



**Cape Peninsula  
University of Technology**

**GENERIC SKILLS CRITICAL FOR SUCCESSFUL EXECUTION OF CONSTRUCTION  
PROJECTS FROM CONCEPTION TO PROJECT CLOSEOUT PHASE IN THE CAPE  
METROPOLE**

**by**

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**Dissertation submitted in fulfilment of the requirements for the degree Master of  
Technology: Business Administration in Project Management in the Faculty of Business  
and Management Sciences at the Cape Peninsula University of Technology**

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*Nolimo Mbunge*

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29 March 2023

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**Signed**

**Date**

## **ABSTRACT**

This study aims to establish the critical skills essential for driving the successful execution of construction projects during the project life cycle at selected construction sites in Cape Metropole, South Africa. A skills gap needs to be filled to equip the project team and project managers to play a significant role in accomplishing high-quality construction projects. Communication, teamwork, leadership, conflict management, and execution skills have been deemed/established to be the far more critical skills to possess that can positively impact successful project execution. Failure to convey the proper messages results in project delays or failure as the employees or subordinates will not be given the correct instructions on what to do. Inability to lead and provide a sense of direction to the overall team leads to a demotivated and demoralized project team, unwillingness to share knowledge and skills creates an unpleasant work environment, and incapacity to effectively address project-related issues and handle conflicts sensibly while unable to perform the and complete project tasks. Most companies involved in construction projects around Cape Town fail to complete their projects within the given time, budget, and scope due to poor working skills, as mentioned above. The main objective of this study is to identify the critical skills needed for a project manager in the construction industry and identify which attributes are required for effective management and execution of the project. The study implemented descriptive and association research designs, while the study population was derived from the construction of a large company within the vicinity of Cape Town. The study used questionnaires to collect data while. An excel data analysis tool was used to analyse quantitative data, while data was presented using geometric techniques such as bar graphs and pie charts. The study results demonstrated that the relationship between construction project success and critical skills is crucial. The study recommended that construction project companies should have rigid, strong, and effective critical skills.

Keywords: communication, leadership, teamwork, conflict management, execution, project team and managers.

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## **CHAPTER 1**

### **THE STUDY'S INTRODUCTION WITH BACKGROUND STUDY ON LITERATURE REVIEW INCORPORATING PROJECT EXECUTION SUCCESS, PROJECT EXECUTION FAILURE, PROBLEM STATEMENT, AND RESEARCH METHODOLOGY TO BE UTILIZED.**

#### **1.1 Introduction**

A project is defined as a short period of endeavour undertaken to establish a new result, product, or service. The temporary nature of projects clarifies that a project has a start and an end date. (PMBOK, 2013:3). Projects are not for the long run, they are temporary in nature, and therefore the success of the project must be measured according to completing the project within the constraints of time, cost, quality, resources, and scope. This is all to ascertain recognition of benefits for the specifically undertaken project. The project's success can be considered the last baseline by authorized stakeholders.

According to Peter (2011:26), a project manager is an expert in the field of venture administration. Venture supervisors are responsible for the general population in an undertaking. Individuals are the way to any effective undertaking. Without the right individuals at the right place at the right time, a task cannot be successfully completed. Venture directors can have the duty of arranging, executing, controlling, and shutting down any task commonly identified with the development business, building, engineering, processing, and broadcast communications.

A project manager executes projects because it is one of the primary duties of the work.

#### **1.2 Background**

Dogbegah et al. (2011:26-40) cited many studies that focused on project management competence and aimed to identify determinant factors and criteria for a competent project manager. According to Dogbegah Chen, two principal traditional approaches are worker-oriented and work-oriented to distinguish between project management aptitudes. Brown and Bowen (2009:496) posit that most employers expect their employees to demonstrate a mixture of skills, including interpersonal, technical project management competencies, cognitive aptitude, and leadership behaviours supported by project management education.

To cater to this demand and make education more relevant to the reality of the workplace, many universities are offering project management courses either as core programs or as electives. Dogbegah recognized 18 project management competencies, and the contention in the finding is that project management must be conceptualized past the ordinarily underscored venture organization mastery. The learning territories distinguished by past

investigations are compressed. Zhang et al. (2011:157-167) posit that the project manager must deliver the project with the required performance specified by the client. If the complexities are not addressed well, it may affect the project manager's performance.

Most challenges faced by project managers in construction are planning-related. According to Hwang and Tan (2010:492), numerous progressions of huge scale are likely if green highlights are fused at a later stage, bringing about a more significant general task cost. Ahsan and Gunawan (2010:68-78) reported that construction projects in India showed the worst schedule performance. Olawale and Sun posit that proclaimed an examination led the UK to decide on restraining factors and moderating measures by identifying with time and cost invades on development extends in the nation.

Poor performance, such as time delays and cost invades, are not unusual in construction projects, and the reasons behind these problems have attracted the attention of construction consultants and researchers. The four most important factors leading to time delays and cost invades are finance and payment problems, poor contract management, site conditions changes, and material shortages. According to the Construction Industry, it is essential for the supply chain partners to measure project performance in the agreed areas, at the agreed intervals, and to feedback the results to the project team. In recent years invention in construction has received increasing interest explicitly, both among practitioners and academics

Anantatmula (2010:13-22) postulates that although the terms management and leadership continue to be used to signify different features and accountabilities, it is essential to note that intersection exists. Additionally, project management always involves effective leadership in achieving successful project outcomes. According to Yang et al. (2011:258-267), project management refers to the scheduling and organizing of project activities through decision-making procedures that improve the competence and usefulness of a project. On the contrary, leadership is about guiding others towards achieving project objectives, motivating and guiding people to realize their potential and achieving harsher and more challenging organizational goals.

According to Anantatmula (2010:14), successful leadership persuades people of the need to change, emboldens new ways of thinking and problem solving, and then inspires them to work together to realize project objectives in demanding work environments. The project management execution is disregarded while distinguishing venture achievement factors. Leadership also guides people to grow together as professionals while simultaneously completing their project responsibilities

In construction, integration frequently alludes to sharing working practices, strategies, and practices that advance a situation where data is openly traded among the different gatherings. Different abilities and information are viewed as shared inside an incorporated

group condition, and conventional obstructions isolate the plan procedure. Hoegl (2011:20-22) studied contemporary project teams comprehensively, root-causing their successes and failures and recognizing organizational conditions most advantageous to operative performance.

In addition to project management performances and complementary skills, interactive capability and the ability to actively create and develop cooperative relationships are indispensable assets for handling project networks (Pauget and Wald 2013:200). Successful project management skills are needed to contest the trend of failing Information Technology. Project Management Institute (PMI) has created training and certification programs for PMs; these offerings only address generic PM skills.

Project managers in construction are responsible for the overall achievement of transporting the owner's physical improvement within the restrictions of cost, schedule, quality, and safety requirements. As such, they play a crucial role in the functioning accomplishments of architectural and engineering construction companies and the enlargement of groundwork in every country. In addition, project managers are responsible for the project's technical content as expressed by the engineering and construction accuracy, consistency of the facility, and within-cost performance.

### **1.2.1 Essential project management skills in construction**

Projects in construction cover several areas of specialization. So, it is not out of the ordinary for development project managers who have some expertise in building works—in any case, gaining the learning contributions for a specific kind of venture region empowers the project manager to create two sorts of aptitudes. These aptitudes relate directly to development ventures, specifically, their strengths and general skills, transferable from the development field to other fields.

The general aptitudes give much of the establishment for creating venture administration aptitudes. They are frequently basic for the undertaking administrator to work effectively with their information. The construction industry development business introduces an appropriate situation for investigating the advancement of expert competency in venture administration. This is since all its business exercises depend on the undertaking of the administration and their approach; thus, it flourishes in instances of effective administration that can provide valuable lessons.

Project Management skills are susceptible to change in the business environment, and the increasing speed of change depends on the project management process. Huemann (2010:361-369) considers in a later longitudinal multi-strategy contextual analysis of an organization from the Telecom industry that Human Resource Management (HRM) requires to play a much more proactive part in creating and supporting undertaking focused

administration. This incorporates creating venture directors' capabilities, such as authority and group.

The development of the venture administration teaches, combined with falling venture spending plans, shortening of the venture due dates, and the expanding danger of an exorbitant undertaking. Disappointment has driven enterprises and the scholarly world alike to research, what's more, to recognize the wellsprings of undertaking achievement. While a few researchers utilize a frameworks/process approach accentuating the development of achievement itself, others stress the human qualities essential to making such progress.

This investigation, concentrating on distinguishing and rating favoured IT venture administration abilities crosswise over enterprises, obviously falls into the last mentioned (Pant and Baroudi 2009:124-128).

Anne (2012:1-28) posits that in construction project management, there are two skills which are soft skills and hard skills

Soft skills include relational abilities that incorporate characteristics, for example, administration, correspondence, arrangement, desires administration, impacting, critical thinking, and basic leadership. Delicate skills are, to a great extent, impalpable, not related to a deliverable or a solid yield, and they are, for the most part, utilized without the utilization of devices.

Soft skills include the more technical aspects of a project manager's role, including the production of an unmistakable deliverable, for example, a work breakdown structure

The venture plan includes a basic outline, earned esteem reports, venture spending plans, dashboards, et cetera. These abilities are more specialized in nature, and they regularly fuse the utilization of apparatuses, for example, venture planning programming, spreadsheets, displaying devices, and a bunch of deliverable formats accessible

According to Anne (2012:1-28), there are ten reasons why project management in construction fails

Incompetently qualified or inexperienced project managers

- Failure to set and manage opportunities
- Poor leadership at all levels
- Failure to effectively identify, document, and track requirements
- Poor plans and planning processes
- Poor effort approximation
- Cultural and moral misalignment
- Misalignment between the project team and the business/organization it serves
- Insufficient or misused methods

- Insufficient communication, including progress tracking and reporting

Leung (2009:126-131) posits that these compound, demanding, and energetic requirements call for project managers that can manage the construction process from beginning to successful completion. However, the outcomes of confusion of aptitudes and undertaking multifaceted nature could prompt misfortune of control and disappointment in these activities. Disappointments of ventures like the Holyrood parliament building and the Sydney Opera house have raised worries among industry and substantiated underperformance in the development construction.

Fisher (2010) outlines six skills for effective project managers in construction.

- The first is the ability to understand other people's behavioural characteristics. The ability to be genuine, open, and honest with others develops an understanding relationship.
- Secondly, effective project managers should be able to lead others through their excellent management styles. Finally, effective leaders should hold the power of influence, impressing others to support an agenda.
- Fourthly, effective leaders should have authentizotic behaviour. They should be able to accept people for what they are and not try to force them to change.
- Fifthly, effective leaders should have conflict management skills that would enable them to establish the root causes of conflict and deal with the conflicts decisively.
- Finally, effective leaders need to be culturally aware. They should develop and apply an awareness of the cultural differences of their team members.

The significance of a few of these basic elements to extend achievement ought not to be naturally astonishing to many undertaking administrators. Nonetheless, it was demonstrated through this examination that it is lacking to inquire, "What factors are most imperative to extend achievement? Fruitful venture usage can be a troublesome, complex undertaking. The undertaking administrator is ceaselessly besieged with a wide assortment of information and data from venture colleagues, the parent association, and customers.

The viable advantage of the exploration that has been accounted for in this article has been to help in clearing up the parts that an effective venture supervisor must attempt and those obligations that have appeared to add to fruitful undertaking execution. It is trusted that through concentrating consideration on these parts and essential factors, the task director will be in a superior position to effectively screen and steer their future undertakings toward a fruitful conclusion.

Project managers in today's construction industry face a condition whereby the essential roles and functions they perform are observing a gradual shift in focus. Practising project managers in construction adapt to this changing industry environment by relying on knowledge and skills acquired through training and experience to maintain their professional competency. Therefore, the extent to which such training enables project managers to adapt to changing demands effectively has considerable relevance not only for the training of future project managers but, more importantly, the kind of management and general human resources development policies that construction organizations can adopt.

The research presents a study that focuses on the development of construction project managers and how they maintain their professional skills in a changing construction business environment. Project managers identify the general knowledge and skill essentials that are perceived as essential for developing project management competency through a survey of project managers in the construction industry

Consequently, effective project management is very precarious to achieving sophisticated projects. Isik et al. (2009:629-637). investigated the imperative variables for effectively conveying project management skills ventures with proprietor responsibility, venture conveyance framework, venture group acquisition, contract conditions, plan reconciliation, venture group attributes, and development process as free factors and timetable, cost, quality, and feasible high-performance (Korkmaz et al. 2010:877-885). According to Isil et al. (2009:629-637), operative project management is very serious for the successful achievement of the cultured project.

Most research has been conducted to investigate project management factors affecting the performance of projects. These project management activities should be systematically explored to identify current components of the project organization. These components represent some features inherent in project organizations, which may have potential impacts on the environmental performance of building projects. Project Management competencies include scheduling, control systems and responsibilities, monitoring and feedback, and continuing involvement in the project. The success of a construction project is repeatable in accomplishing cost-effectiveness and gaining a competitive position. They identified the most critical success factors for construction projects: planning effort, project team motivation, project manager goal commitment, scope and work definition, control systems, and project manager technical capabilities.

The critical influence of this research is the enclosure of political skill as one of the essential skills for construction project managers. Additionally, this research should help construction project managers be conscious of the vital skills they need to possess to advance their performance. Finally, a theoretical framework is developed to determine the complexity of



the project manager's tasks and the construct. The framework provides a sound foundation for future studies that focus on project manager skills

Significant advantages of proper project management planning in the construction industry:

- Eliminate or reduce uncertainty
- Improve the efficiency of the operation
- Obtain a better understanding of project objectives; and
- Provide a basis for monitoring and controlling work

The skill sets required for success in project management have changed dramatically in the past few years. Today's competitive global market and changing work environment demand that engineers possess "soft skills" and technical skills, and they must be able to understand project goals and have the ability to accomplish them with the available resource (khan 2010:495-516). To cater to this demand and make education more relevant to the reality of the workplace, many universities are offering project management courses either as core programs or as electives. Along with the five project management processes—initiating, planning, executing, monitoring and controlling, and closing—effective project management requires knowledge of the project's environment (technology, industry, etc.) and general management skills and interpersonal skills.

These interpersonal skills, particularly communication skills and leadership skills, are deemed essential to today's successful project manager, where a good portion of project activity. Although project management has its most substantial presence in industries where projects tend to be complex, multi-year, and require extensive human and financial resources (e.g., aerospace, construction, information technology), project management processes and procedures can be used in a variety of industries and for a variety of project types and sizes.

The study revealed no significant differences between the low and medium/ high PMIM segments on the skills/competencies expected of an instructional designer versus a project manager, suggesting a consensus regarding the desired knowledge base of instructional designers and project managers. A more puzzling finding is the apparent disconnect between decision-maker expectations about how candidates for leadership of educational or training product development project team should acquire their knowledge of instructional design and project management and how practising project team leaders acquire their working knowledge of project management and instructional design respectively Kelly (2009:282-296)

The significance of a few of these basic components to extend achievement ought not to be instinctively amazing to many venture directors. Be that as it may, it was demonstrated

through this examination that it is lacking just to inquire what factors are most imperative to extend achievement

### **1.3 Problem Statement**

As alluded to in the preceding scripture, different tasks need different leadership styles. The project execution process life cycle goes through numerous stages: initiation, planning, executing, controlling & monitoring, and the project close-out phase. Each of these stages has different demands, and the tasks to be performed differ from stage to stage, consequently requiring different leadership styles. Therefore, the whole project requires different styles at various stages, suggesting the need for situational leadership processes. On the other hand, leadership styles exercised by the project leaders are generally styles learned in many different settings, chief among which are culture, training, and learning from other leaders in environments other than projects. The research seeks to identify the generic (ideal styles) styles that would lead to the success of the management of a project from the beginning, execution until completion.

### **1.4 The Aim and Objectives of this Study**

This study aims to identify the critical skills needed for a project manager in the construction industry and clearly identify which attributes are necessary for effective management and execution of the project.

This is based on the understanding that critical skills are of high necessity wherever there are objectives to be achieved by more than one individual.

#### **1.4.1 Primary objective of the study**

Identify the different leadership styles relevant to the tasks performed at the different phases during the project lifestyle.

#### **1.4.2 Secondary objectives of the study**

- Identify what styles are suitable for a construction project's initiation or conceptual stages.
- Identify what style is suitable for a construction project's selection and planning stages.
- Identify what style is suitable for resource mobilization and execution in a construction project.
- Identify what style is suitable for stakeholder management, evaluation, and construction project control.
- Identify the style most suitable for preparing the checklist and closeout phase.

## **1.5 Research Questions**

A research question is the crucial core of a research project, study, or literature review. It emphasizes that the study determines the methodology and guides all inquiry, reporting, and analysis stages.

### **1.5.1 Main research question**

What skills specifically are essential for effective project leadership?

#### **1.5.1.1 Sub research questions**

- Is communication a necessary skill for effective construction project execution?
- How crucial are team management skills in leading a construction project successfully?
- How can risk management be an effective competency skill in assessing a situation in a construction project?

## **1.6 Research Design and Methodology**

### **1.6.1 Literature review**

The theoretical background is established through textbooks, project management journals, and newspaper and journal articles.

### **1.6.2 Target population**

The population was restricted to projects executed by project teams under the supervision of project managers. The population comprised of project managers and project team members. For this study, the Project manager is responsible for working with the project sponsor, the project team, and other people involved in a project to meet and execute project goals (Schwalbe, 2010:40). Every project team needs its leader to strategically invest in building a strong, cohesive, capable team. Whether the project manager gets to choose the team members or not, they must optimize their performance. Team building is every bit as essential as project definition and planning. Project team dynamics contribute to project success (Verzuh, 2008: 252, 253). However, leadership style can be related to how the project managers and the team make decisions (Burke, 2007:330).

### **1.6.3 Sample selection and method of sampling**

Peck, Roxy, Olsen, Chris, Devore, and Jay (2008:8) claim that a sample is a subset of individuals or objects collected from a statistical population through a defined procedure. Systematic random probability sampling will be used to avoid any potential biases in the selection system.

The first selection will be used as a base; then, every fourth person will be selected from the sample frame. A minimum of 100 respondents will be approached for the survey. According to Verzuh (2008: 252, 253), 1/5 of an appropriately representative sample can be used to generalise the findings.

#### **1.6.4 The method of data collection**

The primary method of collecting data was considered when choosing the approach to obtain data, deciding on the sample and its size, and constructing the instrument concerned. The process selected to gather data from the respondent sample was surveying and using questionnaires with specific parts relevant to project management. This method has been adopted because it is easy and has the highest response rate, respondents do not need to be literate, long questions can be used, and interviewees can assist with issues that are not apparent to the respondent. The questionnaire was split into three parts: biographical and general information and the project practitioner's roles.

Jowah (2011:114) defines a questionnaire as a research tool with a set of questions expecting a specific answer from the respondent to conduct data analysis for the research.

The questionnaire is broken into three sections: Biography, Likert scale, and open-ended questions.

Permission for data collection will be requested from the selected construction site, and an agreement letter will be obtained. The data will be collected with hard copy questionnaires in a process that will be done face-to-face. The whole process is critical, as it will also allow interviewees to ask questions and be answered immediately.

#### **1.7 Ethical Consideration**

Ethics in the research refers to implementing key ethical aspects of research studies, including unethical questions, asking ethically inadequate questions, plagiarism, and addressing and reporting inaccurate questions. Every research participant taking part in the survey will be addressed, and their obscurity will be assured through dialogue with them to provide an understanding of the significance of research ethics. The participant may withdraw at any time; all data collected will remain anonymous and treated confidentially, thus no potential risk or harm to research participants”.

#### **1.8 Chapter Classification**

**Chapter one:** The introduction of the study with background study on literature review incorporating project execution success, project execution failure, problem statement, research objectives, and research methodology to be utilized.

**Chapter two:** An overview of the leadership theories, the breakdown of the project life cycle phases, and the leadership styles suitable for each project phase.

**Chapter three:** Construction site and the nature of the job-people, relevant leadership styles qualify specifications, technical expectations, differentials in leading academically diverse

**Chapter four:** Research design and methodology- differentiating these from each other, problem statement, population, sampling, data instrument and collection, and analysis.

**Chapter five:** Data reporting- analysis, interpretation

**Chapter six:** Summary of the findings- conclusions and recommendations

## **1.9 Chapter Summary**

This study focuses on skills critical for the successful execution of construction projects. For a project to be executed effectively, especially in construction, it is essential for a project manager to be equipped with the appropriate skills; these skills must be well identified to ensure that the project manager is fully equipped with the necessary skills. The background and the scope of the research are detailed. Data methods were discussed, and questionnaires were formulated.

## **CHAPTER 2**

### **AN OVERVIEW OF THE LEADERSHIP THEORIES, THE BREAKDOWN OF THE PROJECT LIFE CYCLE PHASES, AND THE LEADERSHIP STYLES SUITABLE FOR EACH PROJECT PHASE.**

#### **2.1 Introduction**

This chapter consists of leadership in the construction industry and the skills required for successful project completion. Several studies from the preliminary literature review conducted in building this topic of study through journal searches and database searches on construction engineering and leadership management highlight that those studies on transformational leadership have risen over the last few decades. On the other hand, very few studies have been developed on leadership in the construction industry, focusing on authentic leadership and its attributes, such as leading from the 'heart'. Nevertheless, the currently available literature points out that authentic leadership produces excellent project results, although it has widely been regarded as 'too good to be true' due to its dynamism and human-centred approach.

The human-centric approach found in authentic leadership, together with its focus on human relationships through deep engagements and collaborations consisting of open-mindedness, is lacking and scant in the field of leadership in the construction industry. Although authentic leadership produces prolific results with minimal wastage of resources and materials, it has not been widely accepted in most developing countries, and its benefits remain unknown. Some critics in this field of study reiterated that this authentic leadership allows too much freedom, and sometimes it is difficult to draw boundaries between working relations and personal relations due to its approach to employment relations. The nature of these human relationships remains murky, warranting further doubt and criticism from some critics in the field who discredit the merits of authentic leadership and its influence on leadership in the construction industry. Furthermore, its human-centred approach with various actors involved in the work activity to pursue a common goal remains doubted.

This literature review chapter also discusses some of the leadership styles in the construction industry and their weaknesses in achieving project success. This chapter also elaborates on these leadership styles and the leadership skills involved with each of them. Arguments being presented in this study are that excellent leadership with good skills is key to project success. The study also argues that a project cannot succeed when poor leadership exists. It also brings our attention to whether great leaders are naturally born or are made. Literature to date does not entirely agree with these two viewpoints; some critics believe that great leaders are born, while others believe that great leaders are made. Such contrasting views warrant

further investigation of leadership in the construction industry within a developing country context; in fact, literature does not agree on a single definition of leadership. In addition, many gaps that have developed over the years have not been adequately addressed (Vroom & Jago, 2007).

Debates on best leadership strategies and the ideal skills required continue with many persisting pertinent questions developing each time an agreement is reached (Toor & Ofori, 2008c). This chapter is outlined as follows; the first section, 2.2, provides an in-depth presentation of literature on leadership in general, followed by section 2.3, which offers detailed literature about leadership in the construction industry. It is then followed by section 2.4, which sheds more light on management processes in the construction industry that can lead to project success. Leadership styles in the construction industry are also presented in detail in section 2.5, leading to leadership theories common to the construction industries, highlighting some of the critical approaches deemed suitable for the arguments presented in this research. Finally, sections 2.6 and 2.7 provide some gaps discovered in the literature, thus justifying why this study should be conducted. Finally, section 2.7 provides concluding remarks on the chapter, reminding the reader of some of the key findings in the chapter before moving on to chapter three, the methodology chapter.

## **2.2 Leadership**

Leadership remains the pinnacle of project success in the construction industry. It is widely regarded as one's ability to positively influence others to believe in the same values to achieve the common goal or the desired results. Leadership is viewed as an art or skill to influence others; this requires great tenacity, vision, and direction to achieve the desired results. In other words, leadership has a significant influence on project success, including the action of other key players or stakeholders in each specific project. Current studies on leadership in the construction field have highlighted the need to 'lead' and not to 'manage', emphasising overall project success. This emphasis on providing leadership in contrast to managing points to the need for project leaders to possess unique skills and attributes for project success. This is in recognition that good leadership provides authentic attributes and guidance instead of superficial activities which do not foster innovation and long-term project success. Although many project managers have continued to run projects without being great leaders, their failure to understand what leadership involves has led to poor project outcomes and the detrimental cost to the organizations they manage.

Most of the managers' primary key focus is on short-term goals, and they are only concerned with maintaining the status quo with their subordinates; they remain hungry for power, and in some cases, they turn out to be unpopular amongst their subordinates. This trend has continued in the construction industry, with more studies calling for more focus on leadership and leadership skills ideal for the construction industry. Studies have also shown that the

leadership skill component is a vital key aspect of all project management components in any industry or field of study. The majority of these studies also predict that the leadership skill component of project management will become more popular as various organizations are constantly seeking newer ways and techniques to run their projects successfully, using few resources to achieve great results.

### **2.3 Leadership Skills**

Various leadership skills and traits exist in the construction industry, with most of them focusing on the attributes of a good leader to successfully run a project. Studies on leadership in the construction industry seem to agree that a great leader inspires his subordinates and possesses the following key characteristics or attributes as mentioned below. By and large, key literature studies agree that a good leader has the following essential qualities:

A good leader

- Is a great listener
- Leads by example and inspires his subordinates
- Coordinates a project from start to finish on time
- Has a vision and keeps their daily activities on track until the project is completed
- Is a risk-taker and is willing to make sacrifices today for a better tomorrow
- Identifies an opportunity and is willing to pursue it regardless of the risks involved

These attributes above are a few of the examples of construction leadership that are available in the current literature to date. However, the literature also points out that a good leader is not born with all the above skills, but some can be learned and acquired with time through personal experience and effective mentorship and training from the more experienced leaders. So far, there has been an identification of some of the ideal skills required for a strong leader. These skills include setting the example for the rest of the followers by showing and demonstrating to them how the project should be managed; controlling group dynamics and contradictions to minimize conflict, which can hinder project completion on time; counselling and effective mentoring, among other skills relevant to the field of leadership in the construction industry.

### **2.4 Management Processes in Construction**

The research on the management process in the construction industry states that for projects to become successful, there is a need for great and impactful leadership to be in place. The ideal conditions required for project success within the management process also highlight that construction projects must be completed on time with minimum resource wastage, although very few studies have been conducted on the matter within South Africa and other developing nations. To date, most literature studies have attempted to understand the



reasons behind poor project delivery, with most of the studies pointing out poor timing and scheduling of projects due to poor leadership or incompetent leaders.

Four common factors that have been found to contribute to project failure and expense include poor contractual agreements, material shortages, shifts in location requirements, and capital and payment issues. Several studies have indicated that these factors significantly contributed to poor project outcomes and success rates, resulting in financial losses and material wastage. Key experts in the construction industry have lamented that the success of a project also depends on good management processes in place and sound leadership structures. These studies have called for more understanding of the procurement process and good knowledge of materials required in a construction project.

