



ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE

**ASSESSMENT OF PROJECT COMMUNICATION PRACTICES OF BUILDING
CONSTRUCTION PROJECTS: A CASE OF RENOVATION PROJECTS IN THE
UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA**

By
Bethelhem Tesfaye

Advisor: Worku Mekonnen (PhD)

JUNE 2023
Addis Ababa, Ethiopia

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**A RESEARCH PROJECT WORK SUBMITTED TO ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE AWARD OF MASTER OF ARTS DEGREE IN PROJECT MANAGEMENT**

**Advisor
Worku Mekonnen (PhD)**

**JUNE 2023
Addis Ababa, Ethiopia**

Statement of Declaration

I, **Bethelhem Tesfaye**, hereby declare that the research project work entitled “**Assessment of Project Communication practices of Building construction projects: A case of Renovation projects in the United Nations Economic Commission for Africa**” has been conducted by me under the guidance of Dr. Worku Mekonnen, and all materials and sources used for this project research have been accredited appropriately.

I also declare that this work has never been submitted anywhere, whether for a master's degree or an undergraduate honour in this or any other institution.

Name: **Bethelhem Tesfaye**

Date: -----

Signature: -----

Statement of Certification

This is to certify that **Bethelhem Tesfaye** has carried out this research project work on the topic entitled “Assessment of Project Communication practices of Building construction projects: A case of Renovation projects in the United Nations Economic Commission for Africa” under my supervision. This work is original in nature and is sufficient for submission for the partial fulfillment for the requirements for the Masters of Art Degree in Project Management.

Advisor: **Worku Mekonnen (PhD)**

Signature _____

Date _____

Addis Ababa University
School of Graduate Studies

This is to certify that the research project prepared by Bethelhem Tesfaye entitled: “Assessment of Project Communication practices of Building construction projects: A case of Renovation projects in the United Nations Economic Commission for Africa” submitted in partial fulfilment of the requirements for the degree of Degree of Master of Arts in Project Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Advisor

Signature

Date

Internal Examiner

Signature

Date

Meskerem M (PhD)
External Examiner



Signature

19/07/23
Date

Abstract

Project communication is a very important aspect of a project. Communication, especially in construction projects, is critical to the quality of relationships, trust and collaboration among the project teams. Effective project communication is vital to achieve successful construction process from inception to completion. The purpose of this study is thus, to assess the project communication practices of the construction renovation projects in the United Nations Economic Commission for Africa (UNECA). Specifically, this study tries to assess the challenges in project communication and assess the communication methods in place. With this in mind, questionnaires were developed and distributed to all the project team members and an interview had been conducted with the client, contractor, and consultant project managers. SPSS version 20 was used to descriptively analyze the data collected from questionnaires. Lack of open and transparent communication, unfamiliarity of the project communication strategy, ineffective project communication management and monitoring practices, internal conflicts and low success rates as a result of miscommunication were the major findings worth considering. Besides, inadequate communication skills, poor leadership, language barriers and ineffective reporting system were found to be the most critical challenges in project communication according to the respondents of the study. The organization's common communication method was electronic communication (email), which presents limitations in project management processes. In conclusion, the findings of the study indicates that the current project communication practices are not standardized and show a gap with respect to the benchmark practices of the PMBOK Guide. Accordingly, the study organization is recommended to use effective communication tools and techniques, improve the communication skills of the project team members through trainings, feedback loops and, communication technologies, and restructure its project communication management process to improve its current success rate and conduct its project communication practices as per the standard communication processes outlined in the Guide.

Key words: *Project communication, Communication management, Communication methods*

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List of Acronyms

UNECA	United Nations Economic Commission for Africa
ECOSOC	Economic and Social Council
UN	United Nations
ECA	Economic Commission for Africa
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
SPSS	Statistical Package for Social Sciences
SD	Strongly Disagree
SA	Strongly Agree

Chapter One: Introduction

1.1 Background of the Study

There are many definitions of communication in literature; regardless, the core meaning remains the same. The general view of communication is that it is an interaction within a social context. Communication is the process of exchanging messages or information between two or more parties. It is the interaction and sharing of ideas among group members. Communication is one of the key processes in an organization, which involves planning, managing, and evaluating both internal and external information flows in order to share ideas and comprehend any circumstances that might occur (Hernández, 2019). Communication usually involves a sender (source) and a receiver. According to Foluke (2018), for the communication process to be effective, the sender's intended meaning has to be correctly decoded by the receiver and the expected kind of feedback must be given.

In project management, communication is very vital for everyone involved in the project. The project management Institute, in the PMBOK guide, considers communication management to be one of the most essential areas of knowledge for the successful completion of projects. It defines *Communication management* as “the collection of processes that help ensure that the information needs of the project and its stakeholders are met through development of artifacts and implementation of activities designed to achieve effective information exchange”. It helps ensure that the right messages are sent, received, and understood by the right people. A study conducted by the Project Management Institute (PMI) revealed that ineffective communication had a negative impact on successful project execution. Poor communication in projects results in misunderstanding in the workflow, missed deadlines, unnecessary delays, cost overruns, safety issues and quality problems. This will ultimately create issues with the stakeholders' satisfaction with the project deliverables.

In projects, it is very essential to understand the process of communication, as it is one of the main predictors of success in projects. Good communication allows projects to progress smoothly and on time and ensures that team members are aligned on project goals and understand what's expected of them. Zulch (2014) stated that project team members need to collaborate, share, collate

and integrate information and knowledge to realize project objectives. Hence, Project communication is the responsibility of every project team member.

The construction industry plays a significant role in the economic development of every country. It consists of diverse workgroup, where interactions tend to be characterized by unacquainted classes of people coming together for brief periods before dispersing to work on other projects. The robust interaction in construction projects between stakeholders seems to make construction projects very exposed to communication problems (Berenger & Justus, 2016). Since construction project teams spend majority of their time communicating with other stakeholders, the efficiency and effectiveness of the construction process highly depends on the quality of the communication practices. Lubis (2021) showed that in the case of several projects where the practice of communication management is disordered (supported mainly by project managers' intuition or ignored) found that almost 74% of the difficulties that existed in the project were due to inadequate contact.

For the successful completion of construction projects, effective communication is thus crucial. Construction projects can fail due to inadequately defined tasks and critical processes and uncertainty regarding responsibilities, scope, or objectives. Hence, ineffective communication can lead to misunderstanding in respect of construction projects (Zulch,2014). Especially in renovation projects which involve a multidisciplinary approach, such as project management, architecture, engineering, interior design and much more, it involves considerable risks and uncertainty in exiting conditions that adversely affect project performance (Singh, Y.P., 2007).

The renovation projects in UNECA involve stakeholders from diverse background and international companies. Challenges can arise when dealing with cross-cultural communication to ensure the message's meaning is understood. People from different cultures communicate using different languages (e.g., technical design documents, different styles) and expect different processes and protocols (PMBOK, 2017). Research conducted by Peng (2017) found that factors related to people (project manager's performance, project team's competency, goal commitment and communication effectiveness) are most critical to the success of renovation projects. As a result, the focus of this paper focuses on the project communication practices of UNECA, internal and external channels of communication and the challenges to effective communication.

1.2 Background of the Company

The United Nations Economic Commission for Africa (UNECA) was established by the Economic and Social Council (ECOSOC) of the United Nations (UN) in 1958 as one of the UN's five regional commissions. ECA's mandate is to promote the economic and social development of its member States, foster intra-regional integration, and promote international cooperation for Africa's development as per the company's website profile (www.uneca.org).

Currently, there are various building construction renovation projects inside the compound of UNECA. The Retail Decant Renovation project, The Limpopo Library Renovation project and the Africa Hall Renovation project are some of the renovation projects in UNECA. The most prominent one is the Africa Hall renovation project, which now in its early stage (demolishing phase). It is considered as an upgrade to a living symbol of African History. It is estimated to cost 57 million USD and was funded by the 193 member states. The company's website profile also adds that the Hall was conceived and donated by the Emperor of Ethiopia Haile Selassie to serve as headquarters of ECA, with a vision of attracting the UN to Africa and uniting African Nations.

Another important renovation project in the compound is the 'Limpopo Library Renovation project', The Economic Commission for Africa (ECA) library, like other contemporary libraries facing alternatives to on-site readership, is being re-envisioned as a place to connect, network, learn and share. At this point in time, it is being re-purposed, retooled and repositioned as a central innovative hub with access to open platforms that enable discovery, creativity and sharing of knowledge to maximize its impact as a catalyst to ECA's new vision of becoming 'The premium think tank in Africa' to effectively support the current dynamic growth and transformation of its member states. In order to realize this new, set up of purpose under the new mandate, the existing architectural interior space of the library is believed to be renovated to accommodate new facilities, functions and features desired. The Limpopo Library renovation project's scope under this particular implementation exercise of phase I is limited to the ground floor and covers a total most approximate area of 1,344 sq.mt.

1.3 Research Problem

According to Samáková et al., (2018), the relationship between project management and communication is quite intertwined. Communication is the process of acquiring all relevant information, interpreting this information and effectively disseminating it to persons who might

need it. In project management, it is one of the crucial elements in realizing the project objectives. Communication is an important topic in the construction industry, as effective communication among project participants helps to improve the level of understanding in order to achieve project objectives. Effective communication means that the information is provided at the right time, in the precise format, and with the right impact. It is one of the most important factors contributing to the success of a project (Priyadharshini and Sashara, 2016).

Poor communication is major issue faced in all the construction industries worldwide. Globally, the reports of Project Management Institute (PMI) validate that the problems related to communication are the main contributors to the downfall of construction projects. Due to the diversity and challenging nature of construction projects, achieving successful communication is a major challenge. Ineffective communication in construction project delivery is the major cause of failures associated with construction projects. According to Priyadharshini and Sashara (2016), as the project progresses, information in the form of drawings, specifications and construction techniques must be communicated from one expert to another, and communication poorly managed will lead to de-motivated labor force, design errors, decelerated in the entire job and failure in production.

More than ever before, the world is now a global village, and there is a constant migration of ideas, people and information across different geographical boundaries. For construction projects comprising diverse workgroup, the project manager needs to be sensitive to the cultural differences in the team and acquire intercultural competence. Rajkumar (2010) stated that even if it is known that diverse workgroup can contribute better ideas and creativity, communication within a diverse workgroup can create complex and challenging situations. This is true of UNECA's construction renovation projects. These projects comprise of project team members (client, contractor and consultant) from diverse background and culture. In almost all of the projects, the contractors and consultants in UNECA's renovation projects are foreign companies with different organizational culture, norm, language, and other differences.

The researcher conducted a preliminary interview with some of the project team members about the project implementation processes to realize its results, its successes, and the problems it faced. One of the problems stated was the miscommunication between the consultant and the contractors, where some of the work performed by the contractor were not supervised by the designer

(consultant). This resulted in major quality compromises and the dissatisfaction of the client. Other stated problems were project overruns, disputes, and poor quality, which can be traced back to weak communication links between the project team members. What could be done to improve these problems?

UNECA compound comprises historical buildings, including Africa Hall, which has become a famous landmark venue for pan-African and African Renaissance events. Renovation projects for such buildings need the special attention of the project manager and project team as part of preserving and restoring the historical and cultural values embedded in its architecture. UNECA is working on a number of construction renovation projects, with various phases yet to begin. As a result, the difficulties encountered with project management standards in communicating with internal and external stakeholders must be examined and compared to standard frameworks. The insights can be used to complete the remaining renovation projects successfully.

Bearing this in mind, the researcher identified the project communication practices in the renovation projects and the existing communication challenges to assess how the company carries out internal and external communication in managing the projects.

1.4 Research Questions

1. What kind of project communication methods are used in UNECA building renovation projects?
2. What has the current project communication practices of UNECA building renovation projects resulted in?
3. What are the communication barriers on building renovation projects of UNECA?
4. What is the best method of communication for the successful completion of renovation projects of UNECA?

1.5 Research Objectives

1.5.1 General Objectives

The general objective of this study was to critically examine the practices of project communication management process and suggest recommendations for the study organization, UNECA.

1.5.2 Specific Objectives

- To assess and analyze the project communication practices of UNECA in the context of building construction renovation projects
- To determine the challenges for effective project communication

1.6 Scope

This study was conducted on project communication practices of the renovation projects of UNECA. Among the various renovation projects in UNECA, only the building construction renovation projects that are on going were involved in this assessment. Although the results only showed the finding of communication practices of UNECA's building renovation projects, the results of the study can be extended and applied to other renovation projects too.

