



Cape Peninsula  
University of Technology

**IMPACT OF PROJECT MANAGERS' LEADERSHIP STYLE ON EMPLOYEE  
PERFORMANCE IN A CONSTRUCTION COMPANY IN CAPE TOWN**

by

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## DECLARATION

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## **ABSTRACT**

There is currently a lack of research detailing how project managers' leadership styles impact the performance of employees of construction companies in Cape Town. Our aim, through this thesis, was as follows: to investigate whether or not project managers' leadership styles have an impact on employee performance in Cape Town's construction industry; to ascertain the extent of the impact (and better understand the correlation between different leadership styles and performance outcomes); to develop a management framework to improve leadership quality, and, in doing so, provide tools to improve employee performance.

To achieve these research objectives, the researcher developed a structured questionnaire to gather data on the impact of construction project managers' leadership styles on employee performance. A total of 456 questionnaires were distributed at construction sites across Cape Town. Of these, 377 were duly completed, resulting in a respondent rate of 82.68%.

Responses were then analysed by the researcher using an ANOVA test (with the descriptive and regressive methods), as well as a post-hoc test (using the Bonferroni Method), and correlation analysis. The results revealed there to be a statistically significant positive relationship between Cape Town project managers' leadership styles and the performance of subordinate employees on construction job sites.

Using this information, the researcher developed a conceptual framework with leadership quality development tools and recommendations to assist project managers and organisations in improving employee performance and leadership. It highlights the importance of using leadership quality development tools such as training and development, empowerment, coaching, participation, and delegation to improve employee performance. It also details specific and strategic means to implement these recommendations.

We believe this research provides valuable insight into the impact of project managers' leadership styles on employee performance in the construction industry in Cape Town. It provides details on how construction project managers' leadership is perceived, as well as its impact on employee satisfaction and performance. The research will contribute to project managers' leadership development to help improve previous shortcomings and foster a mutually beneficial work environment where all can thrive.

## **ACKNOWLEDGEMENTS**

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Most importantly, I owe a debt of gratitude to Jesus Christ, the author of life and giver of all good things. Without His blessings and guidance, this achievement would not have been possible.

## DEDICATION

For my parents, my siblings, and my wife.

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## GLOSSARY

<b>Terms/Acronyms/Abbreviations</b>	<b>Definition/Explanation</b>
<b>Likert scale</b>	A tool to measure attitudes and opinions using a numbered scale, whereby respondents rate items based on their agreement with a given statement, according to Warmbrod (2014:31). For example, '5' indicates a respondent 'strongly agrees'; '4' would mean they 'agree'; '3' denotes a 'neutral' (neither agree nor disagree) response; '2' means they 'disagree'; '1' means they 'strongly disagree'.
<b>Project manager</b>	In the construction industry, this person has direct responsibility for planning and executing a project, including procurement, and adherence to schedule and budget constraints.
<b>Statistical Package for Social Science (SPSS)</b>	This software package statistically analysis research data. While it was intended for use in the social sciences, it has become a popular and readily used tool for other fields of study.
<b>Conceptual framework model</b>	A construct of interlinked tasks, which according Jabareen (2009) work together to provide an understanding of a phenomenon. Concepts included in a conceptual framework support one another, explain the phenomenon, and establish a framework-specific philosophy. In other words, "an interpretative approach to social reality" used in quantitative research that provides practical, rather than theoretical understanding.
<b>Autocratic leadership</b>	Autocratic leadership (also known as authoritarian leadership) is a top-down style of leadership that puts the responsibility of all decisions in the hands of the project manager and seeks little, or no, input from subordinates. Autocratic leaders tend to make decisions based on their own opinions, ideas, experience, and judgement; they rarely accept advice from lower-ranking employees, Zulch (2014).
<b>Democratic leadership</b>	Democratic leadership encourages subordinate employees to be active in decision making. A democratic leader listens to the opinions and ideas of his or her team before developing conclusions and solutions, according to Mahmutaj <i>et al.</i> (2015).
<b>Transactional leadership</b>	The transactional leadership style encourages compliance and performance through a system of rewards and punishments, asserts Odumeru and Ifeanyi (2013). It is a highly motivating leadership style for short-term results.

<b>Transformational leadership</b>	Transformational leadership seeks to motivate and inspire subordinate employees through encouragement and opportunities for long-term growth. These leaders ask employees to create positive change and shape the organisation's future through innovation and participative contributions, Robbins and Coulter (2007).
<b>Standard deviation (STDV)</b>	A calculation used to measure how widely the values of a data set are dispersed from the average value (the mean), according to Elaine R Monsen (2007:5).
<b>Mean item score (MIS)</b>	The sum of all respondents' scores (on the five-point Likert scale), as a portion of the sum of all maximum possible scores, which determines a response's relative importance from highest to lowest, states Warmbrod (2014:32).
<b>Contingent reward</b>	A system of positive reinforcement, which is used to motivate employees by rewarding them when they achieve an identified goal, Walumbwa, Wu and Orwa (2008:251-265).
<b>Management-by-exception (passive)</b>	In this leadership style, management takes a 'hands off' approach and intervenes only when objectives are not met, or issues become serious, state Bass and Avolio (2004).
<b>Management-by-exception (active)</b>	Manager actively monitors employees' work and takes immediate corrective action if, and when, problems arise, Bass and Avolio (2004).
<b>Correlation analysis</b>	A measurement in statistics that indicates the extent to which two or more variables are interdependent, writes Senthilnathan (2019). Positive correlation means the variables will fluctuate (increase or decrease) parallel to each other, while a negative correlation will demonstrate the extent that one variable will increase as the other decreases.
<b>Pearson correlation coefficient</b>	This measures the statistical relationship, or association, between two continuous variables, including details about the magnitude of this association and the direction of the relationship, Swinscow(1976)
<b>Demography</b>	Cambridge Advanced Learner Dictionary (2008) defines demography as the statistical study of human populations, including their size, density, distribution, and other information.
<b>Analysis of Variance (ANOVA)</b>	Statistical models used to analyse differences among sample group means. Statisticians and researchers use this test in a regression study to determine the influence of independent variables on the dependent variable, states, Sow (2014)

## CHAPTER ONE: INTRODUCTION

### 1.1 Background

The construction industry is a vital sector of any country's economic output. According to Del Caño and De La Cruz (2002) the industry plays a crucial role in contributing to national targets for physical, economic, and social needs.

Cape Town's construction industry, likewise, plays a vital part in shaping the past, present and future of the city. The heart and economic activity of Cape Town has been formed through building, demolishing, planning, designing, renovating, and maintaining a variety of buildings and infrastructure (both public and private).

In an era of globalisation, "the physical infrastructure, built through construction activity, is the nation's economic backbone...[it] can influence the competitiveness of enterprises within the economy", Liphadzi (2015:10).

As such, leadership within this integral sector can impact the livelihoods of Cape Town residents—and as a result, the rest of South Africa—when it comes to employment opportunities, economic growth, environmental sustainability outcomes, and overall health and wellbeing.

There is currently a lack of research detailing how project managers' leadership styles impact the performance of employees of construction companies in Cape Town, as stated previously by Petersen (2012:1). While most literature to date recognises the importance of leadership, most research emphasises the role of technical aspects for a project's success, rather than adequately addressing management style and leadership, write Toor and Ofori (2008:341).

"The low volume of leadership studies in the South African industry is due to the lack of knowledge of the industry on the part of social scientists and a lack of understanding of social sciences by those in the industry," Liphadzi (2015:63) states. However, the industry is increasingly recognising the role and importance of leadership as a deciding factor in the success of projects in the construction sector.

Mohammad and Yarmohammadian (2006:13) define leadership styles as "managerial attitudes, behaviours, characteristics and skills", which are defined by both individual and collective interests, reliability, and values.

By investigating project managers' leadership in the construction industry in Cape Town and establishing the impact of their leadership style on employee performance, we will improve the overall understanding of whether or not project managers' leadership styles impact employee performance, ascertain the extent of the impact (in this case, the correlation between different leadership styles and performance outcomes), and develop a management framework to improve leadership quality and performance.

It is reasonable to suggest then, that strong, competent leadership is essential in the construction industry, where success is contingent on completing the work on schedule and within targeted budgets. This strong leadership creates a supportive work environment for employees; they know their assigned tasks, have guidance on each step of the project, are kept accountable to deadlines and progress, and manage project funds effectively. In contrast, absence of leadership in the construction industry can be devastating; without it, teams stall, flounder or can miss project goals entirely, according to Toor and Ofori (2008:358).

These authors go on to assert that "leadership is a key factor for success in any activity that involves collaboration among a group (or groups) of people", Toor and Ofori (2008:352). Likewise, Chinyio and Vogwell (2007), found that efficient leadership of multi-stakeholder construction projects can unify the team's goals and prevent conflict.

Thus, employee performance in South African construction companies, including those in Cape Town, depends on the leadership styles of project managers—these actions can either positively or negatively impact his or her team, states Liphadzi (2015:3).

Mohammad and Yarmohammadian (2006:13) argue that an organisation's ability to meet its goals is directly dependent the perceived effectiveness of project managers' leadership styles. "By incorporating the correct leadership style, leaders can influence the performance, productivity and commitment of employees."

This study will investigate how democratic, transactional, transformative, or autocratic leadership styles can impact the performance of construction employees in Cape Town; the study will consider leadership style variables to be independent and the performance of employees to be dependent. We will develop a relationship analysis model to demonstrate which of these styles is most effective for employee performance.

## **1.2 Problem statement**

Currently, there is a gap in research addressing the impact of project managers' leadership styles on employee performance in Cape Town's construction industry. Petersen (2012:1) states that little is known about the impact of leadership styles on employee performance, particularly in South Africa's construction industry.

The success of the construction sector in Cape Town has a direct impact on the livelihoods of Cape Town residents as well as the entire South African economy. Decisions made within this sector can influence the outcome of projects, employee performance, job opportunities, economic growth, environmental sustainability outcomes, and peoples' overall health and wellbeing. Yet increasingly, construction companies fail to complete projects on time and on budget, according to Liphadzi (2015:10).

Therefore, a deeper understanding of project managers' leadership styles—including the full extent of both positive and negative impacts—is required to develop management frameworks to improve leadership quality and performance, which will in turn, allow construction companies to better meet their project goals.

## **1.3 Purpose of the study**

This study's goal is to improve the understanding of the impact of Cape Town project managers' leadership on the performance of subordinate employees by evaluating the effectiveness of differing leadership styles. The researcher will assess include some of the most common leadership styles to determine this impact, including autocratic, democratic, transactional, and transformational leadership.

Once these common leadership styles have been evaluated, the study can then determine how each influences the performance of construction employees in Cape Town. It is our aim that this study will provide important information detailing how construction project managers' leadership styles influence and impact employee performance. The research will contribute to the leadership development of project managers in Cape Town's construction industry and improve previous shortcomings.

## **1.4 Research aims and objectives**

### **1.4.1 Research aims**

Our study will investigate the impact of project managers' leadership styles on employee performance in Cape Town's construction industry.

#### **1.4.2 Research objectives**

The objectives of the study are:

- To determine the impact of project managers' leadership styles as they relate to the performance of employees;
- To ascertain the extent of the impact of managers' leadership style on employee performance;
- To develop a conceptual framework to improve the relationship between leadership quality and performance.

#### **1.5 Research questions**

The below research questions are compiled in accordance with the research problem statement:

- What impact do the leadership styles of project managers have on employee performance?
- What is the relationship between different leadership styles and employee performance?
- Which conceptual framework model improves leadership style quality and employee performance?

#### **1.6 Research hypotheses**

This research purpose is to investigate the impact of construction project managers' leadership styles on employee performance in Cape Town. Based on the available literature, the hypotheses of this thesis are:

##### **1.6.1 Research hypotheses for Research Question One**

What impact does a project manager's leadership style have on his or her subordinate employee performance?

**H0:** There is no statistically significant impact of the leadership style of project managers on employee performance.

**H1:** There is a statistically significant impact of the leadership style of project managers on employee performance.



### **1.6.2 Research hypotheses for Research Question Two**

What is the relationship between different leadership styles and employee performance?

**H0:** There is no statistically significant relationship between leadership styles and employee performance

**H1:** There is a statistically significant relationship between leadership styles and employee performance.

### **1.7 Contribution**

This study aims to improve the general understanding of the impact of project managers' leadership styles on employees' performance, by evaluating a variety of leadership styles (including autocratic, democratic, transactional, and transformational leadership), and determining how each style can influence the performance of construction employees in Cape Town.

It will provide important information detailing how construction project managers' leadership styles influence and impact employee performance. Our research will contribute to the leadership development of project managers in Cape Town's construction industry and improve previous shortcomings.

### **1.8 Limitation and delimitation of the study**

Our research focuses on gathering data about construction project managers' leadership styles in Cape Town and the subsequent impact of these styles on employee performance.

This research was limited to Cape Town construction companies, construction project managers and on-site construction workers. It investigated the impact of project managers' leadership style on employees' performance in Cape Town's construction industry.

The researcher investigated diverse literature relating to this topic. Questionnaires were distributed in person, ensuring those concerned received a proper explanation of the topic and proper instruction to complete the questionnaire. The data collected by the researcher came from employees who were affected, either directly or indirectly, by a project manager's preferred leadership style.

Due to the sheer number of construction companies in Cape Town, it proved difficult to gather data from every company and job site. As such, the research focused on companies with a major presence in the city (and a larger number of employees).

Moreover, Cape Town's construction industry is comprised of three major categories. For the purposes of our study, we surveyed construction employees doing "general building construction", which consists of the erection of residential, industrial, and commercial buildings (rather than large-scale infrastructure projects like bridges and highways, or small, specialty trade contractors such as carpenters, electricians or plumbers).

## **1.9 Data and methodology**

### **1.9.1 Data**

In total, 456 questionnaires were handed out to employees of all management levels on job sites and the offices of selected construction companies in Cape Town. Our rationale for this sample group was that these employees were likely to be most significantly impacted by the leadership styles of their project managers.

"Questionnaires provide respondents with an intimidation-free environment which gives them an advantage over interviews, focus groups and on-site observation," states McClelland (1994:22). The questionnaires were divided into three sections:

- Section A looked at respondents' demographics, with questions to identify gender, age, race, level of education, professional title, number of years of experience in the construction industry, and marital status.
- Section B explored leadership styles and their impact on employees' performance in greater depth, using a Likert scale ranking system.
- In Section C, we asked optional open-ended questions about the different attributes, competencies, and characteristics of project managers that could impact employees' performance in Cape Town's construction sector.

The research was conducted in two parts: the first phase focused on collection of data, its interpretation, and the review of existing literature resources from reports, university websites, journals, articles, and textbooks. The second phase focused on the collection of data with construction project managers and employees in the construction industry in Cape Town through a qualitative questionnaire.

Bell (2007:153) defines data collection as “techniques that allow for a systematic collection of information about our objects of study (people, objects, phenomena) and about the setting in which they occur”.

#### **1.9.1.1 Data analysis**

We systematically investigated the data gathered using statistical, mathematical methods, with the help of the computer software system called SPSS (Statistical Package for Social Science).

The collected data was analysed using descriptive statistics in the form of proportions, frequencies, means and standard deviations, independent t-tests and paired t-tests to compare differences between two groups, correlation, Analysis of Variance (ANOVA), and Ordinary Least Square (OLS) analysis.

#### **1.9.2 Methodology**

We used quantitative techniques to carry out our research—it allowed us to systematically investigate the data gathered using both statistical and mathematical methods. Fellows and Liu (2008) explain this approach in greater detail: “a quantitative approach relates to positivism and seeks to gather factual data and to study the relationships between facts and how such facts and relationships accord with theories and the findings of any research executed previously”.

With these objectives in mind, we developed a structured questionnaire, to help in collecting the relevant data needed for our research. We analysed empirical responses and numerical data as a way of measuring and explaining leadership styles’ impact employee performance in construction companies in Cape Town.

Additionally, we used a descriptive survey design for research to accurately examine respondents’ opinions, skills, and behaviour.

#### **1.10 Leadership styles and employee performance relationship**

The effectiveness of any given leadership style is measured by several factors, including how well employees perform and how they feel about their work.

Bhatti *et al.* (2012:18) found the relationship between employee performance and the democratic leadership style was highly valued by employees; they felt more comfortable with their work when they were in control of their own outcomes. Çetin,

Karabay and Efe (2012) elaborate, stating that a constructive leadership style and productive employee performance are fundamental to the success of an organisation.

These references reinforce that a project manager's leadership style can either inspire positive action among employees or cause dissatisfaction and poor performance; one's level of satisfaction and performance is assessed on the quality of leadership styles, as demonstrated in Figure 1.1 on the following page.

So how do we define, quantify or measure performance—good or bad? Campbell (1990) explains performance to mean the “behaviours or actions which are under the control of the person and contribute to the goals and objectives of the organizations, and also can be measured according to the employee's level of proficiency”.

The above, and many other resources, highlight researchers' focus on defining job performance in terms of an outcome (tangible results) and behaviour—these factors are viewed as objective and easier to observe than personality traits.

