

**BARRIERS TO EFFECTIVE PROJECT COMMUNICATION: A CASE  
STUDY OF ADONAI SHIPPING CHANDELLING PROJECT FOR  
TULLOW GHANA LIMITED**

KNUST

By

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## DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and believe, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at the Kwame Nkrumah University of Science and Technology, Kumasi or any other educational institution, except where due acknowledgement is made in the thesis.

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## ABSTRACT

Several projects suffer from project communication management issues including the oil exploration companies. This research was conducted with the aim of exploring the

barriers to effective project communication between services companies and oil exploration companies. The objectives to the study are; to identify the communication channels employed in ship chandelling project; to determine the communication barriers in ship chandelling project; and to investigate mechanisms for enhancing effective communication in ship chandelling. Questionnaire survey was employed in this research. Out of the 123 questionnaires distributed, 111 were collected and considered valid. On the channels employed in chandelling project, the study revealed that the Staff of Adonai chandelling has largely used telephone communication medium, WhatsApp, e-mail, and text messages as means of communication. On the communication barriers in ship chandelling project, the study revealed that, inability to determine project stakeholders' needs for information, inability to determine communication channels, insufficient interaction between team members and inappropriate communication media. Mechanisms for enhancing effective communication as found from the study include the creation of a communication process through which information must be sent and received, informing ships about new products and explains the use of the product properly, and the creation of communication strategy to enhance onshore and offshore dealings. The study recommended designing an appropriate communication model for the shipping industry in Ghana withy focus on a most of the operators in the shipping industry.

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## **DEDICATION**

I dedicate this research work to the Almighty God, my wife, Mrs. Sethina Dowuona –  
Owoo and my Children Jessica Dowuona – Owoo and Janel Dowuona – Owoo.

You have inspired me to achieve this feat despite all the challenges during the period  
of studies and research.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 INTRODUCTION**

This chapter is an introduction to this thesis. It gives a brief background to the topic under consideration. Other than this, it presents the research problem, aim and objectives of the study, research questions, states the reasons for embarking on the research, and states the scope and limitations of the research as well as an introduction to the research design.

#### **1.2 BACKGROUND OF STUDY**

Communication as a discipline has attracted several definitions by different scholars in the field. Clevenger (1959) posited communication to be “any dynamic information sharing process”. Mefalopulos (2008) also viewed communication as the transmitting of information and messages, whilst Bertalanffy (1968) argued that communication often concerns the flow of information within a system. Bertalanffy’s (1968) definition was supported by O’Reilly and Pondy (1979) who defined communication as the sharing of information between two or more individuals or groups to reach a common understanding. Warnock (2007) introduced a new dimension by viewing communication as the ability to give information, to make one’s voice heard and to participate in discussion and debate. Keyton (2011) also viewed communication as the process of transmitting information and common understanding from one person to another.

Whether it’s in person or via email, with a sponsor or a stakeholder, effective communication serves as the very bedrock of business. It can sway public opinion, give

teams a sense of purpose, persuade executives to increase funding—and boost project success rates (Project Management Institute, 2013). Just as (Goudar, 2010) puts it, “Communication is the fuel that keeps the project running smoothly”. Lampi (2009) stressed that communication is one of the most crucial operations in project management, not to mention change management. How well one performs in the communication activities often defines the success of a project or change operation. A Communication Process, or Communications Management Process, is a set of steps that needs to be adopted for every project in an organization. A Communications process can be undertaken as part of Communications Management and it helps to ensure that the stakeholders are kept regularly informed. For example, as part of the project life cycle, the team implements a Communication Process to make sure that the entire team is kept informed on the status of the project (Goudar, 2010).

In order to fully appreciate the problem of communication in the Ghanaian shipping industry, especially the shipping of oil and gas, there is a need to ask questions such as: What causes communication barriers in managing oil and gas in the selected oil and gas shipping industry? What communication channel can be employed to effectively manage the oil and gas shipping in the selected shipping industry? How much value has been placed on communication to effectively manage oil and gas shipping in the selected oil and gas shipping industry? How does communication affect the management of oil and gas shipping in the selected oil and gas shipping industry?

### **1.3 PROBLEM STATEMENT**

Communication management forms part of the nine knowledge areas that are advanced in the Project Management Body of Knowledge (PMBOK) of the Project Management

Institute (PMI). Indeed the PMI have developed a communication management overview with clear guidelines regarding inputs, tools and techniques, and outputs towards effective communication management on projects. Subsequently, there is increased flow of information between many people at any specific time. This is an obvious upgrade in the demand for communication (Lauferet al., 2008). There is therefore the need for the continuous development of frameworks that integrates the ever changing features and characteristics of a project. According to the Professional Project Management Education (2010), several projects suffer from project communication management issues such as; the inability to determine project stakeholders needs for information; inability to determine communication channels, insufficient interaction between team members and inappropriate communication media. Also, Bandulahewa (2015), stated that the practice of communication requires, communication planning; information distribution; performance reporting; and managing stakeholders. However, these activities are not given the needed attention by construction managers partly because construction industries seem not to be aware of these practices; thus, communication is not given much attention among professionals and hence the use of communication plans are relatively rare (Bandulahewa, 2015). One of the most serious barriers that any company faces is to resolve the problem of information flow – upwards, downwards, and sideways which is often grandly termed communication (Affare, 2012). In 2008, Ghana's Minister for Harbours and Railways, Ameyaw-Akumfi, stressed the importance of Information and Communication Technology for the shipping industry. He described the impact of the ICT revolution as "immeasurable", calling on the trading sector to make full use of the increasing ease of global business transactions and communications (The Statesman, 2008). The



emphasis here is on communication and the challenges that come with communication gap. Hence there is need to undertake this study.

#### **1.4 AIM OF STUDY**

The aim of this study is to explore the barriers to effective project communication between services companies and oil exploration companies.

#### **1.5 OBJECTIVES OF STUDY**

1. To identify the communication channels employed in ship chandelling project
2. To determine the communication barriers in ship chandelling project
3. To investigate mechanisms for enhancing effective communication in ship chandelling

#### **1.6 RESEARCH QUESTIONS**

1. What communication channels are employed in ship chandelling project?
2. What communication barriers exist in ship chandelling project?
3. What mechanisms are likely to enhance effective communication in ship chandelling?

#### **1.7 JUSTIFICATION OF RESEARCH**

This study will help in the reformation of policies aim at enhancing the shipping of oil and gas. The aspect of communication in such reform is very important and should not be overlooked considering the role communication plays in every field of endeavour. Also bearing in mind the research gaps identified, it is a justifiable endeavour to research and add to knowledge in every aspect of the industry. Already substantial amount of work done elsewhere reveal many of the problems of managing logistics

and infrastructure can be traced to poor communication. For instance, a delay in recognizing that certain information is missing, incorrect or conflicting will either cause a delay in the delivery of goods and services. It is essential that communication is effective and that information is understood and processed correctly. Moreover, since very little is known about communication planning, information distribution and performance reporting of shipping of oil and gas in Ghana, the findings of this research will make these aspects of project management an interesting area worth investigating by other students of the project management discipline.

### **1.8 SCOPE OF RESEARCH**

Aspects of communication within the shipping industry in Ghana are broad because the industry comprises of several industry players including contractors, transporters, consultants and clients. This study focused on how communication can be used to ensure a project's sustenance. There are a number of shipping companies in Ghana, some of which are McDan Shipping Company, Gold Line Shipping, OMA Group, Mediterranean Shipping Company, Apex Shipping and Commercial Company (ASCO), Global Cargo and Commodities Limited, and DHL Express (Zindzy, 2019). The complete list of registered shippers will be obtained from the Ghana Oil & Gas Service Providers Association (GOGSPA). Out of which a number of them will be selected for the study. For the consideration of time and cost, only members of the association with presence in Takoradi will be considered for the study. The time required to complete this research is Limited

Adonai Shipping Limited is selected for this study because of its extensive service in ship chandelling in Ghana. According to Pax Shipping (n.d.) ship Chandler is a person who exclusively deals in supplying for a shipping vessel its required commodities. In

other words, just like a grocer supplies food grains to households, a ship chandler supplies essentially required commodities to a ship and its crew. Today's chandlers deal more in goods typical for fuel-powered commercial ships, such as oil tankers, containerships, bulk carriers. They supply the crew's food, ship's maintenance supplies, cleaning compounds, rope, etc. In 2016, Adonai Shipping Limited began to supply food to vessels of Tullow Ghana Limited at sea. Adonai Shipping Limited, a fully indigenous company established in Ghana in 2009, provides a comprehensive range of solutions for the oil & gas industry, ranging from manpower, logistics, agency services, ship chandelling, husbandry, supply chain management, and many more related services. The head office is located in Accra while the operational office is in Takoradi (Adonai Shipping, 2019).

Another reason for the selection of Adonai Shipping Limited is due to ease of access to primary and secondary data. Tullow Oil is a leading independent oil and gas exploration and production company. The Group has interests in 80 exploration and production licences across fifteen (15) countries which are managed as three Business Teams: West Africa, East Africa and New Ventures. Tullow Oil Ghana Limited awarded Adonai Shipping Limited the contract of Ship Chandelling in 2016. The three (3) years contract requires that Adonai Shipping Limited supply Tullow crew on board to make them comfortable and safe for sailing for a long period of time. So far, the major challenge with the supply has been communication.

## **1.9 BRIEF METHODOLOGY**

The researcher proposes to adopt a descriptive instead of correlational research design. This is because this study primarily focuses on describing barriers to effective communication in ship chandelling without focusing on the reasons for the barrier. The

survey uses quantitative research method and utilises observational data type. The sources of data are both primary and secondary. The primary source of data for the study comprises a population of Tullow Oil Ghana and Adonai Shipping Limited. Specifically, the sample frame constitutes staff of the operations department of Tullow Oil, staff of the chandelling department of Adonai shipping company limited, and offshore crew members comprising staff on both companies and the Ghana navy team providing security at the offshore. The secondary sources of data employed for this study are reports, books, and other forms of materials extracted online during the literature review. The research proposed instrument to be used to collect the primary data is questionnaire. The researcher intends to sample a minimum of 123 respondents from the sample frame by applying a nonprobability total sampling techniques. The empirical data collected will be analysed using descriptive analysis. In natural and social sciences, and sometimes in other fields, quantitative research is the systematic empirical investigation of observable phenomena via statistical, mathematical, or computational techniques.