1.7 Limitations

The researcher was not be able to evaluate all the company's project activities as UNECA is a large company with various projects at hand. Therefore, the research was limited to describing the communication practices of UNECA's building construction renovation projects. Among the various renovation projects in UNECA, the study gave more emphasis on the Limpopo Library Renovation project, as it had experienced problems such as schedule overrun and disputes.

1.8 Significance of the research

This research's aim was to look into the challenges in project communication practices that were noticed as a result of the preliminary interviews with the renovation project team members. Considering the importance of effective project communication for construction projects, the result of the research has put forward recommendation on how the project communication practices of UNECA can be improved.

This research study is significant for project clients, contractors and consultants in providing knowledge in the practice of effective project communication to facilitate the implementation of construction renovation projects. In general, this study can also help in identifying the strong and weak practices of project communication in building construction renovation projects as well as be used as a reference to further study the area of project communication.

1.9 Organization of the study

This paper is organized into five chapters, starting from the introduction, literature review, research methodology, data analysis, research findings, and conclusion and recommendation. The first chapter introduces the background of the study, background of the case company, the statement of the problem, objectives of the study, research questions, scope, limitation of the study, significance of the study, and the organization of the study. The second chapter presents the theoretical and empirical review of the related literature. The third chapter deals with the methodology of the study. The analysis of data, results, and discussions is presented in the fourth chapter. Lastly, the final chapter makes conclusions from the findings and put forward recommendations along with implications for future research.

Chapter Two: Literature Review

2.1 Introduction

This chapter provides a study of previous literature on project communication, types of communication, effective project communication, challenges to project communication, project communication management process, and the importance of communication in construction projects. A review of related literature help discovers the best methods and approaches for project communication practices in the research area. Previous studies on project communication practices in the construction industry are also reviewed in the empirical review. This helps explain in more detail the research gaps this study aims to fill.

2.2 Theoretical Literature Review

2.2.1 Project Communication

The word communication has been derived from the Latin word 'communis', which means common. *Communication* is the process by which people work together to create coordinated behavior. It helps us build new ideas and understand each other's needs (Foluke,2018). Communication also helps people stay connected and share information. It is crucial for organizations where people from different communities and groups need to work together. Communication is an important process to achieve excellent results within organizations and projects. When it is effective, timely and assertive, it ensures good decision making, allowing an improvement in the generation of ideas, plans, projects, goals and strategies (Hernández et al,2019).

Communication is pervasive in all areas of organizational life. It is a way of sharing information between people. The sender sends the information through a channel/medium, and the receiver decodes it to get the message. Communication, is a process that involves many skills in intrapersonal and interpersonal processing, listening, observing, speaking, questioning, analyzing, and evaluating. It is through communication that we can collaborate and cooperate with other people. It is a way of sharing information with other people. It is a process of transferring information from one person to another. Communication can be seen as a two-way process in

which people exchange thoughts, emotions, or ideas towards a mutual goal or direction (Perumal, 2011).

According to Project Communication Handbook, Project Communication is “the exchange of project-specific information with the emphasis on creating understanding between the sender and the receiver.” In a project, all the stakeholders must receive timely and accurate information from the project team. To address the demands of project stakeholders, project team members produce information in a variety of methods. These stakeholders also provide input to the team. Hence, all members of the project team are accountable for project communication.

The information and control system for the project is centered on the project manager and project office. The project manager is in charge of creating the project's organizational structure and the lines of communication and communication plan. The management of stakeholder opinions and actions should be outlined in a structured communication plan (Priyadharshini and Sashara, 2016). The need to comprehend what the project would need from its communication system and what communication methods and styles might be used to successfully address these needs must be understood to comprehend the requirements of the project communication plan. Poor communication during projects impacts the project's quality, cost, schedule, and worker safety. Therefore, there needs to be better project communication that results in less failure, more creative thinking and technological solutions, and improved quality of the project's deliverables (Zulch, 2014).

2.2.2 Types of Project Communication

Kerzner (2017) and PMI (2016) stated that there are five types of communication or flows in a project management process. These are:

- **Downward communication:** This is a way of talking to people below you in the organization. It is usually used by the project manager or other top management to the lower-level managers or members, from the executive managers to the project manager, so everyone knows what is going on and what needs to be done.

- **Upward communication:** This is a way of talking to people at the top of a hierarchy, like team leaders, managers, and executives. This flow of communication allows team members to feel

connected to the project, to be able to give feedback on how it's going, and to report on the project's progress.

- **External communication:** This is when the project manager talks to other people not part of the project, like those working on the project for other organizations.

- **Horizontal communication:** This is communication between people at the same level in the organization, which helps create team spirit.

- **Diagonal communication:** This is communication with other units and teams. It is a way to get help from other people or teams on a project. It is important so that the team can get answers from people who know a lot about the project, and who can help them solve any problems that might come up.

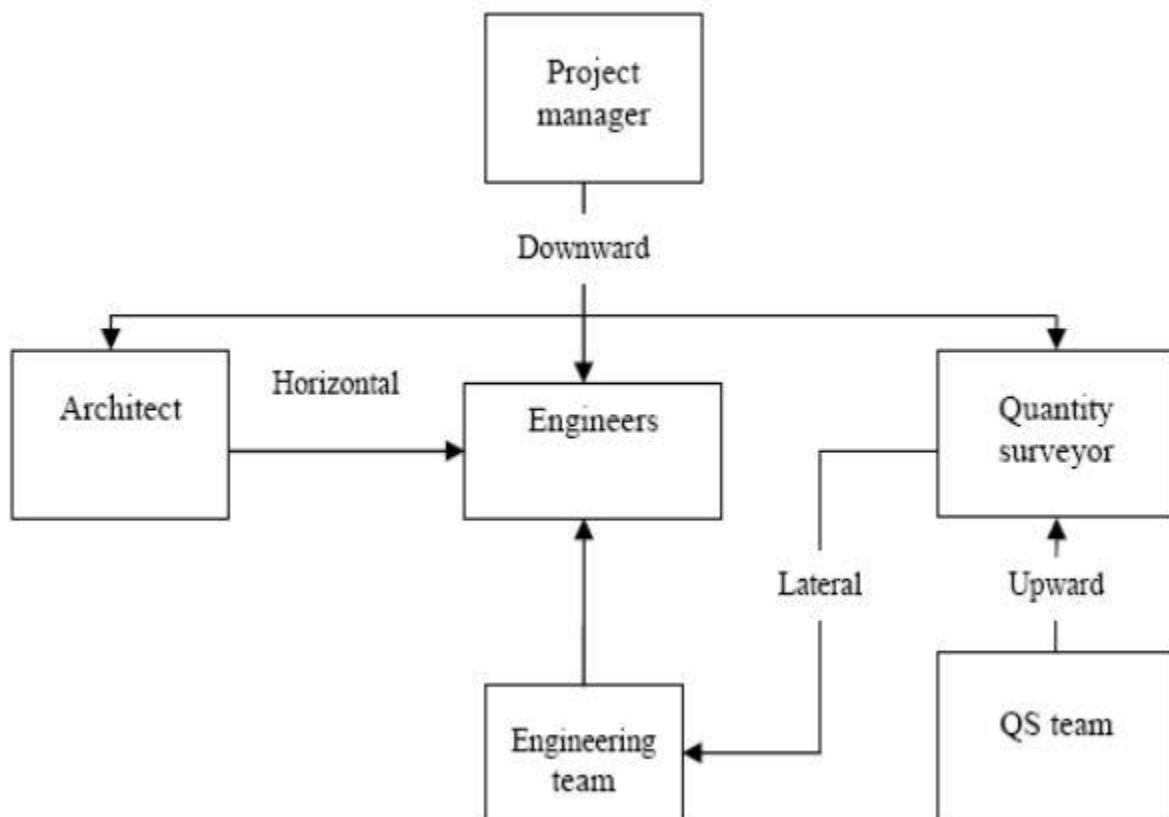


Figure 2.1 Communication Flows: Source (Adapted from Smit & Cronje, 2002)

According to Foluke (2018), there are generally two types of communication.

- **Verbal communication:** Verbal communication involves using sounds, words, signs, and language to communicate with others. It can be classified into interpersonal communication, which is used to communicate with one person, and public speaking, which is used to communicate with a large group of people. Interpersonal communication is informal, while public speaking is formal. Oral communication is a process of communicating with one or more listeners, and can take the form of oral meetings, oral presentations, one-to-one meetings, performance reviews, and so on. Written communication is a process of communicating with someone by writing, and can take the form of letters, memos, circulars, notices, reports, and email. One advantage of writing is that it can be edited and amended many times before it is sent to the person it is intended for.

- **Non-verbal communication:** Non-verbal communication is communication done without using words. This includes things like body language, which is hard to avoid because it's not intentional. It can be confusing because it doesn't have the same clear meanings as verbal communication. And it varies depending on the culture. For example, in some parts of the world, a nod of the head means "no" while in other parts of the world it means "yes".

Abdullahi et al (2021) identified eight modes of communication adopted in the construction industry.

- i. **Verbal communication:** Verbal communication involves the use of words, both written and spoken, to relay a message.
- ii. **Telephone communication:** This can fill the gap between written media and face-to-face dialogue it is quick and can be used to accomplish a variety of tasks without having to travel to another location
- iii. **Reports:** A report provides beneficial information for all members of the project team. Reports are used to record and convey information about the status or condition of the project or a portion of it. Report may be generated by all members of the project team, such as field observation reports by architects, daily reports by contractors, or installation quality control reports by manufacturer representatives.
- iv. **Written communications** include news articles and mailed flyers provide updates.
- v. **Oral communications** may include periodic meetings with residents and recorded updates that people can obtain through a phone call.

- vi. **Electronic communication:** electronic communication is gaining momentum particularly in the construction during the construction stage. Starting with faxes, the use of electronic communications has expanded to include email, text messaging, and now, social media, such as Facebook, LinkedIn, and Twitter. Electronic communications can also include web-based software programs that provide full project management capabilities. Electronic communications are typically used in addition to other communication tools and methods. The main benefit of electronic communications is the ability to store and quickly retrieve documents.
- vii. **Project portal:** Use of the portal permit direct access to information relating to a project.
- viii. **Drawing:** Drawing consist of pictographic representation of a building, usually prepared by the design team members in line with the client needs. Zulch (2014) categorised communication mode in the construction industry under the following: interpersonal communication, group communication, mass communication, public communication and organisational communication.

2.2.3 Effective Project Communication

Effective communication is the process of exchanging ideas, opinions, knowledge, and facts to ensure the message is received and comprehended with clarity and purpose. An organization's ability to handle difficulties and problems and create a process to identify misunderstandings is built on effective communication. Managers that use effective communication techniques help in the departmental resolution of critical issues (Chambers, 2001). Effective communication occurs when there is shared meaning and when the message that is transmitted and received are identical. The successful transmission of ideas or information requires a mutual understanding between the sender and the receiver.

Effective communication creates a bridge between diverse project stakeholders that could have various organizational and cultural backgrounds, degree of competence as well as various perspectives and interests. Clarity about the communication's purpose - defining it; understanding as much as possible about the recipient of the communications, meeting needs and preferences; and monitoring and measuring the effectiveness of the communications-these are the fundamental characteristics of effective communication artifacts (PMI, 2017).

In projects, project managers should be able to communicate timely and effectively to ensure that all the team members are informed about the progress of the project. According to Rodriguez (2017), there are some communication theories that can improve an individual's management skills, especially when interacting with team members. These are: Groupthink, Diffusion theory, Communication Accommodation theory and Social Information Processing theory.

1.Groupthink: A group must be united in thought in order to get the best results. The Groupthink theory is based on that. The group's members must have the same objectives, and all decisions must be made in unison. Since the members must be very cohesive, Groupthink will be challenging to establish. To ensure that everyone is working toward the same goal, the project manager must find common ground with all team members. The team members must critically feel like they belong to the group and that the project's objectives are far more essential than their differences. However, Groupthink can have negative impacts, so it's wise to be ready for those as well.