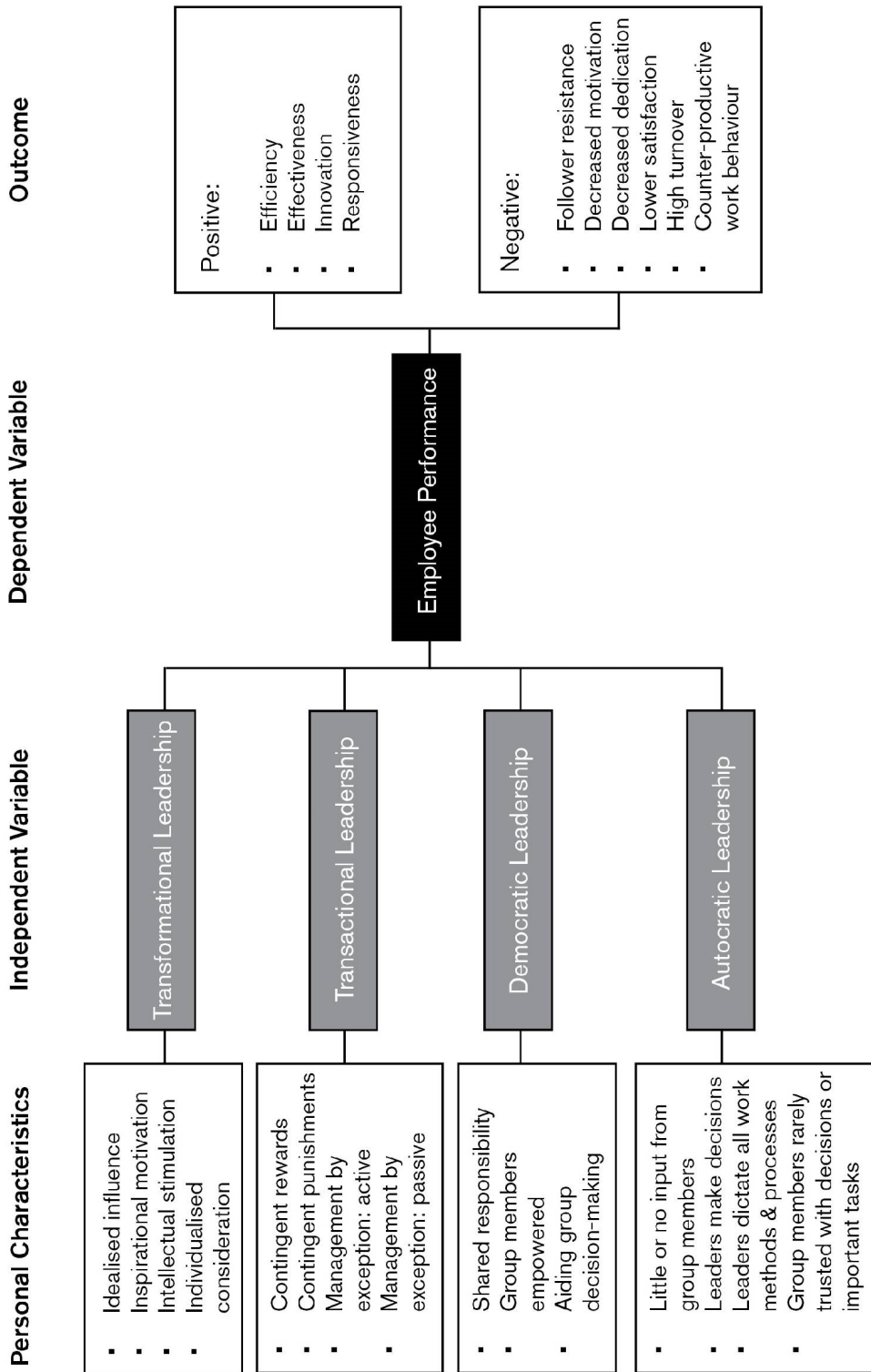


Figure 1.1: Theoretical framework

### **1.11 Ethical considerations**

The research honoured the ethical obligations of research guidelines by ensuring research integrity and efficacy; respecting respondents' confidentiality when dealing with research questionnaires; ensuring participants participated voluntarily; seeking the informed consent of all the participants; avoiding harm to the participants.

### **1.12 Study outline**

This study comprises five chapters, as detailed below:

#### **1.12.1 Chapter One: Introduction**

This chapter defines the problem to be researched, including details of how it will be investigated. The introduction provides a summary of the problem, along with the research sub-questions.

#### **1.12.2 Chapter Two: Literature Review**

This chapter will include relevant information from selected peer-reviewed journals, published books, and theses, which highlight current thoughts on project management and leadership styles. It will address leadership styles and theories, which will be outlined in detail, as well as information about how these styles apply to, and impact, employee performance in the construction industry in Cape Town. This background information is relevant to lay a foundation for the study, before addressing the research questions and objectives.

#### **1.12.3 Chapter Three: Methodology**

This chapter is key to detailing how the research was conducted and providing the rationale for data collection. The goal is to outline the design and research methods implemented to investigate leadership styles of project managers and their impact on employees' performance using the survey method.

We will explain the processes used to collect, present, analyse and validate data, to ultimately address the research objectives and questions. The chapter also includes remarks about the ethical procedures considered in advance of this research.

#### **1.12.4 Chapter Four: Analysis and Discussion of the Research Data**

Here, the researcher outlines and discusses the analysis of the research questionnaire in detail, to determine if the sub-problems were addressed. Moreover, the data collected has been reviewed in relation with the selected literature, to justify the findings.

### **1.12.5 Chapter Five: Recommendations and Conclusion**

In this chapter—the study’s summary—we will present conclusions and recommendations that are relevant to our original research objectives. Based on these conclusions, we will identify aspects for consideration and future investigation.

### **1.13 Conclusion**

In this Introduction, we introduced our study’s overall structure, including research problem and questions, limitations of the work, its rationale, and our research methodology. The next chapter will outline foundational literature, which helps us better grasp the impact of project managers’ leadership styles on employee performance in the Cape Town construction industry.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

The chapter addresses leadership styles and theories, which will be outlined in detail, as well as information about how these styles apply to, and impact, employee performance in the construction industry in Cape Town.

This background information is relevant to lay the foundation for the study, before addressing the research questions and objectives.

### **2.2 The construction industry**

Liphadzi (2015:10) states, in an era of globalisation, construction is a country's economic backbone, which directly influences a nation's ability to economically compete on the global stage—and hinder competition between local businesses.

Cape Town's construction industry, in this manner, plays a vital part in shaping the past, present and future of the city: through building, demolishing, planning, designing, renovating and maintaining a variety of buildings and infrastructure (both public and private). As such, leadership within this integral sector can impact the livelihoods of Cape Town residents—and as a result, the rest of South Africa—when it comes to employment opportunities, economic growth, environmental sustainability outcomes, and overall health and wellbeing.

#### **2.2.1 Challenges within the construction industry in Cape Town**

According to Liphadzi (2015:59), the South African construction industry—and in relation, that of its major cities—face many ongoing challenges.

These include: skills shortages among poorly-educated construction workers and government administrative employees; high rates of construction company bankruptcy; increasing costs for building materials and equipment; lack of developer financing due to stringent banking regulations; gaps in the availability of new technology (and those with the skills to use said technology); poorly maintained or lacking urban and rural infrastructure, including water scarcity, limited electrical capacities, sewage disposal, and street lights.



Moreover, there is limited private land available for building, some of which may be subject to recent land claims in court, heritage designations, increasing statutes and regulations, or zoning challenges.

### **2.3 Definition of a project**

Before we examine the full scope of the role of a project manager, we must first understand the meaning of the word 'project'. According to literature, a project is "any planned, temporary endeavour undertaken to create a unique product, service or other complete and definite outcome within a limited time scale and budget" Bekker and Steyn (2008:3).

Meanwhile, Martin and Wysocki (2019:486) defines a project as "a sequence of unique, complex and connected activities" that all have a singular aim or purpose, with constraints such as schedule, budget, and scope. Essentially, a set of tasks with both a beginning point and an end.

### **2.4 Theoretical framework**

Researchers form theories to understand, predict, and explain certain observations, writes Abend (2008:173-199). They help challenge and advance researchers' existing assumptions and knowledge.

A theoretical framework outlines the path research will take and establishes it firmly in the constructs of the field of study, according to Adom et al (2018:439-441). It introduces and describes researchers' theories, and then explains why the study's research problem exists.

The goal of creating a theoretical framework is to provide direction, as well a motivating catalyst, to explore a research question. In doing so, they magnify the empiricism and scientific rigor of research, state Adom et al (2018:439-441)

Without theoretical framework, readers can find it difficult to understand the academic position and underlying factors of the study's hypothesis and assertions, add Adom et al. (2018:439-441).

## **2.5 Leadership**

### **2.5.1 Defining leadership**

The definition of leadership can prove as elusive to pin down as its true beginnings. Philosophers and great minds of the ancient world used the concept with various connotations. Thus, it can have nuanced perceptions depending on its context.

Indeed, argues Goethals et al. (2012), some of the first references to leadership can be found in texts from the Far East as early as the 6th century BC, with Chinese masters such as Lao Tzu and Zhuang Zhao advocating for “selflessness and leadership” in their works.

Other philosophers, including Aristotle, Plato, Machiavelli, and Confucius also contributed their own opinions to the theoretical database of knowledge on leadership.

“These efforts and other philosophical approaches constitute a rich and ongoing normative approach to understanding leadership”, states Liphadzi (2015:12), adding that they attach a moral or ethical significance to good leaders. He argues that most modern-day theories on leadership are not unique, and heavily borrow from the historical or classical views of leadership.

As Price (2009:21) says most definitions of leadership include some element of shepherding a group in the direction of a common goal. It is often explained using terminology that relates to responsibility, influence, personality, or status; it is a method to achieve a goal or set of desired behaviours.

Likewise, Shaw and Stogdill (1974:9) define leadership as “the process (act) of influencing the activities of an organized group in its efforts toward goal setting and goal achievement”, while Cribbin (1981:23) states the leadership process allows project managers to have subordinates do what needs to be done, but willingly.

To fully understand the far ranging and varied definitions of leadership, Table 2.1 provides a cross section of some of the most common and widely accepted definitions of the concept, which have been utilised for the past 60 years or more.

**Table 2.1: Definitions of leadership**

<b>Definition</b>	<b>Source</b>
"Leadership is 'the behavior of an individual...directing the activities of a group toward a shared goal'."	(Hemphill & Coons 1957:7)
"Leadership is 'the influential increment over and above mechanical compliance with the routine directives of the organization'."	(Katz & Kahn, 1978:528)
"Leadership is the 'process of influencing the activities of an organized group toward goal achievement'."	(Rauch & Behling, 1984:46)
"Leadership is about articulating visions, embodying values, and creating the environment within which things can be accomplished."	(Richards & Engle, 1986:206)
"Leadership is a process of giving purpose (meaningful direction) to collective effort, and causing willing effort to be expended to achieve purpose."	(Jacobs & Jaques, 1990:281)
"Leadership 'is the ability to step outside the culture . . . to start evolutionary change processes that are more adaptive'."	(Schein, 1992:2)
"Leadership is the process of making sense of what people are doing together so that people will understand and be committed."	(Drath & Palus, 1994:4)
"Leadership is 'the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organization'..."	(House <i>et al.</i> , 1999:184)

**(Source: Yukl (2002:2))**

Most descriptions of leadership, asserts Yukl (2002:2) mirror the assumption that it requires the implementation of “intentional influence” over another person or group, to instruct, guide, or facilitate events or outcomes. However, that is nearly all the definitions have in common; they differ on the matter of who imposes this influence, why it is asserted, and how it should be implemented to yield the optimal results.

What is crucial to understand, is that the organisation of leadership structures has evolved over the centuries, from authoritarian leaders who viewed the working masses as ‘naturally lazy’, to today’s age of democratic leadership, where organisations and companies are transitioning into empowering, encouraging environments.

“As the focus of leaders has changed over time, it has influenced and shaped the development and progression of leadership theory,” Liphadzi (2015:12).

### **2.5.2 Leadership vs management**

Grisham and Walker (2008:179) argue there are numerous overlaps between leadership and management roles—so it becomes important to define the difference if project managers in Cape Town’s construction industry are to know and balance these competing interests.

According to Ashworth, A. & Hogg (2007:382), whenever people work together as a team, one member of the group will inevitably become the leader.

Liphadzi (2015:17) cites several authors who have discussed this issue in detail, among them, Jarad (2012), who saw leadership as a subcategory of management and stated both are important for ensuring organisational structure. Price (2009:26), meanwhile, defined management tasks to include budgeting, planning, controlling and structuring. Bartol et al. (2011:33) highlighted the contrast in leadership tasks: directing, visioning, motivating, influencing, and coordinating the development of individuals.

Whereas leaders are often creative and seek extraordinary opportunities that may come with some associated risk, this spirit can be stifled by an overzealous manager who seeks order and wants to avoid any sign of danger, states Liphadzi (2015:17) in reference to arguments made by Zaleznik (2004:80).

“Managers focus on non-behavioural aspects of management, such as the systematic selection of goals, the development of strategies to achieve goals, the design of the organisation, and the control of the activities required to attain the goals,” reasons Zulch (2014:139).

A leader, on the other hand, will aim to steer his or her employees’ behaviour in a favourable direction to achieve organisational aims. One is not better than the other, adds Zulch, since companies need both leadership and management to be effective.

“Successful organisations therefore seek good managers with the leadership potential to develop into leader-managers,” write Botha, T., Smit, P. J. and Cronje (2002:283).

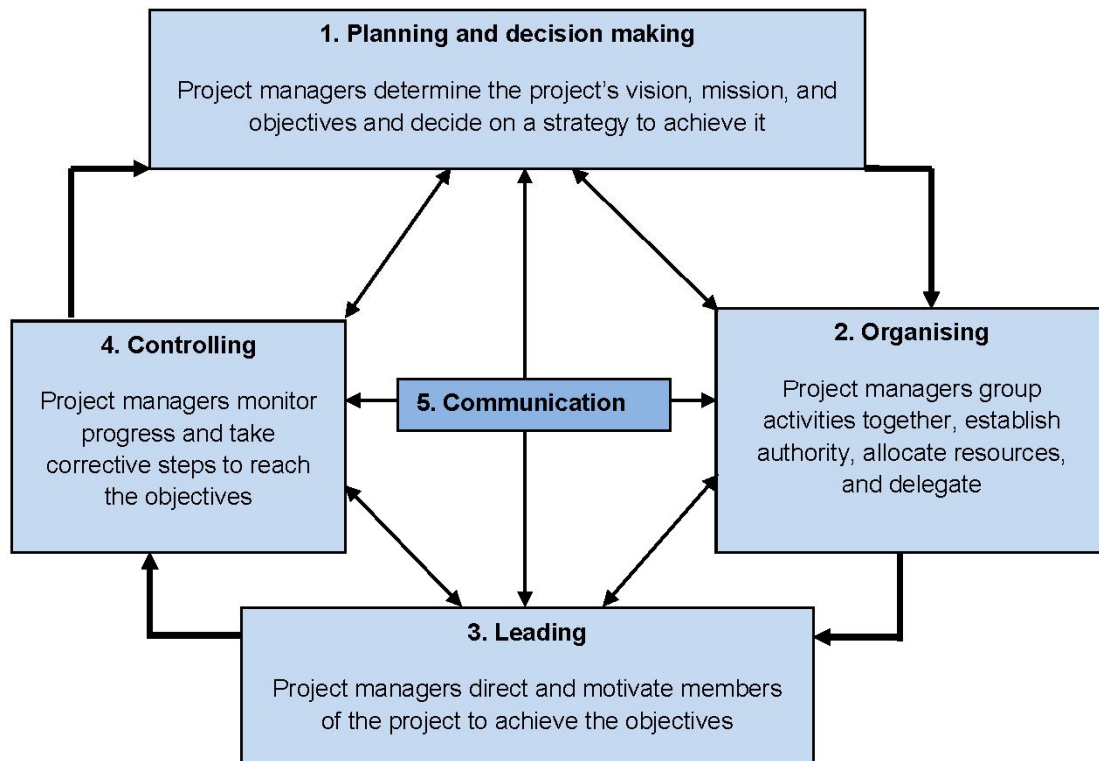
Projects that fail tend to be “over managed and under led”, according to Bennis and Okoro (2010:58). Whereas managers try to “do things right”, leaders “do the right things”, aiming to set the tone and direction for projects and changes. They innovate, ideate, and are proactive rather than reactive.

The ideal characteristics of a leader then, says Liphadzi (2015:18), is someone who is inspiring, quick to adapt and innovate, brave in the face of risk, and functions independently. Likewise, he says, a manager is someone who takes deliberate action after meticulous analysis and consultation; who stabilises chaotic situations, and acts with authority.

Yet there is no consensus in literature regarding the core traits and personality of a leader versus a manager. Indeed, some social scientists have even taken the extreme stance that leaders and managers perform activities that are polar opposites.

The literature highlights just how difficult it must be for project managers in Cape Town's construction industry to walk the balancing line between leader and manager, as evidenced in feedback from their subordinate employees in our research data. According to Price (2009), the industry has focused on management at the expense of leadership.