#### **1.10 SIGNIFICANCE OF STUDY**

The results of the study will be of great benefit to the oil and gas industry, the shipping industry, and specifically to oil and gas shippers in Takoradi, which is the focus of the study. In identifying the causes of communication barriers in the oil and gas shipping industry, it is expected that the findings will go a long way to providing a guideline to solving some issues that might arise from miscommunication in such industry. Problems peculiar to the various communication channels can be tackled head-on with appropriate measures specific to the communication channel. Just like for any other academic paper, it is expected that the findings of this paper will add on to the



knowledge based of project management as a discipline. Students interested in carrying out similar research are also expected to benefit from the depth of information provided in this study.

### **1.11 ORGANIZATION OF THE STUDY**

The five chapters in this thesis are organised as follows: In the introductory chapter, a brief background to the study followed by statement of the problem, research aim and objectives, research questions, research methodology, significance of the study, scope and delimitation of the study are presented in the order stated. Chapter Two reviewed articles, books, journals, theses, reports etc. that are related to the topic considered. Very important to this chapter is the statement on the research gaps. In Chapter Three where a discussion of the research methodology is done, it explained what research approach, research methods, and research strategy were used in the research. It also justified the selection of the population, sample and the collection of primary and secondary data. Chapter Four details the presentation and analysis of the collected data. Chapter Five summarises the whole thesis and makes recommendations based on the findings.

## **CHAPTER TWO**



## **LITERATURE REVIEW**

### **2.1 INTRODUCTION**

This chapter is intended to provide a foundation of knowledge on communication and ship chandelling; to identify areas of prior scholarship to prevent duplication and give credit to other researchers; to identify inconsistencies such as gaps in research, conflicts in previous studies, open questions left from other research; to identify need for additional research; to identify the relationship of works in context of its contribution to the topic and to other works; and to place this study within the context of existing literature making a case for the need for further study.

### **2.2 UNDERSTANDING COMMUNICATION**

Communication is the act of giving, receiving or exchanging information, ideas and opinions so that the message is completely understood by both parties. In a communication process, there must be a sender who speaks or sends a message, and a receiver who listens or receives the message. The sender sends a message with a certain intention in mind. The receiver of the message tries to understand and interpret the message sent. He then gives feedback to the original sender, who in turn interprets the feedback. This process, repeated continuously, constitutes communication (Fayad, 2016).

Communication can be defined as the process of transmitting information and common understanding from one person to another (Keyton, 2011). The word communication is derived from the Latin word 'communis', which means common. The definition underscores the fact that unless a common understanding results from the exchange of information, there is no communication (Cheney, 2011).

According to Ramsing (2009), there are several examples to support the assertion that communication is important in ensuring the success of construction projects. For instance, effective communication between the project team helps to maintain a good relationship between the participants to ensure the success of the construction project (Ceric, 2011). Baker (2007), cited in Ramsing (2009) intimated that ninety-five percent (95%) of all problems encountered in projects are caused by poor communication and that the relevance of being capable to handle the skills of communication during the presentation of facts, details, status, project requirements, etc should be prioritized in construction management. Again, Zulch (2012) stated that the issue of communication in the construction industry is of maximum importance irrespective of the fact that projects are planned, organised and managed by experienced and qualified personnel. Accordingly, failure in project communication can lead to the failure of the project as a whole. Communication does not only aim to keep members of the project team updated in terms of progress but as well enhance the ownership of project decisions (Cornelius and Associates, 2010). Chenet al. (2013), intimated that to accomplish the requirements of a project means communicating the important messages to the team that needs the information. For instance, where this cannot be attained during the construction of the project, members of the project/construction team will certainly not be able to execute the tasks accordingly which will eventually result in project delay. This assertion is also supported by Koivula (2009). According to Koivula (2009), communication is one of the most crucial aspects of project and for that matter construction management. The success of projects is often defined by how well the task of communication is handled (Ibid.). The completion of projects does not only depend on materials but also on both skilled and unskilled labour termed as the blue collar on site and the white collar that are in the offices. The workers on site provide

the material aspect of construction product while the office workers produce informational conditions for the construction of the project. This gives an indication of the fact that construction productivity is correlated to the amount and superiority of information flows between the management and the people on site (Aiyewalehinmi, 2013). Che Ibrahim et al. (2011), citing Moore and Dainty (1999), stated that the delivery of project and the performance of the construction industry is hinged to a large extent on the methodology of how the knowledge and the experience of the many people involved in the construction process can be integrated as a team. Accordingly, the development of effective communication systems throughout the construction process will ensure the flow of quality and reliable information (Ibid.). Indeed, Dainty et al. (2006) indicated that communication in an environment which is project driven presents several challenges. In an industry such as construction, interaction is mainly characterised by unfamiliar groups of people who come together in a purpose driven environment within short periods before they are divided into several groups to perform their various endeavours towards the achievement of a construction project. The construction industry is not only deemed to be resistant to change, but also the industry as a whole is lacking efficient communication (Landin and Kindahl, 2013). And in an industry where managing and monitoring projects demands collaboration and coordination between parties for successful delivery of projects, effective communication and communication practices of construction firms cannot therefore be downplayed (Gunhan et al., 2012).

Cherry (1978) defined communication as the process of interaction between individuals in which meaning is created and shared. Dainty, et.al, (2006) have recognized that the term 'communication' is in itself a multifarious and complex term, which can mean different things in different context and situations. This is certainly the case within the

construction industry, where each project demands communication between wide varieties of participants. There seems little doubt that communication plays a vital role in the effectiveness of organizations. Although managers in different industries undertake diverse tasks and activities, it has been recognized that they spend most of their time involved in communication. Drucker (1985) emphasizes the importance of communication for managers, and points out that communication ability is essential for success. In project management, the importance of communication is emphasized by Sievert (1986), who says that a high percentage of the problems in working relationships may be attributed to poor communication. It is also important to note that engineers and technical personnel spend 50%-75% of their time in communicating verbally.

### **2.2.1 Characteristics of Communication**

Some of the characteristics of communication according to Mehra (2009) are as follows;

- Communication is a process – it is continuous, on-going, and dynamic
- Communication requires a sender and a receiver
- Communication has information (message/content)
- Communication requires a medium (symbols, signs, behaviour, speech, writing, or signals)
- Communication requires shared understanding – all parties understanding the same thing the same way
- Communication is transactional and irreversible

### **2.2.2 The Nature of Formal and Informal Communication**

Theorists have long recognized that organizations make use of communication methods varying in formality, and that they deploy these different methods for tasks varying in uncertainty. However, matching the informality of the methods

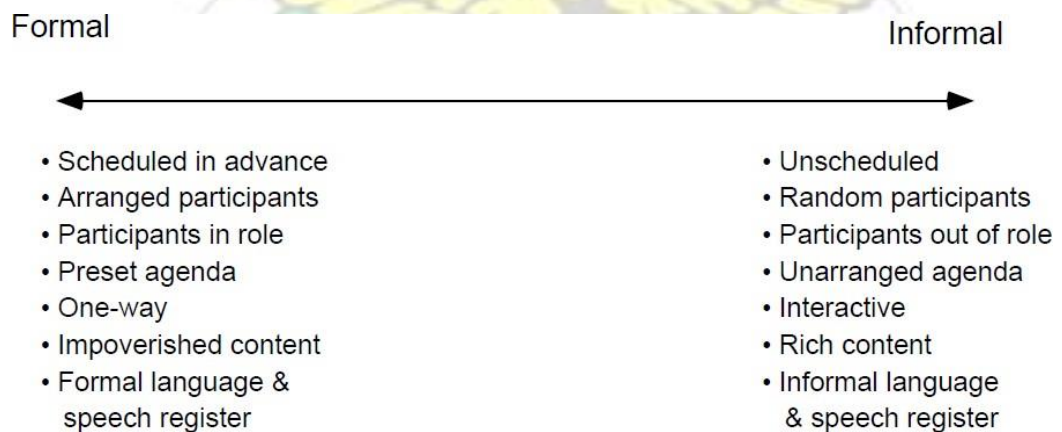


with the uncertainty of the task leads to better organizational outcomes. At both the organizational and the small group levels, the coordination of activity is the production-oriented task that has been examined in detail. Coordination is the activity of directing individuals' efforts towards achieving common and explicitly recognized goals (Blau and Scott, 1962). As Van de Ven et al. (1976) describe it, 'coordination means integrating or linking together different parts of an organization to accomplish a collective set of tasks'. Explicit coordination is necessary in part because individuals within an organization have only partially overlapping goals. Thus, one of the aims of coordination is to insure that the disparate individuals come to share the same goals. But even if these aims were achieved, and their goals were identical, the input-output dependencies among individuals require that their efforts be sequenced and interrelated efficiently.