2.Diffusion theory: This theory explains how new viewpoints and ideas spread through cultures. It emphasizes how creatures of habit we are. Changing someone's habits or way of thinking in an instant is challenging. Others will need time to adjust, while some people can adjust to changes quickly. This theory should be kept in mind by project managers while planning. Some team members may become disoriented by sudden changes in the strategy and may not perform as well as normal as a result. To prevent team members from becoming lost, strategies must be specific and comprehensive. The project members should determine the best way that a certain decision or communication channel will cause impact to the members.

3.Communication Accommodation theory: According to this theory, a person adjusts to the other person that they are speaking to. As someone tries to be accommodating when they engage with others by altering their voice, gestures, and body language. It is the responsibility of the project managers to effectively communicate with the members of project team, and the communication accommodation theory can help comprehend how and why. Though it can occur in four different ways such as overdoing, sensory, dependence, and intergroup accommodation, it is best to try to avoid overaccommodation.

4.Social Information Processing theory: This theory stresses how relationships formed online can be just as powerful as those formed in person, despite the fact that many people are quick to discount the usefulness of online communication. This interpersonal communication theory

emphasizes how even with the scant information people may gather from online chats; significant ties can still be created. This is significant in a time when email correspondences occasionally outnumber face-to-face interactions. In order to quickly communicate instructions and information inside the team, it is also inevitable to send group messages. Project managers will be more careful with their language and focus on how to effectively deliver a message despite the lack of social context cues in order to bear in mind that online relationships equally important.

2.2.4 Barriers to Effective Project Communication

In the complex world of project management, effective communication is easier said than done. There are certain barriers that hinder the process of communication, making it less useful for the sender as well as the receiver. According to Kapur (2018), there are different kinds of barriers that possess various kinds of characteristics. Barriers to effective project communication are further classified as: Human/personal, Semantic and Technical barriers.

- **Cultural barriers:** Projects comprise of people from various cultures and backgrounds. Understanding and accepting of another person's culture is very essential for effective communication. Because of their different cultural backgrounds, project team members may face communication hurdles. Hence, it is vital to raise awareness of each person's culture when the team members are communicating with one another.
- **Language barriers:** When interacting with several nationalities who speak different languages, language can be a barrier to effective communication. In order to avoid any misunderstanding between the project team members, the project manager must ensure that communications are delivered in a common language that is understandable to all of individuals involved. They can then, communicate appropriately. Project team members must also be taught of the language of the organization, because until they are familiar with it, it can be as much a barrier to communication as a foreign language.
- **Communication overload:** Too little information is not good but too much information can cause even more problems. Information overload has proven to have a very negative impact on employee's well-being, productivity and success at work. Therefore, information should not be delivered in excess of the receiver's information needs.
- **Demographic differences:** People's lack of understanding is exacerbated by differences in gender, age, status, and so on.

- **Physical barriers:** Now a days, more people are working remotely. This can affect the flow of effective communication, as project manager might have a hard time managing teams from all over the world, which leads to misunderstandings.
- **Perceptual barriers:** The perception of the project team members differ and depend on their background. They might have different viewpoints and opinions on different subject matters. This might generate a barrier to effective communication.
- **Poor leadership:** Leadership's failure to communicate has the ability to destroy teams, businesses, workplace dynamics, and the systems that keep everything running. A project manager who is uncommunicative frequently produces major challenges to the project deliverables.
- **Inadequate Stakeholder engagement:** In order to establish trust and relationships between the stakeholders involved in the project, effective stakeholder engagement must be promoted. Since projects comprise of many different stakeholders, there should be a very detailed communication plan to achieve effective communication.

2.2.5 Project Communication Management processes

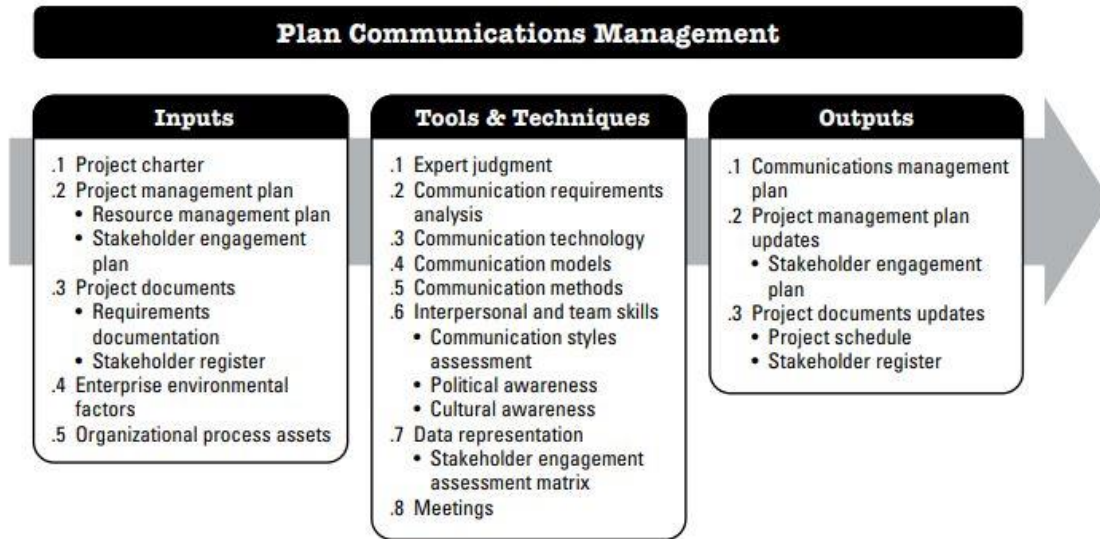
Communication is important in order to successfully complete a project. To work on a project successfully, team members need to cooperate, share information, and integrate knowledge. To do this, it is necessary to understand the process of communication. At its most basic level, communication consists of three components: a transmitter/sender, a transmission channel/medium and a receiver. To communicate, you need a sender (who tells a story or makes a suggestion), a transmission channel (like a phone or computer network), and a receiver (who listens and understands). The channel can help encode the message in a way that the receiver can understand (Zulch, 2014).

According to PMBOK (2017), the Project Communications Management processes are “the processes necessary to ensure that the information needs of the project and its stakeholders are met through development of artifacts and implementation of activities designed to achieve effective information exchange” and are divided into three as follows:

1. Plan Communications Management-The process of developing an appropriate approach and plan to communicate effectively with the stakeholders in a project, to understand their information needs, the resources available to the project, and the needs of the project itself. This process

provides a documented stakeholder engagement approach where relevant information is delivered in a timely way, so that everyone involved can stay informed. This process is regularly used throughout the project, as needed.

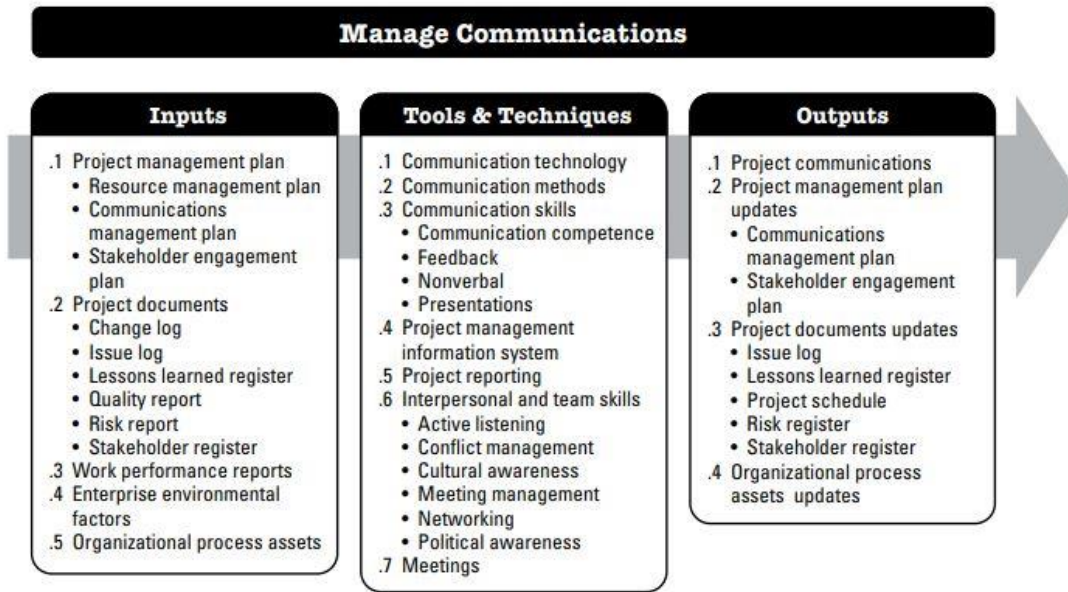
Figure 2.2 Plan Communication Management



Source (PMBOK,2017)

2.Manage Communications-The process of ensuring that project information is timely and appropriately collected, created, distributed, stored, retrieved, monitored and keeping it ready to use. The important thing about this process is that it helps keep everyone informed about what's happening with the project, so everything can go smoothly. This happens throughout the project. It should allow for flexibility in how the project is communicated, so that changes can be made as needed to accommodate the needs of the stakeholders and the project.

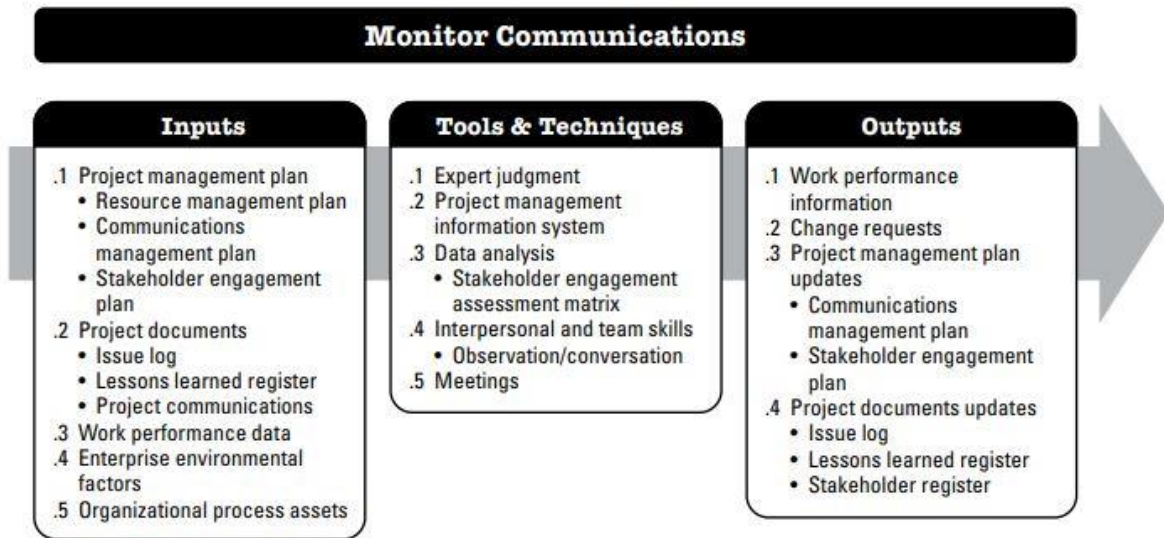
Figure 2.3 Manage Communication



Source (PMBOK,2017)

3. Monitor Communications-The process of making sure stakeholder demand for information are met. The key benefit of this process is the optimal information flow as defined in the communications management plan and the stakeholder engagement plan. This process is performed throughout the project.

Figure 2.4 Monitor Communication



2.2.6 Importance of Communication in Construction Projects

In every construction project, effective communication is key. Maintaining a solid communication chain in construction will benefit all stages of the construction life cycle. Construction projects are goal-oriented, have a well-defined scope, and are typically carried out in a matrix setting. Multiple stakeholders from different disciplines are involved in construction projects. As a result, the definition of success is dependent on their point of view. Because projects are temporary in nature, the PMBOK measures project success in terms of scope, time, cost, quality, and customer satisfaction. However, in a broader perspective, a project’s capacity to align with corporate goals is a significant determinant of project success.

Many components of project management rely on communication. Communication connects and coordinates several parts of project management. Effective communication contributes to the success of a construction project. The project manager must ensure that communication between internal and external project stakeholders is continual. Inadequate information transfer might lead to team members' doubt and misunderstanding. Gamil et al. (2017) discovered that a lack of communication has negative outcomes such as frustration, confusion, discouragement, and an agitated environment in which construction personnel are unable to be productive and unwilling to cooperate. Inappropriate communication between construction professionals is a major source of waste generation in the construction sector, resulting in rework and restoration owing to inappropriate technical information provided.