Figure 2.1 demonstrates the tasks associated with management:



**Figure 2.1: The management process**

**Source: Zulch (2014:14)**

### **2.5.3 Knowledge requirements of project managers**

Successful project managers, writes Zulch (2014:20), must wear many hats, simultaneously. Those with a diverse skill set and the ability to juggle several responsibilities tend to be more successful than those who can not. Those who lack skills are a common reason projects fail, he adds.

Moreover, a project manager crucially requires leadership skills on top of the management qualities they possess; a tall order, considering the long list of tasks for which a project manager is responsible. The skills' hierarchy is outlined in Figure 2.2 below:



**Figure 2.2: The project management hierarchy of skills**

**Source: Zulch (2014:1454)**

Project Management Institute (2008:43) groups the overall study of project management into nine different knowledge areas. These include management of scope, time, cost, quality, integration, procurement, human resources, communication, and risk, states Zulch (2014:24).

In addition to the construction-related tasks discussed, project managers are required to have expertise in four additional spheres: financial management, safety procedures and accident prevention, environmental best practices, and claims management Project Management Institute (2008:121-168).

Note the bottom level denotes leadership, the pillar or foundation upon that which all else is built. Zulch argues that without solid leadership, all other management skills will suffer and be ineffective.

However, once principles are implemented by a leader, basic management skills such as teamwork, motivation, communication, and negotiation can be addressed. Zulch (2014:145) calls these skills essential for collaborative work within an organisation. Only once someone has mastered basic management skills, is he or she finally ready to develop project management skills, the author adds.

At the project management level, one is now familiar with PMBOK's nine knowledge areas in black, as well as the four construction project manager knowledge areas, which are highlighted in red. He or she is now a master, argues Zulch (2014:145).

Other authors, however, have criticised this model. They favour of a reversed approach where a person is first a great manager, before they become an effective and inspiring leader. Zulch (2014:146) says their objection stems from their opinion that project management should appear at the bottom of the pyramid, rather than the top:

“Putting leadership before management is putting the cart before the horse. Leadership is not the starting point, but the end of the professional journey and should probably be the last step.”

#### **2.5.4 Historical leadership in South Africa's construction industry**

Leadership has long been a topic of debate within the local and international construction industries, both historically and in recent years. As the construction industry is increasingly asked to respond to the current climate crisis and the world's social and economic concerns, those within and outside the construction industry question whether the right leaders have been appointed and trained to make a real and lasting impact. This holds true for Cape Town's construction industry, as well as construction crews working in the rest of South Africa.

While the topic of leadership in the construction industry in Cape Town is often covered by news media outlets with a focus on corruption, mismanagement of funds, poor workmanship and skills shortages, there have been no recently published local academic research studies addressing the crucial role a project manager's leadership has in determining the success or failure of a project, or influencing subordinate employees. University of Cape Town researchers, Windapo and Cattell (2013:65-79)

have investigated what challenges impact the performance, development and growth of the South African construction industry, as a whole, by interviewing 120 construction employees in Cape Town. They cited the main perceived challenges to be primarily financial, rather than a leadership issue. Their work points to material costs, access to mortgage/credits, interest rates, and contracting enterprises' success as main determinants of how well, or poorly, projects will perform.

Likewise, Ntuli and Allopi (2013) assessed the impact of skill and experience deficits in Kwa-Zulu Natal's local building sector—but their findings did not speak specifically to the state of leadership and management in Cape Town. The study found that the current skills shortage in KZN underlined the importance of constant upskilling, which they argue should be implemented by South Africa's government and construction companies. The authors recommended that government and local stakeholders must create and implement programs for contractors to tackle the dire shortage of management and technical skills in that province's building industry.

While we can glean anecdotal insight from the South African context as a whole, our study seeks to address the gap in research, to determine what leadership-related factors impact the success or failure of projects. With no recent studies to bolster our literature review, we must rely on more historical sources for evidence indicating how the industry has evolved to its present-day state.

A study by Spatz (1999:3) evaluates the issue from the point of view of directors and managers within the industry, including those who work in large construction firms that employ upwards of 500 staff.

The results, the author states, have exposed a marked absence of leadership in the construction industry. In fact, many of the study's respondents were not able to name any inspiring or influential construction leaders. "Of those individual leaders that are mentioned within the top five highest returns, only one is a practising construction industry professional," Spatz writes.

This demonstrates how construction entities have historically failed when it comes to developing potential leaders, especially in larger firms. The data showed that 18% of respondents said they were "not developing as leaders in any way", and an additional 45% "had no formal succession plan or leadership strategy". Yet surprisingly, more than 90% of those who responded still said they would consider themselves "above average or excellent" when it came to their own leadership.



Nevertheless, individuals within the construction industry are actively seeking novel experiences, training, innovation, inspiration and straightforward direction or guidance so they can improve their leadership potential. Moreover, they rejected the notion that money or financial benefits was influential in their ability to lead.

“Only 8% said money and only 3% identified financial benefits as a key factor in helping them develop,” reports Spatz (1999:3). The industry, however, has not taken note. In nearly 50% of construction companies, executives still use monetary rewards, incentives and benefits as their go-to means of keeping leaders engaged and loyal.

While the skills of leaders are generally perceived as interchangeable or transferable within the construction industry, potential leaders are predominantly still internally recruited, oftentimes, using the flawed incentives or motivational tools. In some cases, these companies might be missing out on recruiting new and better leaders from outside their firms, or the chance to create more appropriate incentives to train up leaders from within the ranks, states Spatz (1999:3).

Why? Because there seems to be varying traits, skills, and characteristics between construction industry leaders versus those from an external industry. This may have arisen as a genuine misunderstanding about the leadership qualities that are required within the construction industry or reinforce that special traits are needed to succeed.

The construction industry needs to fundamentally re-assess the so-called ‘leadership qualities and skills’ it presently uses, argues Spatz (1999:3). Research shows that ‘soft skills’, such as relationship building and management, emotional intelligence, and creativity, should be a greater focus in developing good leaders.

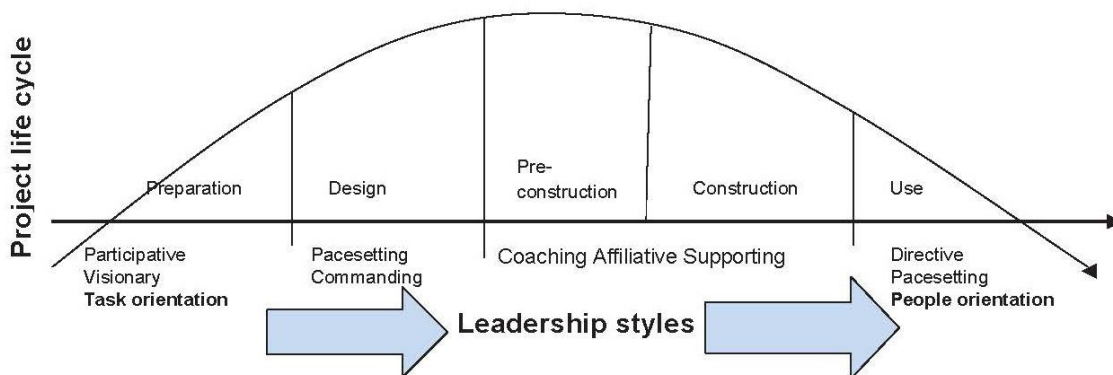
As teams re-assess the meaning of leadership and management within the construction industry, including Cape Town’s, the need for immediate and relevant study becomes striking, as asserted by Wilson and Hillebrandt (1975:45).

The size and complexity of construction projects mean they ultimately require individuals with a unique set of specialised skills. As such, construction teams are typically large and diverse, with workers spanning a range of disciplines. It is what makes good leadership and final responsibility so important, writes Spatz (1999:8), since project managers are final decision makers at every of the project (from conception to commissioning), despite any potential challenges they might face.

“Studies on leadership styles show that the personality of a leader, the maturity of followers, and the needs of the environment determine the leadership style to follow, says Zulch (2014:124). Well-equipped leaders, he adds, are chameleons; able to adapt any style or combination of them to suit the situation, since “any one of the styles might be effective in the right situation.”

This theory—that there no single approach to leadership can be applied to all situations to achieve success—is demonstrated in detail below. Figure 2.3 illustrates a project’s life cycle, which has been divided into five common project phases: preparation, design, pre-construction, construction, and use) and various project managers’ leadership styles.

The arch begins with the preparation phase and peaks at the tail end of the pre-construction phase. It shows how project managers tend to be more task oriented at the start of the preparation phase (when a team needs more of a leader’s support and guidance), but transitions to a people-centric approach towards the end ‘use’ phase (when the team has learnt to be independent).



**Figure 2.3: Leadership styles over the project life cycle**

**Source: Zulch (2014:153)**

“Leadership can be defined as a style of behaviour designed to integrate both the organisational requirements and personal interests in the pursuit of some objectives. Managers have a leadership responsibility. Project managers are often selected or not selected because of their leadership styles,” writes Zulch, referencing the work of Kerzner (2002:260).

### 2.5.5 Leadership: common theories

In the past century, leadership theories have generally been grouped into two camps: classical (pre-1979) or modern (from 1980 until today), as defined in Table 2.2.

**Table 2.2: Leadership theories**

The Theory		Period	Summary of the Theory
Great Man Theory		Before 1950	Leader decides the course of history.
Traditional Leadership Theories	Trait Approach	Between 1910 & 1940	People are born leaders and possess common characteristics.
	Behavioural Approach	Between 1940 & 1960	Behaviours of the leaders are taught.
	Contingency Approach	Between 1960 & 1980	There is not a certain leadership behaviour to suit every situation. It varies depending on the situation.
New (Modern) Leadership Theories: Authentic leadership Transformational leadership Spiritual leadership Charismatic leadership Visionary leadership Cultural leadership Moral leadership Ethical leadership Servant leadership Entrepreneurial leadership		From 1980s until today	Leadership varies depending on the direction of change of the society.

**Source: Aksel (2008:34)**

These theories have been refined and developed over time; a thorough review of the literature shows all are relevant in some way and build on each other, depending on the context in which each approach or theory is applied.

According to Khan and Nawaz (2016:1), many social scientists have conceded that leadership styles have flexibly progressed and developed over the years. Instead of new research refuting the earlier findings of colleagues, the findings simply build on the existing foundations that have been laid.

Few applications are the same, say Dess and Picken (2000:11), since the style of leadership used in tasks requiring exact precision or care, high confidence and sensitivity, or technical expertise may differ from simpler management-oriented tasks.

Therefore, leadership theories can evolve with each new situation or organisation, the context and culture, one's working environment, government laws and regulations, or psycho-social developments, according to Amabile *et al.* (2004:26).

Yet with these theories also came the consensus that “a person does not become a leader merely by virtue of the possession of some combination of traits” Samad (2012).

#### **2.5.5.1 Great Man Theory**

Early adopters of the Great Man Theory argued leaders were ‘born not made’—that heroes rise to power out of a great need for leadership and their inherent heroic potential, state Khan and Nawaz (2016:1).

Historically, these great men were members of the elite, with few from the lower working class ever making it into the annals of early heroic literature. The Great Man Theory was entrenched by medieval monarchs and religious leaders, who championed “the divine right of kings”, a rule of law giving absolute power to ruling monarchs that was only abandoned with subsequent revolutions in Britain, France and America in the 17th and 18th centuries.

However, as was the case with religious leaders such as Jesus, Buddha or Mohammed, and political figures like Dwight D. Eisenhower and Winston Churchill, the origins of a leader as a member of the ruling elite were not always clear cut.

Scottish philosopher, Thomas Carlyle, wrote in 1847 that “universal history, the history of what man has accomplished in this world, is at the bottom of the history of the great men who have worked here,” Khan and Nawaz (2016:2).

Carlyle’s theory was both challenged and expanded by American philosopher, Sidney Hook, who made the case against determinism. His studies and subsequent book, *The Hero in History*, argued the concept of both an “eventful man” and “event-making man”, Dobbins and Platz (2007). According to Hook, humans are active in creating societal norms and in transforming their natural environments—thus, the universe and its inhabitants are neither complete, nor determined.

“He proposed that the eventful man remained complex in a historic situation but did not really determine its course. On the other hand, he maintained that the actions of the event-making man influenced the course of events, which could have been much different, had he not been involved in the process. The event-making man’s role is based on ‘the consequences of outstanding capacities of intelligence, will and character rather than the actions of distinction’,” write Khan and Nawaz (2016:2).

The Great Man Theory's credibility came under scrutiny after the 1950s, due to world events—and leadership by the likes of Hitler, Stalin, and Napoleon—which revealed this theory to have glaring moral flaws that stifled growth of organisations. There was a need to explain leaders' failings and define their successes, which could only seemingly be answered through the development of common leadership traits and skills.

Subsequently, leadership theory transitioned from the dogmatic belief that leaders are born (or destined to assume their role at a particular time, by nature), to a belief that particular traits indicate one's leadership potential.

### 2.5.5.2 Traditional Leadership Theory: Trait Approach

The Trait Approach Theory of Traditional Leadership, which rose to popularity between 1910 and 1940, ignored previous assumptions about whether leadership traits and characteristics were genetic or acquired through learning, explain Khan and Nawaz (2016:1).

Instead, according to Ekvall and Arvonen (1991), traits were classified as “emergent” or heavily-dependent on heredity (such as height, attractiveness or intelligence), and “self-confidence and effectiveness traits”, developed by experience or learning (such as charisma).

Shaw and Stogdill (1974) identified the following traits and skills as critical to leaders, as outlined in Table 2.3:

**Table 2.3: Traits and skills of a leader**

Traits	Skills
Adaptable to situations Alert to social environment Ambitious Achievement-orientated Assertive Cooperative Decisive Dependable Dominant (with a desire to influence others) Energetic (with a high activity level) Persistent Self-confident Tolerant of stress Willing to assume responsibility	Clever (intelligent) Conceptually skilled Creative Diplomatic and tactful Orally fluent Knowledgeable about group tasks Organised (administrative ability) Persuasive Socially skilled

**Source: Shaw and Stogdill (1974)**

But since no one could detect the traits common to every single leader, this theory fell into disuse and disfavour. It was instead traded for a new theory, asserted in the late 1940s, when scholars looked at the traits of military and non-military leaders respectively, and discovered a correlation between the development of certain traits at particular times, writes Khan and Nawaz (2016:2).

#### **2.5.5.3 Traditional Leadership Theory: Behavioural Approach**

According to a Behavioural Approach (another Traditional Leadership Theory, which emerged in the 1940s and grew in popularity), leaders are not born, they are made. Successful leaders are judged by their deeds and behaviour, and leadership can be taught and learnt. Thus, if success is measurable through definitive actions, prospective leaders could simply mimic the behaviour of others to achieve their own success. In this regard, a Behavioural Approach asserted that anyone could become a leader through careful study, and that their actions defined their potential, rather than physical, social, or intellectual characteristics.

Three broad categories are most frequently mentioned in literature, according to Xiong (2008:19-20): behaviours that relate to the performance of tasks, behaviours that relate to an employee's participation in making decisions, and behaviours that relate to maintaining a group. Researchers became intrigued to identify and study behaviours that would increase subordinates' performance and effectiveness in the workplace Liphadzi (2015:15).

#### **2.5.5.4 Traditional Leadership Theory: Contingency Approach**

The Contingency Approach of Traditional Leadership Theory states that a leader will be successful based on his or her ability to read a situation and implement the correct leadership style to match. By assessing his or her own strengths, a leader must discover the types of environments and situations he or she can have the most impact.

Fiedler (1991:23) first introduced this notion of a "contingency model"—that certain people perform well or poorly according to their situation, which can vary based on the project type, characteristics of their subordinates, the influence of upper management, the structure of their organisation and a leader's own personal preferences.

According to Khan and Nawaz (2016:2): "There is no single right way to lead because the internal and external dimensions of the environment require the leader to adapt to that particular situation".

Greenleaf (1991:429-438), meanwhile explains that, as per the Contingency Approach, a leadership style that is operative in some situations might not be suitable in others. Therefore, “there is no one finest way of leading [or] organizing”.

#### **2.5.5.5 New modern leadership theories**

There are many modern leadership theories that have emerged and evolved since the 1980s as variations of the traditional leadership theories or are based on the direction of change of modern society. These include spiritual leadership, servant leadership, ethical leadership, moral leadership, cultural leadership, entrepreneurial leadership, visionary leadership, charismatic leadership, and authentic leadership, to name a few. However, for the scope of this study, these leadership theories will not be discussed in detail.

#### **2.5.6 Leadership styles**

Management and organisational behaviour expert: Mullins (2009), defines leadership styles “as the methods used to carry out leadership functions and the way a manager decides to act towards his or her subordinates”.

According to Zulch (2014:124), leadership styles can be grouped into six main categories: “directive, pacesetter, participative, visionary, coaching and affiliative”, but adds that other authors have added two more: bureaucratic and laissez-faire leadership.

For the purposes of this thesis, we will focus on four main leadership styles and define them in greater detail: autocratic (sometimes called authoritarian) leadership, democratic or participative leadership, transactional leadership, and transformational leadership.

##### **2.5.6.1 Autocratic leadership style**

The term ‘autocratic’ comes from the Greek words *auto* (meaning ‘self’) and *cratic* (meaning ‘rule’). An autocratic or authoritarian leader takes sole responsibility for decision making with little input from his or her subordinates. While this style of leadership can prove useful for projects requiring split-second decisions it can also lead to resentment among subordinates if they feel overworked and undervalued.