To support the above claims, the study of Anantatmula (2010), for instance, did highlight that management processes in the construction industry are often very complex and challenging to grasp because both terms “management” and leadership are frequently used interchangeably to denote several responsibilities and characteristics needed for effective project outcomes. In a similar but different study, Yang et al. (2011) further indicated that good coordination and proper project scheduling can lead to project success through good leadership. The study also went further by stating that project managers or leaders should also be responsible for the delivery of quality project outcomes as well as taking the responsibility of improving project success and its achievement. Agreeing with these views on the impact of project processes in the construction industry, the study of Anantatmula (2010) went further to indicate that taking project lead and directing subordinates is also part of the requirements to make project managers succeed in their projects. In addition to that, Pauget and Wald (2013) also bemoaned that project success in the construction process is also underpinned or governed by a leader’s ability to create and develop collaborative relationships with those working on the same project. Again, these views hold in the construction industry; good leadership also accounts for project success (Pauget & Wald,2013).

In construction, industry project success refers to the integration practices that involve sharing work practices leading to good project outcomes. According to Hoegl (2011), project success is also related to collaborative skills and the manager’s ability to create and develop good working relationships for the project. Most studies have highlighted that project success is also achievable if good leadership and management are in place in a construction organization. It frequently refers to completing a project within a minimum period with limited wastage of materials and other resources. Project success is also measured by the leader’s ability to coordinate, communicate, take risks, and inspire subordinates to think the same. Most projects in the construction industry are successful due to good leadership in place and the leader’s ability to collaborate with the rest of the project team members. The ability to

create cooperative relationships through team-building exercises and leading from the 'heart' are considered ideal for operational success, as alluded to by Pauget and Wald (2013).

## **2.5 Project Management Skills in Construction**

Project management skills are prone to change in the business environment, and the increasing speed of change is entirely reliant on the process of project management. In a later quantitative multi-strategy qualitative study of a telecommunications company, Huemann (2010:361-369) Believes that human resource management (HRM) will play a much more meaningful role in the growth and promotion of entrepreneurial management. For example, this involves building the capacities of project owners, authority, and the community. The development of project administration teaches, combined with declining project investment plans, shortening project due dates, and the increasing danger of an exorbitant undertaking failure, has pushed companies and the academic world alike to study what is better, recognizing wellsprings of entrepreneurial achievement. Although a few researchers use a framework/process approach that accentuates the production of achievement itself, others emphasize the necessary human attributes to make such progress.

Anne (2012:1-28) addresses two skills in project management: soft skills and hard skills. Soft skills tend to involve relational skills that incorporate flexibility, communication, adaptability, dependability, creativity, critical thinking, and basic leadership. Delicate skills are largely impalpable, unrelated to a deliverable or solid yield, and are mostly used without systems. Soft skills include the more technical aspects of the role of project manager, such as producing a specific deliverable, a work breakdown structure project plan, basic outlines, valuable reports, risk expenditure plans, dashboards, etc. These skills are more specialized in nature, and they regularly fuse, for example, the use of devices, project planning programming, spreadsheets, display devices, and a handful of accessible deliverable formats.

### **2.5.1 Causes of project failure in the construction industry**

According to Anne (2012:1-28), there are ten reasons why project management in construction fails. Leung (2009:126-131) suggests that these complex, challenging criteria include project managers who can handle the construction cycle from start to finish. The effects of a confused multifaceted existence of aptitudes and undertaking could cause unfortunate control and incredible manipulation of these activities. Setbacks from projects such as the Holyrood Parliament Building and the Sydney Opera House have raised concerns among industry, and underperformance in development construction has been substantiated.

Fisher (2010) draws out six skills required by successful construction project managers. The first is the capacity to consider other people's behavioural characteristics. For example, an understanding relationship creates the ability to be sincere, transparent, and truthful with others.

Secondly, effective project managers should be able to guide others through their positive management styles. Finally, efficient and effective leaders should possess powerful influence, impressing others to follow an agenda.

Fourthly, efficient leaders must have conflict management skills which would allow them to determine the root causes of conflict and deal effectively with conflicts.

Lastly, effective leaders must be culturally conscious. Therefore, they will build and apply an understanding of their team member's cultural differences.

The importance of a few of these essential elements in extending achievement should not be shocking to many project managers. Nonetheless, through this review, it has been shown that it is lacking only to inquire, "What considerations are most imperative to expand achievement of fruitful use of venture can be a worrying, complex undertaking. The project manager is continually overwhelmed with various knowledge and data from project associates, the parent organization, and clients. The viable advantage of the exploration accounted for in this paper has been to clarify not only the parts that an effective project manager must attempt but also those obligations that seemed to add to the successful execution of the project. The task manager will undoubtedly be in a superior position to effectively screen and direct their future project towards a successful conclusion by concentrating on these fundamental factors.

### **2.5.2 Additional Causes of the project failure in the construction industry**

In today's construction industry, project managers face a situation whereby the essential roles and duties they perform are continually shifting in importance. The responsibility of project managers in construction is to adapt to this growing business environment by relying on the knowledge and skills acquired to maintain their professional competence through training and experience. The extent to which such training enables project managers to respond effectively to emerging demands has an outstanding value not only for training future project managers but, more critically, for the type of management and general workforce development policies that can be adopted by building organizations.

The report presents a study focusing on the development of project managers and how they maintain their technical skills in the construction industry in a growing business environment. By surveying project managers in the construction industry, project managers define the general knowledge and skills required to develop project management skills. Hence, efficient project management is uncertain in successfully implementing sophisticated projects (Isik et

al. 2009:629-637). Evaluated the requisite variables for the efficient transition of proprietary project management skills, project conveyance structure, project group acquisition, contract conditions, plan reconciliation, project group characteristics and development cycle as free and timely considerations, costs, efficiency and feasible high-performance Korkmaz et al. (2010:877-885). According to Isil et al. (2009:629-637), operational project management is very significant for the successful realization of the cultivated project.

Most work was done to examine factors in project management that affect project efficiency. To define project organisation's current components, these project management practices should be systematically explored. These components reflect some of the characteristics inherent in project organizations, potentially affecting environmental performance construction projects. Project management competencies include planning, monitoring and implementation processes, tracking and reviews, and continuous project involvement. Establishing process success is repeatable in achieving cost-effectiveness and retaining a competitive advantage. We defined vital success factors for construction projects: project commitment, project team morale, project manager target commitment, scope and job concept, control systems, and technical skills of project managers. The critical impact of this study is the enclosure of political honesty as one of the essential competencies for construction project managers. In addition, this work will help project managers to become aware of the crucial skills they need to acquire to advance their performance. Finally, a conceptual framework for evaluating the difficulty of the project managers' tasks is developed. Significant advantages of proper project management planning in the construction industry are:

- Reduce or eliminate uncertainty.
- Improve operational efficiency.
- A clearer understanding of the goals of the project; and
- Include a job tracking and control basis

The skill sets needed for project management performance have changed drastically in the past few years. Today's competitive global market and evolving working environment require engineers to have "soft skills" and technical skills and be able to comprehend and meet project goals with the funds allocated (Khan 2010:495-516). To meet this need and make education more applicable to the realities of the workplace, several universities offer project management courses either as core programs or as elective programmes. Besides the five project management processes that initiate, coordinate, execute, track, and manage and close efficient project management, knowledge of the project environment is required. Such interpersonal skills, particularly communication skills and leadership skills, are considered essential for today's efficient project manager, where a significant part of the project process

is involved. With its strong presence in industries where projects appear to be sophisticated, multiannual and involve significant human and financial resources (e.g., aerospace, building, information technology), project management processes and techniques can be utilized in a range of industries and for a variety of project styles and sizes.

The study showed no significant differences in an instructional designer's expected skills/competencies versus a project manager between the low and medium/high PMIM segments implies a consensus on the desired body of knowledge of the instructional designers and project managers, respectively. The apparent disparity between decision-makers' perceptions about how educational / training product development team members attain their knowledge about instructional design and project management and how practical project team leaders acquire their knowledge of project management and instructional design, respectively, is puzzling. Kelly (2009:282-296). Most project managers would not necessarily be surprised by the importance of a few of these fundamental components to expand achievement. However, this study has shown that it is not sufficient to investigate what factors are most imperative to expand the achievement.

## **2.6 Leadership in Construction**

Leadership in the construction industry has proven to be an essential key ingredient contributing to project success, as Pauget and Wald (2013) echoed. The study showcased that leadership in the construction industry is in high demand than in any other sector; as such, having good leadership skills is considered the best asset. Several studies support this notion, such as Hoegl (2011), who emphasised that construction projects are very complex and require good leadership to succeed. Therefore, the construction industry and its complex nature require good tenacity and outstanding leadership, with leaders possessing good skills to make the project a success.

Although there has been too much focus on transformational leadership styles in the construction industry within the construction industry in general, several new studies on authentic leadership are beginning to emerge and have been deemed suitable for developing countries. If one would consider this argument, it holds true because the essence of project success in the construction industry requires leaders who lead by 'heart' which is synonymous with authentic leadership. In essence, in its dynamic approach and a key focus on the human-centred approach, authentic leadership focuses on the relationships formed in the project process. Most of the relationships that have been highlighted above contribute to great teamwork and collaboration, resulting in projects being completed on time through adherence to the project timeline and budget. Of course, this does not mean authentic leadership is superior to other leadership styles, but its focus on group collaborations and deep engagements creates a conducive working environment since most construction projects are multi-disciplinary.

Studies in the field of leadership in the construction industry claim that a leader who possesses critical thinking and problem-solving skills can handle complex and challenging projects leading to their completion in record time. Many other studies also suggest that when a leader has a good character, it becomes easy to lead a group of followers or subordinates in a project. Studies indicate that leadership styles such as transactional, laissez-faire, autocratic, and transformational leadership have a proven record of facilitating project success in the construction industry. To date, most studies have been calling for authentic leadership styles since managers who possess such styles are capable of handling complex situations in a project. In addition, several studies have also been calling for project leaders who combine their creative abilities with other leadership dimensions such as operational proficiency, completion of projects within prescribed budget and on time, and the “can-do” attitude. These traits and attributes are ideal for the construction industry; however, in South Africa, there is a severe shortage of leaders in possession of the above skills.

The majority of leaders in the South African construction industry are plagued by issues of dishonesty and corruption when it comes to the awarding of project tenders from funders. Although corruption and poor leadership have remained a crisis in the South African construction industry, other leadership values such as honesty and good morals have been lacking in the vast number of leaders in the South African Leadership in the construction industry is highly regarded as the main ingredient which makes a construction project succeed, one’s leadership traits and characteristics are very vital in the success of a construction project. Today, thousands of Rands, if not millions, are invested in leadership; most construction companies are paying close attention to the need to invest in leadership courses for their project leaders, for they understand that if their projects were to succeed, good leadership must be in place. Several companies in the South African construction industry understand the need to invest in leadership training. Their goal is to ensure that their leaders understand what it means to be visionaries who can collaborate effectively with their project team members or subordinates.

Collaboration plays a crucial role in ensuring that all team members working on a construction project work together cohesively to achieve a common goal. The study of Xiong (2008) even suggested that project success is dependent on the type of project leaders involved. Other studies by Lipadzi (2015) were also quick to highlight that all transformational factors such as intellectual stimulation, charisma, and inspirational motivation are essential in a project; but Xiong (2008) further informed that transactional elements, which are management-by-exception, active and passiveness as well as a contingent reward were of great importance for the effectiveness of any leadership. Other suggestions on leadership styles from the literature surveyed also indicated that good leaders in the construction industry should also possess other special skills like idealised attributes, idealised behaviour, and intellectual stimulation.

### **2.6.1 Transactional Leadership**

Transactional leadership is one of the leadership styles that have been widely adopted in the project management industry and the construction industry. Literature to date has indicated that transactional leadership underlies most leadership models, which focus on exchanges between leaders and followers. Transactional leadership is widely regarded as an extrinsic-based motivation process by which leaders achieve their goals while followers receive external rewards for job performance. This type of leadership is also common in most project management industries in South Africa. An example of this type of leadership is the manager who offers rewards, such as time off, extra pay, or promotions, for workers who surpass their weekly or monthly goals on a specific project. Transactional leadership behaviours include contingent personal reward, personal recognition, interactive goal setting, and contingent material reward.

### **2.6.2 Charismatic Leadership**

Charismatic leadership is a form of leadership style in which the project leader or manager ignites energy and passion in their subordinates on a project they will be working on. In this leadership style, the manager adopts the role of a mentor or coach who inspires his subordinates to work as a team with excellent cooperation and collaboration. The division of labour and tasks in this leadership style is equally distributed, increasing the followers' energy and commitment while producing results above and beyond the call of duty. These effects have a higher probability of occurrence in stressful environments and situations where followers look to leaders to deliver them from their difficulties. Generally, charismatic leadership works because it creates congruence between followers and their values and the organization's values and culture. However, its application in the construction industry has not been widely accepted as some critics indicated that leaders who are too charismatic may tend to be motivators and may not get much work done when there is no motivation.

### **2.6.3 Transformational Leadership**

Transformational leadership is also regarded as a form of leadership style or a motivation process in which leaders engage followers to create a connection that raises effort and moral aspiration. Transformational leaders are attentive to all the details. They pay close attention to the needs and motives of their followers and help inspire them to develop into leaders like themselves. This leadership style produces trust and satisfaction and working for a transformational leader can be a wonderful and uplifting experience.

### **2.6.4 Democratic Leadership**

The democratic leadership style is widely regarded as a style that allows leaders to provide clear direction while allowing their subordinates to make their own decisions in the project. Leaders who use this style usually encourage their team members to determine their own

goals and procedures while allowing them the freedom to self-lead and have self-direction. In addition, the democratic leader offers suggestions and reinforces members' ideas. Finally, the democratic style supports the teamwork method and always coaches and leads staff to achieve the organizational goals.

#### **2.6.5 Laissez-faire Leadership**

According to Boonyachai, this leadership style allows the group to develop its own decisions, as the leader has no absolute authority. Specifically, the leader answers questions, provide information or reinforces the group. As a result, the subordinates of Laissez-Faire leaders must seek other sources to support them in making final decisions.

#### **2.6.6 Authoritarian Leadership**

Authoritarian leaders are forceful and demand their followers to follow their instructions all the time. The type of leaders who follow this leadership style is widely regarded as autocratic and undemocratic in their leadership style. This leadership style is the opposite of Laissez-Faire leadership, and Democratic leadership and managers who adopt this style provide clear expectations for what needs to be done, when it should be done, and how it should be done to their followers. There is also a clear divide between the leader and the followers. According to Lipadzi (2015), Authoritarian leaders always set a clear agenda and determine the group's policies and assign tasks to members. In some instances, they make decisions for the group without consulting subordinates. In the end, the leader takes responsibility for the group's progress but accepts very few suggestions from the group. Rarely do the group members communicate with one another, but they communicate with the leader. This leadership style is not typical in the construction industry as most projects done in the construction industry require all workers to work as a team and collaborate on many projects to make the overall project a success.

### **2.7 Leadership Theories**

The study of Xiong (2008) identified leadership theories as frameworks that can be used in the construction industry to guide construction work. In this study, Xiong (2008) highlighted three different categories in which leadership can be grouped. Xiong (2008) outlined these three different categories: situational, behavioural approach, and trait-based theories of leadership. The study of Xiong (2008) argues that the above categories are the ideal traditional ways to help managers or leaders to understand leadership. The study further mentioned that the relationship between these three leadership approaches is fundamental to leadership in the construction industry, as outlined in figure 2.1 below.

#### **2.7.1 Trait approach**

Trait theories are leadership perspectives that focus on individual leaders and attempt to determine the personal characteristics that great leaders share. These are all traits that



someone can learn to implement with practice over time. The character traits associated with leadership are identified as the following:

*Knowledge:* Effective leaders have a high level of knowledge about their industries, companies, and technical matters. Leaders must have the intelligence to interpret vast quantities of information. In addition to the traits mentioned above, other characteristics significantly influence leadership, including being forward-looking, competent, inspiring, and intelligent (Xion,2008).

*Leadership Motivation:* Great leaders have an enterprising spirit, but they also want to lead. They have a strong desire for power, preferring to be in the position of leadership rather than that of a follower.

*Enterprising Spirit:* Enterprising spirit refers to characteristics that reflect a high level of effort. It includes increased demand for achievement, constant striving for improvement, ambition, energy, tenacity, and initiative.

*Self-confidence:* Self-confidence is essential for several reasons. The leadership role is challenging, and setbacks are inevitable. Self-confidence allows a leader to overcome obstacles, make decisions despite uncertainty, and instil confidence in others (Xiong,2008).

*Loyalty:* Leaders who demonstrate loyalty and honesty and admit to mistakes display key traits that followers look for in their leaders. A leader will also increase their influence when people trust and believe their loyalty.

*Integrity:* Integrity is measured by an individual's actions and words. People who do not perform and do not execute what they promised are not considered good leaders.

### **2.7.2 Behavioural approach**

Behavioural leadership theories do not focus on inborn traits or capabilities; rather, they focus on what leaders do (Lipadzi,2015). Three general categories of leadership behaviours are mentioned frequently in the literature: behaviours related to task performance, behaviours related to group maintenance, and behaviours related to employee participation in decision-making (Xiong,2008).

*Participation in Decision-Making:* This behaviour appears during making decisions, in which leaders can range from autocratic to democratic. Autocratic leadership is a form of leadership in which the leader makes decisions on their own and then announces those decisions to the group; democratic leadership is a form of leadership in which the leader solicits input from subordinates. Studies of how the leader's behaviour influences employee attitudes and performance have focused on autocratic versus democratic decision styles or performance versus maintenance-oriented behaviours (Xiong,2008; Lipadzi,2015).

*Task Performance Behaviours:* Task performance behaviours are the leader's efforts to ensure that the teams or organizations reach their goals. Those behaviours include focusing on work efficiency, quality and accuracy, quantity of output, and adherence to regulations.

*Group Maintenance Behaviours:* These actions are taken to ensure the satisfaction of group members, develop and maintain harmonious work relationships, and preserve the social stability of the group, focusing on people's feelings and comfort, appreciation, and stress reduction.

### **2.7.3 Situational approaches to leadership**

Situational theories distinguish leaders from others through the situation at hand. Leaders adjust their decision-making, orientation, and motivational approaches based on unique factors in their situations. These factors include characteristics of followers, types of projects; organizational structures; personal preferences; and upper-level management's influences. As a result, leaders adjust their management style to accommodate the different situations (Xiong,2008; Lipadzi,2015).

## **2.8 Challenges in Leadership in Construction**

Literature to date in project management in the construction in Cconstructionn industry pinpoints some quite significant gaps in the subject matter. Authors like Keegan and Hartog (2004) and Chan and Chan (2005) have all cited that research on leadership in the construction industry is inconclusive and requires close examination. Over the years, great strides have been undertaken by several authors in efforts to address this gap. For instance, the study of Toor and Ofori (2008b) did provide a chronological development of leadership in the construction industry by highlighting several key milestone achievements from the 80s to the late 90s right up to the mid-2000s. In their argument, Toor and Ofori (2008b) highlighted that through these developmental phases, the concept of leadership in the construction industry became known to be what it is to date.

However, in most developing countries and emerging markets like South Africa, the subject remains murky and difficult to understand. In South Africa and other countries in the Southern Africa region, including other Sub-Saharan Africa regions, the issue of leadership in the construction industry remains insufficient as most studies have presented only focused on leadership styles (Lipadzi,2015). There is pervasive literature in the field that talks about leadership styles in the construction industry, but none addresses the leadership skills necessary for successful project completion within the construction industry. As a result, many construction projects fail to complete on time due to poor leadership skills and lousy management. In addition, most projects have failed to meet basic minimum quality standards in worst-case scenarios due to corruption and bad governance. The tendering process and

the awarding of these tenders have also played a significant part in the type of leadership that has been involved in the awarding process.

All the above factors and many others have significantly caused more harm than good because many projects go unaccounted for. Lack of accountability and failure to address some of these challenges have contributed to many financial woes and wastage of other precious resources. On the other hand, literature dating back more than 15 years ago, points out that most research projects completed on leadership in the construction industry mainly focused on transformational leadership styles, cultural issues as well as power issues, as echoed by the studies of Chan and Chan (2005), Liu and Fang (2006) and Toor and Ogunlana (2008). These studies suggest that leadership development, leader emotional intelligence, and reflections on leadership traits, behaviours, and styles are still quite common in the construction industry. The study of Wong et al. (2007) bemoans that transformational leadership is the central leadership style common to the construction industry, but very few studies talk about the leadership skills required to complete a project successfully. Interestingly, the study of Limsila and Ogunlana (2008) discovered that transformational leadership is popular than the laissez-faire and transactional leadership styles because it tends to produce high volumetric results with little wastage of high-quality work with creative problem-solving subordinates.

In addition to scant studies on leadership in the construction industry in developing countries and emerging markets, the actual depth and variety of reflections on leadership in the construction industry are still under the microscope. They have come under heavy criticism over the past few years. For instance, Dulaimi and Langford (1999) berated that few studies available tend to only focus on the personal characteristics of project managers and motivational factors that impact project success even though new studies are now emerging pointing out that leadership is broad, multidimensional, and multi-level. Interestingly, Toor and Ofori (2008b) opined that empirical studies on leadership have increased within the construction industry in the last few decades. However, Toor and Ofori (2008b) have criticised these studies for their lack of depth in methodology and analysis as they only tend to focus on quantitative methodology with a key focus on the behavioural dimension of leadership instead of using certain new concepts such as authentic leadership, servant leadership, and ethical leadership.

These gaps and challenges can be attributed to relatively low research work on leadership in the construction industry because most studies on leadership in the construction industry tended to focus on big organisations and their project management from a financial point of view without highlighting the need or importance of leadership and the skills required in a good leader to complete a project successfully. Another reason for low research on

leadership in the construction industry is also attributed to the lack of in-depth knowledge of the field by social scientists who undertake these studies (Lipadzi,2015).

Most social scientists who have committed to undertaking research studies on leadership in the construction industry have very little to no actual knowledge about the field and how it operates. Furthermore, their lack of in-depth knowledge and education about the area contributes significantly to the scant research on the subject matter. Finally, most researchers and scientists who commit to studying leadership in the construction industry are from poor and developing countries with very little scientific knowledge on how to conduct credible research with meaningful findings. These inconsistencies further cause poor research to be developed, lacking the scientific rigour and credibility (Lipadzi,2015).

In South Africa, research on construction leadership has been improving slowly. Most scientists and researchers interested in the field have gradually improved the quality of research outcomes by offering adequate funding and training to complete scientific projects with good results. Through the National Research Foundation (NRF), South African researchers have increased research grants and funding for such studies on leadership in the construction industry. The National Research Foundation's key primary objectives are two-fold, to advance research and throughput in civil engineering and construction engineering by 2030 (Lipadzi,2015).

The research foundation has committed itself to sponsor and funding projects that promote infrastructural growth and employment creation. Secondly, the National Research Foundation has also been mandated to increase institutional research partnerships and collaborations to broaden the research on leadership in the construction industry by developing high-impact journals focusing on leadership in construction.

## **2.9 Project Managers vs Functional Managers**

Many studies related to project management concentrate on the success and failure factors of projects, too often to the exclusion of leadership and its role in the execution (Neuhauser, 2007:21). The project manager's role is constantly underplayed, and little reference is made to the importance of a project leader in the literature covering project management, almost excluding the project leader as a success factor in project execution. Conclusion: there is a need to consider the traits that may be necessary for a project leader as an important variable in delivering a successful project (Turner & Muller, 2005, 490). The concept of leadership as a discrete

The process is undoubtedly attractive to many people, not least those who might think that they have the required characteristics. Therefore, leadership should be identified as closely related but not identical to management though these are erroneously interchanged as if they are synonyms.

Too often, leadership is confused with management, specifically with project leadership, which is distinctly different from project management (Young & Dulewics, 2008, 18). A project manager's role is more challenging than that of a typical functional manager; in addition to working across operational and organizational environments, which are traditionally designed to support active managers, the project manager has other challenges such as providing leadership without documented support, formal authority and working in matrix organizations where the unity of command is an issue (Anantatmula, 2010: 14). The differences between leadership and management are clearly stated in the table below.

**Table 2.9.1 Key aspects of leadership and management**

<b>Leadership</b>	<b>Management</b>
Setting a direction	Planning and budgeting
Aligning people	Organization and staffing
Motivating	Controlling and problem-solving
Mastery of the context	Control of the environment

**Source: Young and Dulewics (2008: 18)**

## **2.10 Summary and Conclusion**

Since the above gaps and challenges help us understand the actual image of the current state of events in the field, it is sufficient to say that more studies are being developed involving the form of leadership in construction. Furthermore, most studies are being developed pointing to the type of barriers involved and how these barriers can be mitigated. This brings us to the end of this literature review chapter, which aims to present the facts and evidence from the field on the current subject of leadership in the construction industry and how leadership skills can impact project success.

As more studies on leadership in the construction industry are being developed, more and more studies are beginning to emerge in the developing world. Many of these studies focus on various frameworks and interventions critical to the further development of the field in developing nations. With its several skills, the authentic leadership style seems too good to be realistic as most scientists and researchers from the area are still stuck in the transformational leadership style. Authentic leadership and its various attributes promote the dedication and tenacity needed to manage construction projects successfully. It argues that

human relations matter and doing things from the “heart” is vital as various views and opinions of all project stakeholders must be considered from all angles in all projects. Literature shows that authentic leadership produces good results and attributes needed in a construction project within a developing world context. Literature has also indicated that authentic leaders and their followers can make a significant difference critical to the construction industry in South Africa and other African countries, not excluding other countries from the developing and emerging worlds.

This chapter has broadened our horizons and perspective on leadership in the construction industry, and it points to a detailed data collection and investigation, which follows in the next chapter, chapter three. The next chapter, which is chapter three, talks about the research methodology and various philosophies underpinning the study. Finally, it elaborates on the sampling and data collection methods adopted for the research and the reasons to justify the choices made on the data collection instruments.

## **CHAPTER 3**

### **CONSTRUCTION SITE AND LEADERSHIP STYLES**

#### **3.1 Introduction**

This chapter explains the construction site and the nature of the job-quality specifications and technical expectations of construction site personnel. In addition, it provides a different understanding of leadership in construction project management without deserting relevant leadership styles.

#### **3.2 Construction Site Management**

##### **3.2.1 Construction sites**

Construction sites are the mainstay of any construction project. It is where all the planned construction activities are to be carried out. It showcases a mapped land area designated for specific construction activities (Clough, 2017). Checking construction site exercises is a basic worry to most partners (proprietors, workers for hire, designers, engineers, providers, and so on) in a construction project. Fruitful activities are regularly dictated by the degree of familiarity with project status or work task execution. Accordingly, data has an inborn incentive for continuous or close to the ongoing dynamic of project management activities (Bennett, 2013). Great asset acquisition and asset distribution of labour force, material, and hardware come into play when the place of work conditions can be productively and adequately evaluated. Semi-or robotized advancements in the information assortment and evaluation cycle can help settle on quick and certain choices in any construction site programme (Levy, 2017).