According to Sofolahan and Eze (2021), the repercussions of poor communication in construction projects can damage the organization's profits, lower revenue creation, impact customer satisfaction, and even cause consumers to leave. These can have an impact on a construction company's success and survival. Inadequate communication limits an organization's capacity to enhance its performance. Quality communication in the construction program is critical to ensuring the project development process's efficiency and effectiveness. By improving communication among project teams, suppliers, and contractors, project managers can reduce the likelihood of a project failing. Open communication between all levels of the construction project team leads to innovation and enhanced technical solutions during the project execution phase. Improving communication between the project team and stakeholders early on has a positive impact.

2.3 Empirical Review

One of the major factors contributing to the failure of construction projects is ineffective communication management system. As a result, there are significant communication issues with the delivery of building projects. Various studies have been done on the impact of effective communication practices on the project success. Effective communication is very important for the successful completion of construction projects. Organizations that communicate more effectively have more successful projects. This is shown by a study conducted by PMI, where among those organizations considered highly effective communicators, 80 percent of projects meet original goals, versus only 52 percent at their minimally effective counterparts. It was also found that highly effective communicators are also more likely to deliver projects on time (71 percent versus 37 percent) and within budget (76 percent versus 48 percent). The study also revealed that effective stakeholder communication, a fundamental core competence for all organizations, is the most important success element in project management. Organizations cannot afford to disregard this crucial component of project success and long-term profitability in today's challenging and competitive business environment.

According to Hernández et al (2019), communication with companies and projects is a critical process to achieving exceptional results, when it is efficient, timely and assertive. This improves the production of ideas, plans, projects, goals, and strategies. The absence of adequate communication management in organizations and projects has a negative impact on aspects such as:

- inadequate identification of project requirements;
- conflicts among team members due to lack of collaboration, respect, and trust;
- failure to achieve the proposed objectives, hindered effectiveness of project offices, low level of maturity of organizations in project management.

Therefore, as a crucial component of the project's success, it is crucial that organizations create a communications plan that facilitates the alignment of organizational communication strategies with the needs of the project, understanding, and productive interaction between internal and external actors.

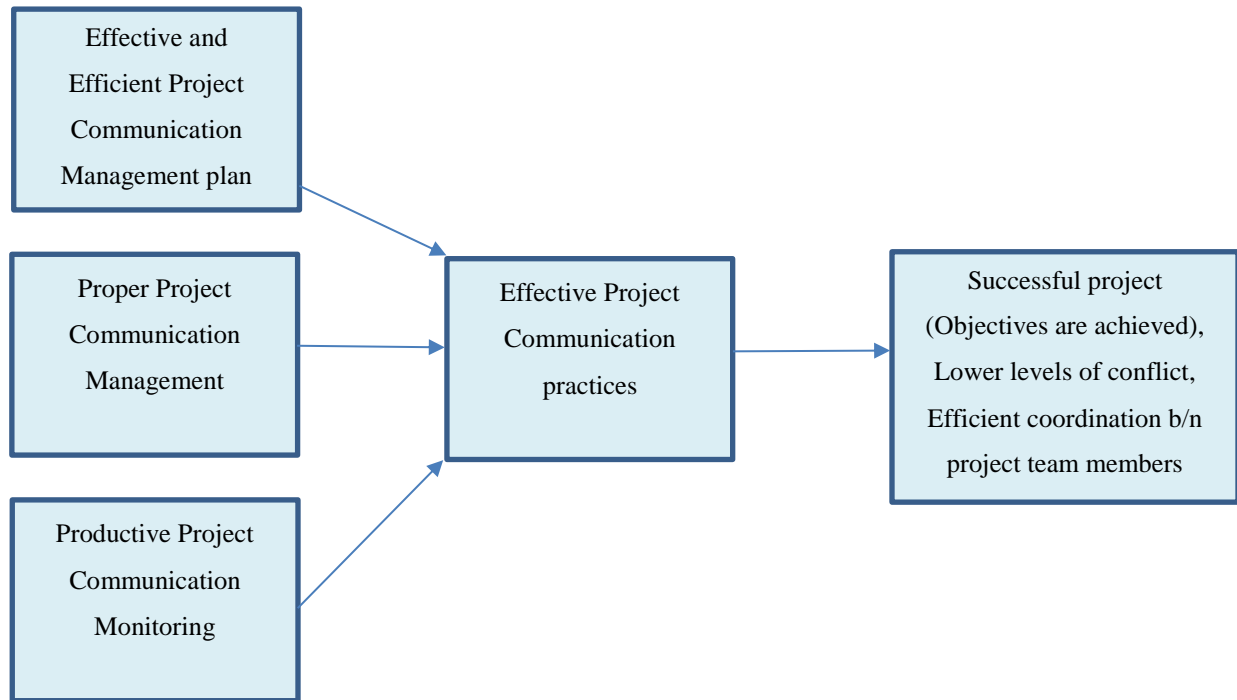
Berenger & Justus (2016), on another hand, undertook a study to assess the communication practices adopted for managing construction projects in South Africa. The study found that the management of organizational processes necessitates the creation of dynamic and efficient communication channels that enable the proper fusion of all of their various mechanisms. Poor communication, an imbalance in stakeholder power, a lack of consensus, particularly in the public sector, and a lack of empathy among stakeholders all contributed to the waste of time that was discovered. Perez (2017) discovered that the most important communication difficulty in a construction project is the widespread communication problem caused by a dispute that appears to exist in the sector, between the construction business and the project management. As per the research's findings, avoiding budget cuts and attempting to avoid many adjustments, which will result in a decline in project quality, should help to avoid this problem.

Ashenafi (2021) proved that there is positive relationship between effective project communication and project performance in Meskel Square construction projects. He also noted that communication channel, communication method, and communication hurdles all have a significant impact on project performance, and that it is highly dependent on the factors that affect the project both directly and indirectly. Local research titled "Practice of Communication Management in IT Projects: The Case of Commercial Bank of Ethiopia (CBE)" by Abadi (2020) concluded on the same. He determined that the subject organization's overall project communication management practices and project success rate were low. Current communication management practice in research areas falls short of the benchmark practice of PMI's Project communication guidelines. This was owing to the corporation's failure to place sufficient attention on communication management.

2.4 Conceptual Framework

According to the findings of the literature and empirical review, the three project communication management processes are required for successful project communication practices, which lead to successful projects. Based on this, the conceptual framework for this study is as follows.

Figure 2.5 Conceptual Framework



Source: (Self developed from literature review, 2023)

Chapter Three: Research Methodology

3.1 Introduction

This chapter presents and describes the research methods applied to the study. It includes research design, research approach, description of study variables, description of study area and target population, sampling technique and sample size, source of data and data collection method, data analysis techniques, reliability and validity analysis and ethical considerations that were used in this study.

3.2 Research Design

Research design is the framework of the research methodologies and procedures a researcher selects to carry out a study. The design enables researchers to focus on developing research techniques appropriate for the topic and set up their investigations for success. According to Creswell (2012), research design is a collection of distinctive characteristics that may be used with both quantitative and qualitative research approaches to gather, analyze and interpret data. The data gathered then helped answer the study's research questions and achieve its objectives.

The study adopted a descriptive research design. One of the advantages of descriptive research is that it aims to accurately and systematically describe a population, situation or phenomenon. It seeks answers to questions like who, what, when, where, and how. Researchers can characterize their respondent's responses to questionnaire and interview items with the aid of a descriptive research design (Shields and Rangarajan 2013).

Since the study focused on describing the project communication practices and the existing communication challenges that occur when managing the renovation projects of UNECA, descriptive research helped describe the situation in terms of its characteristics through gathering techniques such as questionnaires and interviews. The study observed the situation at one point in time, thus applied a cross-sectional research type. This type of research is most consistent with a descriptive research design.

3.3 Research Approach

The study employed a mixed-method as its research approach. This approach combines aspects of both qualitative and quantitative approaches. It enables researchers to expand their investigation with adequate depth and breadth. The benefits of gathering both closed-ended quantitative data

and open-ended qualitative data, for example, support understanding a research problem when a researcher wants to generalize the findings to a population and develop a detailed view of what a phenomenon or concept means for individuals (Dawadi et al., 2021). This approach aids in accurately and completely defining the research problem. Additionally, it broadens and deepens the comprehension of the research problem and guarantees the triangulation of findings.

Mixed-approach was thus used to analyze the project communication practices employed on the construction renovation projects of UNECA. Information from prominent stakeholders (client, contractor and consultant) was gathered through a questionnaire and personal interview. The data gathered was then analyzed to identify the challenges that hinder effective communication and identify the best methods of communication for project success. The questionnaire brought breadth to the study by assisting the researcher in compiling data regarding the project communication practices from different participants. The personal interviews deepened the study since narratives give the researcher a deeper understanding of the research problem.

3.4 Research Population and Sampling

The study was conducted in Addis Ababa headquarters of the United Nations Economic Commission for Africa (UNECA). Regarding the Library Renovation project, UNECA has planned of becoming 'The premium think tank in Africa'. In order to achieve this, ECA as the Client had awarded the contract to the contractor and hired a consultant to oversee the renovation works. The target population is composed of permanent staff from the internal stakeholders. Thus, the population of the study includes project managers, supervisors, engineers, and project staffs from all the parties of the project (client, contractor and consultant). Since the scope of the project is small, the entire project team was the population of the study, which adds up to only 50.

The researcher applied mixed research approach, both questionnaires and interviews were used for this study. For the questionnaires, all the project managers, supervisors and project staffs were included in the study using a census survey. Since the entire population was included in the research, a census survey was chosen to be the appropriate choice for the study. A census is a collection of information from all units in the population. The interviews were held with the prominent parties of the project that have prevalent experience and substantial impact on the procedures involved in project implementation.

3.4.1 Sample Design

A sample is a group of people who reflect a society and are similar to other people. For a researcher with limited time, resources, and money, including the entire population is unmanageable and costly. As a result, a population sample must be chosen, and relevant conclusions to the population investigated must be generalized (Walliman, 2011).

However, since the scope of the project is small and the number of the project team members is small and manageable, the researcher used census type of survey design and took all the project team members which are identified in the research population.

3.4.2 Sample size

A census is the procedure of systematically acquiring and recording information about the members of a given population (Creswell, 2012). Since the target population is small no formula is used, from the research population all the project team members identified in the research population was taken for this study.

3.5 Source and method of data Collection

A combination of primary and secondary sources was used to compile the data for this study. As mentioned above, the entire project team of the renovation project were asked to complete structured questionnaires so that the researcher can collect primary data. The questionnaire was collected and gathered personally, where the responders were provided with a list of pre-determined responses from which to select one. In descriptive quantitative research studies, researchers use one of the two methods of collecting data: either they observe and count overt acts of behavior or they use a questionnaire to elicit answers or predetermined questions about attitudes, opinions, motivations, knowledge, demographics, and many other categories of data. It has been estimated that at least 85% of all quantitative research initiatives use questionnaires, making them the most common method for gathering primary data. Questionnaires are very appropriate whenever a descriptive design is required by a study problem (McNabb,2021).

Another primary source of data was the interviews, which were conducted with important project participants who have significant influence on the processes used to carry out the project and prevalent experience. The respondents who can give relevant and key opinions and solutions to the research problem were chosen. Interviews are special in that they give researchers access to data that is not available through observation or questionnaires. The researcher gathered secondary

data from relevant books, publications, articles and websites. Project documents such as project charter, project reports and contract documents were also used as a source of secondary data for the study.

3.6 Method of Data Analysis

The researcher examined the collected data (questionnaire and interview) to detect errors and omissions and to correct them when possible and assigned numerals (Likert scale) to answers that enabled them to put responses into a limited number of categories. The research's data analysis was done by descriptive statistics using Statistical Package for Social Sciences 20 (SPSS) and Microsoft Excel version 2016. The results obtained from the analysis were presented in tables and charts, based on these findings, tangible conclusions and recommendations are presented.