Informal communication is a loosely defined concept and is often treated as the residual category in organizational theory. According to this perspective, informal communication is that which remains when rules and hierarchies, ways of coordinating activities, are eliminated. More positively, informal communication is the type that is spontaneous, interactive and rich. Coordination by feedback (March and Simon, 1958), through organismic communication networks (Tushman and Nadler, 1978), or by clan mechanisms (Ouchi, 1980) are alternate ways of describing coordination by informal communication. The essence of these informal communication systems is their lack of pre-specification. Information is not pre-packaged and then shipped intact to a recipient and courses of action are not pre-computed and then executed without modification. Rather, information is often exchanged interactively, through meetings and conversations, and courses of action are worked out in the context of the circumstances into which the actions



must fit. Figure 2.1 illustrates several variables that distinguish formal from informal communication. At the heart of informal communication is an ad lib nature. Conversations take place at the time, with the participants and about the topics at hand. None of these characteristics - timing, participants and agenda - is scheduled in advance. Moreover, during its course, the communication changes to take into account the participants' current interests and understanding. In this sense, informal communication is truly interactive, with all participants in the communication being able to respond to what they perceive to be the current state of affairs, including the communication up until that point and their perception of the other participants' reactions to it. Through the feedback mechanism, informal communication can be more effective than formal channels, as participants in the conversations elaborate or modify what they have to say in order to deal with someone else's objections or misunderstandings (Kraut, Lewis, and Swezey, 1982).



**Figure 2. 1: The formalities dimensions of communication**  
(Source: Kraut et al., 1990)

There are both structural and functional characteristics of communication occasions that cause the communication to be more or less formal. Among structural characteristics, the nature of the relationship among the participants and their social

roles influences its formality. For example, conversations among strangers or among those with highly unequal status will be more formal than conversations among close friends or among peers. Similarly, conversation among people acting in their official roles will be more formal than conversation among the same people out of role. The frequency of communication also influences its formality. If communication partners have the ability to communicate with each other in multiple times a day, they need not stand on ceremony in their communication and communication moves from a formal to informal style (Brown and Fraser, 1979). The nature of the communication setting also influences the formality of communication in it. A discussion in a board room is likely to be more formal than one in the corporate fitness center.

Finally, the communication channel itself may partially determine the formality of a communication event. By their nature, for example, telephone and face-to-face discussion are more interactive and richer than a computer mail system and as a consequence, more informal. Subdividing media more finely, computer generated information systems reports and human generated memoranda are more formal than are scheduled meetings and electronic bulletin boards, which in turn are more formal than telephone calls or hallway chats.

In terms of functional characteristics, formal and informal communication systems seem best suited to different types of activities. Formal communication tends to be used for coordinating relatively routine transactions within groups and organizations. For example, in a large corporation, one might go through a procurement process simply by following the steps specified in the corporate purchasing guide. The material specification, purchase requisition forms, bidding procedures, criteria for selecting one vendor over another, and stages in the approval process would all be specified in advance. In the extreme, the rule book could so totally describe the conditions under

which certain actions should occur and the precise ways of executing them that a factory's computerized, just-in-time procurement system could place orders with suppliers without human intervention.

However, these formal coordination mechanisms often fail in the face of novel or unplanned events. Novelty, unexpectedness, and uncertainty are frequent in organizations and are often components of what appear to be routine procedures (e.g., Suchman and Wynn, 1984). Under these circumstances, informal communication seems needed for coordination in the face of uncertainty and equivocality (Daft and Lengel, 1986)



### **2.2.3 Communication Channels**

During a project, communication can occur in various directions depending on who is communicating. There is upward communication to management from your own organization and the customer's organization. Lateral communication takes place with customers and within project teams. Machinery needs to be put in place for further communication to take place, either downward communication (from superior to subordinate), horizontal communication (between colleagues) or upward communication (from sub-ordinates to superior). Mehra (2009) stated that communication will always involve more than one person. In the **figures 2.2**, the number of communication channels required to communicate with five other team members in a team of six is seen.

### **2.3 METHODS OF COMMUNICATION**

There are various ways and methods of communicating information in the construction industry. Although a vast majority of information is exchanged verbally and delegated, most data is exchanged in written format either as hard copy or electronically. Even if information is exchanged verbally such as through project meetings and instructions, this information is well documented and stored for future reference. Scope of work and details of construction are communicated by means of drawings, contract documents, addenda and specifications (Maslej, 2006). Contracts are commonly issued when one entity passes down work to another: for example, when an owner hires a consultant or designer they form a contractual relationship by means of signed contract. Same is true when a consultant, on behalf of the owner, hires a general contractor to execute the work designed by the consultant. The contractor may wish to subcontract some of his work to subcontractors in which case, again a contractual



relationship is formed. Unfortunately, miscommunication is a common occurrence in construction when work is passed down from one entity to another (Maslej, 2006).

For ease of classification, the forms and methods of communication in the construction industry are outlined below (Mehra, 2009);

- Formal Writing – This takes the form of Project Plan, Project charter, Specifications, Reports, Metrics.
- Formal Verbal – Presentation and speeches fall under this category.
- Informal Writing – Examples of informal written methods of communication include memos, e-mail, notes, etc.
- Informal verbal - Meetings, stakeholders and conversations are categorized under informal verbal method.
- Nonverbal Messages – These are conveyed through our facial expressions as well as our postures and gestures and account for about 55% of what is perceived and understood by others.
- Para-verbal Messages – These include the tone, pitch, and pacing of our voice and account for about 38% of what is perceived and understood by others.

Effective communication is a two-way process which involves active listening and reflects the accountability of speaker and listener. It also utilizes feedback to confirm understanding which makes it free of stress.

## **2.4 CHANNELS OF COMMUNICATION**

During a project, communication can occur in various directions depending on who is communicating. There is upward communication to management from your own



organization and the customer's organization. Lateral communication takes place with customers and within project teams. Machinery needs to be put in place for further communication to take place, either downward communication (from superior to subordinate), horizontal communication (between colleagues) or upward communication (from subordinates to superior). Mehra (2009) stated that communication will always involve more than one person.

The channel is the means by which a message is communicated, when one picks a telephone to make a call, the telephone becomes the channel. Public speakers may use one or several channels each of which will affect the message received by the audience.

A speaker's speech could be carried out to his audience nationwide through the channels of radio or television. For the radio audience, the message is conveyed entirely by the speaker's voice. He can be heard but cannot be seen, but for the television audience, the message is conveyed by both the speaker's voice and the television image. In effect, communication channels can be verbal and non-Verbal, formal and informal, impersonal, interpersonal. (Camp Sue c, Satterwhite, 1998). Also, communication channel such as radio telecommunication is used at sea to convey messages. In the early years of the twentieth century, communications were carried out using Morse code. It was a reliable system that has been used for almost a century. Its usage was abated in 1999 (Meskell 2014).

Historically, communications were carried out using Morse code, an excellent reliable system that was used at sea for nearly 100 years (the use of Morse was discontinued in 1999). This channel has been used in the seventies by ships as a danger rescue measure. It is used to send signals to the nearby ship when a particular ship is in danger.

## **2.5 BARRIERS TO EFFECTIVE COMMUNICATION**

According to Camp et al (1998), barriers are factors that interfere with communication and might negatively affect the intended message. Barriers may include physical distractions, emotional distractions, semantic problems, cultural and language differences. These distractions interfere with and draw the receiver's attention away from the message and create barriers to effective communication. Sometimes the resulting lack of concentration can lead to incomplete communication by message senders and erroneous conclusions by message receivers.

Physical distractions according to Camp et al (1998) are usually easier to prevent in a speaking or listening situation because the surroundings can often be controlled or changed. In writing or reading situation, however, the writer has little influence over the reader's surroundings. Emotional distractions on the part of the receiver can prevent him or her from concentrating on and giving full attention to the communication. Emotional distractions such as anger can influence how one interpret a message.

Physical barriers can be in a form of faulty equipment, noisy backgrounds, poor lightening and too hot or too cold temperature. Emotional barriers are also in the form of anger, sadness, absent mindedness, etc. can also change the objective of communication. Also, being too nervous can alter the intended meaning of information. Semantic barriers are mostly in the form of slangs, professional jargons and regional colloquialisms. These can equally harm the intended meaning of information. Problem with structure design is also communication barrier. Bad and faulty structure design in companies or organizations can cause laps and communication gaps. Cultural noise is also a communication barrier. The perceptions people have about an individual's cultural background can also change the intended meaning of a message by the recipient.

## 2.6 COMMUNICATIONS MODELS

The communication models summarized in the **Table 2.1** and **Figures 2.3, 2.4, 2.5** and **2.6** below focuses on project environments. Many models dating from the late 1940s are referred to as *transmission* models since they approach communications as a means of information transfer problem based on some variation of four fundamental elements:

✚ Sender (or Source) → Message → Channel (or Medium) → Receiver.

One of the most popular models was created when Warren Weaver, a distinguished mathematician, applied Claude Shannon's concept of information transmission loss over telephone wires to interpersonal communication. Shannon was a research scientist at Bell Telephone Laboratories trying to achieve maximum telephone line capacity with minimum distortion. Though he had never intended for his mathematical theory of signal transmission to be used for anything but telephones, the Weaver adaptations were very influential in information theory. Norbert Wiener, a renowned mathematician and founder of cybernetics, added the feedback loop to the Shannon-Weaver Model. The various models have been summarized in the Table 2.1 below.