##### **3.2.2 Construction hazards and accidents**

Appraisal of work-related hazards just as an affirmation of work-related wellbeing at a construction site is a critical inquiry to be investigated. It has been assessed that each third work-related casualty or injury happens at a construction site. Additionally, in contrast with different spaces of financial exercises, many more infringements of administrative establishments on wellbeing and security are enrolled in the construction area (Naujalis 2019; Mitropoulos & Memarian 2012). To a great extent, logical and lawful writing centres around answers for various issues relating to well-being and security at work. Mitropoulos and Memarian (2012) accentuate collaboration as the necessary procedure for accident counteraction in construction teams. Inyang et al. (2012) break down ergonomic parts of labourers executing everyday construction undertakings. Silva and Jacinto (2012) break down the work-related accident designs and propose the procedures for further developing security. It is underscored that more examinations ought to be attempted to uncover choices for further developing schooling and preparing adequacy of construction labourers in the space of wellbeing and security (Tartilas 2018; Choudhry 2012). By and large, accidents at

construction sites could be qualified as deformities of the wellbeing and security of the executives' framework, which happen because of various viewpoints, including specialized, innovative, authoritative, and different kinds of elements (De'jus 2007, 2011). Such different standards parts of hazard and security in construction or reconstruction works have been broken down by Bitarafan et al. (2012) and Fouladgar et al. (2012). Plus, any undesirable construction occasion is typically identified with wellbeing and security arrangements set up in innovative work cards of the construction innovation project.

As a rule, there are two principal purposes for dangerous conduct at work: (1) deficient data respecting wellbeing ('I don't have the foggiest idea') and (2) reckless disposition towards security ('I couldn't care less'). Therefore, the number of accidents at work might be decreased with the expanded well-being and security consciousness of representatives, for example, with the assistance of preparation (Teo et al. 2015; Yang, Ju 2012). Major reasons that lessen work-related security in the construction area are, above all else, identified with the mentality of labourers and unseemly conduct, trailed by relative or assumed absence of assets, improper gear that neglects to correspond to wellbeing and wellbeing prerequisites, ill-suited construction the executives model and decision of insufficient subcontractors (Liaudanskiene et al. 2010).

Well-being and security ought to be observed in a lot stricter way; all construction labourers ought to be told about the work environment related work-related hazards and results consistently. Indeed, even before construction works start, labourers ought to be told about the current circumstance and potential hazards (Stankiuviene et al. 2008). Following the appropriate administrative authorizations on work-related well-being and security, construction labourers coordinate formal preparation. The course includes preparing and certificate on work-related well-being and safety, specifically, understudies of higher and progressed professional instruction and preparing schools on occupational well-being and well-being necessities in understanding their strengths and occupation. Considering the consideration given by the public authority on work-related security, construction labourers ought to be very much prepared for work-related wellbeing issues. Thus, the developing number of accidents at work recommends the failure of preparation rather than its deficiency (De'jus 2007).

A few nations urge labourers to partake in an assortment of preparing programs. Various techniques exist for work-related well-being preparing/learning (Xie et al. 2012): perusing (use of text, graphs, and figures); paying attention to live talks on work-related wellbeing; watching video accounts worried about the affirmation of modern security, and partaking in distance learning classes (which are turning out to be particularly compelling these days).

To imbibe a more vivid understanding, Wojcik (2013) provides an overview embraced in Kentucky (USA) which exhibited the significance of reproduction practices in small



construction organizations with under ten specialists, mirroring injuries that can happen at a construction site (Wojcik 2013). Account reproductions are reality-based activities that permit encountering a specific circumstance. Members need to react to inquiries regarding the course of occasions or likely explanations and impacts. This technique is more potent than educational instructing as it requires quick reaction and an appropriate arrangement. Recreations are fit for changing human conduct considerably more adequately than the pedantic teaching of a similar material

Hung et al. (2013) investigated preparing needs through interviews among subcontractors and proposed the requirement for casual Jobsite well-being to supplement what had been covered during the formalized security preparation. In the synopsis, the previously mentioned insight presents the need to expand the effectiveness of preparing. Upgrades to well-being and security preparation of construction experts ought to consider the substance of explicit organising programs, which ought to be centred around answers for totally sensible and extraordinarily functional undertakings. Preparing ought to be based on strategies with intuitive showing techniques, displaying of circumstances, representation procedures, including information bases and indexes of over and over-utilized answers for work-related wellbeing.

### **3.2.3 Construction health and safety**

Typically, a few mechanical cycles might happen at a construction site simultaneously, covering hazard zones where accidents might happen because of various working machines (De'jus 2009). Innovative work cards are intended to convey independent functions as construction processes vary as far as innovation, intricacy of wellbeing and security arrangements, and above all? Hazard effects specialists at a site just as particulars identified with the set-up of work environments. Subsequently, answers for occupational wellbeing are arranged independently for every work environment or field of work, while for one more area of work, the planned arrangements could be changed by thinking about explicit contrasts of a work environment (De'jus 2011). Executing precise arrangements at a genuine construction site might rely on how they are introduced. It is ideal to follow the 3S standard (De'jus 2009), which recommends portraying answers for occupational wellbeing on the construction site plan, in the segment of a specific work environment, just as on the third drawing, which gives a component or part of a specialized security measure to be mounted or utilized or the view from the opposite side. As far as mechanical work cards, understandability may be viewed as one of the value appraisal models.

Examinations of accidents uncovered that in all cases, the correct answers for occupational security were not ready in construction innovation projects (or the tasks were not planned by any means), even though utilization of such arrangements during the executives and conveyance of channel exhuming works would have made authoritative preconditions that

would have permitted keeping away from accidents and altogether lessening the hazard levels (Ogunde et al., 2017). In such cases, the security of channel inclines is guaranteed without extra boxing or shoring gear as slants are adequately shallow, and the cavern in hazard is disposed of by eliminating the dirt for safety's sake close to the channel at the underlying phase of unearthing. Thus, the plan and utilization of such a somewhat straightforward arrangement (which could be effectively and thoroughly portrayed) can ensure safe channel activity and avoid circumstances when a channel collapses or labourers get caught under the soil (Bennett, 2013).

In like manner, standards for systemising possible arrangements and choosing the ideal one are proposed and portrayed by researchers. For example, in Zavadskas et al. (2016), innovative construction processes are assembled into more point-by-point classes. In this way, should answers for occupational wellbeing be ready for every techno-coherent interaction and all construction-site related hazards, the quantity of run of the mill arrangements may add up to a moderately enormous set. Such answers for occupational security appear to be the same as a standard arrangement of task arrangements, which fills in as the take-off point for correlation and evaluation of all undertaking choices (Toole, 2012). Accordingly, Multiple Criteria Decision Making (MCDM) methods could likewise be effectively utilized when arranging answers for occupational security. In genuine cases, the previously mentioned set of arrangements might be restricted through the decrease of the number of mechanical cycles (as not all construction sites include the whole sequence of innovative cycles), this way limiting the number of related hazards as proposed in Annex 5 of the Instructions on Health and Safety at Construction Sites (2000), for example zeroing in all preventive means on five hazards; falls, struck by constructions or items, trapped in or between systems, collapse and electric shock; which relates to ends (De'jus 2009) on ID of conceivable openness to hazard.

Even with previously mentioned restrictions, the quantity of arrangements remains impressively enormous. Every construction site (Dejus & Antucheviciene, 2013), like every work environment, includes distinctive construction cycles and factors, just as various innovations are needed to play out similar errands (Toole, 2012). For instance, working environments can be situated at multiple statures and profundities; extent of work might fluctuate; hydrogeological and meteorological work conditions might be disparate; diverse narrowing materials and building or primary arrangements can be utilized; just as chances of workers for hire to use as vast and changed munitions stockpile of specialized security measures (Kines et al., 2010).

### **3.3 Nature of Job Specifications**

This section considers the job specification of personnel in construction project work. First, it should be noted that there is many personnel involved in a typical construction project work, but the must-have of all positions is the construction site manager (Kwak, 2011; Levy, 2017).

#### **3.3.1 Construction site manager**

Construction managers are responsible for the practical management and planning of every stage of a construction project. They ensure building projects are completed safely, within budget and on time. As a construction manager, you'd oversee schedules of work and delegate tasks to your team to ensure that each phase of a build goes to plan (Kwak, 2011). It is, however, required to ask how to become a construction manager. There are several routes to becoming a construction manager in response to this. It can be through gaining the qualifications needed to start a career path by doing a university course or an apprenticeship. It is also essential to explore these routes to becoming a construction manager to find out which is the right one for an individual. Although some of these options have specific qualification requirements, many employers are more interested in people who are enthusiastic, willing to learn and can follow instructions (Akande et al., 2018).

#### **3.3.2 Role of a construction manager**

According to various scholars, a construction manager is responsible for overseeing all the construction project logistics (Seymour & Hussein, 2014). Duties may include creating work schedules for your team and allocating responsibilities. A construction manager might also be required to conduct site visits and report to senior managers on project progress (Ogunde et al., 2017).

In specific terms, Seymour and Hussein (2014) state that the role of a construction manager involves the following duties:

- Overseeing the logistical requirements of a project
- Delegating work to colleagues within your team
- Meeting regularly with clients, third parties and other managers to report on progress
- Setting targets, objectives, and responsibilities for all supervised staff
- Regularly reviewing timings, budget, labour, risk, and project plans to ensure work stays on track
- Setting and agreeing on budgets
- Conducting site visits to inspect work, check materials and ensure staff are following health and safety guidelines
- Dealing with contracts and mitigating the impact of any issues
- Ensuring the delivery of high-quality work within contract timescales
- Working in an office and on a construction site.

### **3.4 Leadership in Construction Project**

Bass (1990) characterized leadership as "a communication between two or, on the other hand, more individuals of a bunch. That frequently includes organizing or rebuilding the circumstance and the insights and assumptions for the individual.

Leadership is significant in all fields of human undertaking (Teizer et al., 2017). However, elements of the construction cycle and construction projects render leadership much more fundamental. Construction projects are costly and requesting, and the undertaking groups are vast and various. The process is long and includes countless discrete and interrelated errands (Odusami et al., 2013). Since built items impact long-term financial improvement in emerging nations, terrible showing on ventures can have severe ramifications for the country and its residents.

Consequently, the requirement for decisive leadership in construction is significantly more intense. Therefore, it could be contended that "powerful leadership" is one of the essential responses to the issues of the construction business, including (and maybe, particularly) issues in emerging nations (Bertelsen, 2004). To this end, more important consideration ought to be given to leadership improvement.

Leadership in certain pieces of human undertakings (like military, workforce, business, and legislative issues) has been explored, while in construction, little has been done in Cape Metropolitan (Fraser, 2010; Mawdesley et al., 2012; Mohamed, 2012). Since construction work requires collaboration, leadership ought to extraordinarily affect the exhibition of construction work. Leadership is an essential factor in successful project execution in several studies. For instance, Mohamed (2012) showed that great super-vision is the hugest variable affecting the percentage season of bricklayers. Logcher and Collins (2018) additionally commented that the impact of the executives' factors on efficiency could be critical. Nwachukwu (2016) ascribed most task disappointments as time and cost overwhelm or surrender to the absence of deliberate leader transport in the business.

Davis (2016), examining a UK government distribution on construction obtainment, revealed that of the eight fundamental explanations behind cost invades on projects, five identify with the board's plan. These are the resistance of the plan with arranging or legal prerequisites; deficient plan at the hour of going to delicate; absence of co-appointment; the uncertainty of hazard assignment; and insufficient administration control. The significance of task leadership in construction can't be over-underscored. The errand of a construction leader is to deal with the entire construction improvement process from origin to finish to meet the customer's targets. On a construction project, the venture leader might be alluded to as the task chief or undertaking coordinator, relying upon the customer's degree of power (Anne et

al., 2009). In case he is accused of entire liability regarding the determination of the expert group, the acquisition framework and worker for hire, just as setting up the upkeep program after appointing, he is alluded to as a venture chief. Then again, if he is named with not very many appointed forces, he is alluded to as the task coordinator.

Generally, on most construction projects, the draftsman (or the architect relying upon the idea of the project) assumes the part of a task chief, particularly where there is no different arrangement of one. However, a different arrangement of an undertaking chief or a task coordinator, a draftsman, a developer, a domain assessor and valuer, an amount surveyor, or an underlying specialist can be locked in (Fraser, 2010). In a couple of cases, bookkeepers, financial specialists, and legal advisors have been highlighted as task chiefs. There has been some discussion on which calling is best ready to give this administration.

The agreement is that any of the construction-related experts, that is a designer, a manufacturer, a home assessor and valuer, an amount assessor, or an underlying specialist, may make a decent undertaking supervisor gave he has a proper by and large information and experience of the business and he can lead and co-ordinate (Teizer et al., 2017). These stipulations bar the accountants, the financial analysts, and the legal advisors from the rundown since they don't have the information on the construction industry. Aside from being an individual from the construction business, Carter (2017) pinned that individual ascribes are frequently more significant than mastered abilities to be a decent undertaking administrator. He asserted that one could not rely upon his key professional discipline alone and be an esteemed undertaking administrator. The ramifications of this are that project leadership rises above individual expert discipline.

What can be gotten from all the reviews is that for any of the experts in the construction business to be a decent task chief, he wants to embrace a postgraduate course in the project the executives to compensate for whatever lacks that he may have because of his discipline.

### **3.5 Leadership Styles**

Leadership happens when one gathering part changes the inspiration and skills of others in the gathering." Chemers (1997) recommended that leadership is "a course of social impact wherein one individual can enrol the guide and backing of others in the achievement of a typical undertaking." Safety leadership in construction project management is a sub-arrangement of leadership (Pater, 2011). It very well may be characterized as "the course of association among leaders and supporters, through which leaders can apply their impact on devotees to accomplish authoritative wellbeing objectives in light of the current situation of hierarchical and individual variables" (Wu et al., 2007). Impressive examination has shown the importance of leadership to safety (Griffin and Hu, 2013; Hofmann et al., 2003; Zohar, 2002).

Leadership is wholly ensnared in the security of construction projects, and the more significant part of previous studies zeroed in on the full-range model of transformational and transactional leadership practices (Kelloway et al., 2006; Lu and Yang, 2010). Hence, transformational and transactional leadership will be considered in this study.

### **3.5.1 Transactional and transformational leadership**

Transactional leader practices are identified with observing and prize though transformational leader behaviours are coordinated towards moving and rousing the labour force (Reid et al., 2008). Transformational leadership has four classes/aspects: romanticized impact (appeal), persuasive inspiration, scholarly incitement, and individualized thought. In addition, transactional leadership contains two elements: unforeseen awards and the executives by-exemption (Avolio and Bass, 1991). Specifically, the adequacy of transformational leadership in spurring and moving workers is shown by many empirical contemplates. These examinations found that transformational leadership is identified with upgraded representative work inspiration (Shamir et al., 1993), worker fulfilment (Podsakoff et al., 1990), imaginative execution (Pieterse et al., 2010), and obligation to the association (Avolio et al., 2004). Furthermore, these attributes are firmly identified with workers' well-being, inclusion and concerns.

The transformational/transactional leadership system can be viewed as establishing the element construction of security leadership. Numerous examinations developed their particular security components, leading to more likely measures. Aspects of security leadership detailed in writing incorporate well-being inspiration, well-being motivating, well-being strategy, security concern, well-being checking, well-being learning, well-being training, security mindful, security controlling, and so on (Griffin and Hu, 2013; Lu and Yang, 2010; Wu, 2005; Wu, et al., 2007). Nonetheless, these investigations considered various parts of transformational/transactional leadership, bringing about that the recognized aspects have cosy associations with those of transformational/transactional leadership. For instance, wellbeing inspiration and security rousing have comparable implications with romanticized impact and persuasive inspiration—wellbeing mindful and security instructing cross-over with scholarly incitement. Well-being caring is identified with individual thought. Wellbeing strategy, security checking, and well-being control are firmly connected to unforeseen awards and the board by-exemption (Wu et al., 2015).

The solid anticipating force of transformational/transactional leadership to wellbeing execution has been shown in various past examinations, some of which have created security explicit build emerging from the first ones (Barling et al., 2012). In the present circumstance, well-being leadership can be viewed as transformational/transactional leadership zeroing in on security issues. This paper applies the full-range model system of

transformational and transactional leadership to clarify reasonable peculiarities and distinguish hypothetical focal topics.

## **CHAPTER 4**

### **RESEARCH METHODOLOGY**

#### **4.1 Introduction**

This chapter provides detailed information on the research methodology to be adopted for this study. This consists of the research design, population, sampling, and data instrument. In addition, the method of data collection and analysis was also established.

#### **4.2 Methodology**

The methodology adopted for this study is quantitative research methodology. This study seeks to identify the different leadership styles relevant to the construction tasks to be performed at the different phases during the project lifecycle in Cape Metropolitan and its impact on how construction project practitioners can deliver their services. Thoroughly speaking, this study aims to uncover the different leadership styles relevant to the construction tasks at various phases during the project lifecycle in Cape Metropolitan that cannot be effectively captured through any other means than ascertaining the qualitative elements involved to understand the dynamics of leadership in construction projects in Cape Metropolitan. In addition, despite the disadvantage of quantitative research methodology which is wearisome, time-consuming, and involving colossal cost, it is imperative to undertake quantitative research methodology as a whole to attain the result needed for this study as opposed to qualitative research methodology which mainly deals with subjective opinions of respondents. Suffice to say; the researcher is looking for facts, evidence, concepts, and attitudes from practitioners to aid this research, which indicates quantitative analysis, according to Coman (2016).

#### **4.3 Research Philosophy**

Research Philosophy is the philosophical viewpoint of a researcher on the component of how the world works (Novikov & Novikov, 2013). Holden and Lynch (2018) view this aspect as the general public's idea and the idea of science. A researcher can decide its good philosophical position on a review given the researcher's viewpoint of the traditional assortment of information and how it identifies with its nearby situation (Saunders, Lewis & Thornhill, 2012). Thinking about the philosophical element of the general public's idea, this review is slanted to mirror an extreme perspective on society, an inconsistent struggle to liberate itself from the shackles of homegrown maltreatment in the construction industry. On the philosophical element of science, there is an emotional and objective approach to research (Holden & Lynch, 2018). This science-put together aspect depends on a few suspicions like reality (metaphysics), epistemology, human instinct, and so on and how the expected review slants towards the collection of OK information.



Similar to the perspectives of Saunders, Lewis and Thornhill (2012), this review takes on the positivism research philosophy. They suggest positivism philosophy as an experimental strategy of social affair of data to characterize the outflow of the notion made concerning a peculiarity (Saunders, Lewis & Thornhill, 2012). From the researcher's appraisal of the review under movement, the assessment of the leadership style in the real sense of the construction industry appeals to an exploratory approach to research which is in the positivism research philosophy to give.

However, the legitimization of positivism research philosophy can't suggest its relationship with the unbiased and abstract peculiarity that centres around the emotional ramifications of homegrown maltreatment on casualties and the response of professionals directing a few projects against homegrown maltreatment in Cape Metropolitan which tries to find support for its casualties. Along these lines, positivism is praised for its approach to helping researchers comprehend get-together through evidence and express revelations. This review meets all requirements to carry out positivism Philosophy inferable from that homegrown maltreatment is an example of activities in a relationship done to oversee someone else (Kaur and Garg, 2008).

#### **4.4 Research Approach**

Moreover, the research approach appropriate to supplement the decision of positivism is the deductive research approach. The researcher is utilizing a reasoned approach to help uncover the leadership styles at the conceptual stage, selection and planning stages, resource mobilization and execution in a construction project in Cape Metropolitan and the effects on stakeholder management, evaluation, and control. Utilizing a deductive approach works on the reception of the researcher's interests to assess the setting in which project managers are evaluated in their leadership capacity, and the elements encompassing the specialist's points of view conveying help to discover the different leadership styles relevant to the construction tasks to be performed at the different phases during the project lifestyle in Cape Metropolitan

#### **4.5 Research Strategy**

Denzin and Lincoln (2018) characterize research strategy as the "systemic connection between (research) philosophy and ensuing selection of strategies to gather and break down data" (Denzin & Lincoln, 2018). Drawing experiences from the general research philosophy and the target of study, the descriptive research strategy is considered reasonable for this review. This strategy was inclined toward given its lavishness in protecting storyteller (respondents) account, which is consecutive to analysing the elements of the behaviour necessary in understanding the professionals' leadership styles encounters while engaging in construction projects in Cape Metropolitan to help breakdown the pattern of leadership in different stages of construction project management.

Given the peculiarity under study, i.e., construction projects, it very well may be seen that few elements have been featured as being answerable for construction projects, including social and strict convictions and land laws. This will generally show the idea of behaviour project practitioners at construction sites as cutting across convictions, societies, and conditions. Subsequently, the cross-sectional research design squeezes into the portrayal of this study's outline for completing this review. As VanderStoep and Johnston (2009) indicated, a cross-sectional design concentrates on various gatherings of individuals of mixed-status, age, pay level, and class to permit examination of sorts (VanderStoep & Johnston, 2009). This study is unique as it contrasts different leadership styles such as transformational, transactional, etc. Get the job done, say, this research cuts across a few gatherings of individuals of varying age, status, and experience.

#### **4.6 Research Design**

Research design is an impetus for arriving at any research study's ultimate objective (Sekaran & Bougie, 2016). This is because research design is accepted to be the arrangement, construction, and techniques taken on by a researcher to accomplish its research goals in a precise, substantial, affordable, and objective way (Kumar, 2011). Thus, with research design, it is feasible for a researcher to organize a successful arrangement to attempt the different systems and undertakings needed to finish the review and simultaneously guarantee that these methodologies are satisfactory to get legitimate, unbiased, and precise responses to the research questions. This twin interaction is ordered as the capacity to set up and control change in the research results. It should be noticed that research design stems from the rationale of leading a review, the interests of the researcher, the subjects viable, and the prerequisites needs of the result of the study.

From the perspectives of Saunders, Lewis and Thornhill (2012), an overall made research design should express the sources of producing data and recommendations on the most proficient method to get the data, process the data, and examine it. Furthermore, that and an elegantly composed research design ought to consider the ethical issues related to the review (Saunders, Lewis and Thornhill, 2012). To this end, this study finds the systemic decision of quantitative mono-technique research design appropriate for this review. Furthermore, the investigation of the elements of project practitioners' leadership style in Cape Metropolitan suggests a need for this type of strategy that subtleties the design of this study.

#### **4.7 Population and Sample Selection**

Population in research implies the chosen class of individuals or things displaying a typical element deserving of perception (Lewis, 2015). Creswell and Creswell (2018) indicated that a research population is viewed as a local area of individuals, people, gatherings, or units of interest entranced to and contemplated by the researcher (Creswell & Creswell, 2018).

Subsequently, this research will examine the issues encompassing leadership style in construction project management in Cape Metropolitan. The extent of this research is restricted to investigating leadership style in construction project management in Cape Metropolitan and examining the variables in each stage of a construction project in the Cape Metropolitan setting. The study is undertaken on project practitioners in the construction project execution in a selected organization within the Cape Metropolitan. This includes all practitioners directly in the project execution process and 500 practitioners.

Systematic random sampling methods will be utilized for this review, and 100 participants will address the sample size. This is because quantitative research like this has a large sample size (Fielding, 2012).

#### **4.8 Sources of Data**

Data sources refer to the starting place of data to be handled for a review. It alludes to the obtainment point of data that gives the consent for the assortment of data on the topic (Rutberg & Bouikidis, 2018). There are two principal data sources: primary and secondary sources. This study is dependent upon the utilization of the primary sources of data. More significantly, the study embraces essential data sources since it has crude realities that are certifiable and can push experiences into the study.

#### **4.9 Specific Methods of Data collection**

The data collection method depends on the sources of data to be gathered. Hence, as a quantitative study, the questionnaire will be the method of collecting primary data. To this end, the research instrument is a structured closed-ended and open-ended questionnaire guide. This will afford both the study participants and the researcher an easy flow of communication in a friendly manner to determine the relevant values under examination. In addition, it will boost both the naturalistic and interrogative research process needed to dig into an analytical understanding of the leadership of project practitioners in Cape Metropolitan and its impact on how practitioners can deliver their services on construction.

#### **4.10 Method of Data Analysis**

The data accumulated through the questionnaire administration will be gathered, extricated and deciphered in Statistical Package for the Social Science version 25. The coding will be based on the variables measured in the study (Creswell et al., 2007). After the coding, the researcher will then employ descriptive statistics, charts, graphs, percentages and frequency distribution to analyse the data

#### **4.11 Ethical Considerations**

There was adherence to a standard of ethics as a solicitation for authorization was made, assent was looked for, and the namelessness of respondents was profoundly treated with

secrecy close by the data traded. On that note, permission for data collection will be requested from the selected construction site, and an agreement letter will be obtained. The data will be collected with paper/hard copy questionnaires in a process that will be done face-to-face. The whole process is essential, as it will also allow interviewees to ask questions and be answered immediately.

## **CHAPTER 5**

### **DATA REPORTING, ANALYSIS, AND INTERPRETATION OF THE FINDINGS**

#### **5.1 Introduction**

This chapter uses an Excel Spreadsheet to discuss the data obtained during the fieldwork with respondents; the data was processed, edited, coded, and then recorded on the spreadsheet, from which graphics were produced. The diagrams depict the correlations between the variables as the questionnaire asked by the research tool. After clearly clarifying to the respondents that participation was voluntary, random sampling was utilized to collect the data, and ethical norms were followed. The participants' rights to human dignity, secrecy or anonymity, and the right to knowledge were all respected. The research objectives were to determine the leadership styles relevant to the tasks to be performed at the different phases during the project life cycle and to identify the critical skills needed for a project manager in the construction industry. The focus of the research is to determine, highlight, measure, and discuss the importance of critical skills for successful project execution across the project life cycle, focusing on construction projects.

#### **5.2 Reporting on the findings**

The statistician created and reviewed the data collection instrument for reliability and validity. In addition, a prototype study was carried out to revise the questionnaire, which was completed successfully before the actual fieldwork began. First, before the questionnaire was implemented, a statistician was assigned to help with the finishing details, and the specialist performed both reliability and validity testing. Following data collection, the data were categorized, processed, and analysed using the Microsoft Excel program. This was selected due to the software's availability and the fact that it is user-friendly and aids in the conversion of data into graphs, charts, and tables. The researcher's interpretation of the data and the correlations between the variables are detailed in the graphics created from this study. These graphics made it simple to contrast the variables under investigation and, as a result, to elucidate correlations. The research instrument (questionnaire) was divided into three sections:

1. Section A- the biography- information on the participants, which aided in identifying eligible individuals. This was crucial because it contributed to the validation of the research findings.
2. Section B- the Linkert scale- This measured the respondents' perspectives and attitudes on several topics. As attitudes, perceptions, and other non-quantifiable factors cannot be examined; the Likert scale was used to gauge the extent of the respondents' ideas on the variables to be assessed.

3. Section- Open-ended questions- The segment contributed to the qualitative and unstructured interaction between the researcher and the respondents. The open-ended portion encouraged respondents to express themselves openly about the issues as they saw them.