3.7 Validity and Reliability

Regarding the reliability and validity of the study, the researcher tried to triangulate the data from different sources. Besides, due care was given to wording and clarity of the question in the questionnaires. Validity can be defined as the principal amount to which the sample of the test item represents the content that is supposed to be measured (Creswell, 1994). The degree to which a measurement tool truly measures what it claims to measure is referred to as its reliability. The aggressiveness of various types of proposals determines their legitimacy. This study was able to detect content validity by examining the literature and being familiar with the methodologies used in previous investigations.

3.8 Ethical Consideration

Ethical concerns have been prevalent in this research paper. The anonymity of information regarding the organization and respondents for the questionnaire and interview was maintained in this study as an ethical consideration. The researcher described the aim of the analysis to the respondents clearly. In addition, the data collected were solely utilized for this research and were not transferred to a third party or used for any other purposes beyond those of the researcher and the respondents. The responders' identities are kept confidential. This was necessary to prevent any bias that can cause the research to provide false results and the conclusions and recommendations were based solely on evidence. Lastly, all of the sources cited in this project work were appropriately recognized.

Chapter Four: Research Findings and discussions

4.1 Introduction

This chapter deals with the presentation of data, analysis and interpretation. It presents the findings and descriptive statistical analysis of the data gathered from respondents of the distributed questionnaire. SPSS Statistics Version 20 and Microsoft excel were used to analyze the data. In line with the mixed methods research approach, the qualitative data collected through interviews are also presented and interpreted. All the collected data were analyzed and presented in the form of frequency, mean and standard deviation using tables and charts. The process of data analysis and explanation of the analysis result is presented in the following subtopics.

4.2 Response Return Rate

The mixed method research approach employed for this study combines aspects of both qualitative and quantitative approaches. For the quantitative data collection, a total of 50 questionnaires were distributed to the entire project team members. From the distributed questionnaires, 42 of them were filled by the respondents indicating a response rate of 84%. The response rate meets the requirement for further analysis according to Saldivar (2012) who states that for a census survey, a response rate of at least 75% is sufficient to proceed with the analysis.

4.3 Demographic Profile of the study participants

The questionnaire contains five sections. The first section comprises of the general information of the respondents. This section presents the personal information of the respondents who participated in the quantitative phases of the study. Demographic information provides data regarding research participants and allows for better understanding of the data analysis. Hence, the demographic profile of the study participants related to gender, age, level of education, position in organization, work experience and number of participations in projects have been included.

Table 4.1 General Information of Respondents

No.	Description		Respondents	
			n (Frequency)	% (Percent)
1	Gender	Male	32	76.2
		Female	10	23.8
		Total	42	100
2	Age in years	20-30	12	28.6
		31-40	20	47.6
		41-50	7	16.7
		Above 50	3	7.1
		Total	42	100
3	Education level	Certificate	24	57.2
		Diploma	5	11.9
		Bachelor's Degree	10	23.8
		Masters	3	7.1
		Total	42	100
4	Internal Stakeholder	Client	5	11.9
		Contractor	31	73.8
		Consultant	6	14.3
		Total	42	100
5	Position in organization	Project Manager	3	7.1
		Engineer	7	16.7
		Supervisor	5	11.9
		Architect	3	7.1
		Team member	24	57.2
		Total	42	100
6	Experience in years	1-5	7	16.7
		6-10	13	30.9
		11-15	17	40.5
		>=16	5	11.9

		Total	42	100
7	Project participation	1	0	0
		2	5	11.9
		3	22	52.4
		>=4	15	35.7
		Total	42	100

Source: Own survey, 2023

As shown in the above table 4.1, the total number of project team members who participated in this study were 42. Among the 42 respondents, only 10 of them (23.8%) were female while the remaining 76.2 percent account for the male respondents. This may be one of the communication barriers on the company projects, as it may cause male project managers or project team members to misunderstand female personal difficulties. It demonstrates the necessity to balance the gender diversity between male and female.

Regarding the age of the respondents, 47.6% are between the ages of 31-40, 28.6% are between 20-30 and 16.7% of the respondents are between 41-50, while the remaining 7.1% are above the age of 50. The findings indicate that the majority of the project team members of the renovation projects are over the age of 30, which means that the organization has young workforce with strong project implementation capabilities. It also implies that they are mature enough to be sensitive to the values and diverse cultures of the project stakeholders, which is a favorable element for good communication.

Among the 42 respondents, the ones with bachelor’s degree and master’s degree are limited to 23.8% and 7.1% respectively. 57.2% of the respondents are certificate holders while the remaining 11.9% are diploma holders. Since the majority of the respondents are certificate holders only, it is reasonable to conclude that the respondent’s degree of knowledge may not be sufficient to comprehend the organization’s project communication approach.

As to which internal stakeholder the respondents belong to, it was found that the overwhelming majority (73.8%) are members of the contractor team, 14.3% are members of the consultant team while the remaining 11.9% make up the client team. This finding is realistic, as the construction renovation projects comprise more contractor project team members to execute the daily activities on the project site.

Regarding the respondent's current role in the renovation project, 57.2% of the respondents are project team members, 16.7% of them worked as office and site engineer, 11.9% of them worked as site supervisors, 7.1% of them worked as architects and 7.1% have Project manager title. The findings indicate that the researcher obtained data from staff members with various project roles, which aids in understanding the true state of project communication in the renovation projects of UNECA and increases the data's credibility. Since they participate in the daily project communication practices, their input can be used to improve the project performance and communication practices. ‘

Another respondent's demographic profile is the project work experience of respondents, which was divided into four ranges. Starting from 1-5 years of experience covers 16.7%, 6-10 years of experience 30.9%, 11-15 years of experience 40.5% and 11.9% of the respondents have project work experience of 16 years and above. The result shows that more than 50% of the project members have more than ten years of experience in managing and executing construction projects. Since more project experience leads to better communication knowledge, it is fair to assume that the project members can understand the importance of communication in construction projects even though the majority have lower level of education.

The last demographic profile is the number of project participation in UNECA. The majority of the respondents (52.4%) have worked on three renovation projects, 35.7% on more than four renovation projects and 11.9% of the respondents have worked on two renovation projects only. Accordingly, the majority of the respondents, in this demographic profile, have high project participation experience. This can benefit the organization's project communication process.

4.4 Project Communication Management Processes

The second section of the questionnaire incorporates the questions relating to the project communication management processes which are necessary to achieve effective information exchange. According to PMBOK (2017), project communication management processes are the processes necessary to ensure that the information needs of the project and its stakeholders are met through development of artifacts and implementation of activities designed to achieve effective information exchange and are divided into three: Plan communication management, manage communication and monitor communication.

Likert type scale was employed to present the level of agreement of the respondents to the questions in this section ranking 1-5, where 5= Strongly Agree (SA), 4 =Agree (A), 3 =Neutral (N), 2 =Disagree (D), 1= strongly disagree (SD). Based on this, the respondent's responses are presented in the table below, together with their percentage, mean, and standard deviation, for comparison with PMBOK project communication management processes in relation to the renovation projects of UNECA.

In order to interpret mean values for the descriptive statistics results, the criteria proposed by Scott (1999) was used. For Likert type scales ranging from 1 to 5 (Highly dissatisfied to Highly satisfied), the interpretation should be as follows: mean from 1 to 2.9 is regarded Disagree, mean from 2.9 to 3.1 is neutral or near central value, and mean over 3.1 is considered agreement.

Table 4.2 Project Communication Management processes

Items	SD		D		N		A		SA		Mean	Std. D.
	n	%	n	%	n	%	n	%	N	%		
Your company has an effective communication strategy in place	21	50	8	19	8	19	4	9.5	1	2.4	2.45	1.63
The project team are aware of the comm. management strategy in place	8	19	16	38.1	8	19	6	14.3	4	9.5	2.57	1.23
Your company has a project communication management plan	-	-	6	14.3	10	23.8	18	42.9	8	19	3.67	0.95
The comm. management plan is reviewed regularly and modified when necessary	22	52.4	8	19	5	11.9	4	9.5	3	7.1	2.00	1.31
All the stakeholders are informed when there is a change in the project communication management plan	22	52.4	12	28.6	1	2.4	4	9.5	3	7.1	1.90	1.27

The management of project communication is highly valued	6	14.3	20	47.6	10	23.8	4	9.5	2	4.8	2.43	1.02
Processes for clear communication have been created, as well as clarification of stakeholders' roles	5	11.9	10	23.8	14	33.3	7	16.7	6	14.3	2.98	1.22
The project has an issue log in place to reflect any communication issues that might have occurred	-	-	1	2.4	5	11.9	24	57.1	12	28.6	4.12	0.71
Challenges encountered are registered in the lessons learned register	6	14.3	5	11.9	18	42.9	6	14.3	7	16.7	3.07	1.24
There is no communication barrier within the project team	36	85.7	2	4.8	3	7.1	1	2.4	-	-	1.26	0.70
The project utilizes Project Management Information System (PMIS)	2	4.8	6	14.3	28	66.7	5	11.9	1	2.4	2.93	0.75
Average											2.67	1.09

Source: Own survey, SPSS version 20 outputs

- n=Frequency, %=percent, Std. D.=Standard deviation

The first question asked about the existence of an effective communication strategy in the organization. As shown in the above table, 50% of the respondents strongly disagree and 19% disagree with the presence of an effective communication strategy for the renovation project of UNECA. While 19% of the respondents are neutral, the respondents that agreed and strongly agreed to the existence of an effective communication strategy are 9.5% and 2.4% respectively. The mean score was found to be 2.45, which indicates that the respondents did not agree with the statement that there is an effective communication strategy in place for the communication

management of the renovation project. This finding indicates that the project members should give more attention to the project communication strategy implementation.

The second question deals with the project team's familiarity of organization's communication management strategy. 19% of the respondents strongly disagree and 38.1% of them disagree that the project team is aware of the communication management strategy in place. 19% of the respondents are neutral, 14.3% agree while the remaining 9.5% strongly agree on the statement. The mean value 2.57 also indicates that the majority of the respondents are not aware of the communication management strategy of the organization. This finding is consistent with the findings of the above question, in that there is an issue in the implementation of the communication management strategy for the renovation projects.

According to PMBOK (2017), the communication management plan is a component of the project management plan that describes how project communications will be planned, structured, implemented, and monitored for effectiveness. Along with this, the third question is regarding the existence of a project communication management plan in the organization. Among the 42 respondents, 42.9% agreed, 19% strongly agreed, 23.8% of them were neutral while the remaining 14.3% disagreed on the presence of a project communication management plan. This finding is corroborated by the mean value of 3.67, which indicates that most of the respondents are in agreement with the existence of a project communication management plan in the organization. However, most of the respondents do not believe that there is an effective communication strategy in place as per the findings of the questions above, which indicate that the project communication management plan is not being properly managed and monitored.

The fourth question is related to the third question, in that it states that the communication management plan is reviewed regularly and modified when necessary. 52.4% of the respondents strongly disagree with the statement, 19% disagree while 11.89% are neutral. The respondents that agree and strongly agree on the statement are 9.5% and 7.1% respectively. The mean value of 2.00 indicates that most of the respondents do not agree on the communication management plan being regularly reviewed and modified when necessary. The findings indicate that there should be an effective project communication monitoring tool in place.

Another related question to the project communication management plan, was that all the stakeholders are informed when there is a change in the communication management plan. Among

the 42 respondents, 52.4% strongly disagree with the statement, 28.6% disagree, 2.4% remained neutral, while the remaining 16.6% of the respondents either agree or strongly agree on stakeholders being informed when there is a change in the communication management plan. The mean score turned out to be 1.90, which indicates that most of the respondents disagree with the statement.

With regards to the importance of project communication management in the organization, 61.9% of the respondents either disagreed or strongly disagreed, 23.8% remained neutral, while the remaining 14.3% of the respondents agreed or strongly agreed with the high value of project communication management placed in the organization. The mean value of 2.43 signifies the fact that the respondents did not agree that project communication management is given proper attention in the implementation of the renovation projects.

Another question presented to the respondents was the existence of clear communication processes and clarification of stakeholder roles. The response was 11.9% strongly disagree, 23.8% disagree, while 33.3% remained neutral. Among the respondents, 16.7% agreed while the remaining 14.3% strongly agreed on the statement. With a mean value of 2.98, the finding indicates that the respondents are neutral on average on the clear communication processes and clarification of stakeholder roles.