This leadership style has fallen out of popularity in recent years due to its perception as dictatorial, however, Schaeffer (2002) states many of history’s most effective leaders utilised autocratic leadership to advance society and revolutionise various industries—

among them, Roman emperor, Julius Caesar, and Henry Ford, the pioneer of the first automobiles. Shaeffer asserts this leadership style is still common today and “is necessary within organizations and companies that demand error-free outcomes. The reason is simple. It works.”

#### **2.5.6.2 Democratic leadership style**

“The democratic leadership style is based on mutual respect. It is often combined with participatory leadership because it requires collaboration between leaders and the people they guide,” states an article published by St. Thomas University (2014). Moreover, to cite the work of Gastil (1994), democratic leadership empowers, shares responsibility, and helps with the collective ability to make decisions.

Democratic leadership involves all group members, from the lowest subordinate to the highest-ranking executive, in the decision-making process. Unlike Autocratic leadership (which encourages ‘yes-men’ who do not think for themselves), a democratic leader expects subordinates to be skilled problem solvers with experience and self confidence in their own rite. Each person is asked to contribute his or her ideas, opinions, and skills—and is also given the opportunity to “vote” or decide the end outcome. There is no one person who has the final say, rather, it is a group effort that takes into consideration the needs and wants of all involved parties.

It can be characterised by an “I share” mentality, according to Mahmutaj *et al.* (2015), who add: “Participative leaders communicate priorities to followers and involve them in realistic goals. Participative leaders support developing follower’s talent and provide them with necessary resources. In a way, they build team cohesion, it is important to select the right followers who are proactive in the process of decision making.”

This leadership style is believed to encourage inclusive, creative problem solving by all members of the group, along with a feeling of personal responsibility and ownership over the project’s ultimate success or failure. According to Chynoweth (2008), this creates equality between a leader and his or her subordinates, since they have shared power over the end decision.

However, according to Edwin A. Locke, an expert on leadership and motivation from the University of Maryland and his colleague Locke, Schweiger and Latham (1986), there can be serious downsides to this type of leadership; if people don’t feel their voices are being heard or they’re inexperienced, democratic or participative leadership “can actually lead to lower employee satisfaction and productivity”.



### **2.5.6.3 Transactional leadership style**

According to literature, transactional leadership is a style of leadership where leaders encourage obedience and implementation through a system of rewards and punishments. Transactional leadership underlies most leadership models, which focus on exchanges between leaders and followers, asserts Northouse (2017:23).

These leaders, write Odumeru and Ifeanyi (2013), are “extrinsic motivators”, who evoke “minimal compliance” from their subordinates. Rather than rock the boat, they readily accept the goals, organisational structure, and workplace culture of their company.

Bass and Avolio (1994) add that transactional leaders favour using contractual agreements and rewards to motivate their followers. Transactional leadership is highly motivating in the short term, as opposed to other styles of leadership that aim to promote long-term change, such as transformational leadership. In this type of ‘do-this, get-that’ or contractual leadership, managers are often looking to find flaws, faults and deviations in their employees’ work to assess punishments or rewards.

The concept of transactional leadership was first introduced by Max Weber, according to Folakemi, Anthonia et al. (2016:369), in his work considering the socio-economics of an organisation. He defined transactional leaders as individuals who obtain leadership status through “normative rules and regulations, strict discipline and systematic control”, these authors add.

Furthermore, there are three components of the transactional leadership style, write Khan and Nawaz (2016): the contingent reward, a management-by-exception that is active, and a management-by-exception that is passive.

#### **2.5.6.3.1 Contingent reward**

A contingent reward, explain these authors, positively reinforces good work and motivates employees with rewards for their achievements—particularly when financial or schedule goals are met or exceeded.

As such, project managers who favour this contingent reward system often prefer behaviours that emphasise outlining and clarifying each employees’ role and task requirements, according to Walumbwa, Wu and Orwa (2008:251-265). These project managers provide their subordinates with material or psychological rewards, which are contingent on employees’ fulfilment of contractual obligations, says Bass and Avolio (1994).

#### **2.5.6.3.2 Management-by-exception (active)**

For this style of transactional leadership, the project manager supervises employees' work, taking immediate action to correct subordinates if something goes wrong.

"This type of leadership does not inspire workers to achieve beyond the expected outcomes, however, if the target is achieved, that means the system has worked, everyone is satisfied, and the business continues as usual," according to Bass and Avolio (2004).

#### **2.5.6.3.3 Management-by-exception (passive)**

Management-by-exception (passive) is a transactional leadership style used by leaders who avoid expressing their agreement and do not outline clear goals or standards they expect from subordinates.

According to Bass and Avolio (2004), this type of leader will wait for disaster before taking any steps to rectify a situation that seems headed for failure. As such, this type of transactional project manager may only intervene if the project's goals and objectives have not been met, or when serious problems arise.

#### **2.5.6.4 Transformational leadership style**

Transformational leadership includes project managers who encourage, inspire, and motivate employees to achieve results that contribute to the long-term success of their company. They foster opportunities for innovation and encourage subordinates to be changemakers in their own lives, the timeline of a project, and the firm's future.

Robbins and Coulter (2007) describe a transformational leader as "a person who stimulates and inspires (transforms) followers to achieve extraordinary outcomes".

Liphadzi (2015:15), meanwhile, says transformational leaders "put passion and energy into everything. They care about their subordinates and want them to succeed. Transformational leaders influence their subordinates by motivating them emotionally."

Transformational project managers achieve this through a variety of methods (see Table 2.4), all of which serve to boost company culture, individuals' sense of identity and ethics, motivation, and overall job performance. This type of leader is a role model for subordinates, acts as a 'servant leader', holds employees accountable and encourages them to take responsibility and ownership, and intimately knows their personal strengths and weaknesses.

According to Warrilow (2012), four main components of transformational leadership can help boost performance: charisma or idealised influence, inspirational motivation, intellectual stimulation, personal and individual attention.

These four main components of transformational leadership are outlined in detail in Table 2.4:

**Table 2.4: Four components of the transformational leadership style**

Traits	Skills
Charisma or idealised influence	The degree to which the leader behaves in admirable ways and displays convictions and takes stands that cause followers to identify with the leader who has a clear set of values and acts as a role model for the followers.
Inspirational motivation	The degree to which the leader articulates a vision that is appeals to and inspires the followers with optimism about future goals, and offers meaning for the current tasks in hand.
Intellectual stimulation	The degree to which the leader challenges assumptions, stimulates and encourages creativity in the followers—by providing a framework for followers to see how they connect [to the leader, the organisation, each other, and the goal] they can creatively overcome any obstacles in the way of the mission.
Personal and individual attention	The degree to which the leader attends to each individual follower's needs and acts as a mentor or coach and gives respect to and appreciation of the individual's contribution to the team. This fulfils and enhances each individual team members' need for self-fulfilment, and self-worth—and in so doing inspires followers to further achievement and growth.

**Source: Warrilow (2012)**

First introduced by James V. Downton, who coined the term 'transformational leadership', this concept was built on by presidential biographer, James MacGregor Burns, who is considered a leadership expert. Burns (1978) stated that transformational leadership is apparent when "leaders and followers make each other advance to a higher level of morality and motivation".

"Transformational leadership links with positive outcomes on individual as well as organizational levels. Transformational leaders emboldens followers to attain higher-order needs like self-actualization, self-esteem," says Bass (1995).

While transactional and transformational leadership have been shown to vary in concept and practice, many authors agree that transformational leadership adds to transactional leadership, since it can lead to better performance outcomes for individuals, groups, and organisations.

## **2.6 Leadership styles and their relationship with employee performance**

### **2.6.1 Autocratic leadership and employee performance**

Autocratic leadership is typical in high-pressure environments, where team agreement is not necessary for the successful outcome of a project or decision, according to Boehm *et al.* (2015).

In the construction industry, an autocratic style of project management leadership can prove useful when the project faces urgent issues and stress-filled environments: budget overruns, missed deadlines, a lack of available labour and materials, or the risk of excessive change orders from the design team. As these potential problems arise, it can be beneficial for the project manager to take immediate action in decision making, without extensive consultation of all subordinate employees, states Boehm *et al.* (2015:21).

However, this commanding type of leadership can also lead to resentment and poor performance if employees feel overworked or undervalued. When project managers ask little or no input, and dictate all work methods, subordinates can revolt against the tight restrictions of structure, adds Boehm *et al.* (2015:25).

### **2.6.2 Democratic leadership and employee performance**

The democratic leader asks for the group's opinions, while reserving his or her own views. The group is permitted to make decisions, which the leader then 'rubber stamps' as a formality.

Chua, Basit and Hassan (2018:117) say this leadership style can foster team work, promote innovation and creativity, and inspire engagement in tasks that boost happiness, efficiency, and performance in the workplace.

Iqbal *et al.* (2015:7), meanwhile, assert that democratic leaders ask for the opinions of others when making decisions, rather than giving their own suggestions.

The relationship between employee performance and the democratic leadership style was valued by employees, according to Bhatti *et al.* (2012:192). "They feel more comfortable with their work by the fact that they're in control of their own destiny."

In the construction industry, a democratic leadership style can inspire collaboration, encourage teamwork, and increase performance among employees. When all team

members feel they are personally invested in the project, and valued, they will work together towards its positive outcomes; covering for absent employees, working overtime to meet deadlines, managing time and material resources well, and treating their fellow team with respect. Iqbal *et al.* (2015:14)

However, this style of project management leadership can take longer to reach desired outcomes. As a leader consults the group of employees, there can be a lack of consensus that makes decision making even more difficult and leads to cost and time overruns. Employees may not fully understand the complexities and nuances of the owner or client's wishes, and therefore make decisions based on their own interests, rather than those of the owner or client. Furthermore, individual opinions and those of minorities can be quashed by a louder majority—even if the ideas aren't as good. Bhatti *et al.* (2012:198)

### **2.6.3 Transactional leadership and employee performance**

With transactional leadership, a clear chain of command is essential. Punishments and rewards must be defined by project managers as a means of motivating employees, and subordinates' work is typically closely monitored. This leadership style values a positive and mutually-beneficial relationship, according to Nedal GH. Jarad (2012:22).

Odumeru and Ifeanyi (2013) call transactional leaders “directive and action-oriented” and state that they “think inside the box” to use existing solutions when finding solutions to meet the project's or organisation's goals.

In the construction industry, transactional leadership can be highly motivating to achieve short-term goals—particularly in Cape Town, where general construction labourers are not always paid living wages, when compared with construction workers in other parts of the world. Money is a powerful motivator, as are chances to take paid time off, or end work early on a weekend. Liphadzi (2015:22)

### **2.6.4 Transformational leadership and employee performance**

Transformational leadership requires a project manager to be highly interactive with his or her employees, to build a solid relationship with a strong foundation of trust, states Liphadzi (2015:17). “The essence of transformational theories is that leaders transform their followers through their inspirational nature and charismatic personalities. Rules and regulations are flexible, guided by group norms. These attributes provide a sense of belonging for the followers as they can easily identify with the leader and [his or her] purpose.”

In the construction industry, the transformational leadership style encourages active involvement from employees, despite that all final decisions rest with the project manager. By allowing—and encouraging—input and creativity, employees are able to demonstrate their unique abilities and talents, and give their best to the project outcomes. This style of project management leadership can yield more varied, efficient, and innovative ideas, and decrease employee dissatisfaction, burnout, absenteeism, and turnover. This style of leadership drives positive employee performance, encourages personal growth and learning among employees—including upskilling and the opportunity for promotions. Liphadzi (2015:32)

However, when leaders encourage ideas from employees but do not take their advice into consideration for the final decision (and there's no shared vision), it can lead to decreased satisfaction and performance over time if employees feel their opinions and ideas are consistently not valued or used. Likewise, if a project manager loses employee trust, the result can be catastrophic for both morale and a project, according to Odumeru and Ifeanyi (2013:11).

## **2.7 Empirical studies**

We have conducted an extensive review of existing literature and global research studies to find topics relating to that which is discussed in our thesis: the impact of project managers' leadership styles on employee performance in the construction company in Cape Town.

### **2.7.1 Study One**

The most relevant was a study conducted by Oshinubi (2007) which surveyed project leadership and project managers, and collected team performance data.

The study conducted surveyed 17 project managers on 17 project teams, each with six to nine team members. It evaluated project managers' leadership styles, and their impact on employee performance in the construction industry in America's south-eastern states.

The study identified nine characteristics of true project manager's leadership style: "(a) charisma, (b) sharing responsibility, (c) continuous personal and team development, (d) a common vision, (e) mutually influencing relationships, (f) putting the interests of the group ahead of the interests of the individual, (g) risk-taking, (h) team collaboration, and (i) empowering others".

According to the author, “four of the leadership characteristics—continuous development, mutual influence relationships, risk taking, and collaboration—were consistently found in the project managers of top-performing teams”.

As such, project managers and team members alike recognise their collective responsibility for overall performance, and do not think success depends on a single project manager. By using project manager leadership training to improve the nine characteristics identified above, the study asserted that team performance may be impacted for the better.

### **2.7.2 Study Two**

Chan and Chan (2005) surveyed 510 building professionals, with the purpose of evaluating transformational leadership and transactional leadership used by construction project managers.

The study’s aims were to identify which of the two leadership styles was best able to predict and deliver outcomes of “leader effectiveness”, “extra effort by employees”, and “employee satisfaction with leaders”.

It also examined the extent to which leaders used transformational and transactional leadership styles, offering insight for building professionals in business organisations as they develop management framework.

Results of the study suggested that all five of the transformational factors and three of the transactional factors were significantly correlated with leadership outcomes of leader effectiveness, extra effort by employees, and employee satisfaction.

The results further supported that transformational leadership could augment transactional leadership in producing greater amounts of performance and satisfaction.

### **2.7.3. Study Three**

Nidadhavolu (2018) evaluated the leadership styles implemented in the construction industry in India, according to its author, with the goal of studying the leadership styles used by upper management of Indian construction companies and examining their impact on employees’ job satisfaction and organisational commitment. The study was conducted using survey methods.

Sixty employees were selected to participate in the 25-question study, including members from three working groups at three different construction companies (labelled A, B and C). These included senior managers, worker supervisors and construction engineers.

Questions included those related to demographics, assessment of leadership styles, organisational commitment, and job satisfaction. The author used standard deviation, mean and confidence level to analyse the results of respondents.

The results revealed that upper management members at Company A used effective leadership styles. Employees were satisfied with their jobs and committed to the organisation. Employees at Company B and Company C, however, were unhappy with the leadership styles used by their managers. The results showed these employees were unsatisfied with their jobs and less committed to the organisation.

#### **2.7.4 Study Four**

Researchers Mawoli and Mohammed (2013) gathered a sample size from 1,400 staff at Federal Medical Centre in Bida, Niger, using a stratified random sampling method. The authors tested three hypotheses through a linear regression analytical tool. It was discovered that heads of units, sections and departments used autocratic, democratic, and laissez-faire leadership styles to influence job performance.

“Specifically, democratic leadership style has significant impact on the job performance of health workers while autocratic and laissez-faire leadership styles have less or no significant impact on the job performance of health workers,” the study stated.

As a result of this research, the laissez-faire and autocratic leadership styles were recommended to be avoided, since “they are capable of creating a lawless working environment and very low employees’ job performance respectively”.

#### **2.7.5 Study Five**

Understanding the factors that influence employee performance, according to the study’s authors, is crucial to maximising an organisation’s success, through leadership that was “motivating, satisfying, idealized, influential, inspirational and encouraging”, state Advani and Abbas (2015)

The quantitative study surveyed a sample size of 172 bankers in Pakistan, using 18 questions based on the five-point Likert scale. The researchers’ goal was to determine



the impact of transactional and transformational leadership on employees in Pakistan's growing banking sector.

#### **2.7.6 Study Six**

Memon (2014) evaluated the effects of leadership styles on employee performance, using theoretical underpinning. The study found that the impact of leadership styles on employee performance were dissimilar due to "variables of culture and gender". However, communication was revealed as one of the most crucial factors in influencing effective leadership and employee performance.

"The research rational relationships among variables have been deliberated through research findings of various authors to craft practicality of theoretical research, while making it handy for practitioners and trainers. However, the presented model is to be tested through empirical research across the continents and various cultures," Memon states.

#### **2.7.7 Study Seven**

Paracha *et al.* (2012) undertook research to pinpoint which leadership style—transformational or transactional—has a bigger impact on employee performance and job satisfaction. The author collected data from six schools in the Pakistan cities of Rawalpindi and Islamabad.

The findings revealed that transactional and transformational leadership styles positively impact employee performance. However, this study found transformational leadership to have more significant impacts on performance than transactional.

Another interesting discovery was that transactional leadership had no mediating role on an employee's job satisfaction, but transformational leadership did.

#### **2.7.8 Study Eight**

Nawoseing'ollan and Roussel (2017) from Paris School of Business explored the relationship between leadership styles and performance in Turkana County, Kenya. Their work adopted a mixed-method approach using exploratory survey design.