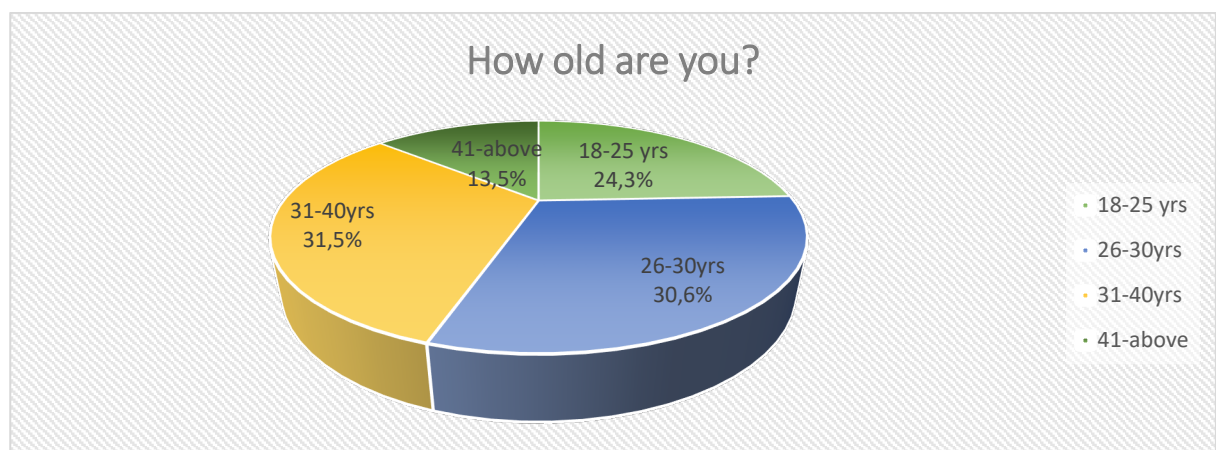
According to the sections listed above, the information in this chapter is organized in the same way as the questionnaire. Each segment had several questions presented in the order in which they appeared in the research instrument - (item by item), with results in both diagrammatical and written form. After editing and cleaning, all spoiled surveys were rejected (withdrawn), and their results were not included. The questions and answers to all the questions provided in the way described above are listed below.

### 5.2.1 Section A – Biography

The twelve (12) questions were asked, and the results are presented in the format outlined above to ensure that each question obtains the maximum level of attention.

#### Question 1: How old are you this year?

This question was posed to ascertain which age groups the Construction employees belong to. As a result, it was possible to determine how long the respondents had worked in the field and their previous experiences.



**Figure 5.2-1 The Age of the respondent.**

**SOURCE: Own construction**

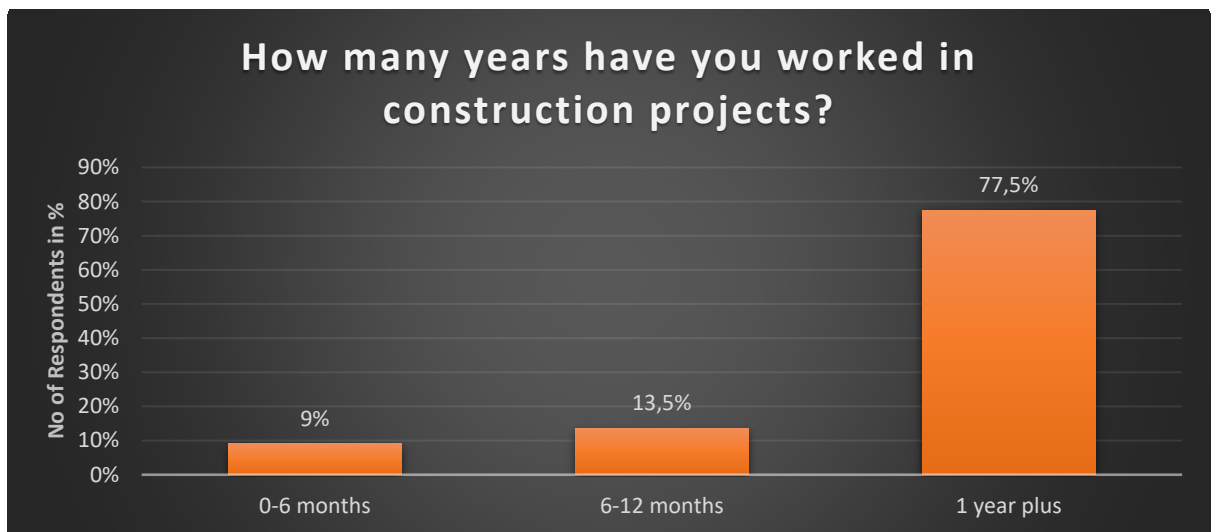
#### *Interpretation:*

24.3% of the respondents are between the ages of 18 to 25 years, 30.6% of the respondents are between the ages of 26 to 30, 31.5% of the respondents are between the ages of 31 to

40 years, and 13.5% of the respondents are between the ages of 41 and above. which clearly shows that majority of the respondents are aged between 31 to 40 years and 18 to 35 age group which gives the impression that more than 62% respondents are new to the management space.

**Question 2: How long have you worked on the construction project?**

It is considered that there is a direct link between the length of time spent in a position and an organization's overall awareness of its difficulties. Individuals who work for a company or in a specific job may recall instances to which they can react if specific questions are posed.



**Figure 5.2-2 Experience in the construction field**

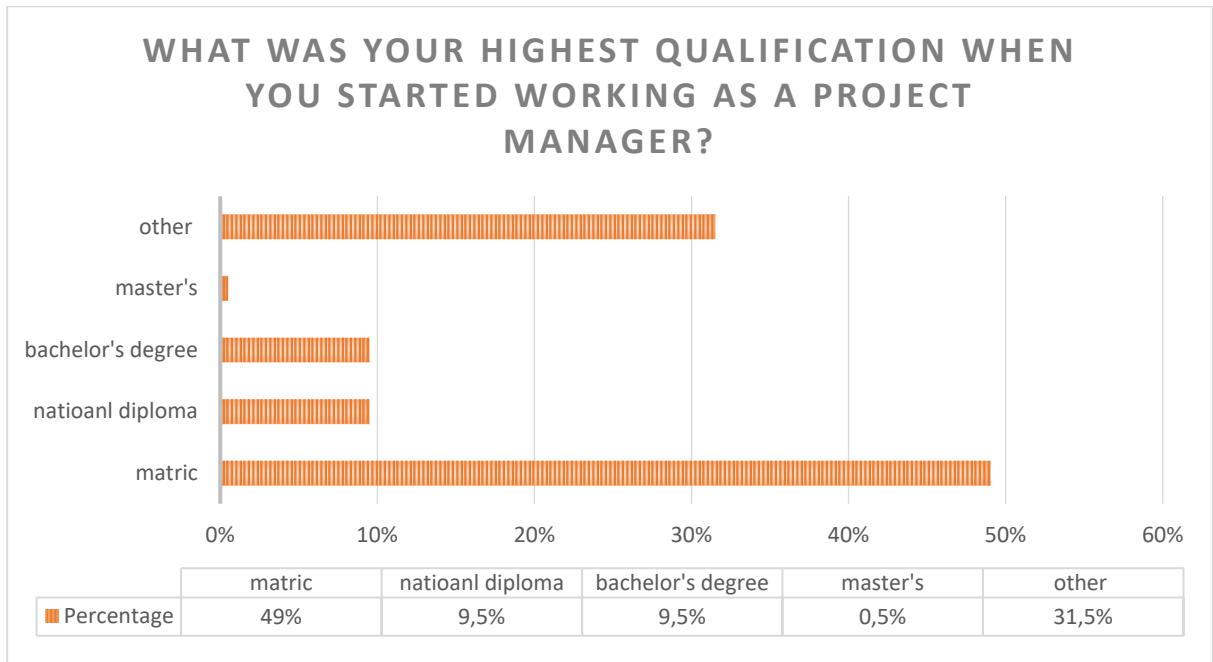
**Source: Own construction**

*Interpretation:*

Enormous 77.7% have worked for at most 1 year in the construction industry, 13.5% have worked 6 to 12 months in the construction industry, and merely 9% have worked 0 to 6 months in the construction industry. This clearly illustrates that most respondents have the necessary experience and knowledge about the construction industry.

**Question 3: What was your highest qualification when you started working as a Project Manager?**

The purpose of this question was to determine each respondent's educational level. Some of the respondents qualify themselves in some way. However, all responses must have diplomas, degrees, or doctorates to participate in the organization.



**Figure 5.2-3 Experience in the construction field**

**Source: Own construction**

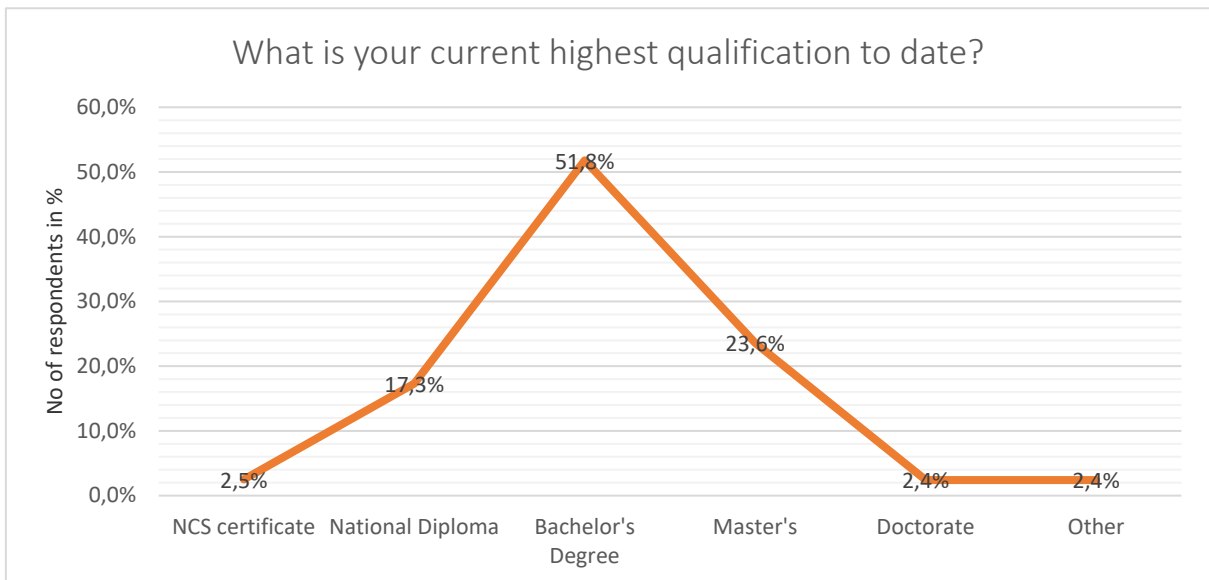
*Interpretation:*

Almost half of the respondents (49%) have matric as highest qualification, both national diplomas, and a bachelor's degree is represented by 9.5% of respondents. Shockingly, only 0.5% have a master's degree as highest qualification, and last 31% have none of those qualifications. This shows that one does not need a university qualification to be a project manager, but experience and knowledge are required.

Question 4: What is your current/highest qualification to date?

This question aimed to determine each respondent's educational level to date and if the respondents are motivated to acquire more skills to aid in project success. All responses must have diplomas, degrees, or doctorates to participate in the project.





**Figure 5.2-4 Highest Qualification to date**

**SOURCE: Own construction**

*Interpretation:*

More than 50% (51.8%) of the respondents have a bachelor's degree as a qualification, 23.6% of the respondents have a master's degree as a qualification, 17.3% have a national diploma as a qualification, 2.5% have an NCS certificate as qualification, 2.4% have Doctorate as qualification and remain 2.4% have no higher education institution qualification. This clearly shows that we are dealing with the graduate respondent, and graduates are perceived as a rational and informed group of people.

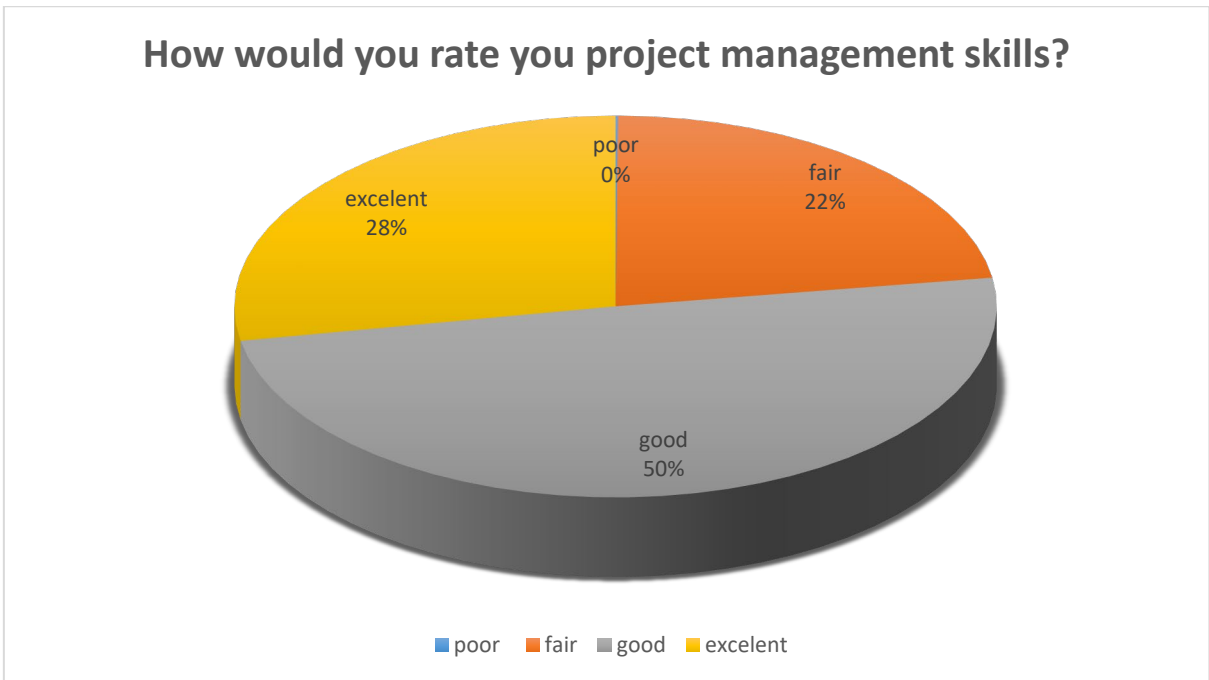
**Question 5: Please specify other qualifications you have acquired.**

This question seeks to determine what other qualifications the project managers and the project team have managed to acquire outside the university.

There were no responses to these questions, which draws us back to question Question4, where more than 50% of the respondents have bachelor's degrees. This suggests that the team has the solid qualification to aid them in reaching project success.

**Question 6: How would you rate your project management skills?**

This question encourages self-rating, of the project leader and the project team members, for self-awareness and self-critique. This question needs to be answered truthfully to identify the gap to be filled.



**Figure 5.2-5 Rating of the Project Management Skills**

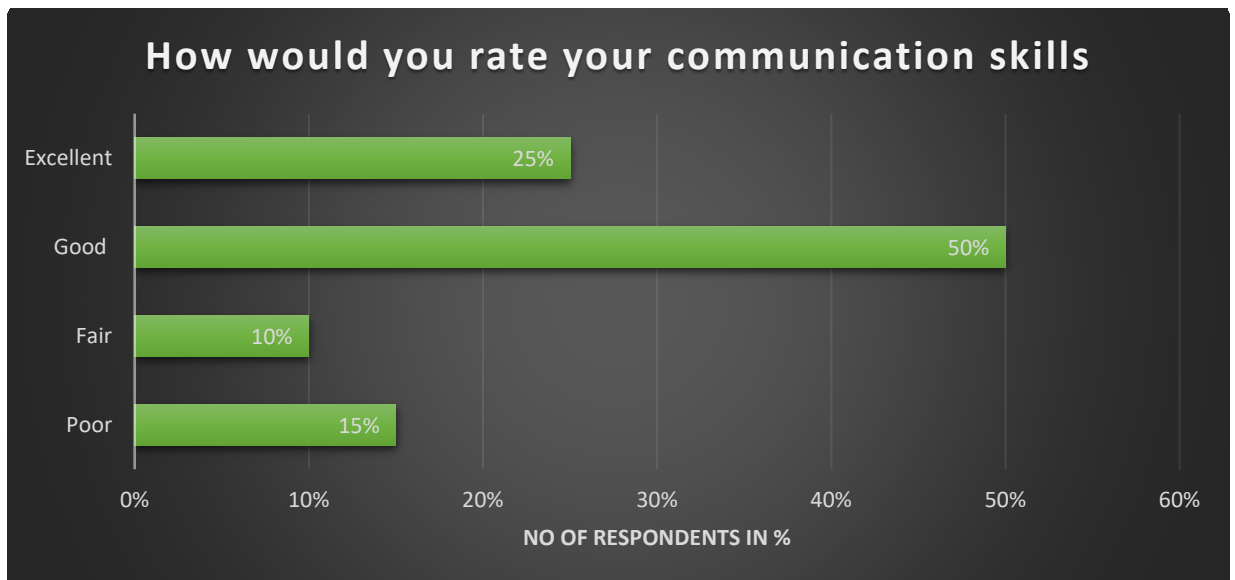
**SOURCE: Own construction**

*Interpretation:*

49.5% of the respondents think they have good project management skills, 27.9% of the respondents think they have excellent project management skills, 22.5% of the respondents believe they have fair project management skills, and 0.1% of the respondents think they have bad project management skills, which clearly show that a respondent is a confident group of people because only 0.1% believe they have bad skills in project management.

**Question 7: How would you rate your communication skills?**

The goal of this question was to get feedback on how respondents would rate their communication skills. The project team is effective if able to communicate what needs to be done and lead everyone to complete their tasks.



**Figure 5.2-6 Rating of Communication Skills**

**SOURCE:** Own construction

*Interpretation:*

**Question 8: How would you rate your conflict management skills?**

This question aimed to get feedback on how respondents would rate their conflict management skills. Any organization's communication is vital, and a lack of it or bad communication can be the sole source of low team morale. Respondents are supposed to communicate the project needs and what needs to be done to ensure project success.



**Figure 5.2-7 Rating of the Conflict Management Skills**

**SOURCE:** Own construction

*Interpretation:*

50% of the respondents rated their conflict management skills as “good” this is a reasonable yet careful response, which may not be the case. 30% of the respondents rated their conflict management as fair, indicating that there is room for improvement. As expected, 10% rated their conflict management skills as “excellent” this is highly anticipated in teams; a few seem to think they are doing a sterling job, and 10% rated the skills as poor.

**Question 9: How would you rate your leadership skills?**

The question was posed to obtain feedback on how respondents would rate their leadership skills. For example, the project team is effective if they maintain relationships with the project members and lead everyone to complete their tasks.

Any project leader should be eager to share what they know, establish a team, foster good relationships, and keep an eye out for learning opportunities for the project team to accelerate project success.



**Figure 5.2-8 Rating of Teamwork Skills**

**SOURCE: Own construction**

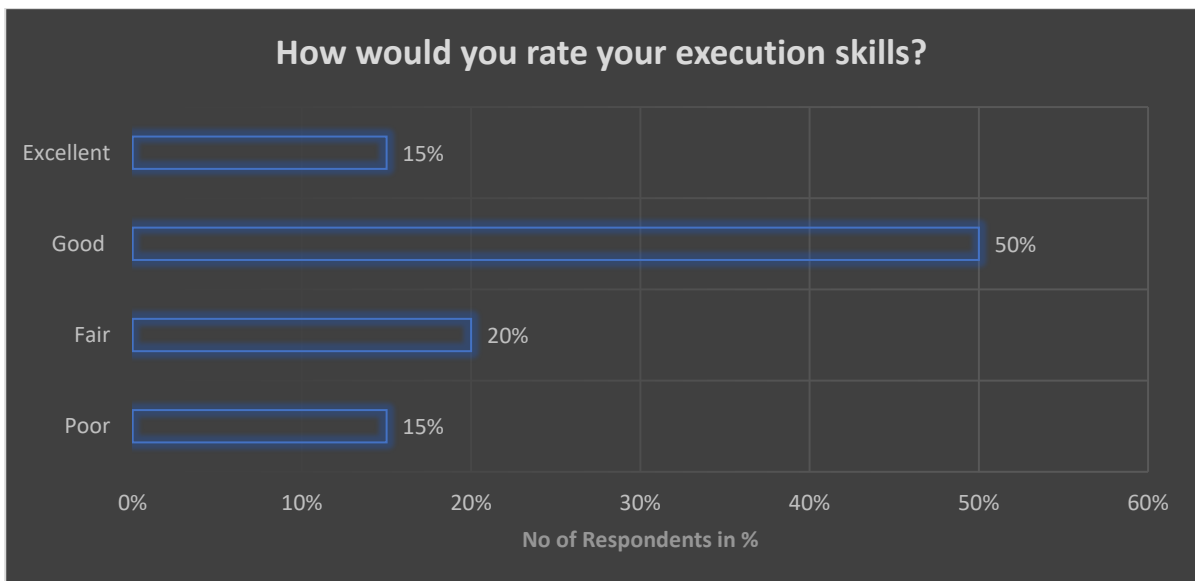
*Interpretation:*

There seem to be harmonious relations within the team as 70% of the respondents have rated their teamworking skills (30% excellent and 40 % good); this is undisputed at only 30% of the respondents rated (20% fair and 10% poor). Overall, this indicates the highly motivated team members who understand the importance of teamwork for obtaining project success in construction projects.

### Question 10: How would you rate your execution skills?

The question was posed to obtain feedback on how respondents would rate their execution skills. For example, the project team is competent if they can successfully execute a project within budget and on time.

In any work setting, the ability to complete tasks successfully is critical. This is especially true in construction projects, where large sums of money are at stake, and the ability to complete tasks on time and within budget ensures project success.



**Figure 5.2-9 Rating of the Execution Skills**

**SOURCE: Own construction**

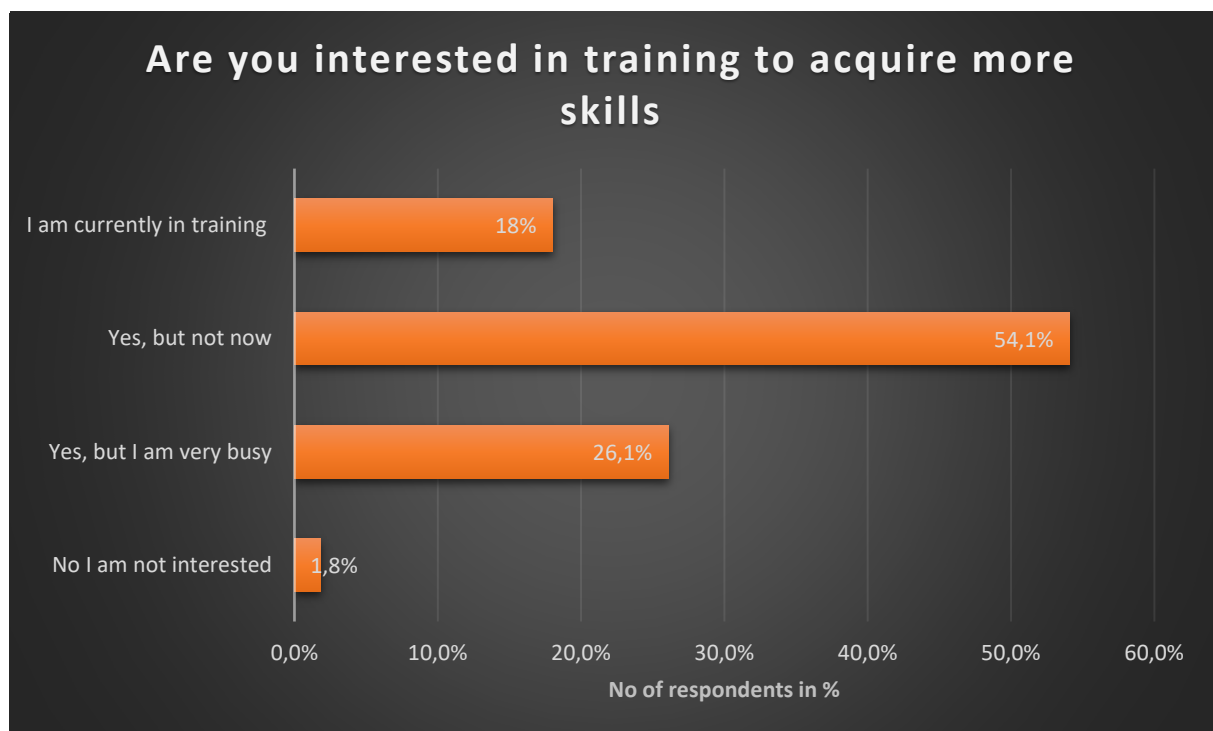
#### *Interpretation:*

50% of the population seem to believe they have good execution skills; a strikingly 15 %of the respondents deem their execution skills excellent. In short, 65% of the population firmly believes that they have adequate execution skills. While 20% of the respondents rated their skills as fair, this is now indicative that some of the team members need polishing and harnessing their skills. Only 15% of the respondents rated their skills as poor; 15% were low. However, this 15% of the respondents with poor execution skills should not be overlooked.

### Question 11: Are you interested in acquiring more skills?

This question was posed to determine if the project team is motivated to do their job explicitly well and if there is interest in acquiring more skills. In an ever-changing environment involving complicated projects like construction, it is critical for the project leader and team to

continually seek ways to improve their craft, increase their knowledge, and train their brains to manage a wide range of obstacles to achieve project success.



**Figure 5.2-10 Desire to acquire more skills**

**SOURCE: Own construction**

*Interpretation:*

54.1% are interested but not now, and 26.1% are interested but busy, that is 80.2% in total which is concerning because being interested in training and acquiring a new skill is not enough; however, that requires deliberate effort and sacrifice.

**Question 12: Mention 5-6 top critical skills (in ascending order) you think are necessary for the successful execution of construction projects.**

The key objective of this question was to find any aspects of the study that the researcher might have omitted. Many people will reveal essential study features that the researcher may have ignored. This aids in developing potential studies or recognising items that the researcher usually overlooks because scholars may place a high value on them.

**Table 5.2.1 Top Critical Skills necessary for the successful execution of construction**

No	Top Critical Skills necessary for the successful execution of construction
1.	
2.	
3.	
4.	

**SOURCE: Own construction**

Response: Surprisingly, neither of the responders offered any recommendations or remarks. The fact that the question was not answered indicates that the respondents were satisfied and that nothing had been left aside.

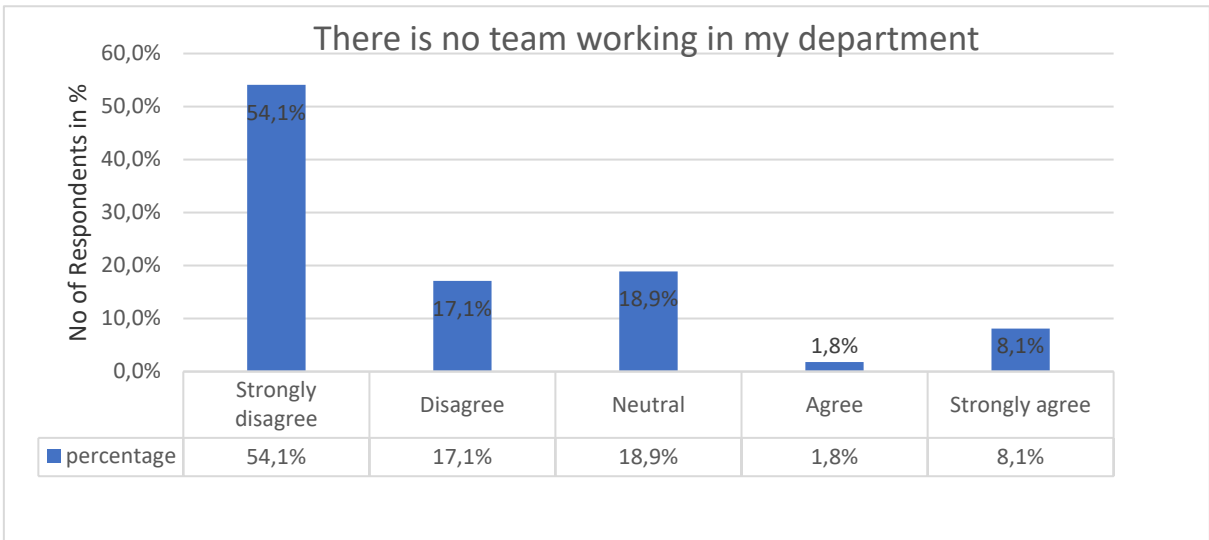
### **5.2.2 Section B Linkert Scale**

This section measures the respondent's views and opinions against specific statements deriving from the research question, problem statement, and study objectives using the Likert scale. The comments on the Likert scale were assessed on a scale of 1 to 5, with 1 indicating strong disagreement, 2 indicating disagreement, 3 indicating neutrality, 4 indicating agreement, and 5 indicating strong agreement.