Regarding the existence of an issue log, the majority of the respondents (84.7%) either agree or strongly agree on the presence of an issue log to be used to reflect any communication issues that might have occurred during the implementation of the project. 11.9% of the respondents remained neutral while only 2.4% disagreed. The mean value of 4.12 clearly indicates that the most of the respondents have agreed on the existence of an issue log in the organization.

Meanwhile, for question number 9 that evaluates if the challenges encountered during the implementation of the project are registered in the lessons learned register, 42.9% of the respondents remained neutral. A total 26.2% of respondents disagree and strongly disagreed on this practice. Contrary to this, 31% of the respondents agreed and strongly agreed on the practice of registering project challenges in the lessons learned register. A mean score of 3.07 indicates that the respondents are indifferent about the subject matter.

The share of the respondents who strongly disagree on the statement that there is no communication barrier within the project team accounted for 85.7%. 4.8% of them disagreed, 7.1% remained neutral while the remaining 2.4% agreed. Overall, the response of the respondents' data shows disagreement with a mean value of 1.26 and a standard deviation of 0.70. It indicates that most of the respondents are of the opinion that there are communication barriers within the project team. As a result, the project requires clear communication channels to ensure effective project communication.

A PMIS (project management information system) is a software program or application that organizes and controls the flows of the project data and information. According to PMBOK Guide (2017), Project management information systems provides a set of standard tools for the project manager to capture, store, and distribute information to internal and external stakeholders with the information they need according to the communications plan.

As indicated in the table above, majority of the respondents (66.7%) remained neutral regarding the utilization of PMIS. 4.8% of the respondents strongly disagreed on the subject matter that project utilizes project management information system, while 14.3% replied that they disagreed on the same. 11.9% of the respondents agreed while 2.4% of them strongly agreed to the subject matter. A mean score of 2.93 also shows that respondents are indifferent to the subject matter.

To summarize the respondents' responses on the processes of communication management on the study organization in relation to the PMBOK principles of project communication management, the result reveals an average mean of 2.67 and an average standard deviation of 1.09. This demonstrates that the study organization is not conducting project communication management in accordance with the PMBOK principles of communication management processes for implementation of the renovation project.

4.5 Project Communication practices of UNECA's renovation projects

This section was used to assess the project communication practices of the renovation projects of UNECA. The respondents were requested to pick options for each question regarding project communication practices. The findings are presented below:

➤ **Communication Channels**

For the renovation projects of UNECA, the communication channels such as verbal communication, meetings, Email, written communication (reports), project portal and technical drawings were selected as options. The respondents replied that for project managers’ mode of communication with other project stakeholders 45.2% of their communication is through E-mail. This was due to the fact that some of the internal stakeholders abroad and email was chosen to be the best method of communication. In addition, 23.8% of the respondents stated that reports (written communication) are also frequently used.

For the communication channel within the project team members, the respondents replied that 59.5% of their communication activity was done through verbal communication (face-to-face). Technical drawings were also stated to be frequently used among the project team members when conducting daily activities in the project site.

Table 4.3 Communication channels

Comm. Channels	Email		Report		Meetings		Drawings		Portal		Verbal		Telephone	
	n	%	n	%	N	%	n	%	n	%	n	%	n	%
Project managers with other stakeholders	19	45.2	10	23.8	7	16.6	2	4.8	2	4.8	1	2.4	1	2.4
Within the project team	2	4.8	3	7.1	2	4.8	10	23.8	0	0.0	25	59.5	0	0.0

Source: Own survey

- n=Frequency, %=percent

➤ **Assessment of Communication methods**

This section deals with the analysis of the usefulness of the communication methods utilized in the renovation projects of UNECA. The respondents were asked to evaluate each method based on their effectiveness. Likert type scale was employed to present the level of agreement of the

respondents to the questions in this section ranking 1-5, where 1= Excellent, 2 =Very Useful, 3 =Useful, 4 =Somehow Useful, 5= Not Useful.

Based on this, the findings are presented in the following table:

Table 4.4 Assessment of communication methods

No.	Communication Methods	N	Mean	Std. D.	Rank
1	Written communication	42	1.36	0.91	1
2	Periodic meetings	42	1.60	1.04	2
3	Electronic communication	42	2.00	1.21	3
4	Project portal	42	3.07	0.87	4
5	Verbal communication	42	3.26	0.99	5
6	Telephone communication	42	3.71	0.83	6

Source: Own survey, SPSS version 20 outputs

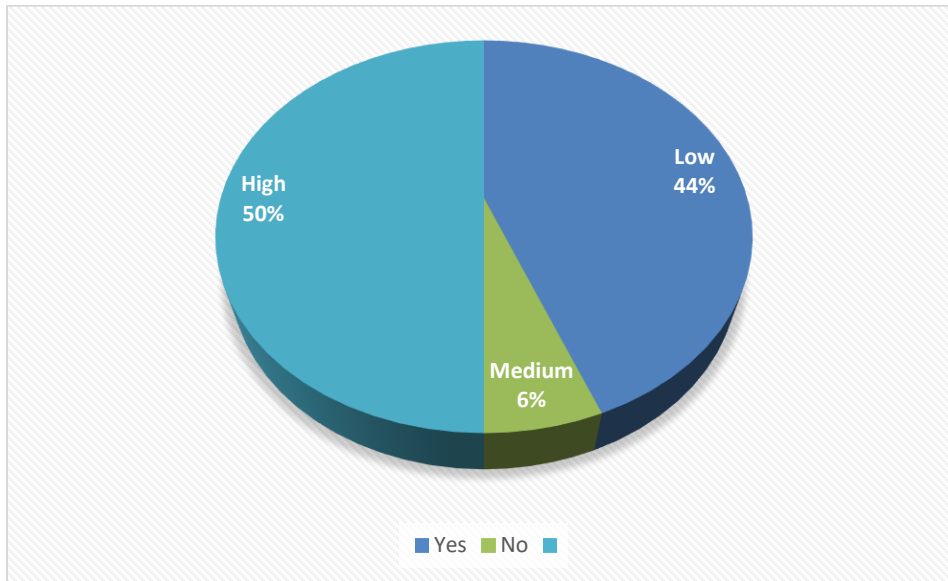
- N=Total respondents, Std. D.=Standard deviation

According to the above table written communication, periodic meetings, email and project portals are the most prevalent methods of communication as per the respondents' responses.

In addition to this, 80.9% of the respondents stated that project communication is *not* properly managed in the renovation projects. This shows that there is a serious issue concerning project communication and every stakeholder and project team member should participate in the management of project communication.

Regarding the importance of communication to the project team working on the renovation project, the findings are presented in the following figure:

Figure 4.1 How important is communication to the project team?



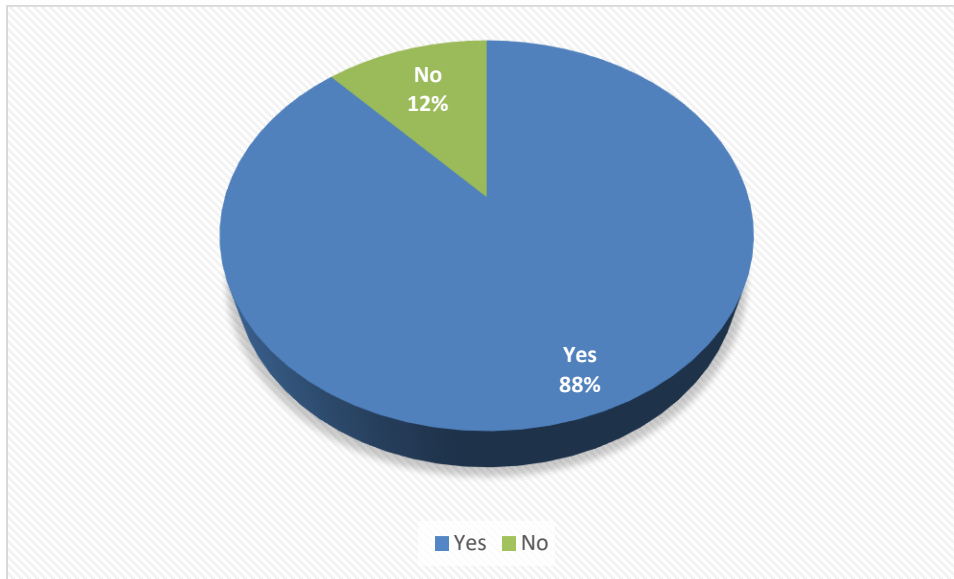
Source: Own survey

The above figure shows that 71% of the respondents replied that communication is very important to the project team, while only 5% believe that communication is not so much important for the project team. The finding indicates that the project team members understand that project communication is very important for the successful completion of the renovation projects. This discovery is encouraging because project communication is the soul of construction project management, according to Priyadharshini and Sashara (2016).

➤ **Project Conflict**

Regarding the occurrence of conflicts during the implementation of the project, 88% of the respondents replied that there had been conflicts which had let to the project delay while 12% believe the opposite as shown in the figure below. The findings indicate that conflicts within the project team members have caused the project to delay.

Figure 4.2 Has there been any conflict that has occurred?



Source: Own survey

In order to understand the level of conflict present in the project environment, the respondents were asked to evaluate the level of conflict using Likert type scale was ranking 1-5, where 1= None, 2 =Few, 3 =Medium, 4 =High, 5= Very High. Based on this, the findings are presented in the following table:

Table 4.5 Level of conflict

Conflict Level	None		Few		Medium		High		Very High		Mean	Std. D.
	n	%	n	%	n	%	n	%	n	%	n	%
Within the project team	-	-	3	7.1	9	21.4	8	19	22	52.4	4.17	1.01
Among the Client, Contractor and Consultant	-	-	10	23.8	10	23.8	17	40.5	5	11.9	3.4	0.99

Source: Own survey, SPSS version 20 outputs

As shown in the above table, the level of conflict with the project team members (supervisors, engineers, site workers) the mean score was found to be 4.17. This indicates that there a very high level of conflict within the team members, which may be the reasons for the schedule delay and the quality problems faced by the project managers (as per the preliminary interview conducted

with project stakeholders). The findings also show that the level of conflict among the client, contractor and consultant has a mean score of 3.4. Although the level of conflict among the internal stakeholders is lower than the level of conflict within the project team members, it is still at a medium level. According to Malik et al. (2021), conflict is detrimental to communication and project success. Conflicts in projects make achieving project objectives challenging and may lead to failure. As a result, the presence of conflict implies that the renovation project’s success rate is impacted by these conflicts.

➤ **Project Success**

A successful project is defined as a project that satisfies its objectives in terms of budget, schedule and quality. Accordingly, 76.2% of the respondents are of the opinion that the renovation project has not met its schedule and budget objectives. Out of the 42 respondents, 54.8% replied that the deliverables of the renovation project have satisfied its internal and external stakeholders, while 45.2% hold the opposite view.

Table 4.6 Project Success

Items	Yes	No
Has the renovation project met its schedule and budget objectives?	23.8	76.2
Have the results of the renovation project satisfied its internal & external stakeholders?	45.2	54.8

Source: Own survey

4.6 Measure of Effective Communication

Likert type scale was employed to present the level of agreement of the respondents to the questions in this section ranking 1-5, where 5= Strongly Agree (SA), 4 =Agree (A), 3 =Neutral (N), 2 =Disagree (D), 1= strongly disagree (SD). Based on this, the findings of the measures of effective communication for the renovation projects of UNECA are summarized in the following table:

Table 4.7 Effective communication practices

Items	SD		D		N		A		SA		Mean	Std. D.
	n	%	n	%	n	%	n	%	N	%		
The project team is aware of cultural and personal differences	2	4.8	5	11.9	10	23.8	20	47.6	5	11.9	3.50	1.02
Information that is communicated to the project team members is effective and efficient	18	42.9	12	28.6	7	16.7	2	4.8	3	7.1	2.05	1.21
The information conveyed is effective in achieving its intended effects on the project team members, including motivating, directing, informing, or gaining their cooperation.	5	11.9	22	52.4	10	23.8	4	9.5	1	2.4	2.38	0.91
The communication skills of the project team are sufficient to accomplish the desired results in communication.	28	66.6	7	16.7	5	11.9	2	4.8	-	-	1.55	0.89
You receive the necessary information, so your work is not delayed.	6	14.3	25	59.5	9	21.4	1	2.4	1	2.4	2.19	0.80
There is transparent and positive open communication	4	9.5	20	47.5	8	19	10	23.8	-	-	2.57	0.97
There is proper documentation and checking of meetings performed throughout the project	-	-	3	7.1	28	66.7	6	14.3	5	11.9	3.31	0.78

Source: Own survey, SPSS version 20 outputs

The first question asked if the project team members are aware of the cultural and personal differences that exist in the project environment. As shown in the above table, 59.5% of the respondents replied that they are aware of the cultural and personal differences. Only 16.7% of the respondents stated the opposite, while 23.8% of them are neutral. The mean value is calculated to be 3.5. This result shows a good sign in project communication practice as cultural awareness aims to guarantee that cultural variety is successfully utilized to create a successful project outcome.