**Table 2. 1: Summary of the various models and summarised interpretations**

Model	Comment
-------	---------

Lasswell formula (1948)	<p>Useful but too simple.</p> <p>It assumes the communicator wishes to influence the receiver and therefore sees communication as a persuasive process. It assumes that messages always have effects.</p> <p>It exaggerates the effects of mass communication. It omits feedback. On the other hand, it was devised in an era of political propaganda. It remains a useful introductory model.</p> <p>Braddock (1958) modified it to include circumstances, purpose and Effect</p>
Shannon and Weaver (1949)	<p>Highly influential and sometimes described as “the most important” model (Johnson and Klare)</p> <p>Communication is presented as a linear, one-way process</p> <p>Osgood and Schramm developed it into a more circular model.</p> <p>Shannon and Weaver made a distinction between source and</p>
	<p>Transmitter, and receiver and destination – i.e. there are two functions at the transmitting end and two at the receiving end.</p> <p>Criticized for suggesting a definite start and finish to the communication process, which in fact is often endless</p>
Gerbner (1956)	<p>Special feature of this model is that it can be given different shapes depending on the situation it describes.</p> <p>There is a verbal as well as visual formula (like Lasswell): someone perceives an event and reacts in a situation through some means to make available materials in some form and context conveying content with some consequence</p> <p>The flexible nature of the model makes it useful. It also allows an emphasis on perception</p> <p>It could explain, for example, the perceptual problems of a witness in court and, in the media, a model which helps us to explore the connection between reality and the stories given on the news</p>
Westley and MacLean (1957)	<p>Another influential model</p> <p>The authors were keen to create a model which showed the complexities of mass communication - hence the emphasis on having to interpret a mass of Xs (events which are communicated in the media)</p> <p>It oversimplifies the relationships between participants by not showing power relations between them.</p>

(Adopted from Mehra, 2009)



## 2.7 THE CONCEPT OF SHIP CHANDELLING

On the high seas, there are no shops or supermarkets such as Melcom or Shoprite to turn to when the need arises for 100 rolls of toilet paper, 100 pounds of pork heads or a few spare rockets. That's why there is ship chandelling. According to White (2005), chandlers have been around since the earliest days of the maritime industry, when they made and delivered the candles used to illuminate ships. But even as increasingly more goods are manufactured overseas for shipping to the United States, the number of companies that stock those vessels is on the decline.

With reference to Los Angeles Times (2005), in 1932, Harbour Ship Supply's most common deliveries were coal, ice, lumber and live animals. Now, the most commonly ordered food item is long-grain rice, as much as 1,400 pounds at a time. A recent order for the cement carrier Goldmar ranged from the mundane to the exotic; produce and pillow cases made their way to the ship along with a fire hydrant valve and rockets for throwing ship-towing ropes. Rounding out the long requisition was a clothes iron and ironing table, perhaps for shore-leave primping. White (2005) stated that difficulties arise in scheduling, especially when the ships have mere hours in port. With effective communication this difficulty may be addressed.

Ship Chandelling services is not a new concept. Such services originated centuries back to the days when boats had a dire need of certain commodities for their long journey of months together. These requirements were necessary to keep the boat sailing safely for a long period of time. In the very beginning of Ship Chandelling Services, a ship chandler was most probably used to only provide items such as ropes, sail cloths and other such details to the crew of that ship.

In the middle ages with the advent of global navigation, there was a high sophistication in the business of ship chandelling services on the basis of newer technologies. So, the job of ship chandlers is not new but reached its peak in the last two decades.

Nowadays the business of ship chandelling services has become an important aspect of all the ports and shipping industries around the globe. Today a ship chandler's role is very significant, graceful and revered as he/she not only provide essential commodities such as ropes, sail cloths, etc. but also attends to other requirements such as maintenance tools, food supplies, chemical compounds, cleaning equipment and many other items.

Chopra (2019) stressed that ship Chandlers play a job of high esteem and serve multipurpose in a ship. Following are some importance of Ship Chandelling Services:

- Ship chandlers should supply all the necessary commodities (like food, oil, lubricants, spare parts, etc.) to the ship prior to their usage.
- Ship chandlers are not there to meet only the most essential requirement by the captain or crew, but it must cater all the minute nuances of requirements of the ship and its crew.
- These ship chandlers not only help in supplying commodities which are required by the ship and its crew but also help the new buyer in buying ship by providing the buyer with exclusive details of the exact condition of the ship. Thus, save a buyer from experiencing a great loss in buying a damaged ship.
- Along with supplying commodities ship chandlers are also expected to provide certain services like repair and maintenance services, cleaning arrangements, etc.

- Ship chandlers provide their services effectively in both the cases specifically when the ship is anchored at the port and when the ship is on its voyage. More precautions should be taken for the supply in the latter case. During voyages ship may require foodstuff for the rest of the journey, fuel or gasoline for the ship, necessary spare parts or repair services; all these requirements are handled with intensive care by the Ship Chandlers.

Thought of such importance, there is a limitation for ship chandlers as they are not in direct contact with Captain and its crew. There exist certain middlemen who are supposed to bridge the gap between Chandler and the client and fix all the rates for the chandelling services. But the middleman wants his/her own remuneration so the cost of commodity or service which the client has to pay poses an extra burden of middleman's share (Chopra 2019).

When it comes to a ship's supplies, in the absence of a ship chandler, it so happens that there are a lot of people involved. The more the number of involved people means a lot of time for transit and consequently a lot of delay in the transit process.

(Chopra 2019) further explained that when a ship's crew approaches a ship chandler, because of the naturalness of a ship chandler, a ship's crew can get the necessary commodities directly from a one-person source. This point adds to the aspect of high level of discount as since the ship chandler is the only person involved in the sale, he/she can afford to procure the best deals for a ship's crew at the right prices thus allowing him to give a high return to his client in the form of rebate or discount.

## **2.8 MECHANISMS FOR ENHANCING EFFECTIVE COMMUNICATION IN SHIP CHANDELLING**

A mechanism is a natural or established system or process through which something is carried or brought about. Like anything else, Communication also has natural and established processes through which it is enhanced. There are several ways of improving communications in ship chandelling. Some of the ways to enhance effective communication in ship chandelling are discussed below;

### **2.8.1 Create a communication process through which information must be sent and received:**

Firstly, to put in place an effective way of communication lay down processes and procedures through which information must be sent and received. This will help the chandlers and their customers to know the right procedures and mediums through which they channel their opinions, reports, grievances and any other important and sensitive information. This will improve the contact and connection between chandlers and their customers. With ship traffic increasing around the world, it has become ever more important to improve safety and security and to safeguard our environment. When critical decisions have to be made quickly to protect or enhance any of these factors, good communication between all involved in the maritime chain is essential (Maritime Industry Foundation 2018)

### **2.8.2 Create communication strategy to enhance onshore and offshore dealings:**

A strategic communication mechanism must be created to enhance onshore and offshore dealings. This will enable the shipping crew to know who to tell what equipment or stuff they want. This strategy will help to create a standard for organizational communication.



For example, should a new company endeavours be communicated when the idea is in the planning phase, when it is funded or when it is ready to launch? Any of the three stages can be appropriate there just needs to be consistency in practice so employees know when to expect different levels of information (Lotich 2019).

### **2.8.3 Emphasize the message to compel the recipient to realise the relevance of the message:**

To enhance communication, more emphasis must be made on the message to compel the recipient to realise the relevance of the message. Extra mediums through which the recipients of the message could be reached must be used. Examples of other mediums are: e-mails, text messages, instant messaging Apps among other. This will ensure a complete communication. For instance, a Chandler can give further note to a purchasing ship about the materials supplied. Moreover, the recipient of the message should also try as much as possible to use extra mediums to give feedback; this ensures that the sender is notified that the message has reached the right recipient. For example, the recipient can notify the Chandler about the items received and the date on which the items are received.

### **2.8.4 Inform ships about new products and explains the use of the product properly:**

Information may be generated and communicated but the purpose behind its generation may not be known to the recipients. It is very important to explain to workers why information is generated and the intention behind its generation. Changers should always try to inform ships about new products and explains the use of the product properly, for example, why a particular product is for internal or external use so that ships will get more

knowledge about a particular item or product. Often leaders come up with a great idea, plan it, implement it and may even communicate it but may not think to explain the why a particular initiative makes sense at any given time. One needs to take the time to think about how an employee will perceive our great ideas (Lotich 2019).

#### **2.8.5 Be cautious to differences in technical knowledge and give explanation when different technical language is used:**

More care and deeper explanation must be given when different technical language is used, this will help in proper decoding of a message from the hip chandler. Acronyms must be explained because they may mean something different in different fields or even in the same field. For instance, in IT, ASP can refer to “Application Service Provider” or “Active Server Page”. Your customers have less technical knowledge than you do. Be careful, therefore, when explaining things to them. If you use acronyms, be sure you identify what the acronym means (Sun 2007).

#### **2.8.6 Avoid interrupting customers or fellow chandlers before they are done conveying the information they have for you in full:**

Don’t interrupt customers when they are explaining a problem or expressing an idea, the interruption may upset them and in turn affect the message. Always allow old customers and new customers to fully explained themselves before you reply or make corrections. Also, don’t cut off customers or fellow chandlers before they are done conveying the information they have for you in full. *Titanic* wireless operator Jack Phillips interrupted a wireless message from a nearby ship, telling them to shut up. In doing so, he prevented that ship from sending *Titanic* an iceberg warning (Sun 2007).

**2.8.7 Use clear, straightforward and understandable words and phrases so that the recipient will get the full meaning of the message:**

Use clear, straightforward and understandable words and phrases so that the recipient will get the full meaning of the message. Vague statement should be followed with more explanations to help the receiver get the complete meaning of the message. Ambiguous statements can be misleading and thus, could give customers and other stakeholders a different understanding of a message. Also, follow up messages with good facial expression. The expression on the face could give someone a different meaning of a message. Sometimes the intention is innocent but the facial expression and the tone of the voice may sound offensive and causes a change in the meaning of a message.

**2.8.8 Anticipate seafarers' objections and questions:**

Chandlers must try to anticipate the objections your customers will have to your message and address those objections. Knowing the needs and behaviour of customers helps create an effective communication skill to address them and hear them out. Chandlers should try to anticipate their customer's objections and questions.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 INTRODUCTION**

The chapter deals with research methodology which outlines research design, research method, the population, the sampling technique and data collection technique important towards the research objectives. Ethical issues were also considered.

### **3.2 RESEARCH DESIGN**

According to Singh (2006) 'Research design is a choice of an investigator about the components of his project and development of certain components of the design. A design of research does not consist of an ordered sequential step-by-step procedure. It is a planning stage of research which is usually made logically visualising its practicability'. Singh (2006) further simplified the definition of research design and state that it is a planning process or approach which is objective in an investigation, evidence gathering and finally reporting on the outcomes of a research. Research design is the strategy to solve a research problem. It helps the researcher to plan and apply the study in such a way that will enhance the researcher to derive purposeful results, thus maximizing the opportunity of getting data that could be accustomed with the real situation.