"Simple and multiple regression analysis was used to determine whether a relationship exists between the independent and dependent variables," the authors state.

“On the other hand, qualitative data from the interview guide was analyzed by content analysis; this involved selecting and grouping the data according to emerging themes in line with objectives of the study.”

According to study findings, there is no “perfect” leadership style—but they do have an impact on employee performance. An authoritative leadership style influenced performance by 52.2%, while affiliative leadership had a 49.5% impact.

“It was concluded that the two leadership styles influence government employees’ performance in Turkana County and therefore the two styles should be adopted [at once] and not each style on its own.”

### **2.7.9 Study Nine**

Another study with relevance was undertaken by Anyango (2015). Its goal was to assess the impact of leadership styles on employees at the Bank of Africa (BOA) in Kenya. The styles evaluated were transformational, transactional, laissez-faire, and autocratic leadership.

The study utilised a cross-section descriptive survey research strategy, which included the distribution of 300 structured questionnaires (with 80 coming back as usable).

“Leadership styles were measured through the multi-factor leadership questionnaire developed by Avolio and Bass (1995), and modified to fit the context of the study. Employee performance was measured by the scale of Yousef (2000),” the author states.

The researcher analysed data using descriptive and inferential statistical techniques, including Pearson’s correlation, and regression analysis. Descriptive and inferential statistical techniques assessed relationships and effects.

According to the findings, transformational leadership was most utilised at the bank, where employee performance proved above average, followed by transactional and laissez-faire leadership.

“Overall, scores in transformational leadership style were found to be strongly correlated with both measures of employee performance and overall performance,” states Anyango.

The “transactional leadership style was found to be positively correlated with both measures of employee performance as well as overall performance”, she added, however, “contingent rewards had a negative but insignificant correlation with performance while management by exception had insignificant positive correlations”.

The findings also state that authoritative leadership had an insignificant relationship, while laissez-faire leadership had an insignificant positive correlation.

According to the authors, this means supervisors should avoid using laissez-faire leadership and instead, implement transformational or transactional styles, Anyango (2015). These two styles were found to potentially have larger impacts on the productivity and performance of employees, as opposed to others.

## **2.8 Conclusion**

In this chapter, we examined peer-reviewed journals, published books, and theses, which highlight academic thought on project management and leadership styles, to evaluate their impact on employees’ performance in the construction industry in Cape Town. The trend, or prevailing thought of the literature seems to indicate that project managers’ leadership styles do have a positive impact on employee performance.

Despite exhaustive research, to the best of the researcher’s knowledge, no existing recent literature was found that assesses the impact of project managers’ leadership styles on his or her subordinate employees in Cape Town’s construction industry. While one study, by Liphadzi (2015) assesses the impact of leadership in construction across South Africa, as a whole, it did not provide Cape Town-specific data or analysis. As such, the researcher relied on historic studies about leadership in Cape Town to provide background context on how the city’s construction industry has evolved to its current state.

The study’s next chapter will focus on the methodology used for research. We will provide a detailed outline of our scientific processes and techniques for survey design and accurate data collection.

## CHAPTER THREE: METHODOLOGY

### 3.1 Introduction

This chapter details the researcher's methods for conducting the research and provides the rationale for data collection.

The goal is to outline the design and research methods used to investigate leadership styles of project managers and their impact on employees' performance. We will explain the processes used to collect, present, analyse, and validate data, which will then be used to address the research questions.

The chapter also includes remarks about the ethical procedures considered in advance of the research process.

### 3.2 Rationale of the study

This study will improve the overall understanding of whether or not project managers' leadership styles impact employees' performance by evaluating a variety of leadership styles.

It will outline how each style—whether transactional, transformative, democratic, or autocratic—can influence the performance of construction employees in the South African context, and the extent of this correlation between leadership style and employee performance. We will also develop a conceptual framework of leadership quality development tools, which can be used by project managers and construction companies in Cape Town to improve employee performance and project outcomes.

In doing so, we anticipate the research will contribute to the leadership development of project managers in Cape Town's construction industry and improve previous shortcomings.

### 3.3 Research paradigm

We must first outline the 'research paradigm', a Greek word meaning *paradeigma* or 'pattern', that was first coined by Thomas Kuhn, a philosopher from the United States, in 1962. This term references scientists' common beliefs, which address how research problems are to be understood and approached.

Considered experts in this field of thought, Guba and Lincoln (1994:109-110) define a research paradigm as a “worldview”, which acts as a guide for action and investigation. It is “the conceptual lens” by which researchers view the world, write Kivunja and Kuyini (2017:27). The research paradigm helps researchers analyse the methodology of research projects to establish the best tools and strategies to review data.

Qualitative researchers, Denzin and Lincoln (2005:43) meanwhile, say paradigms are human-made constructs that outline researchers’ principles, assumptions and influences to find the hidden meanings embedded in data. By understanding a study’s assumptions and principles, scientists can better grasp the quality of research findings and pinpoint any potential gaps or flaws in the evidence, according to Park, Konge and Artino (2020:690:694)

All research, states Groenewald, Thomas (2004:291), “is based on some underlying philosophical assumptions about what constitutes ‘valid’ research and which research method(s) is/are appropriate for the development of knowledge in a given study. In order to conduct and evaluate any research, it is therefore important to know what these assumptions are”.

When it comes to research paradigms, there are three main types: positivism, pragmatism, and interpretivism (also called constructivism). They can, however, be defined even more specifically, by analysing the methodology, ontology, and epistemology of each paradigm type. Methodology refers to the steps involved in the scientific process. Ontology refers to concepts’ properties and the relationships between them. Epistemology, meanwhile, is the study of the human knowledge, including its origins and limits—in other words, what separates justified beliefs from opinion.

Ponterotto (2005:52) describes positivism as a study approach that “relies specifically on scientific evidence, such as experiments and statistics, to reveal a true nature of how society operates”.

The concept is based on work by French philosopher, Auguste Comte, who said using objective observation, experiment and reason are best when trying to understand human behaviour.

Positivism, according to Henning, Van Rensburg and Smit (2004:17), aims to find the truth through empirical methods. It regards human actions and behaviour as “passive,

controlled, and determined by [the] external environment”, writes Groenewald, Thomas (2004:294)

The interpretivist paradigm, on the other hand, uses qualitative or subjective meaning, rather than quantitative measurements, to address research problems. Those who implement this paradigm are “anti-foundationalists, who believe there is no single correct route or particular method to knowledge”, says Groenewald, Thomas (2004:295)

Interpretivist research methods, Thomas adds, relies on participant observations and interviews that do “not predefine dependent and independent variables” but instead asks respondents to make sense of situations as they emerge (2004:296)

Finally, the pragmatism paradigm uses mixed method research—both qualitative and quantitative—to evaluate research problems. According to Morgan (2014:1045-1053) this paradigm can be valuable to researchers as a means of self-conscious decision making: “Many problematic situations require thoughtful reflection, and this is where inquiry comes into play. As an example, the tendency to treat inquiry and research as synonyms indicates the importance of careful, reflective decision making in research.” Pragmatists, Morgan says, call for a different research foundation—one rooted in “life itself...that [is] inherently contextual, emotional, and social”.

For this study, we used quantitative methods to gather objective scientific evidence on the leadership styles of project managers in Cape Town, and the impact that these leadership styles had on the performance of construction employees. Our structured questionnaires were designed to allow us to survey project managers and construction employees in Cape Town, and systematically investigate the data gathered using both statistical and mathematical methods. Thus, we have identified positivism as the primary research paradigm for this research, rather than the pragmatist or interpretivist paradigms.

### **3.4 Research approach: method and design**

This section’s goal is to outline the design and research methods we used to investigate leadership styles of project managers in Cape Town and determine their impact on employees’ performance.

### **3.4.1 Research method**

Research methods are the different processes, strategies and techniques used to collect data and evidence, which is then used to reveal new information or help with the understanding of a topic, according to Booth *et al.* (2013:19) Each of these methods, in turn, uses a distinct tool in the collection of data.

Varying research methods can take the form algorithms, procedures, or schemes during a research study, which are typically “planned, scientific and value neutral”, according to Rajasekar *et al.* (2003:5). They assist scientists in finding explanations and solutions to their research problems. These can include theoretical approaches, experiments, statistics, or numeric and mathematical schemes, for example. Solutions should be based on verifiable facts, measurements, and observations—not subjective reasoning.

For this study, we used quantitative techniques to carry out our research—it allowed us to systematically investigate the data gathered using survey methods (both statistical and mathematical methods).

Fellows and Liu (2008) explain: “a quantitative approach relates to positivism and seeks to gather factual data and to study the relationships between facts and how such facts and relationships accord with theories and the findings of any research executed previously”.

Likewise, Polit and Hungler (1987:148) define quantitative research as “a survey to obtain information from a sample of people by means of self-report whereby people respond to a sequence of questions posed to them by the research”.

Quantitative methods emphasise objective measurements, according to Rubin and Babbie (2008:22) —the mathematical and statistical analysis of data gathered from surveys and questionnaires—to explain findings from groups of people in a generalised way or explain a phenomenon.

### **3.4.2 Research design**

Research design, according to Brent and Leedy (1990:197), is “the plan for a study”. It provides the overarching structure for data collection. McMillan and Schumacher (2001:166), meanwhile, define it as “a plan for selecting subjects, research sites, and data collection procedures to answer research question(s)”.

The goal of research design, these authors add, is reveal credible results. For Terre Blanche and Durrheim (1999:29), research design is “a strategic framework for action, which serves as a bridge between research questions and the execution, or implementation of the research strategy”. It provides a comprehensive empirical outline for data collection, adds Bhattacharjee (2012), which aids researchers in testing their hypotheses, answering specific research questions, and developing processes for data collection and sampling.

Our study adopted a descriptive survey design to accurately examine the behaviour, opinion, abilities, beliefs and knowledge of project managers and construction employees in Cape Town.

Descriptive research aims to systematically and accurately describe a situation, population or phenomenon. It asks and responds to the questions of ‘what’, ‘when’, ‘where’, and ‘how’?

“Descriptive statistics are used to present quantitative descriptions in a manageable form” and simplify vast amounts of data in a logical matter, writes King and He (2006). This method uses tables, discussion, figures, and graphs to represent variability—also known as the measure of central tendency—to assist readers in understanding the data that has been collected through the research.

Central tendency is a summary statistic used to describe the central data point or typical value of a data set. The most common measures of this typical value are the mean, median and mode—all calculate the location of the central data point; however, each uses a different method to find this location. For the purposes of this study, the researchers have used mean to find the centre data value.

The mean represents the arithmetic average—in other words, the sum of adding all values together, divided by the number of figures within the data set. It is most accurately calculated when the data collected is symmetrically distributed.

Sometimes, however, extreme responses can impact the average of the data and pull the mean further away from the centre—a term called ‘skewed distribution’. In this way, calculating the mean does not always yield the most accurate central tendency.

Therefore, to avoid inaccuracy, the researcher must calculate the measures of variability, explained in further detail below.



Measures of variability: this is also known as 'measures of dispersion' or 'measures of spread'. The measure of variability helps researchers to analyse how widely dispersed the distribution is for a data set and how it is distributed (the shape and spread). Key measures of this variability include range, variance, standard deviation, and skewness.

In descriptive statistics, range refers to the difference between the smallest and largest intervals on the complete data set. Measured in the same unit as the data, range indicates the statistical dispersion and is calculated by subtracting the smallest value from the largest value.

Variance measures the spread or dispersion between a set of numbers. It is the average of all squared deviations. To calculate it, researchers must first find the deviation of each element in the data set from the mean, and then square the resulting number.

Standard deviation refers to the measurement of average distance between each quantity and mean. In other words, how a data set spreads out from the mean. A high standard deviation reveals that data points are spread at wider ranges of values (respondents who answered a more extreme '1' or '5' on the Likert scale, for example), whereas a low standard deviation means data points are closer to the mean.

The standard deviation error of the mean (SEM), meanwhile, "measures how far the sample mean of the data is likely to be from the true population mean", states Westfall (2020).

In descriptive statistics, skewness is a measure of asymmetrical distribution in a data set. It can be positive, negative, or undefined, and helps the researcher determine whether extremes in survey data are responsible for inaccuracies in calculating the mean.

According to Elaine R Monsen (2007:5) this research method involves describing, recording, analysing, and interpreting "how a person, group, or thing behaves or functions in the present". Researchers collect data to test a hypothesis or address questions related to the current status of the study's subject, adds Gay, L.R. & Diehl (1992:217).

The descriptive statistics method has been successfully used in similar studies, including those by Kariuki (2015), Gichunge (2000) and Müller and Turner (2010)

Kibuchi (2012) Their work has assisted us in describing the current impact of project managers' leadership on construction employees in Cape Town, and in presenting the findings using statistical methods in Chapter 4 of this study.

### **3.5 Data administration tool, design, and collection**

Bell (2007:153) defines data collection as “techniques that allow for a systematic collection of information about our objects of study (people, objects, phenomena) and about the setting in which they occur”.

The research for this thesis was conducted in two parts: the first phase focused on collection of data, its interpretation, and the review of existing literature resources from reports, university websites, journals, articles, and books. The second phase focused on the collection of data from construction project managers and employees in the construction industry in Cape Town, through a well-structured questionnaire.

We developed a structured questionnaire to collect the data needed for our research. We analysed empirical responses and numerical data as a way of measuring and explaining the impact of leadership styles on employee performance in construction companies in Cape Town.

“Questionnaires provide respondents with an intimidation-free environment which gives them an advantage over interviews, focus groups and on-site observation,” states McClelland (1994:22).

A total of 456 questionnaires were distributed to employees of all management levels on job sites and the offices of selected construction companies in Cape Town. Our rationale for this sample group was that these employees were likely to be most impacted by project managers' leadership styles.

The questionnaires were divided into three sections: Section A consisted of elements measuring the personal profile and demographic characteristics of respondents, while for Section B, we used the five-point Likert scale to measure the impact of leadership styles on employee performance, and develop a conceptual framework to improve employee performance. Section C provided space for respondents to answer open ended questions or provide details on their responses, free of the constraints of the Likert scale.

The Likert scale was developed in 1932 by American social scientist, Rensis Likert. It described the process for quantifying the constructs that describe social and psychological phenomena.

Likert-type scales—a type of ordinal scale—are developed using a collection of statements that “define and describe the content and meaning of the construct measured”, according to Warmbrod (2014:31). These statements help express beliefs, judgments, opinions, and preferences, he adds.

Othman *et al.*(2011:11) called the Likert scale a “subjective scoring system”, and one that allows those being surveyed to quantify their feelings and their individual agreement with the point of view with each item on the questionnaire.

As such, it is crucial for questionnaire wording to be drafted in a manner that permits reliable and valid summated scores as the outcome, write Roberts *et al.* (2011) Oppenheim (1992), and Spector (2015). Potential responses to the survey questions are ranked on a linear scale from 1 to 5, indicating the degree to which respondents agree or disagree with each statement.

However, before variables can be linked to each other in a questionnaire, they must be measured. This gives meaning to statements of relationship. Each measurement must correctly measure what it is supposed to, and items grouped together into the same scale on a questionnaire should have something in common that they are measuring. This ensures reliability and validity of the results.

A summated score for each respondent is the quantification of the construct, writes Warmbrod (2014:31) It is calculated by adding together the values of an individual's responses for each item on the Likert scale. A respondent's score is the sum or average of their responses to the questions.

“A principle basic to Likert scale measurement methodology is that scores yielded by a Likert scale are composite (summated) scores derived from an individual's responses to the multiple items on the scale,” Warmbrod adds.

An alternative way to calculate a respondent's composite score, however, is to use a mean-item summated score (see Table 3.1). In this method, researchers divide an individual's summated score by the number of items that makes up the scale. This mean-item score “falls within the range of the values for the response continuum

options”, writes Warmbrod (2014:32) and thus, all the items on the scale are assumed to carry equal weight when one calculates the summated or mean-item score.

“A Likert scale is by definition a multiple-item scale,” states Warmbrod (2014:32) Scores derived from this scale are summated and defined by a composite of responses to multiple questions, rather than to just one item.

The questionnaires for this study used an ordinal scale (in the form of five-point Likert scale table), where numbers represented the possible response categories. While responses in an ordinal format are simpler to rate and rank, the weight behind and distance between responses cannot always be measured. This is because individuals’ own interpretations of words used in a Likert-scale-style survey—such as ‘always’, ‘often’, ‘sometimes’, or ‘never’—are difficult to define and not always equal, write Sullivan and Artino, (2013:541-542)

Thus, it became important to calculate mean-item score (MIS) and standard deviation, using the statistic method formulas in Table 3.1 and Table 3.2, to better understand the relationships between the data outcomes and respondents’ own interpretations and understanding of the terminology used.

This method involves “simple descriptive statistics”, Othman *et al.* (2011:11) add, which use mean and variance to validate a questionnaire and test if the items in each hypothesised grouping have roughly “the same proportion of data or information being measured”. It is also used to determine whether items have nearly equal standard deviations, so they equally contribute to the total scale score.

“In other words, items should have roughly equivalent means and standard deviations within a Likert scale, respectively,” Othman *et al.* Write (2011:11).