The second question deals with the project information's effectiveness and efficiency. 42.9% of respondents strongly disagree, with 28.6% believing that information delivered to project team members is efficient and effective. 16.7% of the respondents are neutral, 4.8% agree while the remaining 7.1% strongly agree on the statement. The mean value was shown to be 2.05, indicating that the respondents disagree on the effectiveness and efficacy of project information exchanged among project team members.

The third question is related to the second in that it states that the information delivered is effective in producing the intended effects of motivating, directing, informing or gaining cooperation of the project team members. 52.4 % of the respondents disagreed with the statement, 11.9% strongly disagreed while 23.8% remained neutral. The respondents that agreed and strongly agreed on the statement were 9.5% and 2.4% respectively. The mean value of 2.38 indicates that most of the respondents do not agree that the project information is achieving its intended results. This finding is consistent with the finding of the above question, in that the information that is communicated to the project team members is not accomplishing its intended effects making it ineffective and inefficient.

Concerning the project team's communication skills, 83.3% of respondents either disagreed or strongly disagreed, 11.9% remained neutral, and the remaining 4.8% agreed that the project team's communication skills were adequate to achieve the desired results in communication. The mean value of 1.55 signifies the fact that the respondents did not agree that the project team members possessed adequate communication skills. This finding reveals that the project should employ effective communication tools and techniques to develop communication skills in order to achieve the project's desired outcomes.

The respondents were asked if they received necessary information in order for their work to be completed on time. The response was 14.3% of them disagreed, 59.5% strongly disagreed, while 21.4% remained neutral. Among the respondents, only 4.8% agreed or strongly agreed with receiving the necessary information. The conclusion suggests that respondents disagree with the statement, with a mean value of 2.19. This implies that the project team member's work is being hampered due to a lack of vital information. This could be due to the weak communication abilities discovered in the previous finding.

The share of the respondents who disagreed on the statement that there is a transparent and positive open communication within the project team accounted for 47.5%. 9.5% of them disagreed, 19% remained neutral while the remaining 23.8% agreed. Overall, the response of the respondents indicates disagreement, with a mean value 2.57 and a standard deviation of 0.97. The finding indicate that the majority of respondents believe there is no transparent and constructive open communication within the project team.

The last question was to check if there is proper documentation and checking of meetings performed throughout the project. According to the table above, majority of the respondents (66.7%) remained neutral, 14.3% agreed, 11.9% strongly agreed while only 7.1% of them disagreed on the same. A mean score of 3.31 indicates that the majority of respondents agree on good documentation. This is one of the effective communication practices required in a project.

In conclusion, according to the respondents' responses, the study organization has limitations in utilizing effective communication tools and techniques that promote open and transparent communication to develop the communication skills of the project team members. That is why the project information is not achieving its intended results of motivating, directing, informing or gaining the cooperation of the project team members. Even when proper documentation and meeting checks are performed throughout the project, immediate steps are not taken when project team members' work is delayed due to a lack of effective and efficient information as per the respondent's responses. The effectiveness of a project is determined on the level of communication. According to PMI's Pulse communications research, good communication leads to more successful projects, allowing organizations to achieve high performance.

4.7 Barriers to Effective Communication

The respondents were asked to rank the above-mentioned items based on Likert type scale, using ranking 1-5, where 5= Strongly Agree (SA), 4 =Agree (A), 3 =Neutral (N), 2 =Disagree (D), 1= strongly disagree (SD). The following table summarizes the findings of the barriers to effective communication.

Table 4.8 Barriers to Effective communication

No.	Barriers to Effective communication	N	Mean	Std. D.	Rank
1	Poor communication skill	42	4.60	0.80	1
2	Poor leadership	42	4.40	1.17	2
3	Language barrier	42	4.36	1.23	3
4	Ineffective reporting system	42	4.00	0.83	4
5	Lack of effective communication system and platform	42	3.67	1.03	5
6	Inadequate stakeholder engagement	42	3.43	1.10	6
7	Cultural difference	42	3.07	1.02	7
8	Communication overload	42	2.98	1.14	8
9	Attitudinal difference	42	2.86	1.34	9
10	Inaccessibility of information	42	2.38	0.82	10

Source: Own survey, SPSS version 20 outputs

According to the above table, poor communication skill ranks first in terms of the challenge of effective communication in the project, with a mean value of 4.60, followed by poor leadership, language barrier, ineffective reporting system, and lack of effective communication system and platform, with mean scores of 4.40, 4.36, 4.00, and 3.67, respectively. According to the respondents, communication overload, attitude differences, and information inaccessibility are the least problematic aspects of effective project communication. This finding was aligned to a study conducted by Gamil et al. (2017), who found that the most common causes of poor communication in the construction industry were a lack of effective communication among construction parties, followed by inadequate communication skills.

4.8 Interview Findings

Personal interviews with project team members who may contribute relevant and critical viewpoints and solutions to the study topic were also conducted as part of the mixed method technique used for this research. In this regard, project managers from the Client, Contractor, and Consultant sides were chosen to conduct the interview, which included the four questions listed below.

Question#1: What methods do you use to communicate with the project teams and why did you choose it over the other options?

The project managers were interviewed about how they communicate with their project team members. They believed that the method of communication used for project communication has a major impact on the outcomes achieved. Almost all of them mentioned that they used face-to-face communication to not only create relationships with the team but also to ensure that critical information was communicated to the team members. Another form of communication indicated was site meetings held on the project site, however these were held seldom. According to Schwalbe (2016), face to face communication is the most effective medium for project communication because it allows the project manager to assess the project team's level of satisfaction with the status or progress of the project by listening to tone of voice and examining body language.

However, the project managers stated that most of the project communication was through electronic communication because some of the project team members are working from abroad. So, any issues that may arise are communicated to them via emails and reports such as RFIs (Request for information) and material submittals. Despite the fact that project portals were utilized to view technical drawings and project material, the software was not available to the full project team and was not used frequently.

Question#2: What impact do you perceive communication management to have on your company's project success rates?

Another issue posed to the project managers concerned the impact of communication management on the project's success rate. According to the interviews, project managers believed that communication management has a substantial impact on their company's project success rate since they have spent valuable time and resources that cannot be recovered as a result of bad

communication. They provided the following instances to demonstrate this. Project materials had to be re-ordered and brought from abroad due to insufficient communication between the contractor and consultant on the approval of material submittals. A significant amount of revision works was also required as a result of miscommunication between the resident architect and the supervisors on site. According to Meron (2022), poor communication can lead to mistakes in construction, lots of frustration and a bad environment in the project team. There is also a considerably longer time for project execution, and for the same task, it causes a lot more complication than it should.

Question#3: How does the current status of the Limpopo Library Renovation project look like in terms of meeting its schedule, cost and quality objectives?

According to the interviewees' response, the Limpopo Library renovation project is currently about two years behind schedule in terms of reaching its objectives. The project is not performing at the required level of quality due to continuing communication difficulties among stakeholders. This was also found in the preliminary interview, which revealed that miscommunication between the contractor and the consultant had resulted in the compromise of project deliverables. Among the actions taken by the project management were the addition of more staff, the inspection of materials to ensure that they met contractual standards, and the completion of site work in accordance with the approved technical drawings.

Question#4: In your opinion, what must be done to improve the communication practices for the successful completion of the project?

Finally, the project managers were asked to share their thoughts on how to enhance the study organization's communication processes in order for the project to be completed successfully. According to the findings of the interviews, construction projects cannot be successful without efficient communication; all stakeholders, including site supervisors, site and office engineers, and site employees, must work as a team to overcome any challenges in the project. Employee communication training, building an effective communication management system, encouraging open communication, establishing a clear line of communication, using more accessible means of communication, holding regular meetings, and providing an incentive for better communication were some of the general options they provided.

Chapter Five: Conclusions and Recommendation

5.1 Introduction

As outlined in chapter one, the primary objective of this project work was to examine project communication practices in United Nations Economic Commission for Africa renovation projects. This includes examining the current project communication management practices and lastly, making recommendations on how to rectify current weaknesses and better implement the project communication process. The purpose of this chapter is to place the findings from Chapter four (Data analysis) in the context of the aim and objectives, in order to aid in the successful completion of the renovation project, which reflects the study's initial motivation. The primary findings are presented first, followed by the inferred conclusions. Finally, recommendations and suggestions for the renovation project's consideration are presented.

5.2 Summary of major findings

The aim of this study was to evaluate the project communication practices used in UNECA building renovation projects. In order to achieve this, questionnaires on communication practices were distributed to the 50 project team members. 42 of them responded, which was sufficient to make the assessment based on the questions. Interviews were also conducted with important project stakeholders in order to gather data that may not be available through the questionnaire.

The major findings of the research are presented as follows:

- With regards to the project communication management processes of UNECA,
 - Even though the majority of the respondents agree that communication is critical to the renovation project, they do not believe that project communication is adequately managed.
 - The study organization failed to properly convey and acquaint project team members, project managers, and other essential stakeholders with its communication strategy.
 - Most of the respondents believe that the management of project communication is not valued.
 - Even though the research organization has a communication management plan in place, there is a lack of adequate project communication management and monitoring. Most of the respondents do not believe that the communication

management plan is reviewed and adjusted on a regular basis. The practice of informing project stakeholders when there is a change in the project communication management plan is not practiced, which leads to miscommunication.

- Despite the fact that the study organization has an issue log in place to record any communication concerns, the majority of them are unconcerned about the challenges encountered being recorded in the lessons learned register.
 - The majority of respondents agreed that there was a communication barrier within the project. There are no clear routes of communication to ensure successful project communication.
 - Regarding the usage of Project Management Information system (PMIS), the study organization is not sufficiently using programs that organize and control the flow of project data and information, which is especially important when dealing with diverse project team.
- Regarding effective project communication practices, there is cultural awareness in the study organization. When project managers are culturally aware, they recognize that other individuals are different and that uniqueness may be used to their advantage if appropriately harnessed.
- The research organization failed to present clear and transparent communication throughout the project.
 - The communication skills of the respondents were found to be inadequate.
 - Even when sufficient documentation and meeting checks are completed throughout the project, no urgent action is taken when project team members' work is delayed owing to a lack of effective and efficient information, according to respondent responses. The level of communication determines the efficiency of a project.
 - As to challenges to project communication, poor communication skills, poor leadership, language barrier, ineffective reporting system and lack of effective communication system are considered as the most critical challenges.
- Regarding the communication channels, Email is the most commonly used communication method for project managers to communicate with one another. Since most of the project

stakeholders are located in multiple time zones, electronic modes of communication are popular. Additionally, written communication, such as monthly reports, is used. When completing the daily on-site operations of renovation projects, verbal communication (face to face) is the most commonly used communication channel among project team members (engineers, supervisors, site employees). Technical drawings are also utilized to depict the consultant's viewpoint.

- The conflict levels of the project have also been evaluated with the following results
 - The levels of conflict among the Client, Contractor, and Consultant are high, but not as high as the levels of conflict among project team members on site, which is why the majority of respondents claimed that the disputes had caused the project to be delayed.

- Finally, in terms of project success, the majority of respondents felt that the renovation project did not meet its time and financial objectives. Miscommunication among stakeholders has resulted in a reduction in the quality of the project deliverables. This has also led to discontent among the project's internal and external stakeholders.

5.3 Conclusions

The general objective of this study was to critically examine the project communication practices of the renovation projects of United Nations Economic Commission for Africa. The following conclusions have been reached based on the study's findings:

Regarding the communication methods mostly used in the renovation project of UNECA, more formal communication forms were detected than informal communication. According to Malik et al. (2021), while formal communication improves coordination among project teams, it does not aid in the development of trust mechanisms, and as a result, the intended project success is not reached, and disputes between them are not resolved. When project team members talk informally, they learn more about each other, including their culture, background, talents, and so on, making conflicts and differences more likely to be resolved and project success more possible.