#### **3.2.1 Type of research**

The study adopted the descriptive research design approach because it is meant to report on the impact of information management on construction project delivery.

According to Bhat (2018), descriptive research and correlational research are two important types of research studies that help researchers make ambitious and measured decisions in their respective fields. Correlational research is a method that describes and predicts how variables are naturally related in the real world, without any attempt by the researcher to alter them or assign causation between them, whereas descriptive research is defined as a research method that involves observing behaviour to describe attributes, objectively and systematically. It is further explained that the main objective of descriptive research is to create a snapshot of the current state of affairs whereas correlational research helps in comparing two or more entities or variables.



### 3.2.2 Research Strategy

The quantitative approach will be employed in investigating barriers to effective project communication with respect to Adonai Shipping chandelling project for Tullow Ghana Limited.

Quantitative research gathers data in a numerical form which can be put into categories, or in rank order, or measured in units of measurement. This type of data can be used to construct graphs and tables of raw data (McLeod, 2019). On the other hand, qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Denzin and Lincoln, 1994). However, relevant data for the study was collected using questionnaires and personal interactions. The views of key project team in charge of the chandelling will be solicited on the relevance of available information and their associated challenges faced. With reference to Minchiello et al. (1990), McLeod (2019) added that there exists a fundamental distinction between the two research methods: quantitative data is information about quantities, and therefore numbers, and qualitative data regards phenomenon which can be observed but not measured, such as language.

**Figure 3. 1: Difference between quantitative and quantitative research method**

Qualitative research	Quantitative Research
The aim is a complete, detailed description.	The aim is to classify features, count them, and construct statistical models in an attempt to explain what is observed.
Researcher may only know roughly in advance what he/she is looking for.	Researcher knows clearly in advance what he/she is looking for.

Recommended during earlier phases of research projects.	Recommended during latter phases of research projects.
The design emerges as the study unfolds.	All aspects of the study are carefully designed before data is collected.
Researcher is the data gathering instrument.	Researcher uses tools, such as questionnaires or equipment to collect numerical data.
Data is in the form of words, pictures or objects.	Data is in the form of numbers and statistics.
Subjective – individuals interpretation of events is important ,e.g., uses participant observation, in-depth interviews etc.	Objective: seeks precise measurement & analysis of target concepts, e.g., uses surveys, questionnaires etc.
Qualitative data is more “rich”, time consuming, and less able to be generalized.	Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.
Researcher tends to become subjectively immersed in the subject matter.	Researcher tends to remain objectively separated from the subject matter.

Minichiello et al. (1990)

### 3.5 RESEARCH LOCATION

The research was done in Takoradi, the capital city of the Western Region of Ghana. This is because other than the Tema Harbour in the Greater Accra Region, the Takoradi Harbour is the major hub of shipping and maritime transportation in the country. As published in the official website of the Ghana Ports and Harbours Authority (GPHA, n.d), the Port which is Ghana’s premier commercial Port, opened in 1928 to facilitate Ghana’s international trade. It is strategically located 225km west of Accra the capital city of Ghana and 300km east of Abidjan the capital city of La Côte d’Ivoire. It is well connected to its hinterland which makes it the preferred and ideal gateway to the middle and northern parts of Ghana and the Sahel landlocked countries of Burkina Faso, Niger, and Mali.

The port in 2012 handled 31% of Ghana's seaborne traffic, 66% of national Exports and Handled 19% national Imports. Leading exports include Manganese, Bauxite, Forest Products and bulk and bagged Cocoa beans, mining equipment; whilst leading imports include Clinker, Wheat, Petroleum Products and Containerized cargo. In 2007, Ghana discovered oil in commercial quantities at Cape Three Points in the Western Region. Due to the proximity of the port to the Oil and Gas Fields, it is strategically located to support exploration and production activities at the Oil and Gas fields. Majority of the oil supply vessels call the port to load and discharge equipment, chemicals and other supplies that are stored in port sheds as well as private warehouses near the port. These vessel calls have contributed significantly to the increase in calls to the port.

The port is serviced by all the leading shipping lines and clearing/forwarding companies. They include, Maersk Ghana Limited, Inchcape, Bolore group, Zim lines, Hull Blyth, Safe marine, Super maritime Ghana Limited, MSC Ghana Limited, Panalpina Ghana Limited, Maritime Agencies of West Africa, Macro shipping, Conship Ghana Limited, Inchape, Advanced Maritime and Transport Shipping, Baj Freight, GETMA and ISAG etc. The port has a full range of equipment for all operations due to the complementary services provided by other private stevedoring companies such as Speedline, Golden Gate, Atlantic Port Services, Advanced Stevedoring and Gemini who have the capacity to work vessels efficiently.

Other than the reasons cited for considering the Takoradi for the study, the researcher's choice are partly hinged to proximity and ease of data collection needed for the research.

### 3.6 POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUE

A research population can be defined as the totality of a well-defined collection of individuals or objects that have a common, binding characteristics or traits (Polit and Hungler, 1993). Burns and Grove (1993) added that a population is defined as all elements (individuals, objects and events) that meet the sample criteria for inclusion in a study. The population of this study are Tullow Oil Ghana and Adonai Shipping Limited Specifically, the sample frame constitutes staff of the operations department of Tullow Oil, staff of the chandelling department of Adonai shipping company limited, and offshore crew members comprising staff on both companies and the Ghana navy team providing security at the offshore. Table 3.1 summarises the sample size.

**Table 3. 1: Sample size**

Sample	Sample size
Chandelling department staff (Adonai)	12
Operations department staff (Tullow)	15
Crew boarded on 8 vessels (average of 12 crew members per vessel)	96
<b>Total</b>	<b>123</b>

**Source: Author's construct**



The Captain, Chief Officer, Chief Engineer, Second Officer, Second Engineer, Third Officer, Third Engineer and Chief Cook were sampled because they possess the relevant information needed for this study. Some of the staff at Tullow is on the vessel whereas the rest are at the office at any particular moment, thus, effective communication mediums such as e-mails, telephone communication, etc. are the mediums that can be used to effect communication between crew on board and crew at the office.

### **3.7 DATA COLLECTION**

In this research, information will be sourced by adapting structured questionnaires. A structured questionnaire will be circulated in order to collect relevant data to the research objectives and questions.

#### **3.7.1 Data source**

In order to achieve the research objectives and questions, both primary and secondary data collection methods were used.

##### **3.7.1.1 Primary Data**

The primary data for this study was gathered through questionnaires and personal observations. Primary data was collected by the use of printed questionnaires with series of question that was asked on the relevance and challenges of information management on project delivery which respondents responded to. Personal observations were made on some sites visited and interactions with some project team members on how information was managed.

##### **3.7.1.2 Design of Questionnaire**

Important information regarding the research objectives has been sourced and studied from literatures. According to Dawson (2002), the closed ended structured questionnaires approach issued to generate statistics in quantitative research and easier for respondents to respond to the questions asked. This was adopted for the second and third objectives of the study. Questionnaires with cover letters explaining the tenacity of the research, the aim, method of responding and privacy of information were given in order to encourage the response of respondents.

The questionnaire was designed into three sections.

#### **Section A: General or personal information**

This section focused on general information about position, educational level and years of experience of respondents.

#### **Section B: Communication channels employed in ship chandelling project**

This section dealt with a list of communication channels from which respondents are supposed to rank based on a five-point Likert scale.

#### **Section C: Communication barriers in ship chandelling project**

This section includes the list of likely barriers to effective communication obtained from literature. Respondents will be required to state their degree to which each barrier affects effective communication.

#### **Section D: Mechanisms for enhancing effective communication in ship chandelling**

Similar to the latter two sections, this section includes the list of likely mechanisms likely to enhance effective communication obtained from literature. Respondents will

be required to state their degree to which each mechanism can enhance effective communication.

### **3.8 APPROACHES TO DATA ANALYSIS**

The empirical data collected will be analysed using descriptive analysis. In natural and social sciences, and sometimes in other fields, quantitative research is the systematic empirical investigation of observable phenomena via statistical, mathematical, or computational techniques. Quantitative method of data analysis was employed in analysing collected data. The collected data from the completed questionnaires was numbered and coded to facilitate data entry and analysis. The data was analysed by determining mean scores, standard deviations using Statistical Package for Social Sciences (SPSS) and Relative Importance Index (RII) technique has also been employed to analyse data collected from the questionnaire survey. The Relative Importance Indices was calculated for each variable to determine the ranks of each of the variables as perceived by the respondents. The five-point Likert scale of one to five (1-5) has been used to calculate Relative Importance Index for each item. Base on the objectives of the study, the results regarding issues of the study were presented through frequency distribution tables and charts.

### **3.9 ETHICAL CONSIDERATIONS**

In dealing with humans in a research investigation, it becomes very necessary to exercise the right of those individuals who participated in the study. This was done by protecting the information they gave out with uttermost confidentiality. The purpose of the research and its implication was communicated to respondents to avoid any

doubts or deception. This aided the response of respondents in a voluntary manner with respect to the questions asked for which they provided answers.

### **3.10 RESEARCH PROCESS**

Identifying the main aim of this thesis was initially carried out by clearly stating the problems and the research objectives. Subsequently, an extensive literature review on the topic was done. The extant review of literature was done thematically mainly from online search of relevant books, journal, etc. based on the keyword in the thesis topic. The main objective of the review was to give the researcher sufficient information on the concept, types, roles, and barriers to effective communication in the management of projects. Questionnaire survey will be adopted and questionnaire will be distributed and collected from key project team members of Adonai Shipping Limited and Tullow Ghana Limited to solicit their views on the points highlighted in the questionnaire based on the thesis specific objectives. Finally, analysing and discussing the research result will be carried out using the Statistical Package for Social Sciences (SPSS) software version 25 and relevant Microsoft applications such as Excel and providing the conclusion and recommendation thereafter.