The respondents were asked to rank these statements based on how they felt about their comprehension. The same strategy used in the Biographical section is employed here, with the statement appearing as it would in a questionnaire and is accompanied by an illustrated response. The comments that follow are repeated below.

#### **Statement 1: There is no team working spirit in my department.**

This statement was posed to the respondents to determine if there is a team working spirit in the construction industry. If there is no team working spirit, we need to address this poor teamwork and question them if they have any concerns and problems. A clear picture of the team's strengths and goals should be established and where they feel they can contribute.



**Figure 5.2-11 There is no teamwork in my department**

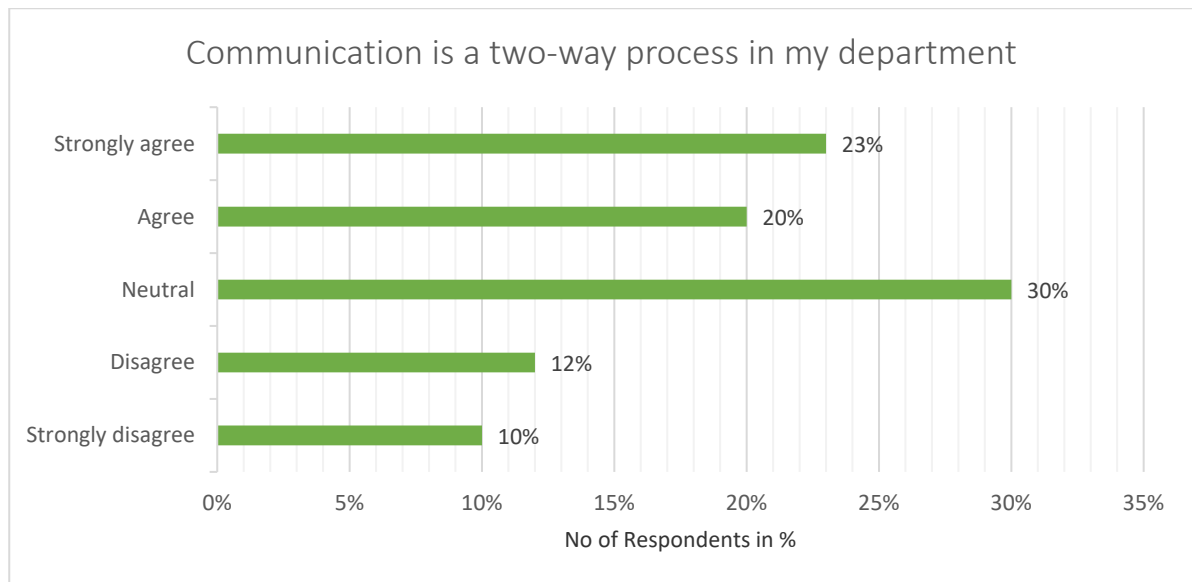
**SOURCE: Own construction**

Surprisingly, 54.1% of the respondents strongly disagree with that statement, 18.1% are unsure, 17.1% disagree, and shockingly, merely 9.9% agree with that statement, which is a negative picture of the construction industry team working spirit and clearly shows that in the construction industry a lot needs to be done regarding building team spirit.

**Statement 2: Communication is a two-way process in my department.**

Communication between two people should be a two-way path, yet instruction is interpreted as communication all too frequently. Even though it relies on what must be said, all employees engage in communication, and certain occupations indicate specific communication styles.





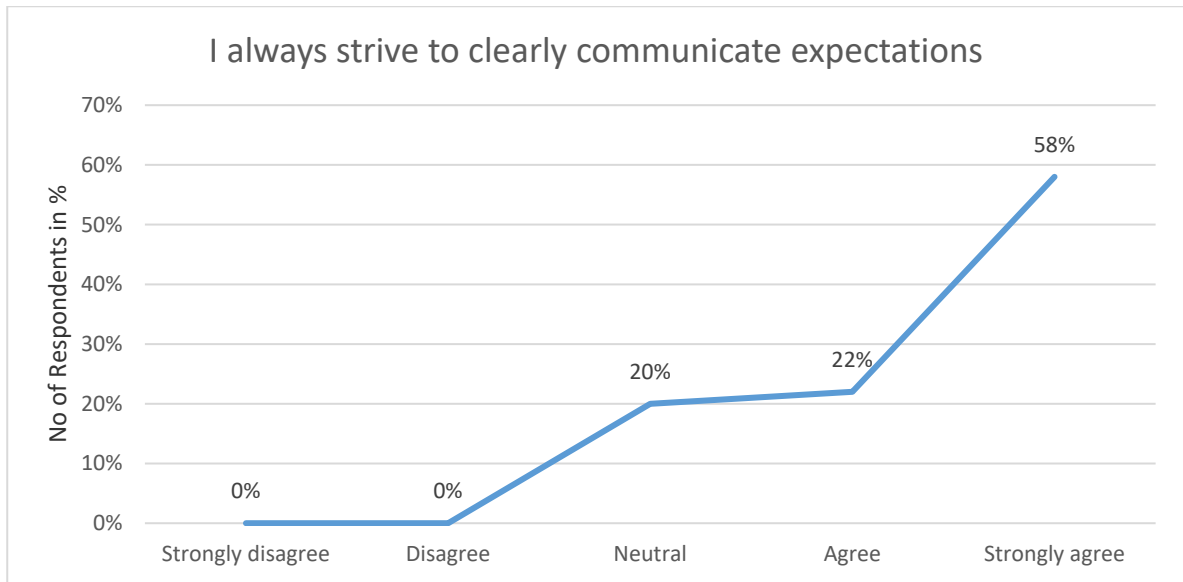
**Figure 5.2-12 Communication is a two-way process**

**SOURCE: Own construction**

43 % of the respondents believe that communication is indeed a two-way process in their department (23% strongly agree and 20% agree). Shockingly 30% of the respondents are not sure. And only 22% of the respondents seem to not be in full support of the statement (12% strongly disagree and 10%). Overall, close to 50% of the respondents seem to agree, whilst 30 of the respondents are unsure; it shows that there is still much work to get the team to understand how communication should be done.

**Statement 3: I always strive to communicate expectations.**

In a dynamic, ever-changing environment of a construction project, communication is key; clear communication is even effective; refrain from wasting time, know what needs to be done and what assistance you require from your team, then set reasonable, realistic tasks and deadlines. Being able to lay down what you want and need from the crew can align the team.



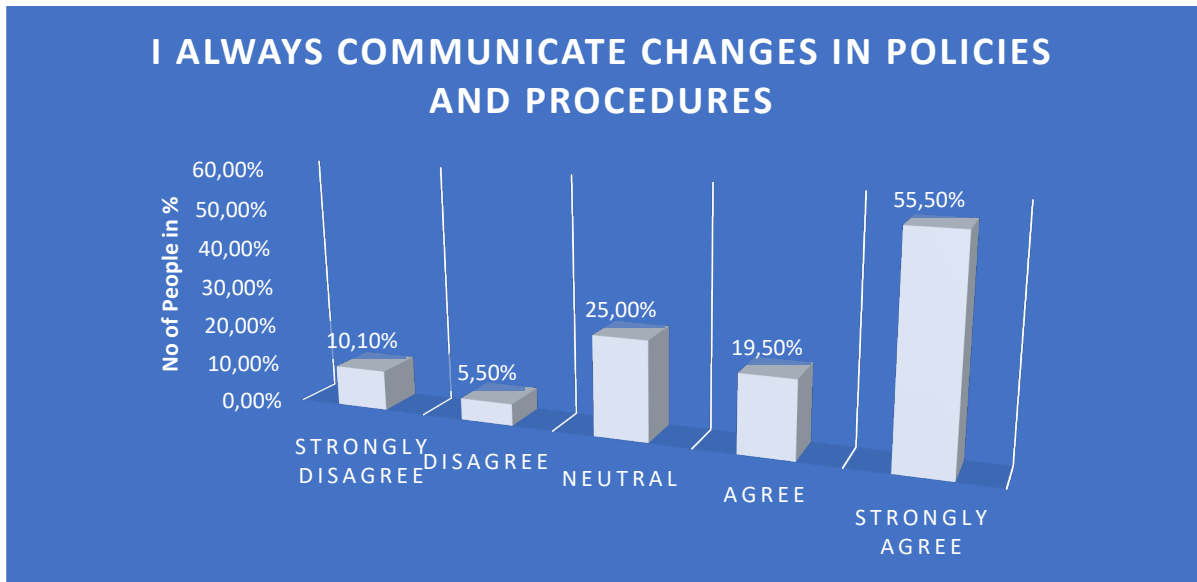
**Figure 5.2-13 Strive to communicate expectations**

**SOURCE: Own construction**

80% of the respondents strive to communicate their expectations to the team (58% strongly agree and 22% agree). However, 20% of the respondents are unsure. No respondents oppose the statement above; this indicates that the team is willing to communicate their expectations.

**Statement 4: I always communicate changes in policies and procedures.**

Ensuring your policies and procedures are effectively communicated is critical to project success. Policies and procedures change due to the ever-changing nature of construction projects. Regularly communicating your policies and procedures ascertains that your employees are informed and onboard.



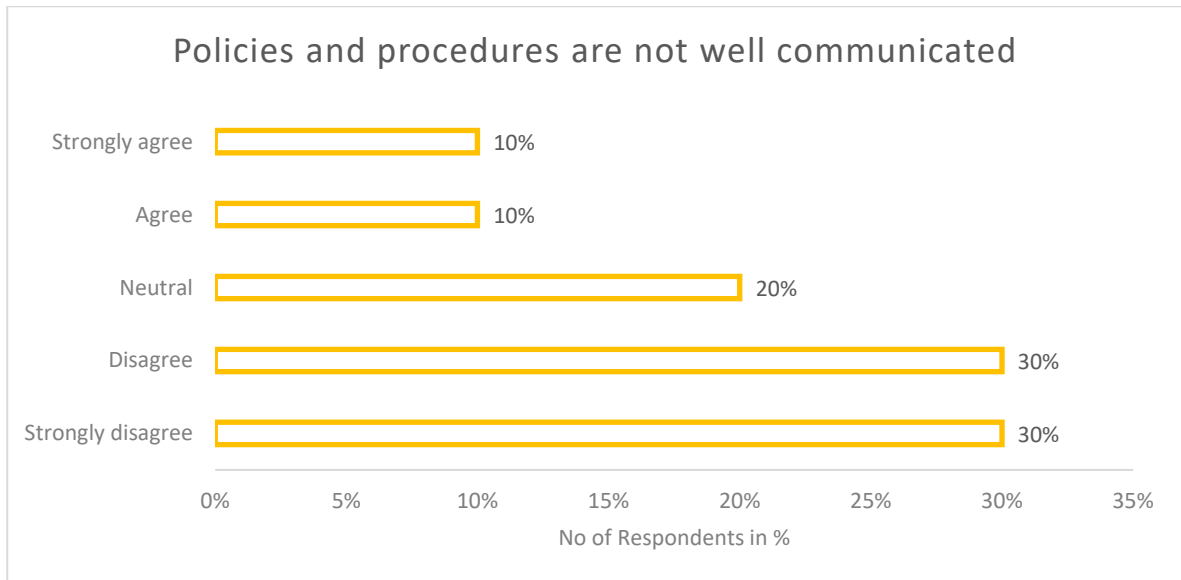
**Figure 5.2-14 Communicate changes in policies and procedures**

**SOURCE: Own construction**

75% of the respondents (55.5% strongly agree and 19.5% agree) said that they always communicate changes in policies and procedures. 25% of the respondents are not certain/undecided. 15.6% (10.1% strongly disagree and 5.5% disagree) with the statement. Communication is critical in our way of working; when changes to the governance structure occur, that needs to be communicated immediately.

**Statement 5: Policies and procedures are not well communicated.**

When your company's policies and procedures change, it is critical to communicate these changes to the project team to avoid costly mistakes and errors. If your projects do not comply, there may be legal and financial consequences depending on the nature of the policy or procedure that is being changed.



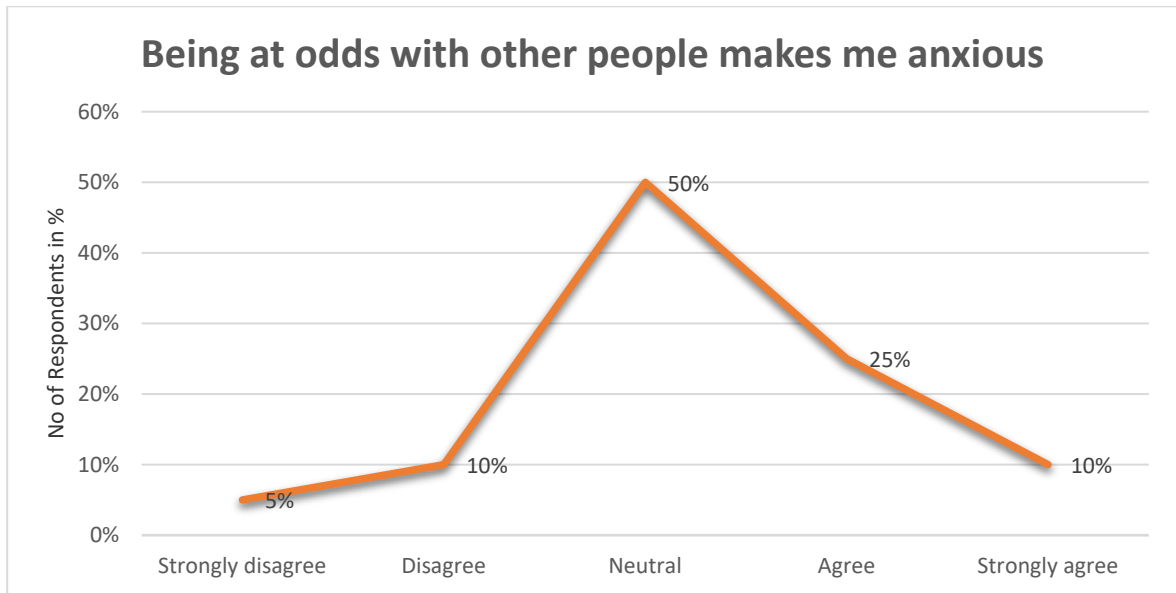
**Figure 5.2-15 Policies and procedures are not well communicated**

**SOURCE: Own construction**

60% of the respondents (30% strongly disagree and disagree) with the statement above state that policies and procedures are not well communicated. While 20% of the respondents are undecided. 20% of the respondents (10% strongly agree and 10% agree) with the statement. Overall, the information above seems to be not true in this case, as most respondents seem to disagree.

**Statement 6: Being at odds with other people makes me anxious.**

It is the nature of projects for the project team to be at odds with each other; it is part of the project team phases. As much as being at odds creates hostility amongst the team, they need to happen; this phase is called (the storming) phase, where the team is at odds with each other. There may be some of the team members who may not appreciate being at odds with the team.



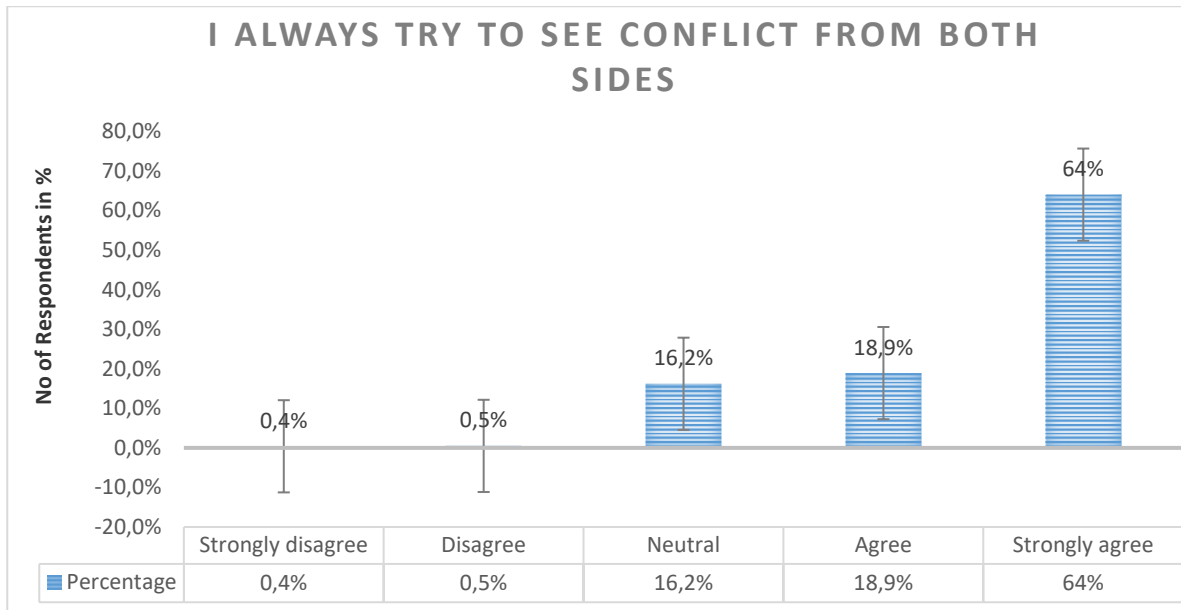
**Figure 5.2-16 Being at odd with the team makes me uneasy**

**SOURCE: Own construction**

35% of the respondents (10% strongly agree and 25% agree) confirm the statement above. While 50% of the respondents may not necessarily be anxious about being at odds with other people. This is important, do not be too emotional at the workplace, have emotional intelligence, do your work and go home. 15% of the respondents (5% strongly disagree and 10% disagree) with the statement.

**Statement 7: I always try to see the conflict from both sides.**

To determine how the project leader and team members view or see conflict in teams or the construction industry



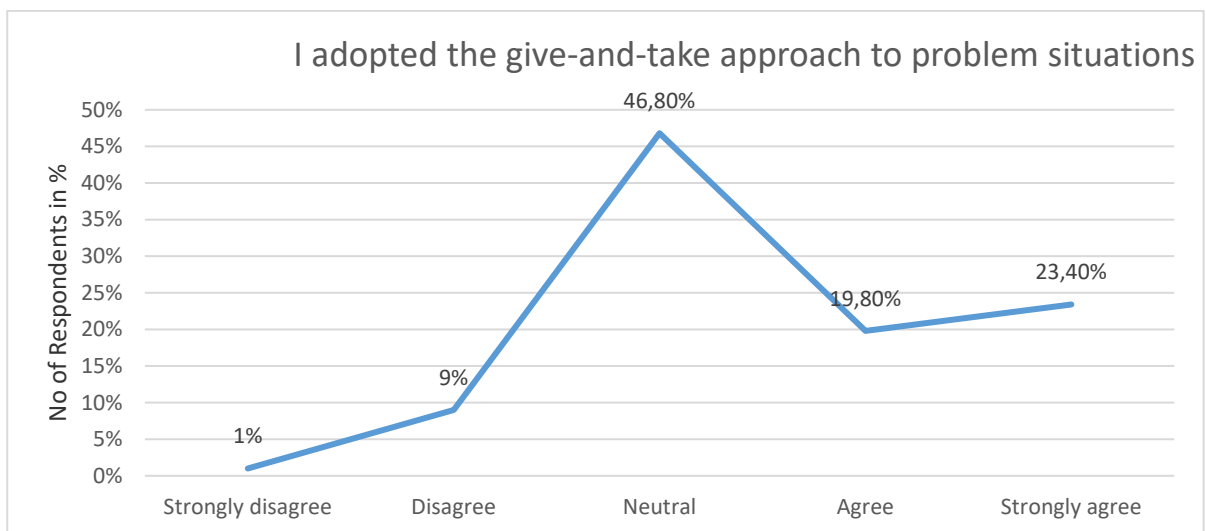
**Figure 5.2-17 Observe conflict from both sides**

**SOURCE: Own construction**

64% strongly agree, 18.9% agree, which is 89.2% of people who agree with that statement, which is a positive attitude to have within a team. Always good that team members see the conflict from both sides to avoid being naïve and limit competition within one side.

**Statement 8: I adopted the give-and-take approach to problem situations.**

The most potent and accommodating approach in managing conflicts and problem situations.



**Figure 5.2-18 Adopt the give-and-take approach to problems**

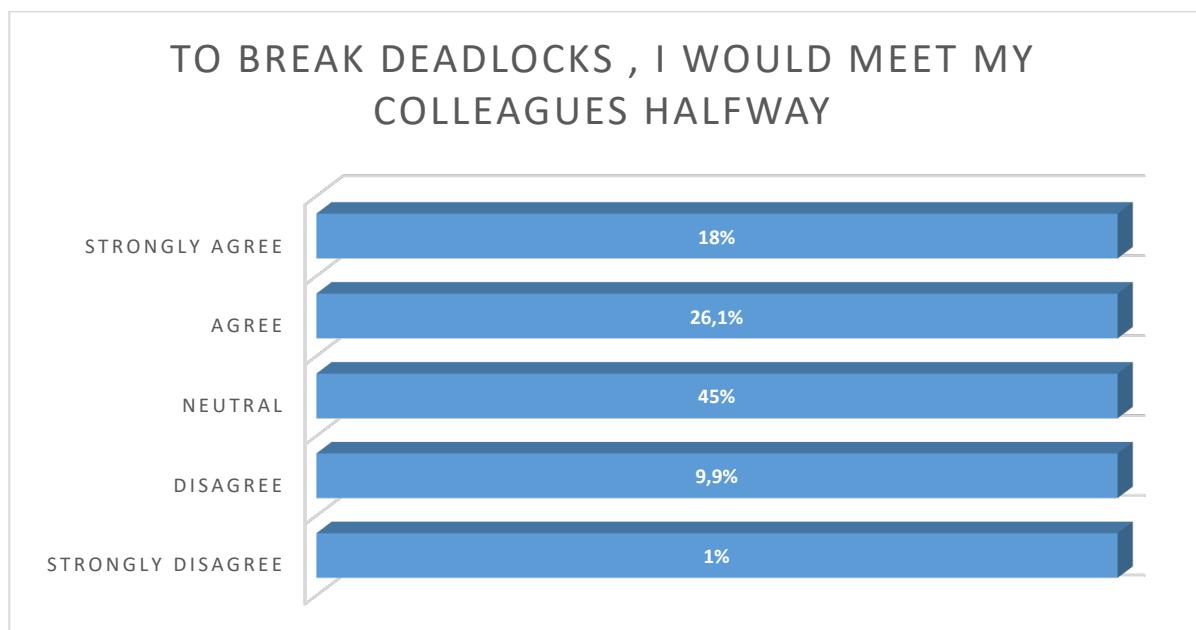
**SOURCE: Own construction**

*Interpretation:*

43.2% of the respondents adopted the give and take approach to conflicts. While 46.8% of the respondents are undecided. 10% of the respondents (1% strongly disagree and 9% disagree) with the statement above. However, most of the team has adopted the give-and-take approach to conflicts.

**Statement 9: To break deadlocks, I would meet my colleagues halfway.**

As much as we intend to break deadlocks, we need to understand how they develop or break or manage them effectively. Teamwork is critical in breaking deadlocks, assisting one another, sharing the workload, and supporting each other in the team.



**Figure 5.2-19 Meet colleagues halfway in an attempt to break deadlocks**

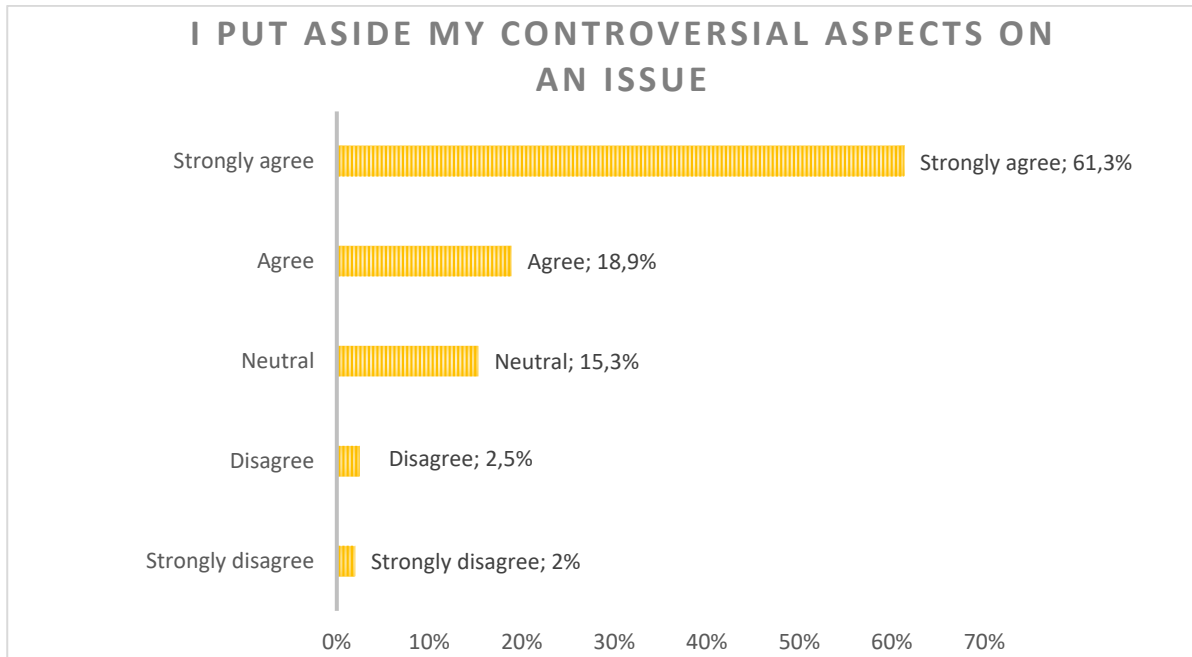
**SOURCE: Own construction**

*Interpretation:*

45% of the respondents are unsure about that statement, 26.1% of the respondents agree with that statement, 18% strongly agree, 9% of the respondents are, 9.9% disagree with that statement, and 1% strongly disagree with that statement. That 45% undecided is a matter of concern because there can be a variety of reason which makes those people undecided

**Statement 10: I put aside my controversial aspects of an issue.**

This question was poised to determine if people are willing to be accommodative within teams.