We used the computer software system SPSS (Statistical Package for the Social Sciences) to analyse each numerical response on the Likert scale-style questionnaire and calculate the MIS and standard deviation based on this data. This software, also known as IBM SPSS Statistics, analyses data in descriptive statistics, and makes numeral outcome predictions.

The MIS was then ranked in descending order (from highest to lowest), which enabled the researcher to compare the respondents’ perceived importance of each statement. The formula detailed in Table 3.1 is based on the notion that respondents’ scores for

each item, when evaluated together, are “empirically determined indices of relative importance”, according to Liphadzi (2015:77).

With MIS determined, the researcher then calculated standard deviation, using the equation detailed in Table 3.2. This tool assisted the researcher to know how respondents’ answers varied or ‘deviated’ from the mean—for example, whether responses were concentrated around the middle ground ‘3’ of the Likert scale, or if they bordered on the extremes of the scale (a ‘1’ or ‘5’).

**Table 3.1: Calculating Mean Item Score (MIS) on a five-point Likert scale**

Category ranking	Mean Item Score (MIS)
1 = Not at all 2 = To some extent 3 = To a moderate extent 4 = To a great extent 5 = To a very great extent	$MIS = \frac{1n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5}{\sum N}$ Equation 1 where, N1 = number of respondents for strongly disagree N2 = number of respondents for disagree N3 = number of respondents for neutral N4 = number of respondents for agree N5 = number of respondents for strongly agree N = Total number of respondents

(Source: Lim and Alum (1995))

**Table 3.2: Calculating Standard Deviation on a five-point Likert scale**

Category ranking	Standard deviation equation
1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree	$s = \sqrt{\frac{1}{N - 1} \sum_{i=1}^N (x_i - \bar{x})^2}$ S= Sample standard deviation N= The number of data points Xi= Each of the value of the data $\bar{x}$ = Sample mean i=1 Number of the value in the data Σ= Sum of

Both mean-item score and standard deviation have been used by the following research scholars: Liphadzi (2015), J Cunningham *et al.* (2015), Petersen (2012), Mohammad (2006)

In this regard, the Likert scale is a more accurate, valid, and reliable tool for data design and analysis, according to measurement specialists. Carmines and McIver (1981), and Nunnally and Bernstein (1994) state that single items “tend to be less valid, less accurate, and less reliable than multiple-item composites”, since they are more susceptible to error and insufficient information.

Warmbrod (2014:32) agrees: “The principle of aggregation—the sum of the responses to a set of multiple items is a more stable and unbiased estimate than are responses to any single item in the set—empirically demonstrates that summated scores derived from responses to multiple items on a Likert-type scale are more reliable than responses to single items comprising the scale”.

Research that is based on measurement, says Cronbach (1951) must ensure both accuracy and dependability. “A reliability coefficient demonstrates whether the test designer was correct in expecting a certain collection of items to yield interpretable statements about individual differences,” the author adds.

To ensure our Likert scale measurement tool was accurate, the researcher used a reliability test called the Cronbach’s alpha coefficient to measure its degree of consistency. This type of reliability analysis, according to Polit and Hungler (1993:296) reveals the accuracy “with which an instrument measures the attribute it is designed to measure.”

Generally, researchers accept that a Cronbach’s alpha of 0.70 and above is an indication of an accurate tool. However, 0.80 and above is better, and 0.90 and above is considered the best.

The researcher also analysed the data using an Analysis of Variance (ANOVA) test, an effective way to compare two groups’ means; in this case, the dependent and independent variable, according to Sow (2014:103)

ANOVA tests allow for increased control over type-I errors, according to Hopkins (2000) which occur when the null hypothesis proves true but is nevertheless rejected.

### **3.6 Research population**

When conducting research studies, we collect and measure data from a sample of the total population of interest, rather than each individual member of the population.

According to Rust (2002): “Population refers to the entire aggregation of cases that meets a designated set of criteria.”

For our research, the targeted population included construction project managers and employees of all management levels in the construction industry, as well as employees on various construction sites.

Once we had gathered anonymous responses from 456 respondents, we were able to systematically analyse the data gathered, using statistical and mathematical methods, and with the help of the computer software system called SPSS (Statistical Package for Social Sciences).

### **3.7 Sampling size, method, and technique**

Sampling refers to the process of selecting a representative group of the population that is undergoing study.

For this thesis, there were two potential sampling groups. Probability sampling is based on random selection and is normally used in quantitative research. Meanwhile, non-probability sampling—or purposive sampling—is based on a researcher’s judgement (to choose the population to participate in the study).

Djamba and Neuman (2002) says a sample’s size depends on the planned method of data analysis, population characteristics, as well as the required accuracy of researcher’s sample.

In this study, we preferred purposive sampling, which would facilitate more relevant and in-depth data from those concerned. Participants in this research were office workers and project administrators of all management levels (within Cape Town’s construction industry), along with project managers and on-site construction crews.

This method was used in response to the small sampling group, to represent the entire population.

### **3.8 Demarcation / Delimitation of study**

This research was limited to Cape Town construction companies, construction project managers and on-site construction workers. It investigated project managers’ leadership styles and their impact on employees’ performance in Cape Town’s construction industry.

We used diverse relating literature to inform the research and survey design. Questionnaires were handed out in person by the researcher, to ensure respondents received a proper explanation of the topic and instructions on how to complete the questionnaire correctly. The data collected by the researcher came from employees affected directly—and indirectly—by the leadership of Cape Town project managers.

### **3.9 Ethical considerations**

Our research considered the ethical obligations of research guidelines, in the following ways: by ensuring the research's quality and accuracy; by respecting the confidentiality and anonymity of research respondents; by ensuring participants contributed voluntarily; by seeking out the informed consent of all the participants; by avoiding harm to the participants.

### **3.10 Significance of the research**

This research provides insight into project managers' leadership styles and their relative impact on the performance of subordinate employees in the construction industry in Cape Town.

It highlighted how construction project managers' leadership is perceived, as well as its impact on employee performance.

The research contributes to leadership development of project managers in the construction industry and helps address systemic misconceptions and recurring issues through the development of a conceptual framework.

### **3.11 Conclusion**

Through our research, we have explored the different relationships between the leadership styles of the construction project leader and employee performance, as well as the factors influencing employee performance. We have also highlighted the objectives of the research and explained our process of gathering data through research methodology.

The next chapter will analyse the data we collected, to quantify the impact of project managers' leadership styles on construction employees in Cape Town.



## **CHAPTER FOUR: ANALYSIS AND DISCUSSION OF THE RESEARCH DATA**

### **4.1 Introduction**

This chapter outlines and discusses the analysis of the research questionnaire in detail, to determine if the sub-problems were addressed.

Moreover, the data collected has been reviewed in relation with the selected literature, to justify the findings.

The questionnaires for this study were designed and distributed to 456 people working at construction companies in Cape Town, with responses analysed using quantitative methods. Of these, 377 were duly completed, which amounts to a respondent rate of 82.68%.

Our questionnaire comprised three sections, with questions addressed to project managers, contractors, subcontractors, and general subordinate construction workers.

The first section looked at the demographics of respondents, with questions to identify age, gender, race, level of education, marital status, professional title, and experience in the construction industry (measured in years).

The second section explored leadership styles and their impact on employees' performance in greater depth. In this section, respondents used a Likert scale ranking system (a '1' on the scale meant they strongly disagreed with the statement, while a '5' meant they strongly agreed).

The data we collected from this section helped us to quantify the impact of project managers' leadership styles on employee performance, ascertain the extent of the impact of leadership style on employees' performance, and develop a management framework to improve leadership quality and performance in Cape Town's construction industry.

Finally, in the third section, we asked optional open-ended questions about the different attributes, competencies, and characteristics of project managers, which could impact employees' performance in Cape Town's construction sector.

The purpose of Section C was to permit respondents to include additional information, which would help the researcher assess respondents' attitudes, feelings and overall understanding of the close-ended questions posed in Sections A and B.

Close-ended questions, due to their simplicity and quantitative nature, do not allow respondents to explain nuances or detail what questions they had when responding.

Therefore, the open-ended question section assisted the researcher in balancing the data collection tool to gain better insight on the research topic from respondents. Respondents were not required to provide responses in Section C—but if they wished to elaborate, this section provided the means to do so.

## **4.2 Data analysis and discussion of research findings**

Data analysis, according to Bihani and Patil (2014:95), is the process of studying, organising, transforming, and modelling data. Its aim, they write, is to uncover useful information, assist with reaching fact-based conclusions, and help make informed decisions.

Of the 456 questionnaires received during this study, the researcher assessed each to check the completeness and accuracy of responses. The researcher removed those that were incomplete but kept a record of these questionnaires. This process allowed the researcher to describe and summarise the data, as well as compare and identify the relationship between variables to get a useful outcome.

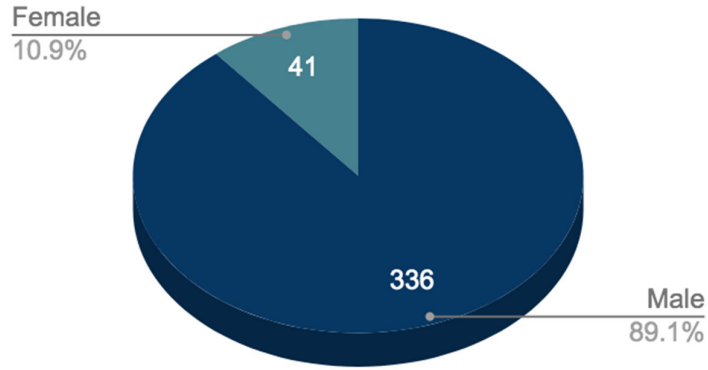
### **4.2.1 Questionnaire Section A: Demography**

This section assessed the background information of respondents, with regards to their demographic attributes. The questionnaire gathered data about respondents' general characteristics in a quantifiable manner.

Demographic information gathered included data about respondents' age, gender, race, marital status, professional identity, educational qualifications, and the length of time they had worked in the industry.

#### **4.2.1.1 Gender**

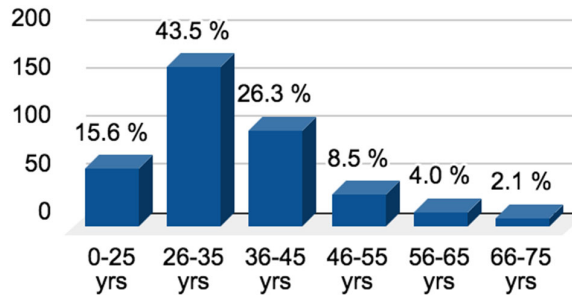
Of 377 duly completed questionnaires, research revealed 89.1% of respondents identified as male (336 in total) and 10.9% identified as female (41), as visually represented in Figure 4.1. No respondents identified as 'other' (ie. gender non-binary or non-conformant) on the research questionnaire.



**Figure 4.1: Gender of respondents**

#### 4.2.1.2 Age

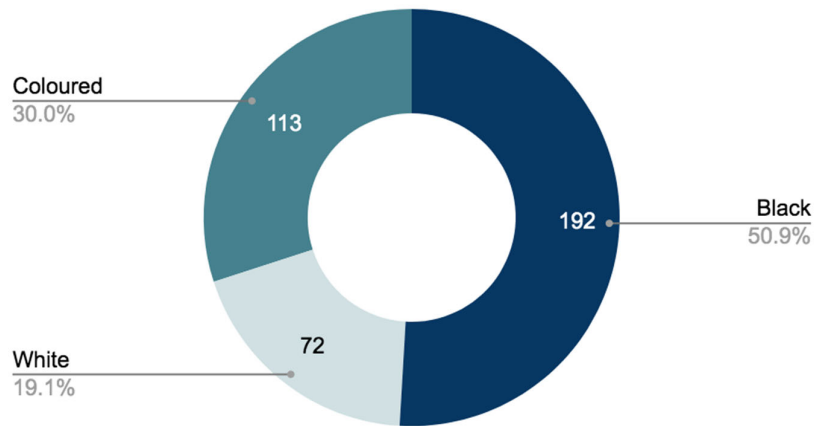
As per Figure 4.2, research revealed the majority of the 377 respondents were between the ages of 26 and 35, followed by those between the ages of 36 and 45. Those between the ages of 0 to 25 ranked third, while only 8.5% of respondents were between the ages of 46 and 55. Least prominent were older employees aged 56 to 75 years old.



**Figure 4.2: Age of respondents**

#### 4.2.1.3 Race

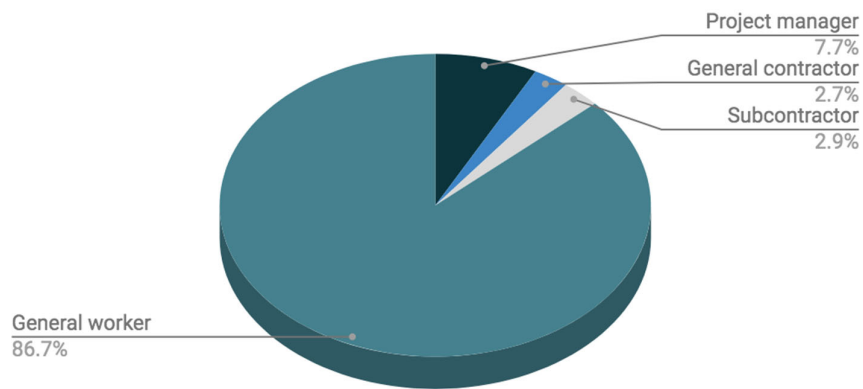
Cape Town is a diverse cultural landscape, with people from all over Africa and the world. As shown in Figure 4.3 below, just over half of respondents (50.9%) identified as Black, followed by those who identified as Coloured (30%), and finally, those who identified as White (with 19.1%). No one identified as a race other than the above three groups.



**Figure 4.3: Race of respondents**

#### 4.2.1.4 Professional title

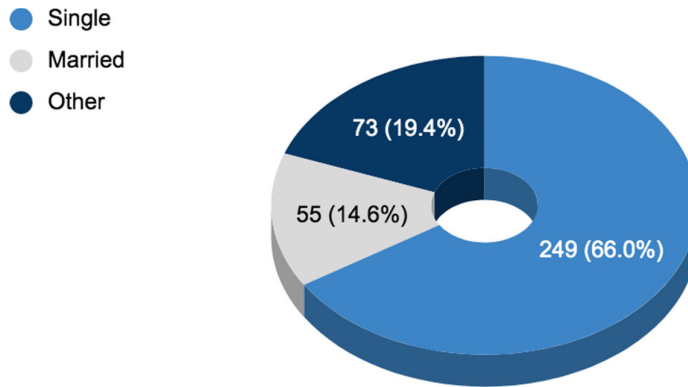
Based on their professional role or title (as per Figure 4.4 below), 7.7% of respondents (29 in total) identified themselves as project managers. Only 2.9% were subcontractors (11 in total), while 2.7% were general contractors (10 in total), and 86.7% were general construction workers, team members and labourers (327 in total).



**Figure 4.4: Professional title of respondents**

#### 4.2.1.5 Marital status

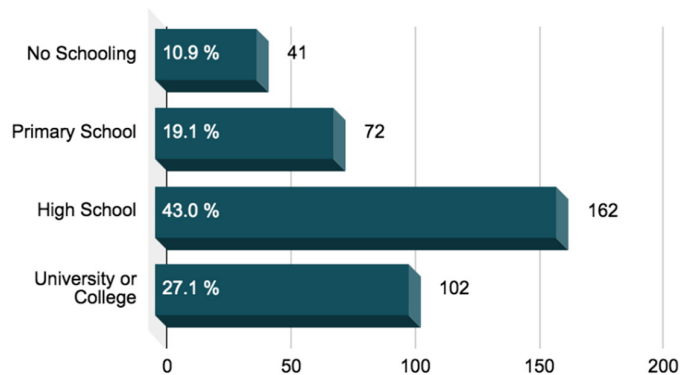
As per Figure 4.5, the highest percentage of respondents (66%) classified themselves as single, while 14.6% were married. A further 19.4% classified themselves as 'Other', preferring not to disclose their marital status for the purposes of this questionnaire.



**Figure 4.5: Marital status of respondents**

#### 4.2.1.6 Educational qualifications

The highest percentage of respondents were educated at the secondary school level and graduated with matric (43%), while 27.1% listed themselves as having university or college qualifications. A further 19.1% of respondents had graduated with primary school qualifications, and 10.9% said they had 'no schooling' (ie. they did not complete all years of primary school education). Findings are shown in Figure 4.6:



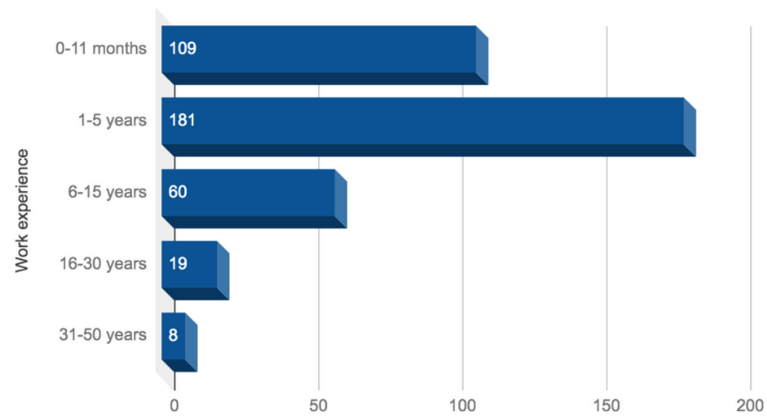
**Figure 4.6: Educational qualifications of respondents**

#### 4.2.1.7 Industry experience

Respondents were asked about the length of time they had worked in the construction industry (see Figure 4.7).