## **CHAPTER FOUR**

### **DATA PRESENTATION AND DISCUSSION**

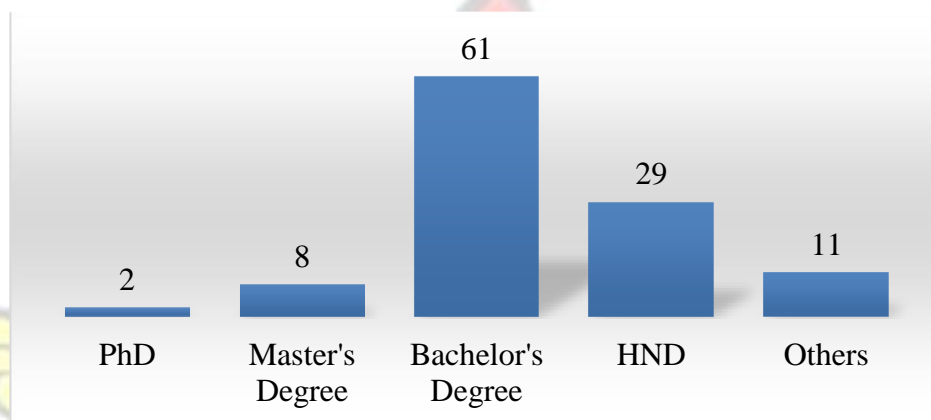
#### **4.1 INTRODUCTION**

This chapter presents the empirical data collected through the structured questionnaire and how the data was analysed. The data is presented in the forms of tables and charts. As mentioned under methodology, the analysis was done using the Excel. The research instrument was divided into four sections, specifically: respondents' details, to identify the communication channels employed in ship chandelling project, to determine the



communication barriers in ship chandelling project, and to investigate mechanisms for enhancing effective communication in ship chandelling. Questions on respondents' details captured the educational background, employer, department, and position/role. Section B, C, and D each had 11, 10 and 8 variables to choose from based a Likert scales. Out of 130 questionnaires distributed electronically, 111 were returned. This produces a return rate of 85.4%.

## 4.2 DEMOGRAPHIC VARIABLES



**Figure 4. 1: Level of Education**

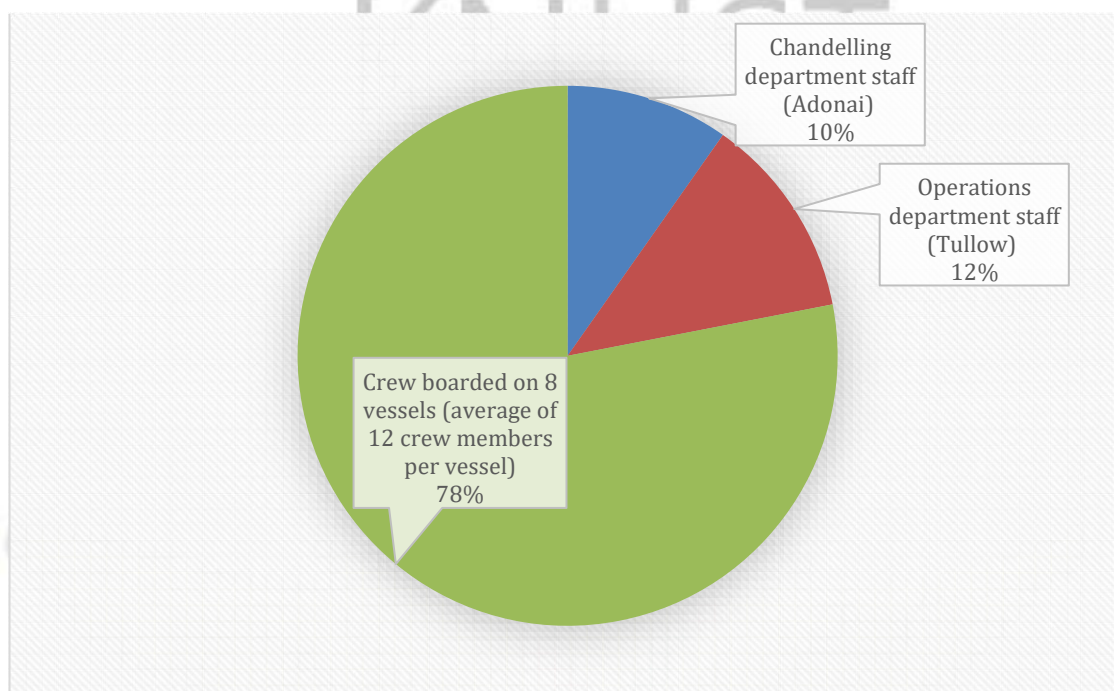
**Source (Field Survey, 2019)**

### 4.2.1 Level of Education

Figure 4.1 indicates the level of education of the respondents. Out of 111 respondents, 2 are PhD holders, 8 hold varying master's degree, 61 are bachelor's degree holders, 29 have Higher National Diplomas, whilst the remaining who fall in neither of the aforementioned categories here described as 'Others' are 11 and comprise diploma and other certificate holders plus the artisans with no formal education. This represents 1.8%, 7.2%, 55%, 29%, and 9.9% respectively.

### 4.2.2 Department

Figure 4.2 shows that the respondents comprised staff of Adonai, Tullow, and others comprising crew members on-board the vessels supplied with food by the Adonai Shipping company. In terms of number, the 10%, 12%, and 78% represent 12, 15 and 96 respondents.

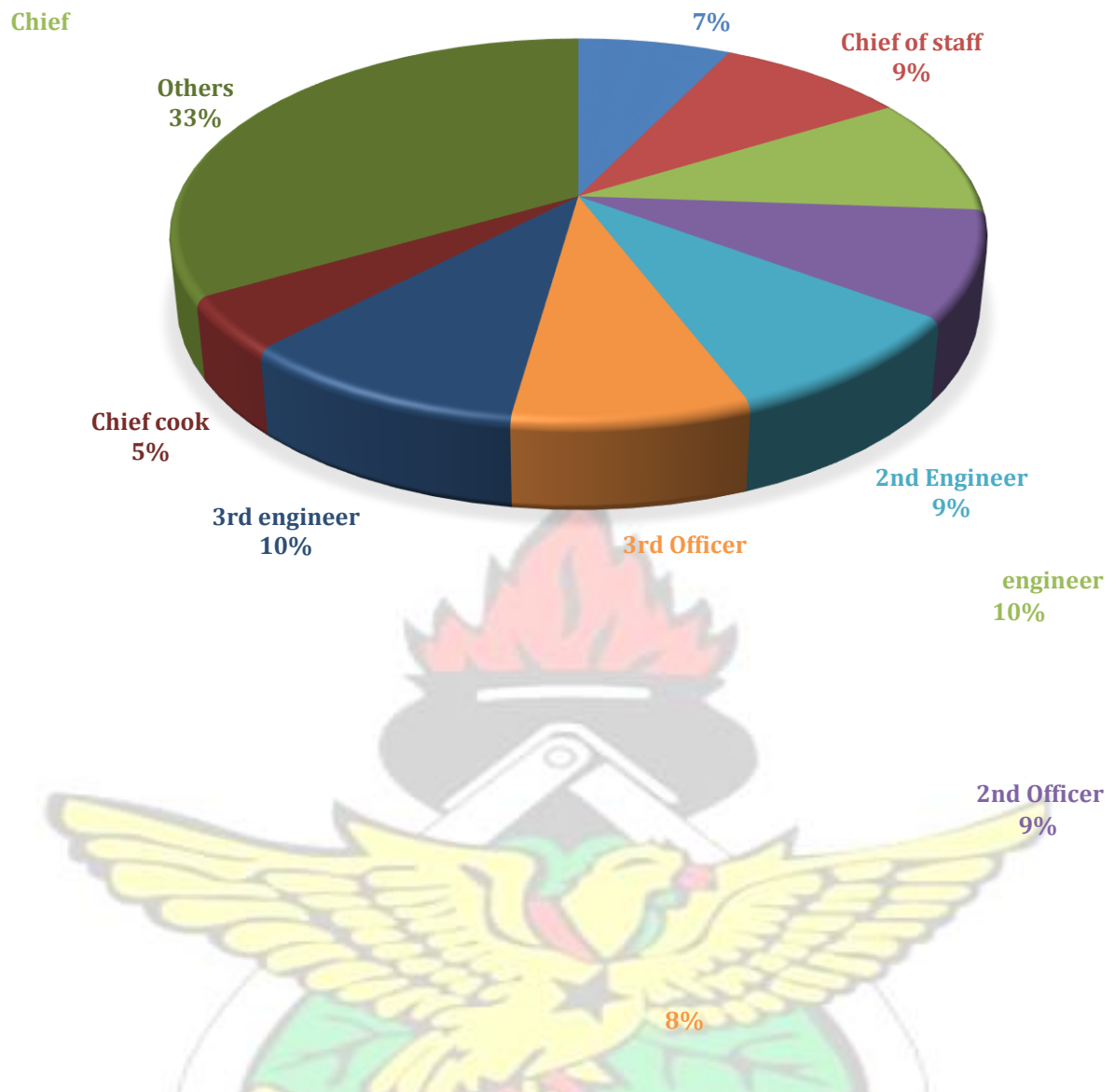


**Figure 4. 2: Department**

### 4.2.3 Position

Figure 4.3 represent the role of the respondents in percentages. The result is an aggregate of respondents in all twelve (12) vessels. There are eight (8) captains, ten (10) chief of staff, eleven (11) chief engineers, ten (10) 2<sup>nd</sup> officers, ten (10) 2<sup>nd</sup> Engineers, nine (9) 3<sup>rd</sup> Officers, eleven (11) 3<sup>rd</sup> engineers, five (5) chief cook, and thirty-seven (37) other crew members. Figure 4.3

**Captain**



**Figure 4. 3: Position**  
**Source (Field Survey, 2019)**

#### **4.3 CHANNELS/MEDIUM OF COMMUNICATION IN SHIP CHANDELLING**

In this section, eleven (11) various channels or media of communication were a Likert scale was used by experts to express their opinions from not important to very important channels/medium of communication in ship chandelling.