**Figure 5.2-20 Put aside controversial aspects of an issue**

**SOURCE:** Own construction

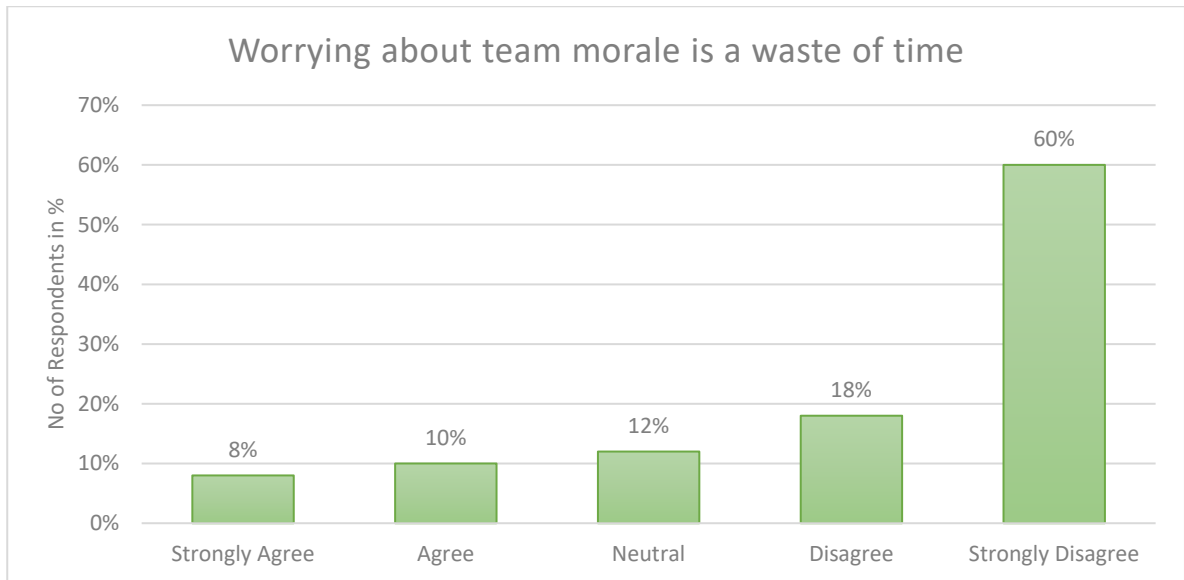
*Interpretation;*

61.3% of the respondents strongly agree with that statement, and 18.9% of the respondents agree with that statement. This clearly shows that the respondents are team players and willing to accommodate another member within the team.

**Statement 11: Worrying about team morale is a waste of time.**

This statement was poised to understand if the team is concerned about the team morale within their workspace.





**Figure 5.2-21 Worrying about team morale is a waste of time**

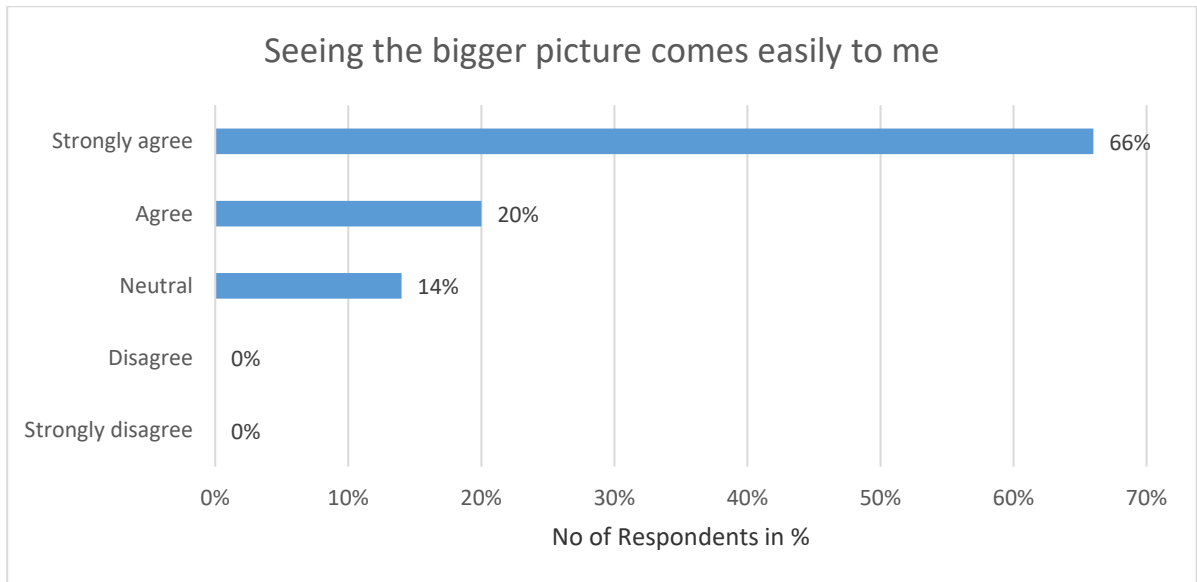
**SOURCE: Own construction**

*Interpretation:*

61.3% of the respondents strongly disagree, and 18.9% disagree, which equates to 80.2% of respondents who disagree with that statement which clearly show that respondents care about the team's wellbeing and morale

**Statement 12: Seeing the big picture comes easily to me.**

Most managers, much less the subordinates, are unaware of their organizations' vision, let alone the initiatives they are involved in. There's also a chance that some embedded projects won't have their visions. The ability to contextualize and interpret the bigger picture or the project vision allows the team to assess which skills are most required to ensure project success and meet the vision.

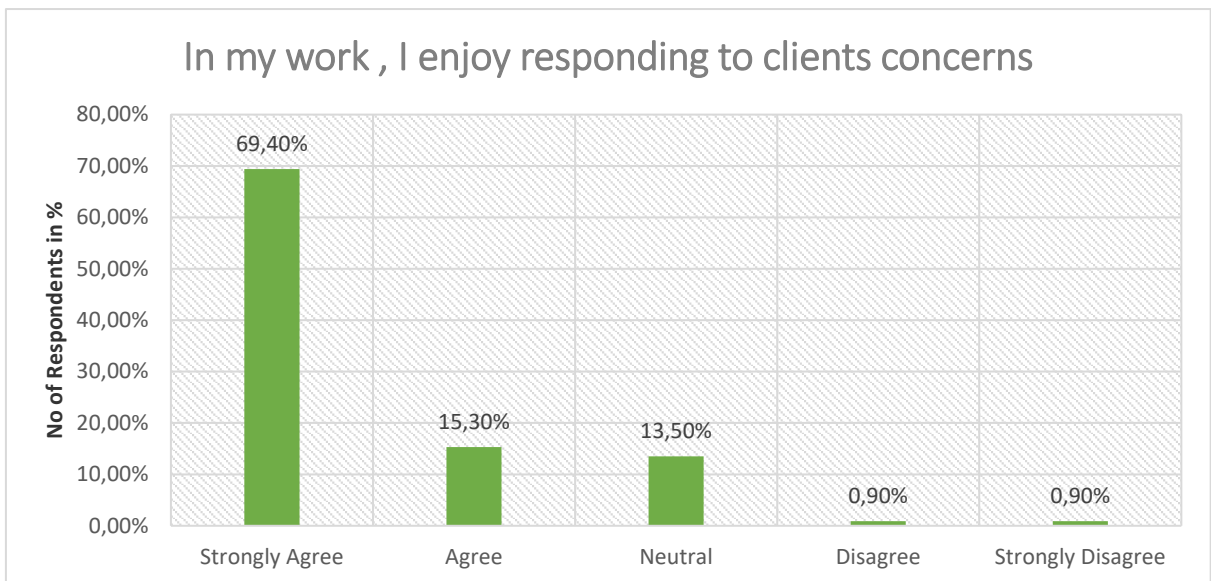


**Figure 5.2-22 Seeing the bigger picture comes easily to me**

**SOURCE: Own construction**

75.5% strongly agree, and 14 4% agree with the statement. Which is not surprising considering that 77.7% of the respondents who answered the survey have one year and more experience? Meaning that the respondent can see the bigger picture, supported by 80.1% of people who agreed with that statement.

**Statement 13: In my work, I enjoy responding to clients' concerns.**



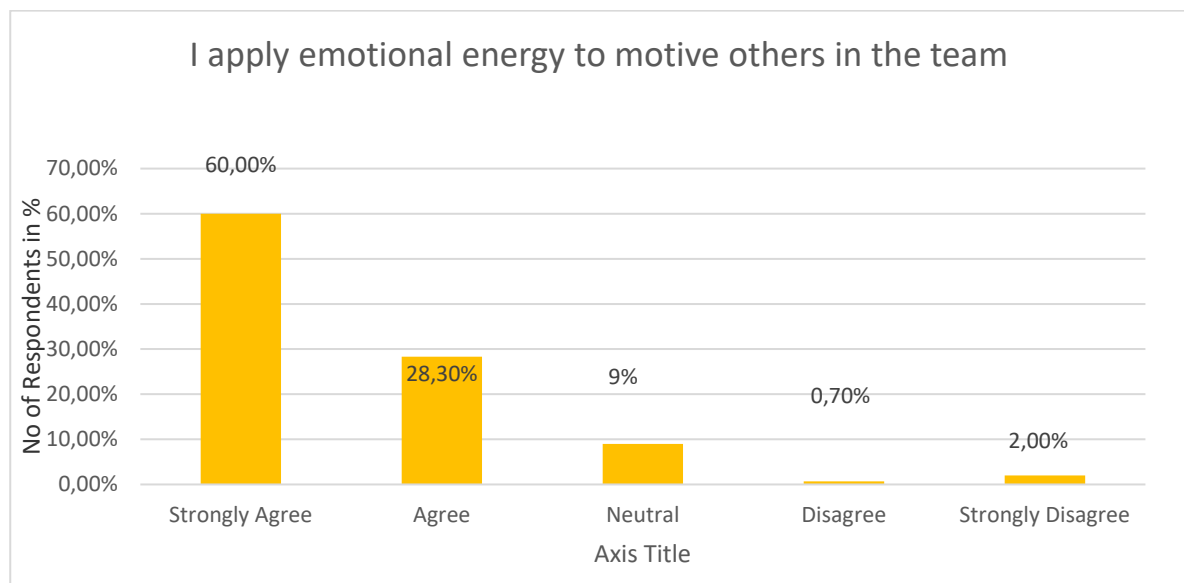
**Figure 5.2-23 Enjoy responding to clients' concerns**

**SOURCE: Own construction**

The majority of the respondents enjoy responding to and addressing client concerns within the construction project. A total of 84.7% of the respondents (15.30% agree and 69.4% strongly agree) affirmed the assertion to be measured. Therefore, it can be generalized here that the employees in the organization are confident and motivated to interact with clients ensuring customer satisfaction and resulting in project success. However, 1.80% disagree, and 13.50% are undecided.

**Statement 14: I apply emotional energy to motivate others in the team.**

A leader’s first responsibility is to look after your energy before assisting in orchestrating the energy of people around you. Emotions drive people, and people drive performance. Therefore, when delivering strong performance, the team will feel inspired, motivated, focused, and engaged—the responses from the interviewees in table 5.14.



**Figure 5.2-24 Respondents that applies emotional energy to motivate others**

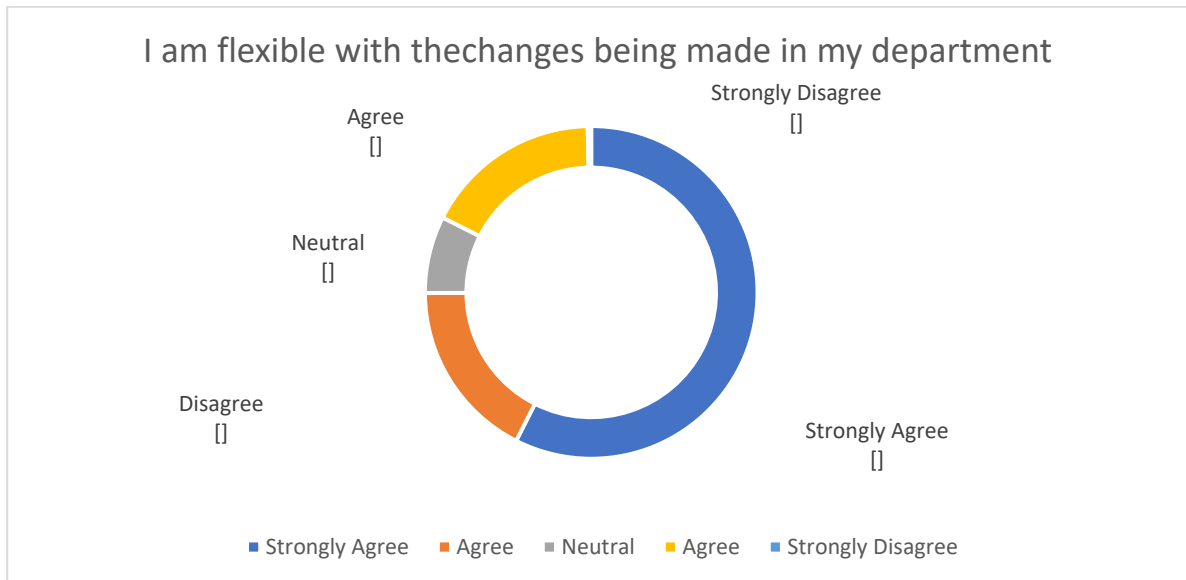
**SOURCE: Own construction**

A vast (88.3%) of the respondents strongly agree that specific emotional energy is applied to motivate others in the project team to ensure strong team performance. However, 9% of the respondents are still undecided. Furthermore, 2.7% reflects the respondents who strongly disagree; this is now evident that the emotional energy is applied to motivate others due to the low number of respondents who seem to disagree with the statement in question.

**Statement 15: I am flexible with the changes being made in my department.**

The project team, essentially in the construction project field, is often required to work above and beyond during the standard workweek. Being flexible is a highly needed skill, especially

when new project governance is introduced; being able to adjust and adapt to the policies and procedures ensures that the work is done within the required standard. The responses from the interviewees n table 5.26



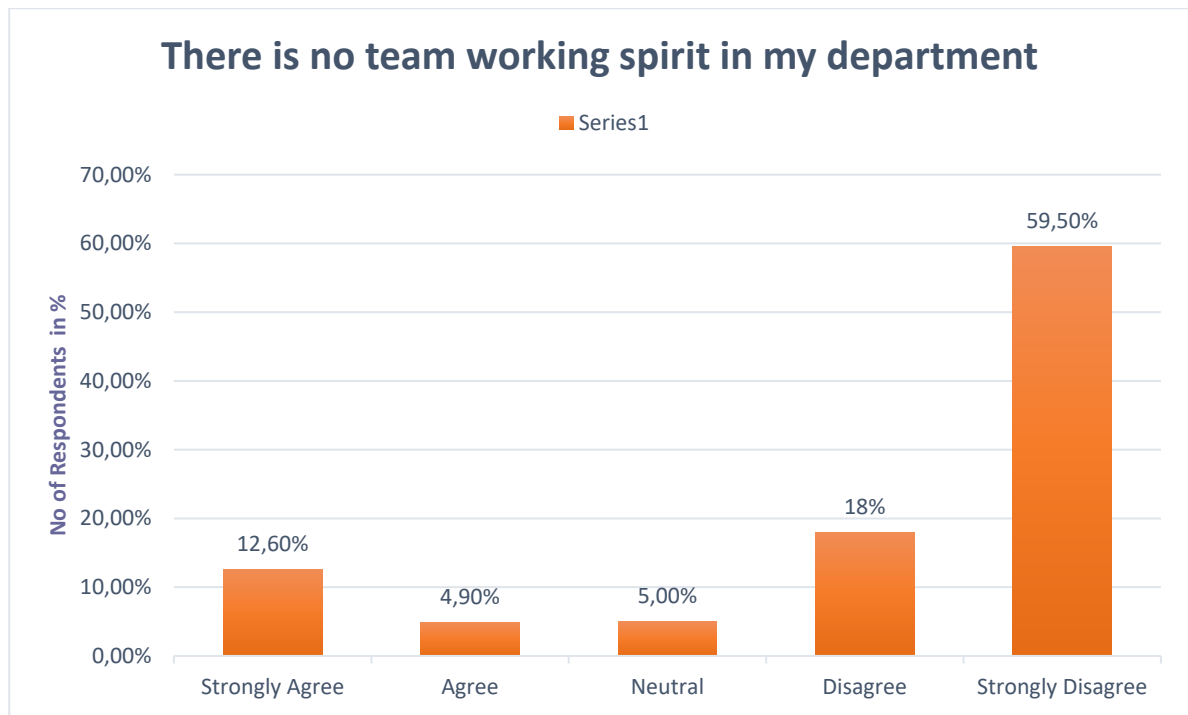
**Figure 5.2-25 Respondents that flexible to change**

**SOURCE: Own construction**

There seems to be strong confirmation from the team regarding the flexibility to changes, and this team indicates that it welcomes changes, easily without hassles, to support this statement. A total of 86% strongly agree and agree with the above statement. However, 9% of the respondents are unsure if there is indeed flexibility to change within the team. Again, a total of 5% disagreed, suggesting that some members of the project team are somewhat not fully flexible to exercise change; this is a concern as there is a requirement for everyone to be flexible and not hold back essentially when it comes to project governance.

**Statement 16: There is no team working spirit in my department.**

Many uncontrollable aspects trigger demotivation within the team. A team with unity will have higher levels of team spirit, and there are benefits attached to high team spirits, such as boosting team morale, great communication flow, and engagement levels. The responses from the interviewees n table 5.16



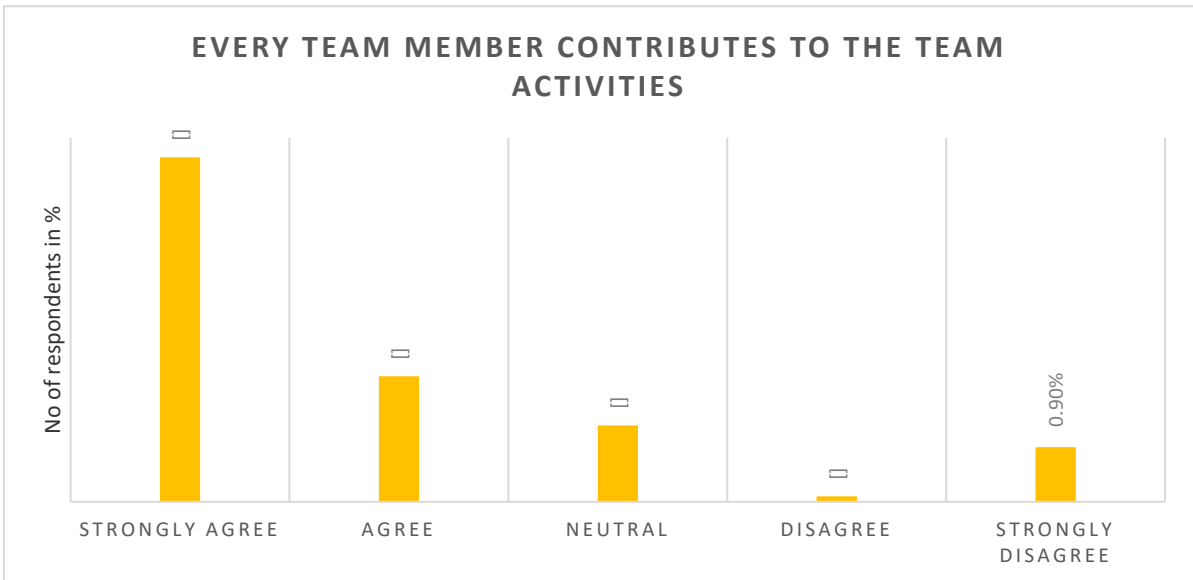
**Figure 5.2-26 Respondents that agree there is a lack of team working spirit**

**SOURCE: Own construction**

Arguably, (59.50%) strongly disagree with the statement that there is no team working spirit within the project team in the field, and 18% of the respondents disagree, confirming there is a team working nature in the project team; this is a crucial observation, team members must understand team working spirit, this has a good impact in boosting team morale. However, 5% of the respondents are still neutral. A total of 17.5% of the respondents (strongly agree and agree) that there is no team working spirit within the group; it is vital to address this gap and get the very few of the respondents to be part of the team working spirit, ensuring everyone is on the same wavelength.

**Statement 17: Every team member contributes to the team activities.**

Important to note that there are many ways to contribute to the team activities by being open to your team members' ideas, being approachable, and being respectful to others. Project success is dependent on every team member working towards a shared vision or common goal. The responses from the interviewees in table 5.17



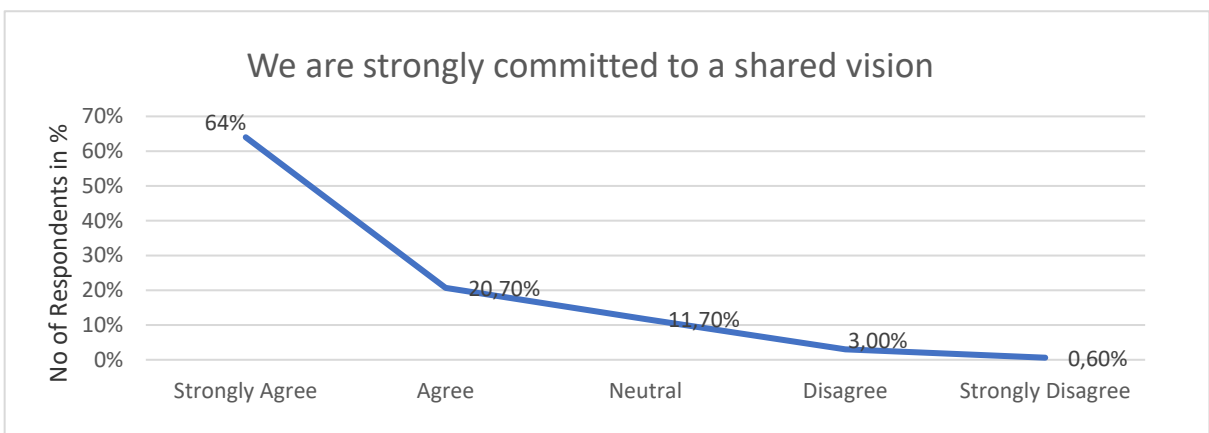
**Figure 5.2-27 Respondents that agree every team member contributes to task**

**SOURCE: Own construction**

More than 50% of the respondents strongly agree that the team contributes to the team activities; this indicates that the team understands that each role they play, no matter how seemingly insignificant, is valuable to the team’s success overall. To support this statement, 20.70% agree, while 12.60% are undecided. A total of 1.80% (0.90 disagree and strongly disagree).

**Statement 18: We are strongly committed to a shared vision**

It is imperative not to lose sight of the benefits of a commitment to a shared vision; it aids collaboration, provides direction, and creates alignment within the team. When the unit is committed to a shared vision, it boosts motivation and engagement. Response to question is found in table 5.18.



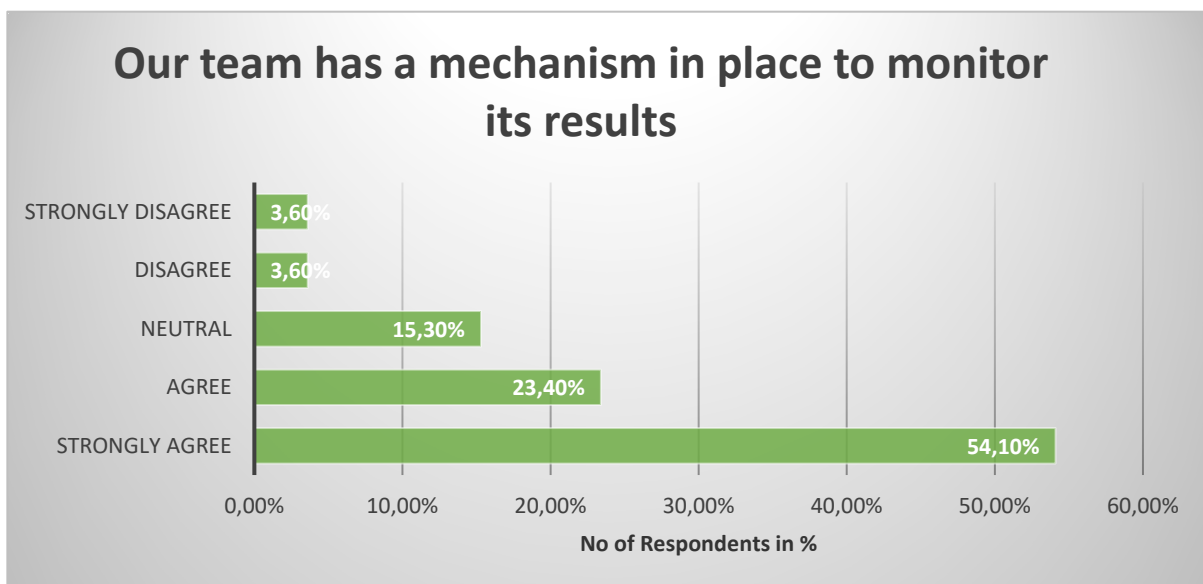
**Figure 5.2-28 Strongly committed to a shared vision**

**SOURCE: Own construction**

The team is well-aligned and strongly committed to a shared vision. A significant total of 84.7 % of the respondents strongly agree and agree. On the other hand, 11.7 % are still uncertain. Furthermore, 3.6% of the respondents strongly disagree with and disagree with the statement. The project leader’s role is to embed the vision to the team and ensure the team is committed to the shared vision.

**Statement 19: Our team has a mechanism to monitor its results.**

As much as technology systems are in place, the ideal mechanism to monitor the team is with your own eyes. However, this may be impossible due to remote working. The use of self-monitoring tools, surveys, and one-on-one sessions with the team. The responses from the interviewees in table 5.19



**Figure 5.2-29 Have a mechanism to monitor team results**

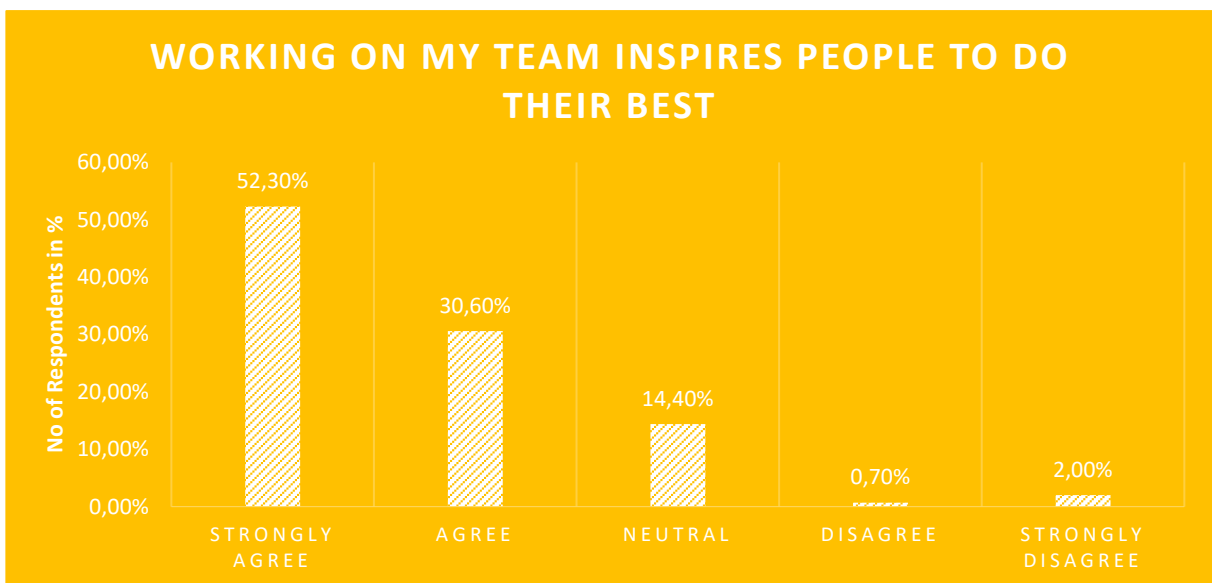
**SOURCE: Own construction**

The number of 7.2% of the respondents (strongly disagree and agree) is low, but it is essential not to overlook these few respondents that feel like there are no mechanisms to track results; the project leader needs to explore another tool. At the same time, only 15.30% are unsure. Enormous 77.3% of the respondents strongly agree that there is a mechanism to monitor team results.

