**THANK YOU**
APPENDIX 2

COMMUNICATION SATISFACTION QUESTIONNAIRE (CSQ)
An Adapted Form for the Ghana Atomic Energy Commission.

My name is Mark Kwasi Sarfo. I am a student of the Department of Communication Studies of the School of Information and Communication Studies, University of Ghana, Legon. I am conducting a research on Internal Communication Audit of Public Institutions: A Case Study of the Ghana Atomic Energy Commission. I would be grateful if you could help in providing information about communication satisfaction in the Commission. The information gathered will be used for academic purposes only. Confidentiality and anonymity will be strictly observed. The accuracy of the research will be dependent on truthful and honest responses. Thank you.

Types of Information Received / Communication channels
1. What type/s of information about the Commission do you usually receive? (Please tick as many as applicable).
   a) Corporate events  b) Issues on security  c) Issues on performance  d) Issues on organizational policy/goals  e) Emergency response  f) Financial issues  
   g) Social events  h) Job related issues)
   i) Other please specify………………………………………………………………………………………………

2. How often and by what channels do you usually receive this information? (Please indicate as many as applicable). eg. (1. Daily, annually) (2. Durbars, emails)
<table>
<thead>
<tr>
<th>Type of Information</th>
<th>1. How Often</th>
<th>2. Channel/Medium/Forum</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Corporate events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Issues on security</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Issues on performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Issues on organizational policy/goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Emergency response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Financial issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Social events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Job related issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Other please specify………</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Which of the following best describes how you feel about how much information you receive?
   a) I usually receive adequate information
   b) I usually receive too much information
   c) I don’t usually receive adequate information
   d) Occasionally I receive enough information
   f) Other please specify………………………………………………………………….

4. Which channel/s do you prefer to receive information from in the Commission and how often?
<table>
<thead>
<tr>
<th>Type of Information</th>
<th>Channel/Medium/Forum</th>
<th>How Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Corporate events</td>
<td></td>
<td></td>
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<tr>
<td>b) Issues on security</td>
<td></td>
<td></td>
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<tr>
<td>c) Issues on performance</td>
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</tr>
<tr>
<td>d) Issues on organizational policy/goals</td>
<td></td>
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<tr>
<td>e) Emergency response</td>
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<tr>
<td>f) Financial issues</td>
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<td></td>
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<tr>
<td>g) Social events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Job related issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Other please specify………</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Does information about the Commission in any way affect the way you work?
   a) Yes   b) No   c) Sometimes   d) I don’t know
   e) Other………………………………………………………………………………………………………..

6. In what way/s does information about the Commission affect how you work?
   ………………………………………………………………………………………………………………
   ………………………………………………………………………………………………………………
   ………………………………………………………………………………………………………………

7. The table below is related to question 1. Indicate how satisfied you are with some attributes of the communication channel you often receive information from. **Please tick** to indicate your response.
<table>
<thead>
<tr>
<th>Attribute of Channel</th>
<th>Very satisfied</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Dissatisfied</th>
<th>Very dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessibility</td>
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</tr>
<tr>
<td>User-friendliness</td>
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<tr>
<td>Confidentiality</td>
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</tbody>
</table>

**Quality of Information/Satisfaction**

1. What do you think about the content of information you receive and its relevance to your work?

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

2. How much do you trust the source or information you receive?

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3. How will you grade the consistency/regularity of information you receive?

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4. What do you think about the clarity of information you receive?

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5. *Use the table below to indicate your level of satisfaction with information received in the Commission.*
<table>
<thead>
<tr>
<th>Quality Attributes</th>
<th>Very satisfied</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Dissatisfied</th>
<th>Very dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>(relevance)</td>
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<td></td>
</tr>
<tr>
<td>Credibility</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(trustworthy)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(clearness)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Consistency</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(regularity)</td>
<td></td>
<td></td>
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</tbody>
</table>

6. What will you like to say about the overall quality of information you receive from the commission? *Please write legibly.*

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

7. Do you have any opportunity to respond to any communication in the Commission?

a) Yes  b) No  c) Sometimes  d) Other...........................................................................................................
8. What type/s of communication do you usually have opportunity to respond to?

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…………………………………………………………………………………………
…………………………………………………………………………………………

9. What do you think can be done to improve internal communication in the Commission?

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

Demographic Data

1. Gender:
   a) Male   b) Female

2. How long have you been working in the Commission?
   a) Less than 1 year
   b) 1-5 years
   c) 6-10 years
   d) 11-15 years
   e) 16-20 years
   f) Over 20 years

3. What is your rank in the Commission?
   a) Senior Member
   b) Research Scientist
   c) Senior Staff
d) Technologist

e) Administrative staff

f) Junior Staff

g) Other (please specify)…………………………………………

THANK YOU