Telephones are one of the most common mediums used to communicate worldwide hence Telephone communication medium as seen in the Table 4.1 was chosen or ranked as 1<sup>st</sup> by RII of 0.863 followed by a very common medium thus WhatsApp

with an RII of 0.814. thanks to email, numerous messages, files, videos, documents and presentations can be sent faster without having to pay anything and this amazing medium cannot be left unsaid hence it took the 3<sup>rd</sup> rank by RII of 0.814. Text messages took the forth position with an RII of 0.811.

**Table 4. 1: Channels/medium of communication in ship chandelling**

<b>channels/medium of communication in ship chandelling</b>	<b>RII</b>	<b>Rank</b>
Telephone communication medium	0.863	1st
WhatsApp	0.814	2nd
E-mail	0.813	3rd
Text messages	0.811	4th
Public address systems	0.793	5th
Radio telecommunication medium	0.787	6th
Downward communication channel (upper to lower ranks)	0.764	7th
Upward communication channel (lower to upper ranks)	0.726	8th
Letter post	0.726	9th
Lateral communication channel (same ranks)	0.710	10th
Televisions medium	0.697	11th

**Source (Field Survey, 2019)**

After seriously analysing the remaining channels, Public address systems ranked 5<sup>th</sup> by RII of 0.793. 6<sup>th</sup> was Radio telecommunication medium with an RII of 0.787 followed by Downward communication channels (upper to lower ranks) as 7<sup>th</sup> with RII of 0.764 alongside Upward communication channels (lower to upper ranks) as 8<sup>th</sup> by RII of 0.726. Letter post and Lateral communication channel (same ranks) took the



9<sup>th</sup> and 10<sup>th</sup> rank with 0.726 and 0.710 respectively. Television medium came out as the least important as the 11<sup>th</sup> rank with the RII of 0.697.

Short of talking with someone face-to-face, a phone call is the best way to get a personal response. With other forms of communication, such as texting or email, one leaves a message and hope for a quick response. Phone calls have a vocal backup in the form of voice mail. The caller can leave a detailed voice message, without the restriction of a certain number of characters or typing a text message on a tiny cellphone keypad. The telephone system is run by Ghana Telecom and is relatively reliable. Telephone users in the country increased from 218,000 in 2000 to three million (3,000,000) as at the end of 2005. By 2012 there were 285,000 fixed telephone lines in use, which put Ghana on the 120th position in the world. Mobile telephones are overwhelmingly popular in the cities, it is approximated that in 2012 about 25.6 million mobile cellular lines were in use, which at the time put Ghana on the 42nd position in the world (Ghana Web, 20180). With respect to chandelling, this form of communication is highly essential to get instant response.

WhatsApp is a very popular mobile messaging application, which dominates today's mobile communication. Especially the feature of group chats contributes to its success and changes the way people communicate. This can be used to enhance communication among the chandelling team members.

#### **4.4 COMMUNICATION BARRIERS IN SHIP CHANDELLING**

The barriers to effective communication in the case of Adonai Shipping, the provider of the Chandelling service, and the Tullow Vessels were identified by providing ten (10) variables derived from literature. The respondents were expected to respond to

each question by ticking the appropriate option based on the five point Likert scale provided in the questionnaire. Table 4.2 summarises the findings of the data collected for this section.

**Table 4. 2: Communication barriers in ship chandelling**

<b>communication barriers in ship chandelling</b>	<b>RII</b>	<b>Rank</b>
semantic problems	0.919	1 <sup>st</sup>
noisy backgrounds	0.834	2 <sup>nd</sup>
faulty communication equipment	0.796	3 <sup>rd</sup>
improper use of slang	0.773	4 <sup>th</sup>
faulty structure design	0.769	5 <sup>th</sup>
absent mindedness	0.762	6 <sup>th</sup>
improper use of jargons	0.723	7 <sup>th</sup>
colloquialisms	0.595	8 <sup>th</sup>
poor lightening	0.569	9 <sup>th</sup>
mood (anger, sadness or being too nervous)	0.521	10 <sup>th</sup>

**Source (Field Survey, 2019)**

Semantic problems ranked 1<sup>st</sup> with an RII of 0.919 followed by noisy background with an RII of 0.834. Third was improper use of faulty equipment with an RII of 0.796 accompanied by noisy background as 4<sup>th</sup> with RII of 0.773. Faulty structure firmly took the 5<sup>th</sup> rank with an RII of 0.769 leaving the 6<sup>th</sup> rank to absent mindedness with an RII of 0.762. After the 6<sup>th</sup> rank come the 7<sup>th</sup> obviously and that rank was given to improper use of jargons with an RII of 0.723. The 9<sup>th</sup> and 10<sup>th</sup> final ranks were given to poor lightening and mood with an RII of 0.569 and 0.521 respectively. Semantic noise can be a serious roadblock to effective communication. Semantic barriers to

communication are the symbolic obstacles that distort the sent message in some other way than intended, making the message difficult to understand. The meaning of words, signs and symbols might be different from one person to another and the same word might have hundreds of meanings. For this particular study, this could be as a result of the difference in level of education and language difference.

#### **4.5 MECHANISMS FOR ENHANCING EFFECTIVE COMMUNICATION IN SHIP CHANDELLING**

A Likert scale was used by experts to express their opinions from not important to very important some mechanisms for enhancing effective communication in ship chandelling.

**Table 4. 3: Mechanisms for enhancing effective communication in ship chandelling**

<b>Mechanisms for enhancing effective communication in ship chandelling</b>	<b>RII</b>	<b>Rank</b>
Create a communication process through which information must be sent and received	0.876	1st
Inform ships about new products and explains the use of the product properly	0.870	2nd
Create communication strategy to enhance onshore and offshore dealings	0.841	3rd
Avoid interrupting customers or fellow chandlers before they are done conveying the information they have for you in full	0.802	4th
Be cautious to differences in technical knowledge and give explanation when different technical language is used	0.744	5th
Use clear, straightforward and understandable words and phrases so that the recipient will get the full meaning of the message	0.676	6th
Emphasise the message to compel the recipient to realise the relevance of the message	0.611	7th
Anticipate seafarers objections and questions	0.559	8th

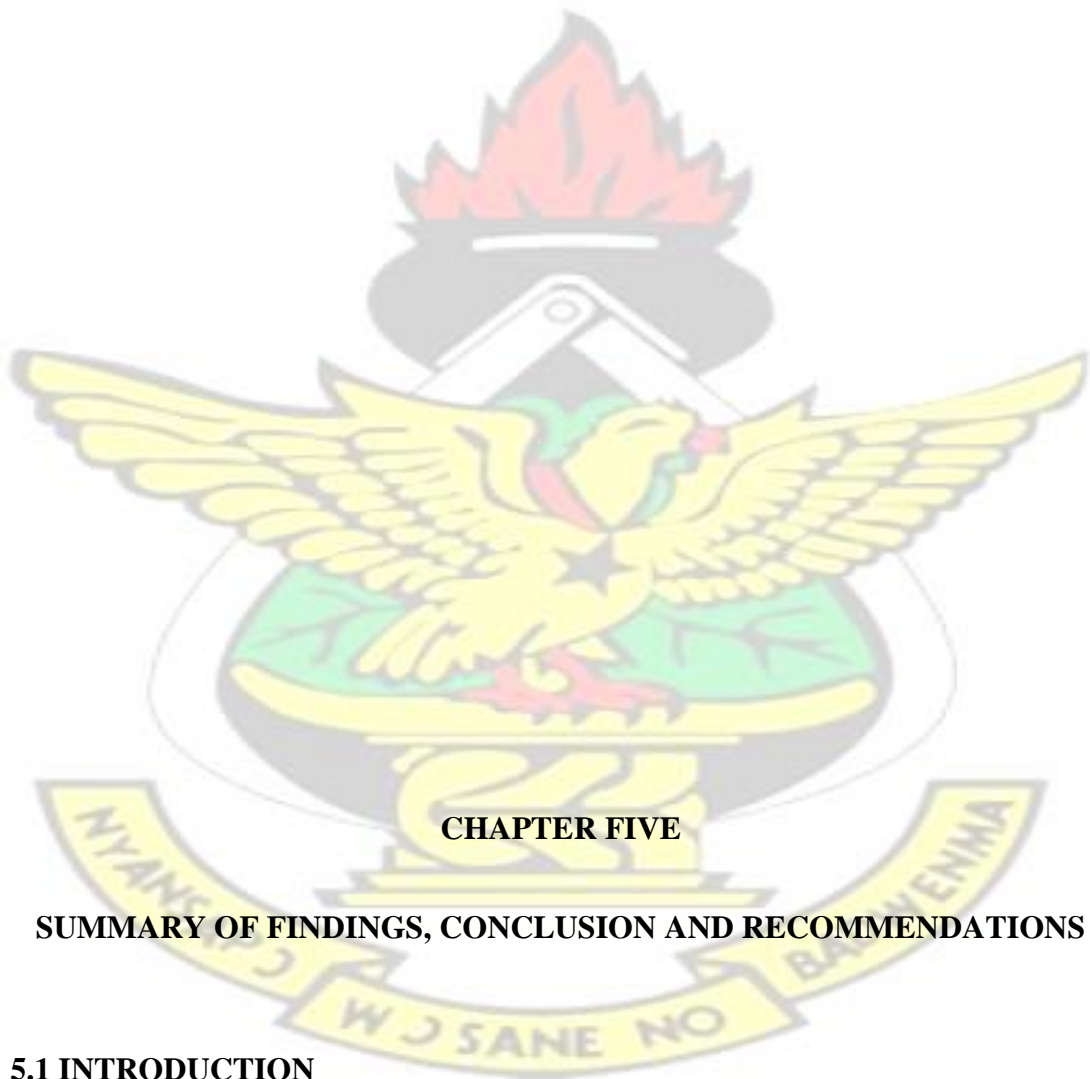
**Source (Field Survey, 2019)**

From the above table, the professional that were asked to express their opinion chose Creating a communication process through which information will be sent and received as the 1<sup>st</sup> followed by Informing ships about new products and explains the use of the product properly as 2<sup>nd</sup> with an RII of 0.876 and 0.870 respectively. Create communication strategy to enhance onshore and offshore dealings came third with an