**Statement 20: Working on our team inspires people to do their best.**

It is vital to identify teams and create strong relationships within project teams during construction projects. During the project execution phase, the project manager must inspire

all project teams to have the same goal, which leads to project teams working hard. As a result, project teams are motivated to improve project progress within projects.



**Figure 5.2-30 Working in teams inspires hard work**

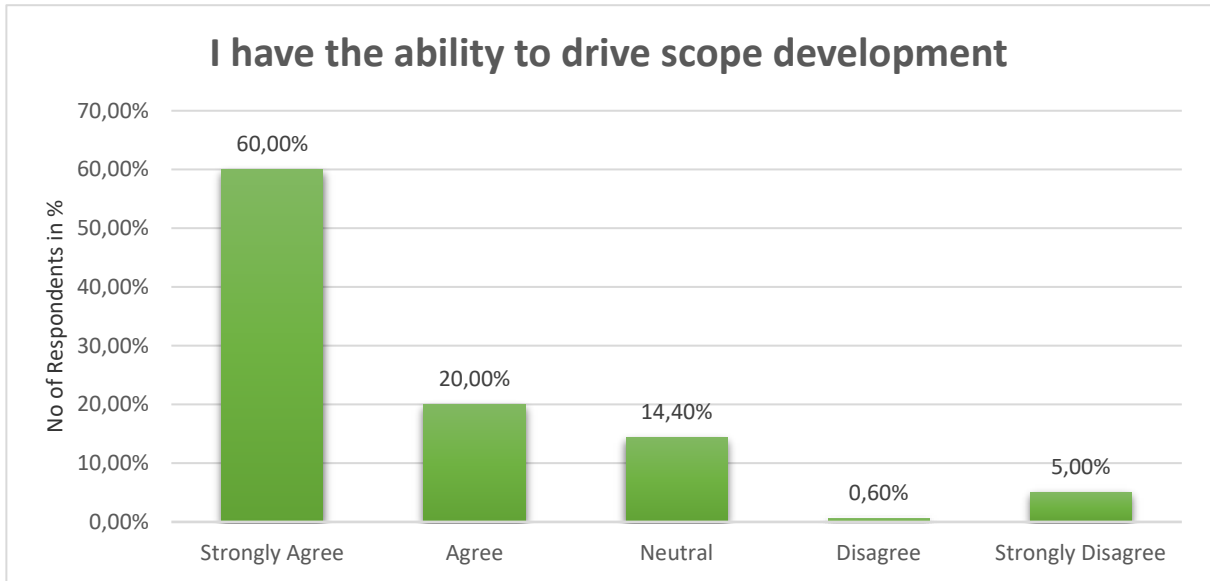
**SOURCE: Own construction**

It is proven that working in project teams inspires teams to do their best at work. During a construction project, the work should not be individualized; project teams work efficiently. Furthermore, project teams inspire time management; everyone who makes project teams is always encouraged to see the project progress. A total of 53% strongly agree and agree with the above statement. However, 14.4% of the respondents are unsure if working in project teams inspires hard work. Again, 32.2% disagreed and strongly disagreed, suggesting that project teams do not necessarily have to work in teams to do their level best in what they do.

**Statement 21: I can drive scope development.**

It's interesting to consider how a person may operate without fully comprehending the problem –execution skills become critical. Someone needs to have the ability to drive scope development. The response is in figure 5.33





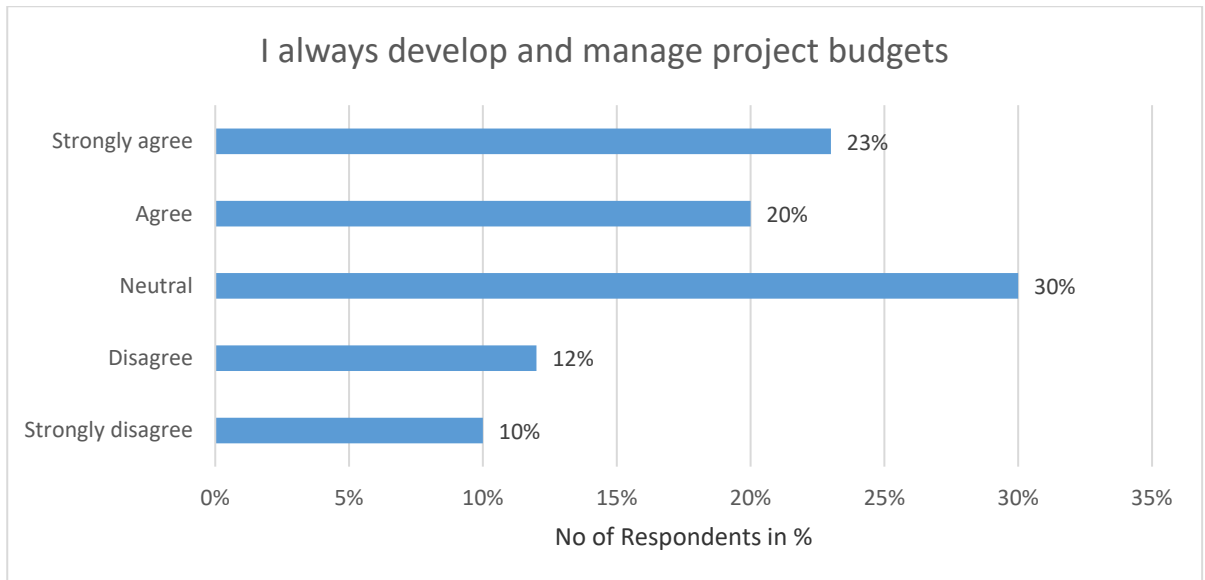
**Figure 5.2-31 Ability to drive scope development**

**SOURCE: Own construction**

80% of the respondents deem themselves to have the ability to drive scope development (60% strongly agree and 20% agree). While 14.4% of the respondents are unsure whether they possess the skill to drive scope development. On the other hand, 5.6% are aware that they cannot drive scope development. The team should have lesson learned sessions where knowledge, skills, and experience are shared so that every team member can drive scope development.

**Statement 22: I constantly develop and manage project budgets.**

Project managers must manage projects, especially from the initial to the execution phase. This is to ascertain that the project is within

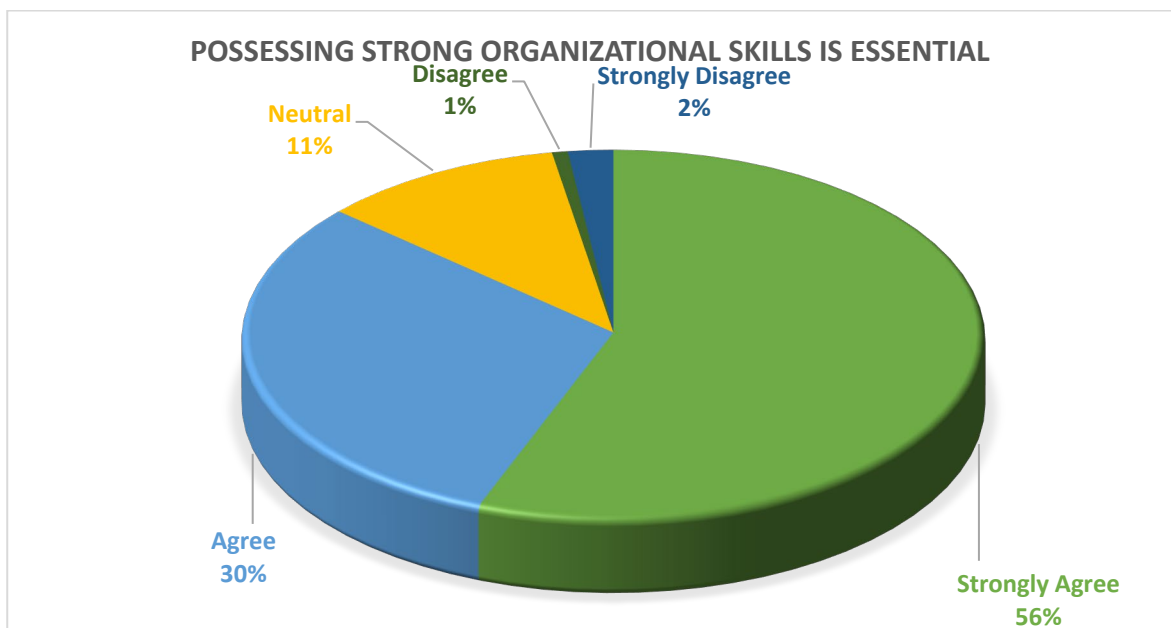


**Figure 5.2-32 Always develop and manage project budgets**

**SOURCE: Own construction**

**Statement 23: Possessing strong organizational skills is essential for me.**

It is critical to the success of your policies and procedures that they are effectively communicated. Because of the ever-changing nature of the workplace, policies, and procedures change. By communicating your policies and procedures regularly, you can ensure that your employees are informed and on onboard.



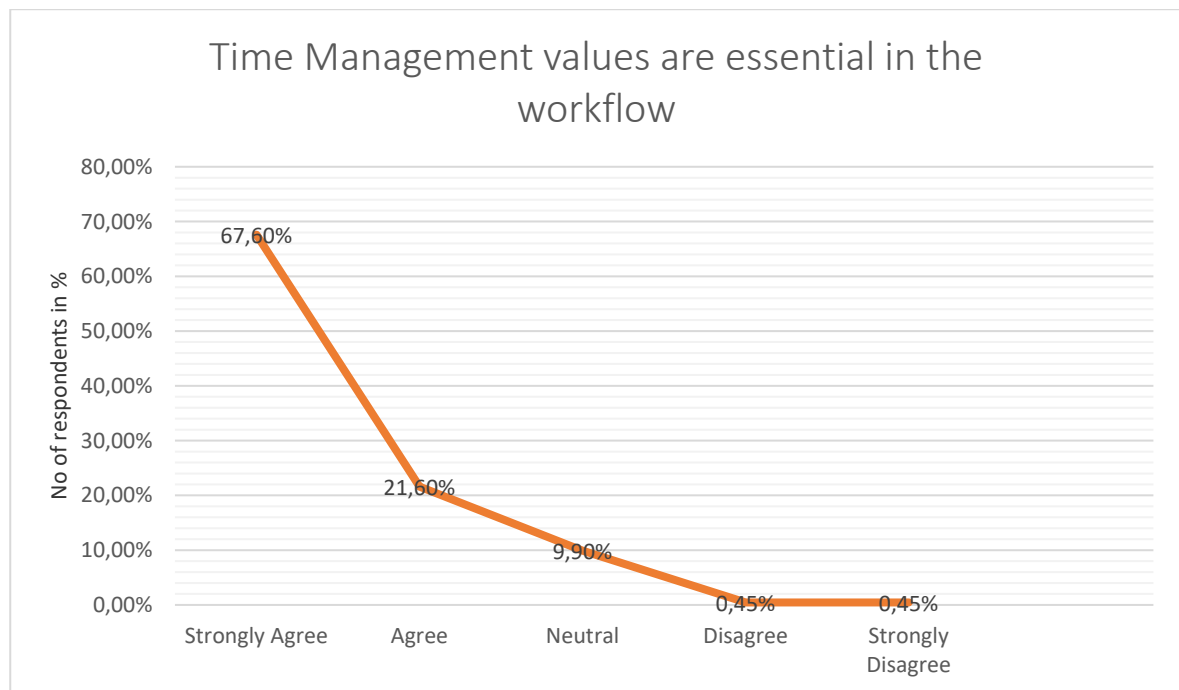
**Figure 5.2-33 Possessing strong organizational skills is key**

**SOURCE: Own construction**

Organizational skills help both project managers and project teams work efficiently. Each organization has its own goals and works as per the [project scope to deliver the final product. Therefore, project managers need to know the essential skills required in that specific project. The total population that Disagrees is 3% (2% strongly disagree and 1% disagree); there is about 11% that remain undisclosed as they did not answer the above statement. The total number that agrees is 86% (56% strongly agree and 30% agree) that strong organizational skills remain key during the project execution for effective project progress while the quality of work is not compromised.

**Statement 24: Time management values are essential in the workflow.**

Improved time management enables the team to harness the performance and achieve the goals with minimal effort.



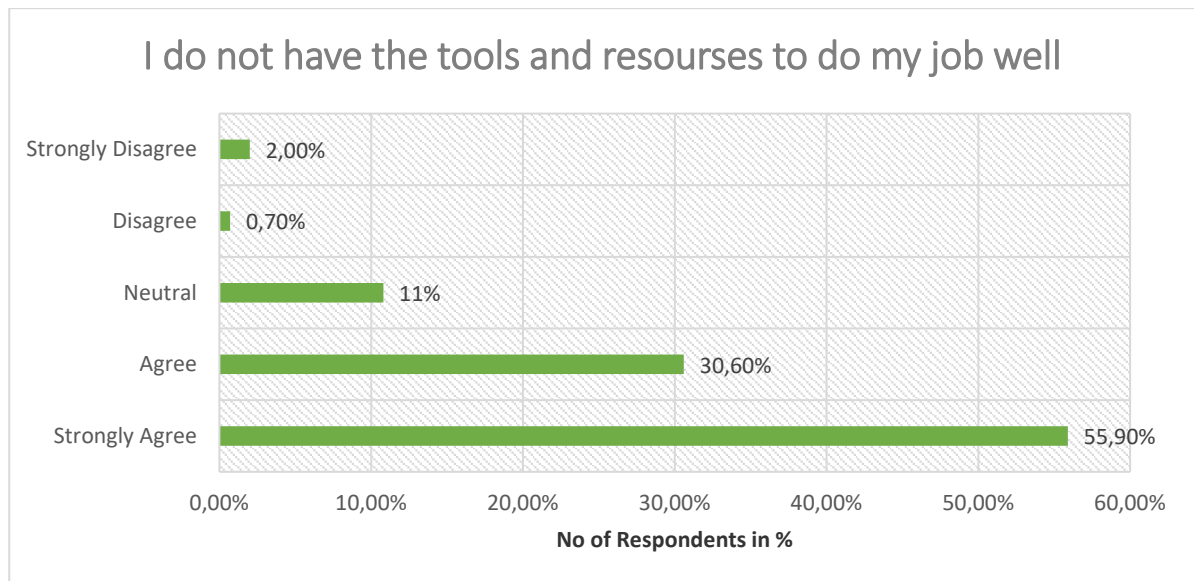
**Figure 5.2-34 Time Management values are essential**

**SOURCE: Own construction**

89.2% of the respondents (67.6% strongly agree and 21.6 agree) with that time management values are critical in the workflow. 9.9% of the respondents are undecided. 0.9% of the respondents (0.45% strongly disagree and 0.45% disagree) with the above statement. It is satisfying to see many respondents in support of the above statement; this then informs us that the team understands the time-management principle.

**Statement 25: I do not have the tools and resources to do my job well.**

Every work that must be completed is assumed to necessitate the use of resources somehow. The types of resources would include finances, personnel, technology, and other items required to complete the tasks. It should also be noted that the classification of resources may have not been stated in this statement, resulting in ambiguity about what was required. However, from a research standpoint, the assumption and expectation are that resources are needed in all operations, and the project team should be equipped.



**Figure 5.2-35 No tools and resources to do my job well**

**SOURCE: Own construction**

86.5% of the respondents (55.9% strongly agree and 30.6% agree) do not have the tools and resources to perform their day-to-day activities well. Only 11% are unsure of this statement. 2.7% seem to oppose this statement. Considering that 86.5% of the respondents agree with the idea, there need to be systems, tools, and advanced technology that will aid the team in optimizing their way of work.

**5.2.3 Section C Open-Ended Questions**

To aid the research by obtaining any additional information that the respondents may be aware of but has been omitted. As a result, this section asks respondents to offer as much information about the study as they see fit and understand. This category focuses on the respondent's expectation of an effective project leader. Although only a tiny percentage of respondents filled in the number of things requested, the replies were aggregated (similar responses were logged together), and the following information is provided:

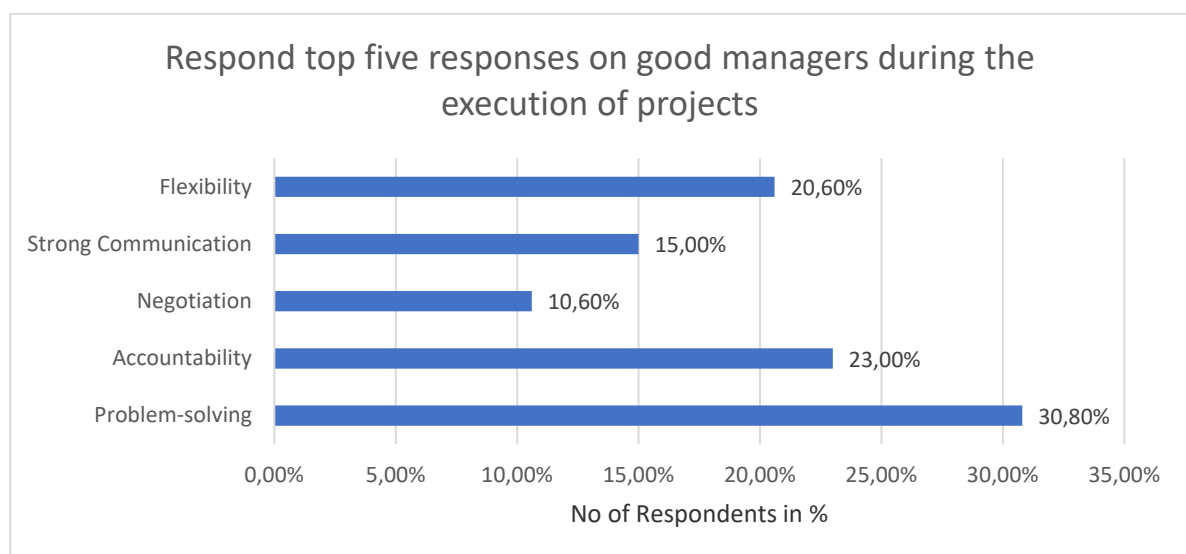
**Question 1: State five behaviours you expect from “good” managers during the execution of construction projects.**

*Conclusion:* The five most prevalent responses from the project team were problem-solving, accountability, negotiation, strong communication, and flexibility. Below is figure 5.38, which shows the responses to the statement.

**Table 5.2.2 Five behaviours you expect from “good” managers during the execution of construction projects**

No	State five behaviours you expect from “good” managers during the execution of construction projects.
1.	Problem-solving
2.	Accountability
3.	Negotiation
4.	Strong Communication
5.	Flexible

**SOURCE: Own construction**



**Table 5.2.3 Respondents’ views of good managers during the execution of projects**

**SOURCE: Own construction**

30.6% of the respondents indicated problem-solving, 23.0% of the respondents stated accountability, 20.6% of the respondents indicated flexibility., 15.0% of the respondents indicated strong communication, and lastly, 10.6% of the respondents indicated negotiation.

**Question 2: State five behaviours you dislike portrayed by ineffective managers at construction sites.**

Few respondents chose not to react to this statement; one reason could be that respondents did not understand what was anticipated of them to respond to this statement.

**Table 5.2.4 Five behaviours you dislike that ineffective managers portray at construction sites**

No	State five behaviours you dislike that ineffective managers portray at construction sites.
1.	
2.	
3.	
4.	
5.	

**SOURCE: Own construction**

**Question 3: What five behaviours from a project manager motivate you to perform at construction site projects?**

*Conclusion:* The five most prevalent responses from the project team about what motivates the team to perform are leading by example, clear and direct, achievable goals, clear communication, and team interaction. Below is figure 5.39, which shows the responses to question 3.

40.0% of the respondents indicated achievable goals, 20.0% stated team interaction, 15.0 % of the respondents indicated clear communication, while the other 15.0% indicated clear and direct, and lastly, 10.0% of the respondents stated lead by example.

**Table 5.2.5 Five behaviours from a project manager that motivates you to perform at construction site projects**

No	What five behaviours from a project manager motivate you to perform at construction site projects?
1.	Lead by example
2.	Clear and direct
3.	Set achievable goals
4.	Clear communication
5.	Interact with team

**SOURCE: Own construction**

**Question 4: Anything else you want to mention about excellent and effective/motivating project management at construction site projects.**

Few respondents chose not to react to this statement; one reason could be that respondents did not have further input.

*Conclusion:* As per the information that was given, most of the respondents highlighted that:

Recognition and reward- Showing appreciation to the team and acknowledging the good work being put in by the team

Constant feedback encourages the team to address issues/concerns with the project management, knowing that there will be feedback, regular follow-ups, and action plan to remedy project-related matters.

**Table 5.2.6 Good and effective/ motivating project management at construction site projects**

No	Anything else you want to mention about good and effective/ motivating project management at construction site projects
1.	Recognition and reward
2.	Constant feedback

**SOURCE: Own construction**

### **5.3 Conclusion**

Respondents who took part in the questionnaire survey were provided with the opportunity to opt out during the study because it was for research purposes, which most respondents did when it came to the open-ended section.

The chapter focused primarily on the respondents, who were asked to provide constructive criticism/feedback on the organization from which they dreaded they would be unfairly treated/victimized. Although, as per the data, most of the participants who took part in the survey were members with vast organisation experience, few respondents are above 41 years and above.

According to the respondents, possessing skills such as communication, leadership, teamworking, execution, and conflict management skills are very important in the organization; lack of these will result in poor project management, the project will collapse, capital/budget will be mishandled. The construction industry is dynamic and requires continuous improvement of skills, and the team seem to understand this, as over 54.1% of the respondent are interested in acquiring more skills but to understand this, as over 54.1% of the respondents are interested in acquiring more skills later. The team realizes that the current skills they possess may need to be harnessed over time for greater project success.



## CHAPTER 6

### SUMMARY OF THE FINDINGS, CONCLUSIONS, LIMITATIONS OF THE STUDY, AND RECOMMENDATIONS

#### 6.1 Introduction

The research objectives describe what the researcher expects from the study and what the study aims to achieve. The goals of this survey were explicitly described as identifying the critical skills needed for a project manager in the construction industry and clearly identifying which attributes are required for effective management and execution of the project. This would serve as a point of reference and aid in determining the contribution of essential skills/styles to project success. Critical skills are recognized as a vital component of good leadership, and as a result, they have become the emphasis. The organization under study has invested much in technical talents, as mentioned in the literature study chapters. This is based on the understanding that critical skills are of high necessity wherever there are objectives to be achieved by more than one individual.

THE TITLE; Generic skills critical for successfully executing construction projects from conception to project close phase in the Cape Metropole.

- Primary Research Objective
  - Identify the different leadership styles relevant to the tasks performed at the different phases during the project lifecycle.
- Secondary Research Objective
  - Identify what styles are suitable for a construction project's initiation or conceptual stages.
  - Identify what style is suitable for a construction project's selection and planning stages.
  - Identify what style is suitable for resource mobilization and execution in a construction project.
  - Identify what style is suitable for stakeholder management, evaluation, and construction project control.
  - Identify the style most suitable for preparing the checklist and closeout phase.

This chapter is the summation of five previous chapters; the first was the proposal, which was changed into chapter one. The literature on life cycle phases and the leadership styles suitable for each project phase, relevant leadership styles, and technical leadership expectations was the subject of the following two chapters (2 and 3). The fourth chapter went over the research

design and methodology used in the field study described in the fifth chapter. Data collection, data analysis, reporting, and interpretation were all included in this chapter (5). The final details and information from both the literature review and the empirical fieldwork undertaken by the researcher are discussed in this chapter (6).

## **6.2 Research design and methodology**

The research was conducted using a structured questionnaire with three sections that included qualitative and quantitative methods. The research instrument was created based on the literature review and then used to conduct the empirical research. Personal administration of the study instrument was used to increase the completion rate and aid respondents where clarification and explanation were sought. A minimum of 100 people responded, and 1/5 of a suitably representative sample can be used to generalize the findings. Therefore, the survey was open to 100 people out of 180. Due to the importance of cost and accessibility, a few construction companies were approached for the survey. A statistician tested the instruments for validity and reliability, and the reconstructed document was used for the survey.

## **6.3 Data Analysis**

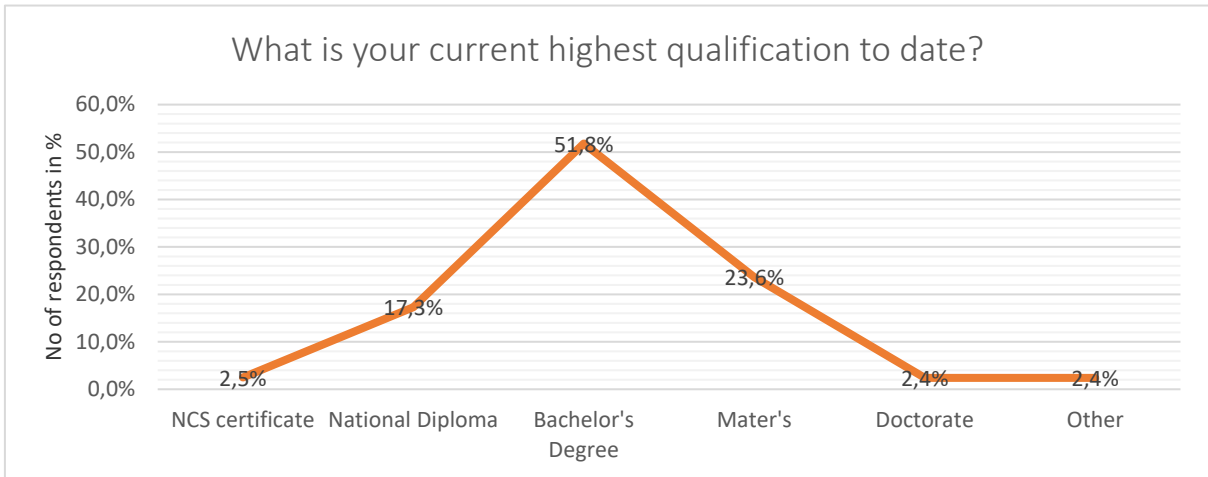
The summary and interpretation follow the format in the preceding chapter (5), in the summary, conclusions and recommendations section. This analysis follows the pattern in the questionnaire as stated above, starting with the biography to the Likert scale and the open-ended section with open questions for the respondents.

## **6.4 Summary of the findings**

### **6.4.1 Section A: Biography**

Essentially helped in getting the correct people who fitted into the expected population characteristics. And this, illustrated in the data reporting chapter, is followed by the Likert scale.