Data revealed nearly half of respondents (48%) had worked between one to five years, followed by 28.9% of respondents, who said they had less than a year of experience.

The numbers were lower for those with five to 50 years of experience: 15.9% for the 5- to 15-year category, 5% for those with 16 to 30 years, and only 2.1% for those with 31 to 50 years of experience.



**Figure 4.7: Industry experience of respondents**

#### **4.2.2 Questionnaire Section B: Leadership style and performance**

In this section, we discuss the findings of Section B of the research questionnaire. The data collected reveals the extent to which four leadership styles—transactional, transformational, democratic and autocratic—are used by project managers in Cape Town, and how the implementation of leadership styles can impact employee performance in the local construction industry.

Our findings will help address the below research questions, which were drafted in accordance with the initial research problem statement:

- What impact do the leadership styles of project managers have on employee performance?
- What is the relationship (correlation) between different leadership styles and employee performance?
- Which management framework model improves leadership quality and performance?

In Section B of the survey questionnaire, respondents used a Likert scale ranking system (a '1' on the scale indicated strong disagreement with the statement, while a '5' meant they strongly agreed) to answer survey questions.

The quantitative data the researcher collected through the structured questionnaire was analysed using descriptive statistics, including analysis of proportions, mean, and standard deviation. We then used regression analysis, as well as a reliability test to analyse the accuracy of our Likert scale results using Cronbach's alpha coefficient.

According to our reliability test, which measured the accuracy of the Likert-scale tool that was implemented for this study, the impact of leadership styles on employee performance in the Cape Town construction industry has a Cronbach's alpha reliability coefficient of 0.894 (as demonstrated in Table 4.1). As previously stated in Chapter 3, researchers accept that a Cronbach's alpha of 0.80 and above highly accurate in social science research situations, with 0.90 considered the best. As such, this test highlights that the tools we used for this research study are reliable and have relatively high internal consistency.

**Table 4.1: Reliability test using Cronbach's alpha coefficient**

Cronbach's alpha	Number of items
0.894	5

Furthermore, we used a post hoc test, as well as correlation and Analysis of Variance (ANOVA), to compare and reveal the differences between the means of the independent and dependent variable groups.

The researcher then used these findings and analysis to develop a conceptual framework to help improve leadership quality—and subsequently—employee performance. We discuss this process in more detail in the pages to follow.

#### **4.2.2.1 Project managers' leadership styles**

For this study, we assessed four of the most common leadership styles: transformational, transactional, democratic, and autocratic leadership.

The data we gathered on each of these leadership styles in Section B of our structured questionnaire forms the basis of our research findings and helps us to answer our three

research questions, which were highlighted previously. In Table 4.2, we used the mean to rank leadership styles from most commonly to least commonly used. The results were as follows:

**Table 4.2: Ranking of project managers' leadership styles in Cape Town's construction industry, according to common use**

Project managers' leadership style	Standard deviation error	Mean	Rank
Transactional leadership	0.34641	4.0600	1
Democratic leadership	0.27284	3.8800	2
Transformational leadership	0.15492	3.8640	3
Autocratic leadership	0.23922	3.6120	4

#### 4.2.2.1.1 Transactional leadership

In Cape Town, transactional leadership ranked most commonly used, with 0.34641 standard deviation error and a mean of 4.0600. Transactional leadership promotes compliance from subordinates through rewards and punishments, which keeps followers motivated for the short-term.

Interestingly, these findings differ from the results of a similar study by Liphadzi (2015) which evaluated leadership styles and their impact on employee performance in the construction industry of South Africa, as a whole.

Liphadzi's work found transformational leadership to be more commonly utilised by project managers at a national level, over the transactional leadership style, which Liphadzi ranked second most popular across the country.

In Table 4.3, we highlight project managers' responses to survey questions that related to transactional leadership. The ranking below shows which statements resonated most with project managers:

**Table 4.3: Survey questions relating to transactional leadership, ranked from most to least agreement**

Transactional leadership	Rank
I emphasise discipline when my subordinates do something wrong.	1
My personnel usually obey my instructions and commands.	2
I motivate my employees through payment and rewards.	3
I manage others by setting standards that we agree on.	4
I facilitate events for my employees.	5



#### 4.2.2.1.2 Democratic leadership

In contrast to Liphadzi's work, our Cape Town study found democratic leadership to be the second most commonly used leadership style among project managers locally, with a 0.27284 standard deviation and a mean of 3.8800.

Also known as participative leadership or shared leadership, this leadership style encourages employees to take a more participative role in the process of decision making.

Liphadzi's study of the impact of project manager leadership styles across South Africa (2015) ranked democratic leadership third, behind transactional leadership.

In Table 4.4, we highlight responses to survey questions that related to democratic leadership among project managers in Cape Town. This data shows which statements resonated most with project managers:

**Table 4.4: Survey questions relating to democratic leadership, ranked from most to least agreement**

<b>Democratic leadership</b>	<b>Rank</b>
I keep the lines of communication open at all times.	1
I sometimes ask my subordinates for ideas.	2
I encourage creativity and new ideas.	3
A leader gathers feedback from subordinates for decision making.	4
I involve employees in the project's decision-making process.	5

#### 4.2.2.1.3 Transformational leadership

In Cape Town, transformational leadership ranked third among respondents, with 0.15492 standard deviation and a mean of 3.8640.

This statistical analysis means that leaders in the Cape Town construction industry use methods that inspire and motivate employees through encouragement, to innovate and create positive lasting change on projects and within their organisations. The data shows project managers believe it is a great way to boost employee performance within the company.

In Table 4.5, we highlight responses to survey questions that related to transformational leadership among project managers in Cape Town. This data shows which statements resonated most with project managers:

**Table 4.5: Survey questions relating to transformational leadership, ranked from most to least agreement**

<b>Transformational leadership</b>	<b>Rank</b>
A leader must represent higher morality.	1
A significant part of my leadership is that of a teacher.	2
When we have a job to do, I'm in there with everyone else, doing my part.	3
I help others with their self-development.	4
I spend considerable energy instilling hope among my workers.	5

#### **4.2.2.1.4 Autocratic leadership**

Our study found autocratic leadership was the least commonly utilised in Cape Town among project managers, with 0.23922 standard deviation and a mean of 3.6120.

This style of leadership promotes project manager control over all decisions and little input from group members. Autocratic project leaders typically make choices based on their ideas and judgments, and rarely accept advice from followers.

In the Cape Town construction industry, autocratic leaders believe that by taking this approach, they push employees to perform better. This mirrors Liphadzi's findings (2015), which also ranked autocratic leadership as the least utilised leadership style, based on his research and analysis of its use across South Africa.

In Table 4.6, we highlight responses to survey questions that related to autocratic leadership among project managers in Cape Town. This data shows which statements resonated most with project managers:

**Table 4.6: Survey questions relating to autocratic leadership, ranked from most to least agreement**

<b>Autocratic leadership</b>	<b>Rank</b>
I always stand for what I know is right.	1
I persuade others to do things my way.	2
I monitor all projects I'm in charge of, to ensure the team meets its goal.	3
As the leader, I am the only one who initiates methods and processes.	4
I ask for little or no input from my workers.	5

#### **4.2.2.2 Understanding the impact of project managers' leadership styles on employee performance**

For this section of the questionnaire, respondents were asked questions that would help us understand the impact of their project managers' leadership style on employees' performance from most to least impactful, as explained in Table 4.7.

In designing questions, we did not disclose the associated leadership style, to obtain the most accurate responses and avoid influencing the results. The data revealed:

**Table 4.7: Understanding the impact of various project managers' leadership styles on employee performance, from most to least impactful**

<b>Leadership style</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Rank</b>
Transactional leadership	4.0760	0.59932	1
Transformational leadership	4.0320	0.38245	2
Democratic leadership	3.8340	0.51520	3
Autocratic leadership	2.6360	0.81730	4

#### **4.2.2.2.1 Transactional leadership**

This leadership style was shown to have the biggest impact on employee performance in our SPSS analysis of data. The mean was 4.0760 and the standard deviation was 0.59932.

This outcome reinforces the notion that Cape Town's project managers value performance outcomes, and reward or punish their subordinates based on whether they have met a project or task's goals. Likewise, the data shows us that construction employees' performance is strongly influenced by these incentives.

Based on our statistical analysis, this style of leadership was proven to stimulate performance by employees. These results prove the assumption that in the construction industry, transactional leadership can be highly motivating to achieve short-term goals—particularly in Cape Town, where general construction labourers are not always paid living wages, when compared with construction workers in other parts of the world. Money is a powerful motivator, as are chances to take paid time off or end work early on a weekend, according to Liphadzi (2015:22)

In Table 4.8, we rank survey statements relating to transactional leadership from most to least resonant, as per the responses we received from subordinate construction employees in Cape Town who completed the research questionnaire.

**Table 4.8: Transactional leadership survey questions for subordinate employees in Cape Town's construction industry, ranked from most to least agreement**

<b>Transactional leadership</b>	<b>Rank</b>
I perform better when my project manager motivates me through payment and rewards.	1
I perform better when my project manager manages us by setting standards we agree on.	2
I perform better when my project manager emphasises discipline when I do something wrong.	3
I perform better when my team obeys the project manager's instructions and commands.	4
I perform better when my project manager facilitates events for me.	5

#### **4.2.2.2 Transformational leadership**

The research revealed transformational leadership to be the second most impactful style of leadership based on the SPSS analysis, with 4.0320 mean and standard deviation of 0.38245. This showcases the effectiveness of working together to achieve a project goal.

In the construction industry, the transformational leadership style encourages active involvement from employees, despite that all final decisions resting with the project manager. In Table 4.9, we rank survey statements relating to transformational leadership from most to least resonant, as per the responses we received from subordinate construction employees in Cape Town who completed the research questionnaire:

**Table 4.9: Transformational leadership survey questions for subordinate employees in Cape Town's construction industry, ranked from most to least agreement**

<b>Transformational leadership</b>	<b>Rank</b>
I perform better when my project manager represents higher morality.	1
I perform better when my project manager spends considerable energy instilling hope in us.	2
I perform better when my project manager's leadership is that of a teacher.	3
I perform better when my project manager helps me with my self-development.	4
I perform better when my project manager is present when there's work, and does their part.	5

By allowing—and encouraging—input and creativity, employees can demonstrate their unique abilities and talents, and give their best to the project outcomes. This style of project management leadership can yield more varied, efficient, and innovative ideas, and decrease employee dissatisfaction, burnout, absenteeism, and turnover. It promotes positive employee performance, encourages personal growth and learning among employees—including upskilling and the opportunity for promotions, according to Liphadzi (2015:32)

The data shows many of Cape Town’s project managers value and inspire their subordinates to have an open mind, outline clear expectations, and actively work with their employees to achieve the best outcomes. This approach is highly motivating and can be an effective alternative to improving performance, even if additional rewards are not feasible.

**4.2.2.2.3 Democratic leadership**

The study’s research findings rank democratic leadership third, with a mean of 3.8340 and a standard deviation of 0.51520. This highlights its considerable role in influencing the performance of employees in Cape Town’s construction industry.

In Table 4.10, survey statements relating to democratic leadership were ranked from most to least resonant, according to the responses from subordinate construction employees in Cape Town:

**Table 4.10: Democratic leadership survey questions for subordinate employees in Cape Town’s construction industry, ranked from most to least agreement**

<b>Democratic leadership</b>	<b>Rank</b>
I perform better when the project manager keeps the lines of communication open at all times.	1
I perform better when the project manager encourages creativity and new ideas.	2
I perform better when the project manager gathers feedback from me before making decisions.	3
I perform better when the project leader involves me in the project’s decision-making process.	4
I perform better when the project manager sometimes asks me for ideas.	5

The use of the democratic leadership style in the construction industry can inspire collaboration, encourage teamwork, and increase performance among employees. When all team members feel they are personally invested in the project, and valued, they will work together towards its positive outcomes; covering for absent employees, working overtime to meet deadlines, managing time and material resources well, and treating their fellow team with respect, argues Iqbal et al (2015:14)

This collaborative leadership style highlights the impact of teamwork and engagement of all employees. Encouragingly, as Verba (2015) states: “This leadership...[leads] to increased performance, job satisfaction and increased productivity”.

**4.2.2.2.4 Autocratic leadership**

This leadership style was least utilised among project managers in Cape Town’s construction industry, according to SPSS data analysis. Autocratic leadership had a mean of 2.6360 and a standard deviation of 0.81730.

Research also revealed this leadership negatively influenced the performance of many respondents we surveyed. In Table 4.11, we rank survey statements relating to autocratic leadership from most to least resonant, as per the responses we received from subordinate construction employees in Cape Town who completed the research questionnaire:

**Table 4.11: Autocratic leadership survey questions for subordinate employees in Cape Town's construction industry, ranked from most to least agreement**

<b>Autocratic leadership</b>	<b>Rank</b>
I perform better when the project leader monitors all projects that he or she is in charge of to ensure the team meets its goal.	1
I perform better when the project leader is the only one who initiates methods and processes.	2
I perform better when the project manager asks for little or no input from me.	3
I perform better when the project manager always stands for what he or she knows is right.	4
I perform better when the project manager persuades me to do things his or her way.	5

In the construction industry, an autocratic style of project management leadership can prove useful when the project faces urgent issues and stress-filled environments: budget overruns, missed deadlines, a lack of available labour and materials, or the risk of excessive change orders from the design team. As these potential problems arise, it can be beneficial for the project manager to take immediate action in decision making, without extensive consultation of all subordinate employees, writes Boehm et al. (2015:21)

However, this commanding type of leadership can also lead to resentment and poor performance if employees feel overworked or undervalued. When project managers ask little or no input, and dictate all work methods, subordinates can revolt against the tight restrictions of structure, adds Boehm et al. (2015:25).

While research has revealed there are some positive outcomes when it comes to autocratic leadership, in general, this style leads to employees not feeling valued, empowered, or free to exercise creativity and innovation. While it can be fruitful in achieving tight deadlines or strict budgets, it can lead to poor performance over time, from employees who feel stifled by rules and authoritarian dictation.

#### **4.2.3 Questionnaire Section C: Open questions**

This section was designed to investigate the different attributes possessed by construction project managers in Cape Town; identify which were liked or disliked by respondents, and which positively or negatively impacted their performance.

Using the 'open questions' format, we allowed respondents to write their own feedback without the constraints of a quantitative scale or numerical ranking system. Our research revealed the following:

Many respondents said they appreciated when their project leader took initiative and "went the extra mile" to accomplish project tasks; they also said they appreciated when their project manager took the time to patiently listen to other people's suggestions, incorporating them in decision making when possible or necessary.

Other respondents, however, found their project managers to be "stubborn" and said they rarely listened to their team members; the project manager's focus was the task at hand, and in some cases, they ignored employees.

Respondents cited project managers' lack of collaboration and communication with team members—in these cases, the emphasis was on adhering to rules or procedure even when it did not make sense to do so.

Several other factors were stated to influence performance, both positively and negatively. Racial divides in the workplace, for example, affected performance negatively, whereas financial benefits or incentives, new project challenges, good communication, a sense of belonging, and an ability to meet project goals and objectives all impacted performance positively.

Nevertheless, most respondents stated that their project managers possessed at least one of the following traits: strong communication, passion and commitment, positivity, innovation, or collaboration.

Based on the research findings, we suggest Cape Town's construction industry still faces several challenges, including many that directly impact the quality and development of project managers, as well as the performance of subordinate employees (see Table 4.12).

**Table 4.12: Challenges to employees' performance and the development of leadership in Cape Town's construction industry**

<b>Factors that negatively impact employee performance and leadership</b>			
Unstable political environment	Lack of self confidence	Lack of opportunity	Lack of incentives
Inexperience	Lack of skills	Ineffective organisational culture	Cultural differences
Education background	Racial divide in the workplace	Lack of training	Corruption

#### **4.2.4 Research questions and hypotheses**

##### **4.2.4.1 Research Question One**

**Research question (RQ):** What impact do the leadership styles of project managers have on employee performance?

**Null hypothesis (H0):** Project managers' leadership styles have no statistically significant impact on employee performance.

**Hypothesis (H1):** Project managers' leadership styles have a statistically significant impact on employee performance.

The study's goal was to investigate the impact of project managers' leadership styles on the performance of subordinate employees in Cape Town's construction industry. In this case, we determined the leadership style of construction project managers to be the independent variable, and performance of subordinate employees to be the dependent variable.

Using both the independent and dependent variables, the researcher then sought to answer: 'What impact do the leadership styles of project managers have on employee performance?'

Two potential hypotheses emerged; the first, that project managers' leadership styles have no statistically significant impact on employee performance, and the second, that project managers' leadership styles do indeed have a statistically significant impact on employee performance.

According to Venkatesh, Brown and Bala (2013) researchers can evaluate the relationships between variables by comparing the mean of the dependent variable between two or more groups within the independent variable.