Furthermore, a medium level of conflict was observed amongst internal stakeholders (client, contractor, and consultant) and a high level of conflict among project team members. According

to Malik et al. (2021), conflict has a negative relationship with project success and is typically triggered by miscommunication. From the above finding, it is reasonable to conclude that the existing project communication techniques have resulted in internal disagreements, which have had a detrimental impact on the project's progress, causing it to be delayed.

Meron (2022) also added that interpersonal conflict on construction sites is one of the most common occupational workplace stresses, which has been linked to work disability, occupational accidents, reduced quality, loss of competent personnel, restructuring inefficiencies, lost motivation and productivity, absenteeism, and employee turnover.

Regarding the common communication barriers on the renovation projects, the most critical challenges in project communication turned out to be inadequate communication skills, poor leadership, language barriers, ineffective reporting systems, and a lack of an effective communication system. Whereas, inaccessibility of information was rated as the least critical one and this indicates that the renovation project has the necessary project information that is available to every project member. From this finding, it is reasonable to conclude that the project team members' communication skills should be improved.

The research organization failed to present clear and transparent communication throughout the project. The emphasis placed on communication management was determined to be insufficient. Inputs to project communication plan were not reviewed regularly and updated and the communication technology was not available to all the project team members. The communication skills of managers, supervisors, and team members were also found to be inadequate. As a result, the information that is communicated within the project team members is ineffective in accomplishing its intended goals of motivating, directing, informing or gaining the corporation of the project team members.

The overall project communication practice of the research organization was judged to be quite low. As a result, project success has been low. Project managers must recognize how important good communication is to project management and how ineffective communication can harm a project's chances of success. Based on the findings, it is fair to conclude UNECA does not fully implement the processes of the project communication management processes specified in the PMBOK Guide (2017): plan communication management, manage communication and monitor communication, which are necessary to achieve effective information exchange.

5.4 Recommendations

Based on the findings of the study and reviewed literatures, the following recommendations are worth considering:

- The project communication strategy for the renovation projects should be well known among all the stakeholders and their teams (Client, Contractor and Consultant) in order to familiarize and enhance the sense of ownership within the project team.
- The current renovation project's success rate in meeting its budget, schedule, and quality targets has not pleased its internal and external stakeholders, which has had a negative impact on the study organization. As a result, it is suggested that the project communication management process be restructured to leverage the current success rates of the renovation projects.
- The most significant barrier to effective communication was found to be poor communication skills. Thus, approaches such as trainings are recommended to improve the project team's communication skills, as this improvement plays a significant role in the project success rate of the study organization. Surveys can also be used to gain a general consensus regarding a certain issue such as the method of communication for the project. Surveys allow project team members to submit anonymous feedback on a certain issue. As a result, the information conveyed within the project team will be more effective and efficient in attaining its goals.
- Having procedures and processes in place to communicate and work with stakeholders to satisfy their needs and resolve any issues that arose was also inadequate; thus, developing efficient communication management and monitoring procedures and processes is advised.
- Existing project communication approaches have resulted in internal disagreements, which have hampered project development and caused it to be delayed. Any existing conflicts should be made known to the Project manager or team leader. The project manager must encourage the project team members to share their ideas on how to improve quality without

extending deadlines or budget. When conflicts occur, they should be dealt with timely and perceived as an opportunity to bring positive changes to the organization.

- When transparency and openness are disregarded in project management, misunderstandings among project team members might occur, which can lead to project failure (Rodriquez, 2017). Considering this, open and transparent communication should be encouraged within the project team, in order to minimize failure, lead to innovations and better technical solutions, and positively influence the quality as viewed by all stakeholders involved. This should include not only the provision of pertinent information, but also ensuring that the information being communicated is properly written and providing opportunities for feedback for effective interaction. Feedback loops should be incorporated in order to support interactive communication between the project manager, team and all other project stakeholders. Hence, upward and downward communication should be used to effectively interact within the project team.
- It is also recommended to invest in technologies that are able to communicate the critical updates about the project, where everyone involved in the project is able to access any project related information. According to the PMBOK Guide, one of the elements that can influence communication technology selection is the project environment. Because the majority of project stakeholders are spread across multiple time zones, implementing communication technologies can improve project outcomes by increasing productivity and collaboration among project team members, controlling the workforce spread across multiple time zones, and monitoring project success. For efficient use, project team members must be appropriately trained in the use of the project communication technologies.
- Project management information systems can also be used to manage and monitor the effectiveness of project information, such as whether the information needs of stakeholders have been met. PMIS systems aid in ensuring that stakeholders have easy and quick access to the information they seek. Project team members will be able to see what is going on with the project and will be better prepared to deal with any issues that may arise. The

system is intended to maintain all records in one place, allowing the study organization to achieve high levels of accountability and team members to communicate more efficiently.

- Appropriate communication management tools such as project reporting, issue log, lessons learned register, project schedule, risk register and stakeholder register are recommended to allow for the flexibility in the communication activities and allow adjustments in the methods and techniques to accommodate the changing needs of the stakeholders and the project. These tools may assist the project manager in managing communication changes and issues, applying lessons learned about managing communication to later phases of the project, taking corrective actions to meet project quality expectations, keeping track of overall project risk, and identifying stakeholders who require project information.
- The study organization must take project communication very seriously. Overall, it is recommended that the best methods of communication for the successful completion of the renovation projects of UNECA is the utilization of project communication processes as per the standard communication processes outlined in PMBOK (plan, manage and monitor). Since these processes have a continuous nature, for the project to be completed successfully, the processes must be followed throughout the project.

5.5 Suggestions for further studies

This study reported on the practice of project communication, the common communication barriers in the project, communication channels used in the project, the effect of the current communication practices on the success of the project and the recommended methods of effective project communication for the successful completion of the project. As this study is only focused on project communication practices, the researcher suggests that future research include an assessment of project practices of building construction renovation projects in relation to other knowledge areas of project management. It is also recommended that the future study concentrate on the high-tech technologies for project communication management for the building construction projects and design techniques to overcome the communication barriers which are prevalent in the construction industry.

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APPENDIX A: Questionnaire

Addis Ababa University

College of Business and Economics

School of Commerce

Master of Arts in Project Management (MAPM)

Dear Respondents,

My name is Bethelhem Tesfaye. I am a Masters student of Addis Ababa University, School of Commerce, Department of Project Management. I am currently undertaking a research project entitled '**Assessment of Project Communication Practices of Building Construction Projects (the case of UNECA Renovation Projects)**' in partial fulfillment of the requirements for the Master Degree in Project Management.

I would be so grateful if you would take your precious time and fill out this questionnaire. The purpose of this questionnaire is to gather data on the project communication practices of UNECA's building renovation projects. I believe that the information you supply will contribute to the understanding on the current practices of communication and the challenges that occur during the renovation projects of UNECA. The data collected will be completely confidential and is anonymous. By responding to this survey, you are giving consent to be included in the research project and permission to utilize the information collected from this questionnaire in further study. Please note that the collected data will only be available to the researcher.

Thank you in advance for your contribution to this research study.

Part I: General Information of Respondents

Please use a tick (✓) mark to answer the following questions.

1. Gender of Respondent

Male

Female

2. Age of Respondent

20-30

31-40

41-50

Above 50

3. Respondent's level of education

Certificate

Diploma

Bachelor's Degree

Masters

PHD

4. To which stakeholder do you belong to?

Client

Contractor

Consultant

5. Respondent's current position in the organization

Project Manager

Engineer

Supervisor/Team leader

Architect

Others (specify).....

6. Respondent's project work experience in years

1-5 years

6-10 years

11-15 years

16 years and above

7. How many UNECA renovation projects have you worked on?

1

2

3

>=4

Part II: Questions relating to the Project Communication Processes

Please use a tick (✓) mark under your answer choice.

Relative Importance: - SA stands for Strongly Agree, A stands for Agree, N stands for Neutral, D stands for Disagree, SD stands for Strongly Disagree

	Project Communication Management Processes for the renovation project	SD	D	N	A	SA
1	Your company has an effective communication strategy in place					
2	The project team are aware of the communication management strategy in place					
3	Your company has a project communication management plan					
4	The communication management plan is reviewed regularly and modified when necessary					
5	All the stakeholders are informed when there is a change in the project communication management plan					
6	The management of project communication is highly valued					
7	Processes for clear communication have been created, as well as clarification of stakeholders' roles.					
8	The project has an issue log in place to reflect any communication issues that might have occurred					
9	Challenges encountered are registered in the lessons learned register					
10	There is no communication barrier within the project team					
11	The project utilizes Project Management Information System (PMIS)					

Part III: Questions relating to the Project Communication practices of UNECA’s renovation projects

Please use a tick (✓) mark to answer the following questions.

1. Which one of the following modes of communication do project managers frequently use with other project stakeholders?

Verbal communication

Telephone communication

Electronic communication (E-mail)

Written communication (Reports)

Periodic Meetings

Project Portal

Drawings

Other (specify).....

2. Which one of the following modes of communication is frequently used within the project team in your company?

Verbal communication

Telephone communication

Electronic communication (E-mail)

Written communication (Reports)

Periodic Meetings

Project Portal

Drawings

Other (specify).....

3. How do you evaluate the usefulness of following modes of communication in the Renovation project?

Communication methods	Excellent	Very useful	Useful	Somehow useful	Not useful
Verbal communication					
Telephone communication					
Electronic communication (E-mail)					
Written communication (Reports)					
Periodic Meetings					
Project portal					

4. Do you think project communication is properly managed in the renovation project?
Yes No
5. How important is communication to the project team working on the renovation project?
Low Medium High
6. Has there been any conflict that has occurred, which has led to negative implications of the project such as delay?
Yes No
7. Level of conflict within the project team (supervisor, engineers, site workers)
None Few Medium High Very High
8. Level of conflict between the internal stakeholders (Client, Contractor, Consultant)
None Few Medium High Very High
9. Has the renovation project met its schedule and budget objectives?
Yes No
10. Have the results of the renovation project satisfied its internal and external stakeholders?
Yes No

Part IV: Measure of Effective Communication

Please use a tick (✓) mark under your answer choice.

Relative Importance: - SA stands for Strongly Agree, A stands for Agree, N stands for Neutral, D stands for Disagree, SD stands for Strongly Disagree

	Effective Communication practices	SD	D	N	A	SA
1	The project team is aware of cultural and personal differences					
2	Information that is communicated to the project team members is effective and efficient					
3	The information conveyed is effective in achieving its intended effects on the project team members, including motivating, directing, informing, or gaining their cooperation.					
4	The communication skills of the project team are sufficient to accomplish the desired results in communication.					
5	You receive the necessary information, so your work is not delayed.					
6	There is transparent and positive open communication					
7	There is proper documentation and checking of meetings performed throughout the project					

Part V: Barriers to Effective Communication

To what amount do you agree or disagree to the following factors as barriers to the effective communication in the renovation project? *Please use a tick (✓) mark under your answer choice.*

Relative Importance: - SA stands for Strongly Agree, A stands for Agree, N stands for Neutral, D stands for Disagree, SD stands for Strongly Disagree

	Barriers to Effective Communication	SD	D	N	A	SA
1	Language Barriers					
2	Cultural Differences					
3	Communication overload					
4	Poor Communication skills					
5	Attitudinal difference					
6	Ineffective reporting systems					
7	Poor leadership					
8	Lack of effective communication system and platform					
9	Inaccessibility of information					
10	Inadequate Stakeholder engagement					

APPENDIX B: Interview

Addis Ababa University

College of Business and Economics

School of Commerce

Master of Arts in Project Management (MAPM)

The interview's objective is to collect information about the project communication practices and the challenges that occur during the renovation projects of UNECA.

I would like to express my gratitude to you for agreeing to take part in this study.

I would like to hear your views on the following points:

1. What method do you use to communicate with the project teams and why did you choose it over the other options?
2. What impact do you perceive communication management to have on your company's project success rates?
3. How does the current status of the Limpopo Library Renovation project look like in terms of meeting its schedule, cost and quality objectives?
4. In your opinion, what must be done to improve the communication practices for the successful completion of the project?

I want to express my appreciation for taking the time out of your busy schedule to talk with me about your thoughts on these issues.