Twelve (12) questions were asked, and the summary is submitted below. The first question sought to determine the level of education of the participants. Of the respondents, 2.5% had matric, and 95.1% had tertiary education.



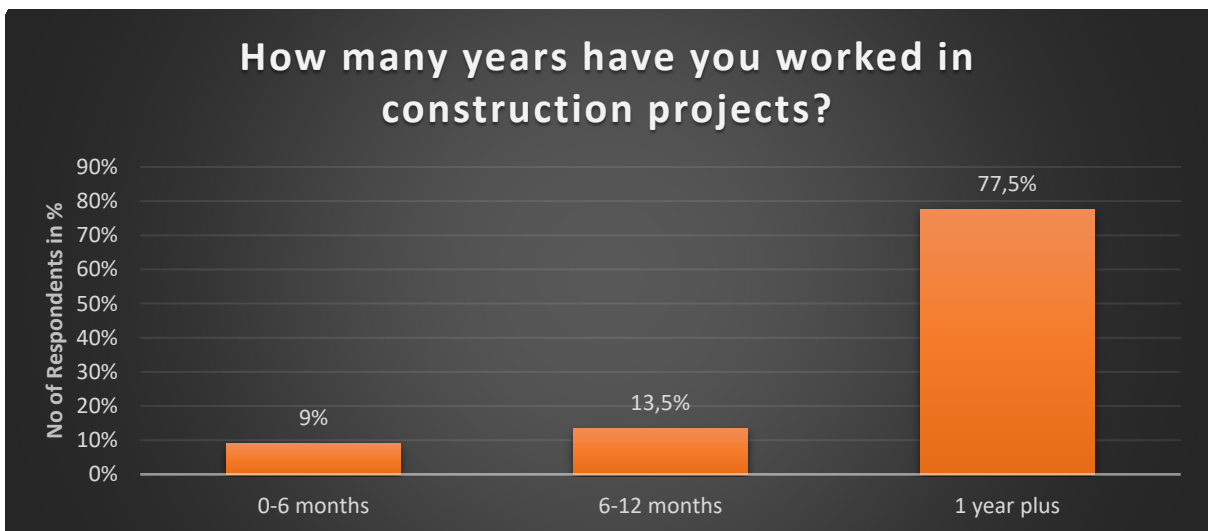
**Figure 6.4-1 Please indicate your highest educational qualification**

**SOURCE: Own construction**

In conclusion, the statistics on the education levels suggest that with adequate training and good practice in communication, an organization may be successful.

*Recommendations:* It is hereby recommended that the organization invest in training managers and subordinates to improve communication literacy. The organization may also invest in personnel development, including the 2.4% of those without matric.

Question 2: It was important to identify the number of years the project team members and the project manager in construction projects to provide adequate information on their knowledge and experience in the dynamic space of construction.



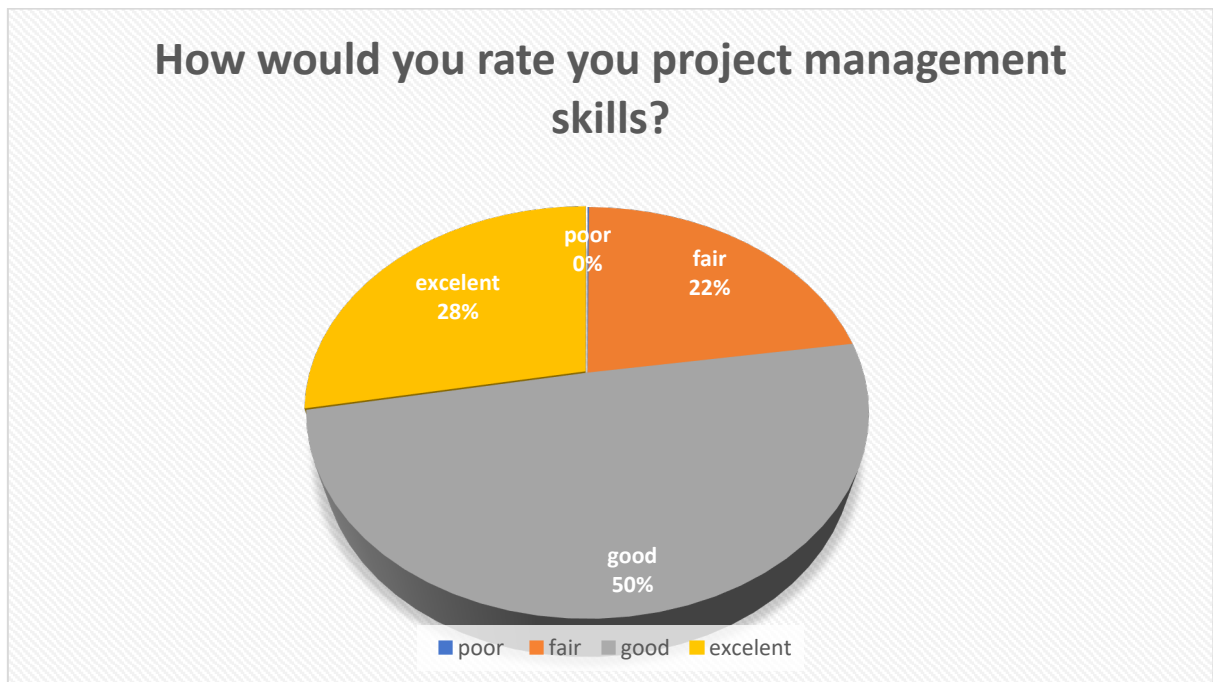
**Figure 6.4-2 Years worked in construction projects**

**SOURCE: Own construction**

*Conclusion:* The respondents possessed the appropriate experience and exposure to appraise the present situation in the organizations accurately. Because 77.7% of the respondents said they'd been in the industry for one year and above, it's been determined (concluded) that this is the best type of responder for this survey.

*Recommendations:* Experience is vital when facing a dynamic space of construction projects. It should be further maintained through the recruitment process for potential employers to possess 3-5 years of experience in the field.

Question 3; It was important to identify how the respondents would rate their project management skills precisely to provide adequate information on their understanding of what is meant by project management skills.



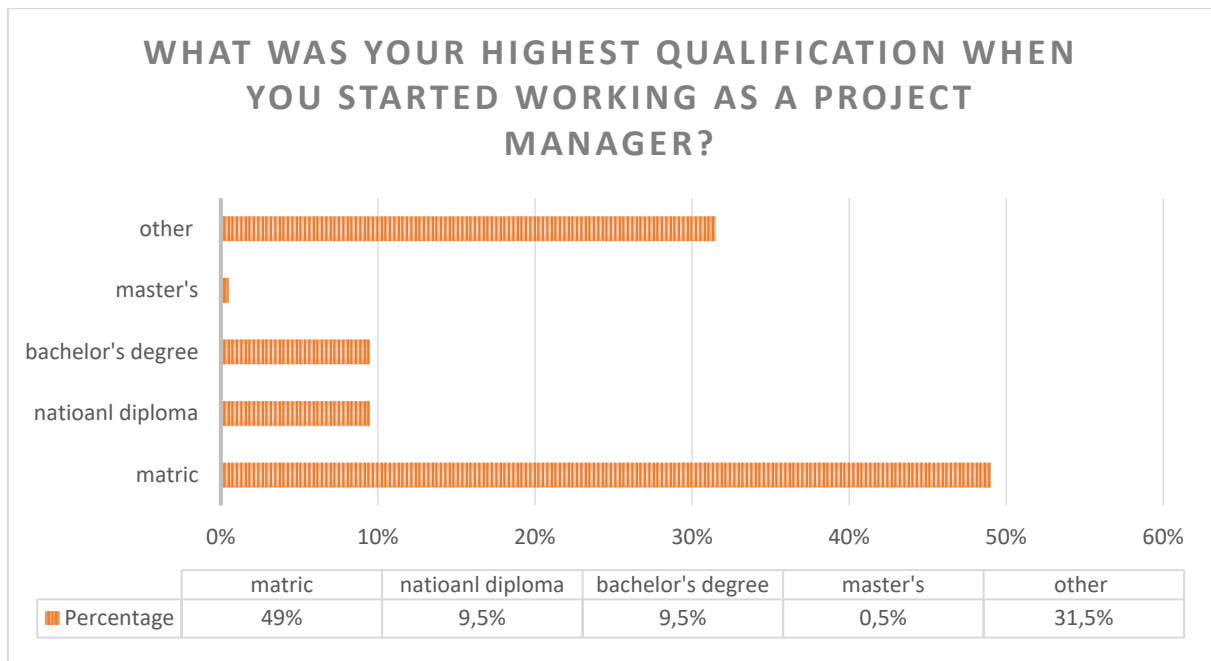
**Figure 6.4-3 Rating of the Project Management**

**SOURCE:** Own construction

*Conclusion:* About 50% of the respondents deem themselves to possess good project management skills. Overall, the team believes that they are competent, efficient, and effective.

*Recommendations:* The assumption should not be that the team is aware of project management skills and what those skills are. The question promotes self-rating; we anticipate a change of dishonesty and resistance to being transparent. The organization should seek to facilitate a workshop where project management fundamentals are unpacked.

Question 3; It was important to identify the highest qualification when they started the construction space.



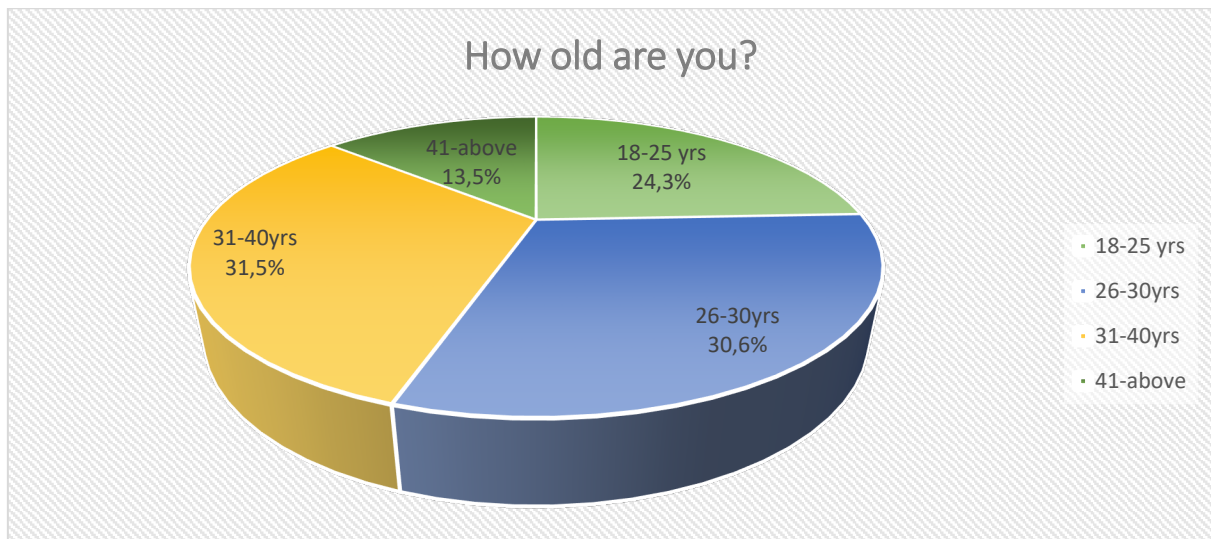
**Figure 6.4-4 Highest Qualification when they joined the project**

**SOURCE: Own construction**

*Conclusion:* This was posed to determine each respondent's educational level, and this illustrates that one does not need a university qualification to be a project manager, but experience and knowledge are the essential requirements.

*Recommendations:* Be that as it may, experience and knowledge are crucial, but education is unmatched. Therefore, it should be a requirement for project managers to possess a higher education level.

Question 4; It was important to identify the age of the respondents to get a clear image of what type of project team.



**Figure 6.4-5 The age of the respondents**

**SOURCE: Own construction**

*Conclusion:* This clearly shows that most of the respondents are aged between 31 to 40 years and 18 to 35 age group, which gives an impression that more than 62% of respondents are new to the project management space in the construction space.

*Recommendations:* It is good to have new blood in the construction space; more opportunities should be available for the youth.

#### **6.4.2 Section B – Likert scale**

Since views are hard to quantify, the scale was designed with a range of 1-5, with 1 indicating significant disagreement, 2 indicating disagreement, 3 indicating neutrality, 4 indicating agreement, and 5 indicating strong agreement. The findings have been summarised in tables to make examining the correlations between the variables easier. All the assertions are consolidated into a single table. The statements will be restated exactly as they appear on the research instrument, and responses will be given in the order they occur on the research instrument.

**Table 6.4.1 Communication Skills**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
COMMUNICATION SKILLS					
There is no team working spirit in my department	54.1	17.1	18.9	1.8	8.1
Communication is a two-way process in my department	10	12	30	25	23
I always strive to communicate expectations	0	0	20	22	58
I always communicate changes in policies and procedures.	10	5.5	25	19.5	40
Policies and procedures are not well communicated.	30	30	20	10	10

**SOURCE: Own construction**

*Conclusion:* the results above are responses from employees about the company. In terms of communication, many of the employees felt that changes in policies and procedures are consistently communicated. In addition, most of the employees indicated that they always strive to communicate expectations within the team.

*Recommendation:* The Company to be inclusive when changing or updating the policies and procedures, seek the views and opinions of the team, and encourage the team to bring forth ideas as to what needs to be amended. 30% of employees felt that the company does not communicate the policies and procedures well.

**Table 6.4.2 Conflict Management Skills**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
CONFLICT MANAGEMENT SKILLS					
Being at odds with other people makes me anxious	5	10	50	25	10
I always try to see the conflict from both sides	0.4	0.5	16.2	18.9	64
I adopted the give-and-take approach to problem situations	1	9	46.8	19.8	23.4
To break deadlocks, I would meet my colleagues halfway	1	9.9	45	26.1	18
I put aside my controversial aspects of an issue	2	2.5	15.3	18.9	61.3

**SOURCE: Own construction**

*Conclusion:* the results above are responses from employees about the company in terms of conflict management. Most of the employees indicated that they could put aside their controversial aspects on an issue. The majority of the employees indicated that they always try to see the conflict from both sides. This shows that the employees' conflict management skills are adequate. The project team appears to be able to put their differences aside, which indicates that they can accommodate one another and work as a team. The project leader should sustain the project team's compromise and humbleness.

*Recommendation:* Working in a team has its dynamics, and team diversity is crucial. It is in the organization's best interest to develop team building activities in the workplace, emphasizing collaboration rather than rivalry, according to the 50% of respondents who are undecided about the above statement.



**Table 6.4.3 Leadership Skills**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
LEADERSHIP SKILLS					
Worrying about team morale is a waste of time	60	18	12	10	0
Seeing the big picture comes easily to me	0	0	14	20	66
In my work, I enjoy responding to client's concerns	0.9	0.9	13.5	15.3	69.4
I apply emotional energy to motivate others in the team	2	0.7	9	28.3	60
I am flexible with the changes being in my department	0	18	8	17	57

**SOURCE: Own construction**

*Conclusion:* the results above are responses from employees about the company, in terms of the leadership skills within the company. Most of the employees indicated that they enjoy responding to clients' concerns; this shows that the employees understand the concept of customer satisfaction. Furthermore, most of the employees noted that seeing the overall picture comes easy to them, and this is impressive as it now depicts that the employees can contextualize and interpret the bigger picture, making them feel part of the vision even more. Project vision allows the team to assess which skills are most required to ensure project success and meet the vision. Always try to see the conflict from both sides.

*Recommendation:* There is still room for improvement when it comes to the employees being flexible with the changes in the department; 18% of the respondents disagree with the statement. The company needs to encourage personal interest and build a strong support network and explain why the changes are made and how they can improve the way of working.

**Table 6.4.4 Teamwork Skills**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
TEAMWORK SKILLS					
There is no team working spirit in my department	54.1	17.1	18.9	1.8	8.1
Every team member contributes to the team activities	0.9	0.9	12.6	20.7	64.9
We are strongly committed to a shared vision	0.6	3	11.7	20.7	64
Our team has a mechanism in place to monitor its results	3.6	3.6	15.3	23.4	54.1
Working on our team inspires people to do their best	2	0.7	14.4	30.6	52.3

**SOURCE: Own construction**

*Conclusion:* the results above are responses from employees about the company, in terms of the teamwork skills within the company. Most of the employees indicated that each team member contributes to the team activities and enjoys responding to clients' concerns; this shows that the team understands that each role they play, no matter how seemingly insignificant, is valuable to the team's success overall. Furthermore, most of the employees indicated that they are strongly committed to a shared vision, and it can be concluded that the team is well-aligned. It can be further concluded that the project manager's role of embedding the image in the group and ensuring the team is committed to the shared vision has been well executed.

*Recommendation:* 18.9 % of the respondents are still uncertain if there is a team working spirit in the department; creating a well-functioning team can benefit both the employees and their company. However, because every workplace comprises people with various ideas, fostering the desired team spirit might be challenging. Nevertheless, building great teamwork has

numerous advantages, including increased production and efficiency, improved understanding, and a more positive work environment. Therefore, building a team spirit should be one of your top priorities as a business owner because it is the only way to create a problem-free organization. As a leader, you may believe that encouraging team spirit is beyond your abilities, but the truth is that there are numerous things you can do to improve your company's culture.

**Table 6.4.5 Execution Skills**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
EXECUTION SKILLS					
I can drive scope development	5	0.6	14.4	20	60
I constantly develop and manage project budgets	10	12	30	20	28
Possessing strong organizational skills is essential for me	2	1	11	30	56
Time management values are essential in the workflow.	0.45	0.45	9.9	21.6	67.6
I do not have the tools and resources to do my job well	2	0.7	11	30.4	55.9

**SOURCE: Own construction**

*Conclusion:* the results above are responses from employees about the company, in terms of the execution skills within the company. The majority of the employees indicated the ability to drive scope development with the team. The team should have lesson learned sessions where knowledge, skills, and experience are shared so that every team member can drive scope development. Most of the employees indicated that they strongly believe that time

management values are essential in the team's workflow. It is satisfying to see many respondents in support of the above statement; this then informs us that the team understands the time-management principle.

*Recommendation:* 30% of the respondents are unsure whether the team can develop and manage project budgets. The company should offer training and workshop to the team to instil in the project-related areas where there is a significant gap.

### **6.4.3 Open-ended questions**

**State five [5] behaviours you expect from “good” managers during the execution of construction projects.**

*Conclusion:* The five most prevalent responses from the project team were problem-solving, accountability, negotiation, strong communication, and flexibility.

*Recommendation:* Team flexibility and accountability needs to be instilled. This can be done by enrolling team leaders on training and short workshops.

**What five behaviours from a project manager motivate you to perform at construction site projects?**

*Conclusion:* The five most prevalent responses from the project team about what motivates the team to perform are; lead by example, clear and direct, achievable goals, clear communication, and team interaction.

*Recommendation:* The company needs to engage and interact with the team more regularly, set realistic goals agreed upon by the team, and always show leadership traits; scheduling workshops can do this with the subject matter experts.

**Anything else you want to mention about good and effective/ motivating project management at construction site projects?**

*Conclusion:* Recognition and reward- Showing appreciation to the team and acknowledging the good work being put in by the team

Constant feedback encourages the team to address issues/concerns with the project management, knowing that there will be feedback, regular follow-ups, and action plan to remedy project-related issues.

*Recommendation:* The company to have workshops where team efforts and contributions are rewarded and acknowledged. Have monthly giveaways where the team takes part and stands a chance to win and have an employee of the year programme. This, in a way, has a way of motivating the team to be more competitive and motivated within the team.

## **6.5 Chapter Summary**

This study's research objective was to identify the critical skills needed for a project manager in the construction industry and clearly identify which attributes are needed for effective management and execution. Project communication, time management, and scope management is classified by the PMBOK as two of the 10 knowledge areas and therefore considered necessary in successful project execution. The findings of this research are based on the employees' perceptions and their experience with the interaction of the construction project environment.

Communication, leadership, teamwork, conflict management, and execution skills have been established (from the research) as critical skills essential for the construction project execution process.

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## QUESTIONNAIRE

Generic skills critical for successful execution of construction projects from conception to project close phase.

The target population are project teams and project managers that are involved in the construction project. Your identity is protected; please do not make any markings that may be used to identify you. Participants are not forced to take part in the filling of this questionnaire, as they have the right to refuse and pull out from taking part at any stage during the research.

### SECTION A. BIOGRAPHY

Please cross the applicable boxes

1. How old are you this year, please use table to indicate your age range?

18 – 25 years	26-30 years	31 – 40 years	41- above
---------------	-------------	---------------	-----------

2. How many years have you worked in construction projects?

0 – 3 years	4-7 years	8 – 11 years	12- above
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3. What was your highest qualification when you started working as a Project Manager?

National Diploma	Bachelors’ degree	Master’s degree	Other
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4. What is your current / highest qualification to date?

National Diploma	Bachelors’ degree	Master’s degree	Doctorate	Other
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5. Other – please specify .....

6. How would you rate your Project Management skills?

6.1 Communication Skills

Poor	Fair	Good	Excellent
------	------	------	-----------

6.2 Conflict Management Skills

Poor	Fair	Good	Excellent
------	------	------	-----------

6.3 Leadership Skills

Poor	Fair	Good	Excellent
------	------	------	-----------

6.4 Teamwork Skills

Poor	Fair	Good	Excellent
------	------	------	-----------

6.5 Execution skills

Poor	Fair	Good	Excellent
------	------	------	-----------

7. Are you interested in a training to acquire more skills?

No, I am not interested.	Yes, but I am very busy.	Yes, but not now.	I am currently in training.
--------------------------	--------------------------	-------------------	-----------------------------

8. Please identify the 5-6 top critical skills (in ascending order) you think are necessary for the successful execution of construction projects

1. ....
2. ....
3. ....
4. ....
5. ....
6. ....

**SECTION B**

**GENERIC SKILLS INFLUENCING THE SUCCESSFUL EXECUTION OF CONSTRUCTION PROJECTS.**

Please rank the following by crossing the most applicable. By using the scales 1 to 5.  
 NOTE: 1 = disagree strongly, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	<b>COMMUNICATION SKILLS</b>	1	2	3	4	5
1	There is no team working spirit in my department	1	2	3	4	5
2	Communication is a two-way process in my department	1	2	3	4	5
3	I always strive to clearly communicates expectations	1	2	3	4	5
4	I always communicate changes in policies and procedures.	1	2	3	4	5
5	Policies and procedures are not well communicated.	1	2	3	4	5
	<b>CONFLICT MANAGEMENT SKILLS</b>					
6	Being at odds with other people makes me anxious	1	2	3	4	5
7	I always try to see conflict from both sides	1	2	3	4	5
8	I adopted the give-and-take approach to problem situations	1	2	3	4	5
9	To break deadlocks, I would meet my colleagues halfway	1	2	3	4	5
10	I put aside my controversial aspects of an issue	1	2	3	4	5
	<b>LEADERSHIP SKILLS</b>					
11	Worrying about team morale is a waste of time	1	2	3	4	5
12	Seeing the big picture comes easily to me	1	2	3	4	5
13	In my work, I enjoy responding to client’s concerns	1	2	3	4	5
14	I apply emotional energy to motivate others in the team	1	2	3	4	5
15	I am flexible with the changes being in my department	1	2	3	4	5
	<b>TEAMWORK SKILLS</b>					
16	There is no team working spirit in my department	1	2	3	4	5

17	Every team member contributes to the team activities	1	2	3	4	5
18	We are strongly committed to a shared vision	1	2	3	4	5
19	Our team has a mechanism in place to monitor its results	1	2	3	4	5
20	Working on our team inspires people to their best	1	2	3	4	5
	<b>EXECUTION SKILLS</b>					
21	I have the ability to drive scope development	1	2	3	4	5
22	I always develop and manage project budgets	1	2	3	4	5
23	Possessing strong organisational skills is essential for me	1	2	3	4	5
24	Time management values are essential in the work flow.	1	2	3	4	5
25	I do not have tools and resources to do my job well	1	2	3	4	5

**SECTION C**

**WHAT ARE YOUR EXPECTATIONS FROM AN EFFECTIVE PROJECT LEADER?**

**1. State five [5] behaviours you expect from “good” managers during the execution of construction projects.**

.....

.....

.....

.....

.....

**2. State five [5] behaviours you dislike that are portrayed by ineffective managers at construction sites.**

.....

.....

.....

.....

.....

**3. What 5 behaviours from a project manager motivate you to perform at construction sites projects?**

.....

.....

.....

.....

.....

**4. Anything else you want to mention in relation to good and effective / motivating project management at construction sites.**

.....

.....

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

**THANK YOU FOR TAKING PART IN THIS EXERCISE.**



**Lesley Laphi (Pr. Tech)**  
**Managing Director**  
**Karo Solutions**

Cell: +27(0)82 378 0737,  
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**CPUT POSTGRADUATE OFFICE**

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8000

January 4, 2021

**RE: Permission for Nolimo Gloria Mbunge Student number 214318826 to conduct research on our premises**

To CPUT Ethics committee / Whom it may concern,

This letter serves to give consent that Nolimo Gloria Mbunge with student number 214318826 registered for a course MTech Business Administration in Projects, at Cape Peninsula University of Technology conducting research on a topic titled Critical generic skills for successful construction-project execution from conception to project close within the Cape Metropole can conduct research at any of our construction sites. Full permission is granted for the above student to conduct her studies in fulfilment for the requirements of the Master's degree.

Yours faithfully

A handwritten signature in black ink, appearing to read "Lesley Laphi", written over a horizontal line.

**Lesley Laphi (Pr. Tech)**  
**Managing Director**  
**Karo Solutions**

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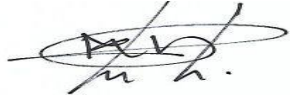


Office of the Chairperson Research Ethics Committee	<b>FACULTY: BUSINESS AND MANAGEMENT SCIENCES</b>
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The Faculty's Research Ethics Committee (FREC) on **2 March 2021**, ethics **APPROVAL** was granted to **Nolimo Gloria Mbunge (214318826)** for a research activity for **M Tech: Business Administration in Project Management** at Cape Peninsula University of Technology.

Title of dissertation / thesis / project:	<p><b>Critical generic skills for successful construction-project execution from conception to project close within the Cape Metropole</b></p> <p>Lead Supervisor (s): Dr E. L. Jowah</p>
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**Decision: APPROVED**

 <hr/> <b>Signed: Chairperson: Research Ethics Committee</b>	<p style="text-align: center;"><b>24 March 2021</b></p> <hr/> <b>Date</b>
---	---

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the CPUT Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study requires that the researcher stops the study and immediately informs the chairperson of the relevant Faculty Ethics Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines, and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, notably compliance with the Bill of Rights as provided for in the Constitution of the Republic of South Africa, 1996 (the Constitution) and where applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003 and/or other legislations that is relevant.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No field work activities may continue after two (2) years for Masters and Doctorate research project from the date of issue of the Ethics Certificate. Submission of a completed research ethics progress report (REC 6) will constitute an application for renewal of Ethics Research Committee approval.



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PROJECT CLOSEOUT PHASE IN THE CAPE METROPOLE**

by

**Nolimo Gloria Mbunge**

**with final word count of 28 629 on 4 June 2022**

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