RII of 0.841. The 4<sup>th</sup> rank is Avoid interrupting customers or fellow chandlers before they are done conveying the information they have for you in full with an RII of 0.802. Another mechanism that professional saw to be very important and rated it as 5<sup>th</sup> with an RII 0.744 of was being cautious to differences in technical knowledge and give explanation when different technical language is used. After critically examining the remaining mechanisms, using clear, straightforward and understandable words and phrases to enable the recipient get the full meaning of the message firmly took the 6<sup>th</sup> rank with 0.676 as RII followed by an equally important mechanism thus Emphasising the message to compel the recipient to realise the relevance of the message with an RII of 0.611. Anticipate seafarer's objections and questions came out as the least important mechanism occupying the 8<sup>th</sup> rank with an RII of 0.559. Considered to be the most important mechanism for enhancing effective communication, the communication process begins with the sender, who is also called the communicator or source. The sender has some kind of information—a command, request, question, or idea—that he or she wants to present to others. For that message to be received, the sender must first encode the message in a form that can be understood, such as by the use of a common language or industry jargon, and then transmit it. The person to whom a message is directed is called the receiver or the interpreter. To comprehend the information from the sender, the receiver must first be able to receive the sender's information and then decode or interpret it. Considering the evidence that communication has not been very smooth or effective in chandelling due to a number of reasons, there is a need to deliberately create a communication process through which information must be sent and received.



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## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 INTRODUCTION**

This chapter discusses the summary of the findings, the conclusions of the study and suggest appropriate recommendations which seek to direct future research. The objectives of this research were to identify the communication channels employed in

ship chandelling project, to determine the communication barriers in ship chandelling project, and to investigate mechanisms for enhancing effective communication in ship chandelling.

## **5.2 SUMMARY OF FINDINGS**

The conclusions as follows were therefore presented as per the objectives of the research.

### **5.2.1 Communication channels employed by project professionals in the construction industry in Ghana**

The research established that channels used for communication differ in the form of communication involved. Staff of Adonai chandelling have largely used the following means or channels of communication; telephone communication medium, WhatsApp, e-mail, text messages, public address systems, radio telecommunication medium, downward communication channel (upper to lower ranks), upward communication channel (lower to upper ranks), letter post, lateral communication channel (same ranks), and televisions medium.

### **5.2.2 Major barriers to communication on projects in Ghana**

Amongst the findings of this research were the various barriers to communication between the Adonai chandelling team and the Tullow crew offshore. Semantic problems were the most prevalent barriers to communication on construction projects in Ghana. Below is the most prevalent barrier to communication on construction projects and has been arranged in the descending order.

Semantic problems: Faulty communication equipment, improper use of slang, Noisy backgrounds, Faulty structure design, absent mindedness, improper use of jargons, Colloquialisms, Poor lightening, Mood (anger, sadness or being too nervous).

### **5.2.3 Mechanisms for Enhancing Effective Communication in Ship Chandelling**

Eight variables were derived from literature and used in the questionnaire to validate the mechanism for enhancing effective communication as found from the study are:

Create a communication process through which information must be sent and received, Inform ships about new products and explains the use of the product properly, Create communication strategy to enhance onshore and offshore dealings, Avoid interrupting customers or fellow chandlers before they are done conveying the information they have for you in full, Be cautious to differences in technical knowledge and give explanation when different technical language is used, Use clear, straightforward and understandable words and phrases so that the recipient will get the full meaning of the message, Emphasise the message to compel the recipient to realise the relevance of the message, Anticipate seafarers' objections and questions.

### **5.3 CONCLUSIONS**

Within the shipping industry, there is an appreciable level of the importance of effective project communication and its importance within the industry. Irrespective of that, there have been many hindrances to effective communication in chandelling in Ghana. These include Semantic problems, Faulty communication equipment, improper use of slang, Noisy backgrounds, Faulty structure design, absent mindedness, etc. Finally, the research established that poor communication had resulted in project delays, project cost overrun and project abandonment. This research has shown that project communication strongly affect the performance of professionals within the construction industry. Therefore, clearly establishing and managing the structures of communication on project must always be on the agenda of team leaders and management before the commencement of every project.

## 5.4 RECOMMENDATIONS

Base on the findings of this study, the researcher recommended the following;

- ✚ Create a communication process through which information must be sent and received.
- ✚ Inform ships about new products and explains the use of the product properly.
- ✚ Create communication strategy to enhance onshore and offshore dealings.
- ✚ Avoid interrupting customers or fellow chandlers before they are done conveying the information they have for you in full.
- ✚ Use clear, straightforward and understandable words and phrases so that the recipient will get the full meaning of the message.

## 5.5 LIMITATIONS OF THE RESEARCH

This study has a few shortcomings or discussible issues, which may be taken into account when conducting similar studies in the future. First, the data collected was restricted to only two companies. Again, the sample size of the respondents used for this study was much smaller. Although there were clear distinction between the agreements and disagreements of the variables assessed, the results could be different with larger sample size.

## 5.6 RECOMMENDATION FOR FURTHER STUDIES

Base on the outcome and limitations of this study, the researcher therefore recommended that future study should concentrate on the following:

- Designing an appropriate communication model for the shipping industry in Ghana withy focus on a most of the operators in the shipping industry.



- How to use effective project communication to address issues within the shipping industry in Ghana.

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## APPENDIX I

### QUESTIONNAIRES

#### **RESEARCH TOPIC: BARRIERS TO EFFECTIVE PROJECT COMMUNICATION: A CASE STUDY OF ADONAI SHIPPING CHANDELLING PROJECT FOR TULLOW GHANA LIMITED INTRODUCTION**

The researcher is a final year student of Kwame Nkrumah University of Science and Technology-Kumasi and from the Department of construction Technology and management. He intends to execute this research as part of the university's academic requirement for the completion of his degree of Master of Project Management. Your objective response to this questionnaire is an invaluable aid to this research work. All information provided will be treated as confidential and for academic purposes only. There are no right or wrong answers.

In case of any doubt/s or need for clarification, please contact any of the addresses given below.

Thank You.

Supervisor

Dr. Gabriel Nani

0243625066

Student

Robert Owoo

0577684903

## SECTION A – DEMOGRAPHIC QUESTIONS

Below are some demographic questions. Kindly respond appropriately by ticking.

1. What is the highest level of education you have attained?

☐ PhD    ☐ M.Sc.    ☐ B.Sc.    ☐ Diploma

Others, Please specify.....

2. How conversant are you with the concept of barriers to effective project communication?

☐ Very Conversant   ☐ Conversant   ☐ Not Sure   ☐ Fairly Conversant   ☐ Not Conversant

## SECTION B – CHANNELS OF COMMUNICATION IN SHIP CHANDELLING

Below is channels/medium of communication in ship chandelling. From your experience, kindly express your opinion on (**how effective**) they are and the challenges associated with each channel/medium by ticking the appropriate cell respectively. Use the following Likert scale.

### Channels/medium of communication in ship chandelling

1 effective                      2 not sure                      3 Not effective

### How challenging are these mediums

I. Challenging                      II. Not sure                      III. Not challenging

channels/medium of communication in ship chandelling	1	2	3	How challenging are these mediums		
				I	II	III
Upward communication channel (lower to upper ranks)						
Lateral communication channel (same ranks)						
Downward communication channel (upper to lower ranks)						
Telephone communication medium						
Radio telecommunication medium						
Televisions medium						
Public address systems						
E-mail						
WhatsApp						
Text messages						
Letter post						
<i>Others (Please specify)</i>						

## SECTION C – COMMUNICATION BARRIERS IN SHIP CHANDELLING

Below are some communication barriers in ship chandelling. From your experience, kindly express your opinion on (how important) they are by ticking the appropriate cell. Use the following Likert scale:

1 Not Important      2 Fairly Important      3 Not Sure      4 Important      5 Very Important

COMMUNICATION BARRIERS IN SHIP CHANDELLING	1	2	3	4	5
faulty communication equipment					
absent mindedness					
semantic problems					
Colloquialism					
noisy backgrounds					
poor lightening					
faulty structure design					
improper use of jargons					
improper use of slang					
mood (anger, sadness or being too nervous)					
<i>Others (Please specify)</i>					



## SECTION D – MECHANISMS FOR ENHANCING EFFECTIVE COMMUNICATION IN SHIP CHANDELLING

Below are mechanisms for enhancing effective communication in ship chandelling.

Kindly express your opinion on (how important) they are by ticking the appropriate cell. Use the following Likert scale:

### Mechanisms for enhancing effective communication in ship chandelling

1 Not Important      2 Fairly Important      3 Not Sure      4 Important      5 Very Important

mechanisms for enhancing effective communication in ship chandelling	1	2	3	4	5
Create a communication process through which information must be sent and received:					
Create communication strategy to enhance onshore and offshore dealings:					
Anticipate seafarers objections and questions:					
Use clear, straightforward and understandable words and phrases so that the recipient will get the full meaning of the message:					
Avoid interrupting customers or fellow chandlers before they are done conveying the information they have for you in full:					
Be cautious to differences in technical knowledge and give explanation when different technical language is used:					
Inform ships about new products and explains the use of the product properly:					
Emphasise the message to compel the recipient to realise the relevance of the message					
<i>Other (Please specify)</i>					