Using the authors' above suggestion, the researcher divided participants' scores for the independent variable into two groups and compared the means using the dependent variable. Data was then analysed in two parts: first, using descriptive analysis to explain the distribution of data, and then using Analysis of Variance (ANOVA) to test the hypotheses.

"In the process of examining the relationship between variables, researchers can use t-test or ANOVA to compare the means of two groups on the dependent variable, states Sow (2014:103) The main difference between these two hypothesis tests is that a t-test is restricted to comparing just two groups, while ANOVA has the capacity to compare two or more groups.

When considering the data analysis technique to implement for this study, the researcher evaluated the potential strengths and limitations of both ANOVA and t-test. According to Hopkins (2000) ANOVA's post hoc tests allow for increased control over type-I errors, which occur when the null hypothesis proves true but is nevertheless rejected. For this reason, the researcher has selected ANOVA as the data analysis technique for hypothesis testing in this study.

#### **4.2.4.1.1 Descriptive analysis of the impact of project managers' leadership styles on employee performance**

Literature defines descriptive research as a research process that details characteristics of a population or subject under investigation. This research methodology examines the 'what' of the subject or population, rather than its 'why'.

To interpret the key results for the research using descriptive statistics, we began by outlining the size of our sample, describing the central tendency of the data collected, highlighting the spread of the data, assessing the data distribution's shape and spread, and comparing data from different survey groups.

Our statistical Analysis of Variables (ANOVA), depicted in the tables and graphs to follow in this section, will describe the impact of project managers' leadership styles on employee performance in the construction industry in Cape Town. ANOVA will help determine the difference in employee performance between the leadership styles.

We will highlight the statistical results for all type of leadership styles to know if there is statistical mean difference in rating of leadership styles, which indicates the degree of

acceptance of the styles by both management and employees as motivating factors for optimal performance.

Tables 4.13 and 4.14 show the distribution scores of project managers' leadership styles and employee performance. The study sample consisted of 377 participants, including project managers and subordinate employees. Its purpose is to provide a statistical summary of the number of samples (N) and the measures used (i.e. the mean, standard deviation, and standard deviation error, etc.) to investigate the statistical differences in the mean rating of leadership styles and their impact on employee performance.

In Table 4.13, the descriptive analysis of the leadership style of construction project managers is demonstrated, abbreviated as 'LSSM'. Scores for LSSM ranged from 2.86 to 4.60, with the mean of 3.8540 and a standard deviation of 0.46846.

**Table 4.13: Descriptive analysis of leadership styles in the construction industry in Cape Town**

		Descriptive							
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
LSSM	Transformational Leadership	377	3.8640	0.36997	0.16546	3.4046	4.3234	3.54	4.44
	Transactional Leadership	377	4.0600	0.34641	0.15492	3.6299	4.4901	3.68	4.60
	Democratic Leadership	377	3.8800	0.61008	0.27284	3.1225	4.6375	3.02	4.60
	Autocratic Leadership	377	3.6120	0.53490	0.23922	2.9478	4.2762	2.86	4.28
	Total	1508	3.8540	0.46846	0.10475	3.6348	4.0732	2.86	4.60

Meanwhile, in Table 4.14, depicts the descriptive analysis for employee performance—abbreviated as 'ULSSIEM'. Scores for ULSSIEM ranged from 1.58 to 4.49 with a mean of 3.6445 and a standard deviation of 0.81764.

**Table 4.14: Descriptive analysis of employee performance in Cape Town’s construction industry**

		Descriptive							
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
ULSSIEM	Transformational Leadership	377	4.0320	0.38245	0.17104	3.5571	4.5069	3.42	4.34
	Transactional Leadership	377	4.0760	0.59932	0.26802	3.3319	4.8201	3.05	4.49
	Democratic Leadership	377	3.8340	0.51520	0.23040	3.1943	4.4737	3.42	4.46
	Autocratic Leadership	377	2.6360	0.81730	0.36551	1.6212	3.6508	1.58	3.43
	Total	1508	3.6445	0.81764	0.18283	3.2618	4.0272	1.58	4.49

The mean in tables 4.13 and 4.14 are used to measure the centre of a numerical data set for each variable. The standard deviation, on the other hand, provides an indication of how much individual responses to questions vary or ‘deviate’ from the mean. These numbers highlight the spread of the responses. These two tables also show the ‘level of confidence interval’, which represents the true population mean. Based on the analysis, the researcher has 95% confidence that the population mean lies between the lower and upper bounds.

Meanwhile, Table 4.15 summarises ANOVA analysis of project managers’ leadership styles and employee performance in Cape Town’s construction industry. According to Marshall (2017) this hypothesis test uses “the ratio of between group variation to within group variation”, to reveal if there is a statistically significant difference between the groups. “Within group variation”, the authors add, measures the extent to which an individual mean varies from the group mean.

“Each difference between an individual and their group mean is called a residual. These residuals are squared and added together to give the sum of the squared residuals or the within group sum of squares (SSwithin). Between group variation measures how much the group means vary from the overall mean (SSbetween)”, Marshall and Owen state.

To prepare for the ANOVA test depicted in Table 4.15, the researcher divided participants into two groups, based on their respective scores for the independent

variable (or leadership styles, written below as LSSM) and the dependent variable (employee performance, abbreviated below as ULSSIEM). In advance of regression analysis, the researcher then conducted a one-way ANOVA test to determine if there was a statistically significant impact between leadership styles and employee performance – in other words, if there was a marked difference in employee performance between the leadership styles and if a particular leadership style impacted employees to perform better. Here, a p-value of less or equal to 0.05 was required to show significance (as reported on Table 4.15 as the ‘Sig.’ column).

**Table 4.15: Hypothesis testing: ANOVA for leadership styles and employee performance in the construction industry in Cape Town**

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
LSSM	Between Groups (LSSM)	0.509	3	0.170	0.741	0.543
	Within Groups (ULSSIEM)	3.661	16	0.229		
	Total	4.170	19			
ULSSIEM	Between Groups (LSSM)	6.947	3	2.316	6.437	0.005
	Within Groups (ULSSIEM)	5.755	16	0.360		
	Total	12.702	19			

*\*At the 0.05 level, the mean difference is significant*

Our data shows the ANOVA for ULSSIEM (employee performance) was significant, since  $F(3,16) = 6.437$ , and the p-value = 0.005. This result allowed us to reject the null hypothesis ( $H_0$ ), which stated: “There is no statistically significant impact of the leadership style of project managers on employee performance”. Based on the findings in Table 4.15, the data shows that project managers’ leadership styles do, in fact, have a statistically significant impact on employee performance.

To fully understand the statistical impact between leadership style and employee performance in ANOVA, the researcher next conducted a post-hoc test on previously analysed subset data between groups, to confirm where the differences occurred between groups of variables; specifically, a multiple comparison analysis test.

For the purposes of this study, we have used the multiple comparison method by Bonferroni, which provides a post-hoc comparison of the means, to determine which means are significantly different. This ensures a statistical adjustment to the

significance level of hypothesis tests, since multiple tests are being performed, as demonstrated in Table 4.16.

The purpose of an adjustment is to reduce the probability of identifying significant results that do not exist, and in doing so, guard against making Type I errors; for instance, rejecting or confirming null hypotheses when they are, in fact, true in the testing process.

**Table 4.16: Post-hoc multiple comparison test of leadership styles and employee performance using the Bonferroni method**

Post-Hoc Tests Using Bonferroni Method								
Dependent Variable		(I) LS	(J) LS	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
LSSM	Bonferroni	Transformational Leadership	Transactional Leadership	-0.19600	0.30252	1.000	-1.1061	0.7141
			Democratic Leadership	-0.01600	0.30252	1.000	-0.9261	0.8941
			Autocratic Leadership	0.25200	0.30252	1.000	-0.6581	1.1621
			Transactional Leadership	0.19600	0.30252	1.000	-0.7141	1.1061
		Transactional Leadership	Transformational Leadership	0.18000	0.30252	1.000	-0.7301	1.0901
			Democratic Leadership	0.44800	0.30252	0.948	-0.4621	1.3581
			Autocratic Leadership	0.01600	0.30252	1.000	-0.8941	0.9261
			Transactional Leadership	-0.18000	0.30252	1.000	-1.0901	0.7301
		Democratic Leadership	Transformational Leadership	0.26800	0.30252	1.000	-0.6421	1.1781
			Autocratic Leadership	-0.25200	0.30252	1.000	-1.1621	0.6581
			Transactional Leadership	-0.44800	0.30252	0.948	-1.3581	0.4621
			Democratic Leadership	-0.26800	0.30252	1.000	-1.1781	0.6421

ULSSIEM	Bonferroni	Transformational Leadership	Transactional Leadership	-0.04400	0.37932	1.000	-1.1851	1.0971
			Democratic Leadership	-0.19800	0.37932	1.000	-0.9431	1.3391
			Autocratic Leadership	1.39600*	0.37932	0.012	0.2549	2.5371
		Transactional Leadership	Transformational Leadership	0.04400	0.37932	1.000	-1.0971	1.1851
			Democratic Leadership	0.24200	0.37932	1.000	-0.8991	1.3831
			Autocratic Leadership	1.44000*	0.37932	0.010	0.2989	2.5811
		Democratic Leadership	Transformational Leadership	-0.19800	0.37932	1.000	-1.3391	0.9431
			Transactional Leadership	-0.24200	0.37932	1.000	-1.3831	0.8991
			Autocratic Leadership	1.19800*	0.37932	0.037	0.0569	2.3391
		Autocratic Leadership	Transformational Leadership	-1.39600*	0.37932	0.012	-2.5371	-0.2549
			Transactional Leadership	-1.44000*	0.37932	0.010	-2.5811	-0.2989
			Democratic Leadership	-1.19800*	0.37932	0.037	-2.3391	-0.0569

\*. The mean difference is significant at the 0.05 level.

The post-hoc test result using the Bonferroni method indicates a statistically significant difference between the impact of the transformational, transactional, and democratic leadership styles, and the autocratic leadership style, as shown in Table 4.16 by a Sig. value of less than 0.05. This implies that autocratic leadership has the least impact on employee performance in the construction industry in Cape Town, as well as an impact magnitude that is statistically significant relative to all other leadership styles.

#### 4.2.4.1.2 Reporting ANOVA test results for the impact of leadership styles on employee performance

A one-way ANOVA was conducted to investigate the impact of leadership styles of Cape Town's construction project managers on employee performance. The independent variable—leadership styles—was abbreviated as LSSM. The dependent variable—employee performance—was abbreviated as ULSSIEM.

The result of our ANOVA test was significant:  $F(3,16) = 6.437$ ,  $p = 0.005$ . This result allowed us to reject the null hypothesis ( $H_0$ ), which stated: "There is no statistically significant impact of the leadership style of project managers on employee performance". As such, we were able to support the conclusion ( $H_1$ ), which states: "There is a statistically significant impact of the leadership style of project managers on employee performance".

#### **4.2.4.2 Research Question Two**

**Research question (RQ):** What is the relationship between leadership styles and employee performance?

**Null hypothesis ( $H_0$ ):** There is no statistically significant relationship between leadership styles and employee performance.

**Hypothesis ( $H_1$ ):** There is a statistically significant relationship between leadership styles and employee performance.

For this portion of the survey, questions were designed in such a way that their responses would help us ascertain the extent of the impact of leadership style on employees' performance in the construction industry in Cape Town.

Respondents were given ample time to reflect and respond to the questions accurately. They were then asked to assess how positively or negatively a leadership style might impact their performance on site. We did not disclose the leadership style associated with the questions, to yield the most accurate responses without bias.

##### **4.2.4.2.1 Regression analysis to ascertain the extent of the relationship between leadership style and employee performance**

Regression analysis, write Uyanık and Güler (2013:23) is a technique used in statistics to estimate the relationship among variables that have a "reason and result relation".

The primary intent of regression is to examine the relationship between a dependent variable and each independent variable, and subsequently formulate the linear relation equation between dependent and independent variables. Since the regression model for this study used just one dependent variable but more than one independent variable, we have used multilinear regression.

Regression analysis is a form of inferential statistics. In this type of statistics, p-values help determine if relationships the researcher observes in a sample also occur in the larger population. The researcher can test the null hypothesis using the p-value for each independent variable, to determine if it has any correlating relationship with the dependent variable. If there is no association between the changes in an independent variable and changes in the dependent variable, then no correlation exists. When this happens, it means there is insufficient evidence to scientifically demonstrate a cause-effect relationship among the larger population.

If a variable's p-value is less than the significance level, it means the sample data provides sufficient evidence to reject the entire population's null hypothesis. The data thus favours the hypothesis stating a non-zero correlation. In addition, it suggests that changes in the independent variable are associated with changes among the population level. As such, this variable is revealed as statistically significant and useful as an addition to the regression model. However, when a p-value is greater than the significance level, this means there is a lack of evidence in the sample to conclude that a non-zero correlation exists.

The purpose of this study is to investigate the impact of leadership styles of construction project managers on employee performance in Cape Town and establish the relationship between independent and dependent variables. As stated previously, the independent variable in our study was leadership styles and the dependent variable was employee performance. In this section, we will attempt to find significant correlation between these two variables.

We performed regression analysis to determine the correlation between leadership styles and employee performance (ie. to determine the cause-effect relationship) and to make predictions about the research topic by interpreting this relationship. This analysis assisted the researcher in assessing the following hypotheses for Research Question Two, "What is the relationship between leadership styles and employee performance?", those being, H0: "There is no statistically significant relationship between leadership styles and employee performance", or H1: "There is a statistically significant relationship between leadership styles and employee performance".

Table 4.17 shows the research key results for descriptive statistics. The researcher began by outlining the size of the sample, which is represented by 'N'; describing the central tendency of the data collected; highlighting the spread of the data; assessing the data distribution's shape and spread; comparing data from different survey groups;



and showing the totals that ascertain the extent of the impact of leadership style on employee performance.

**Table 4.17: Regression analysis of leadership styles and employee performance – simple linear regression descriptives and correlation output**

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
Transformational Leadership	193.2000	16.97552	377
Transactional Leadership	203.0000	15.89439	377
Democratic Leadership	194.0000	27.99248	377
Autocratic Leadership	180.6000	24.54298	377
Ascertaining the extent of the impact of leadership style on employees' performance	1112.6000	244.38158	1508

More useful is the correlations matrix table (see Table 4.18 below), which provides a correlation matrix, along with probability values for all variables. Since we only have two variables, leadership styles (independent) and employee performance (dependent), there is only one correlation coefficient.

**Table 4.18: Correlation matrix of leadership styles and employee performance**

		<b>Correlations</b>				
		AEILSEP**	Transformational Leadership	Transactional Leadership	Democratic Leadership	Autocratic Leadership
Pearson Correlation	AEILSEP**	1.000				
	Transformational Leadership	0.978***	1.000			
	Transactional Leadership	0.943***	0.967***	1.000		
	Democratic Leadership	0.887***	0.858***	0.938***	1.000	
	Autocratic Leadership	0.918***	0.902***	0.958***	0.991***	1.000

*The correlation is significant at the 0.05 level (1 tailed) \* , \*\* , \*\*\* represented significance at 10%, 5% and 1% respectively*

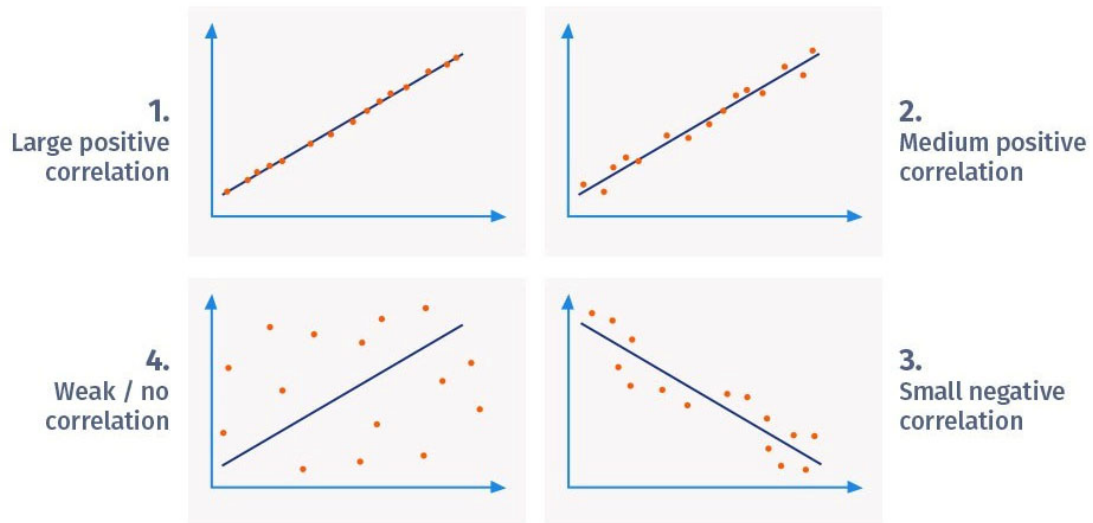
**\*\*AEILSEP = Ascertaining the extent of the impact of leadership style on employee performance**

**Pearson Correlation:** Karl Pearson developed his so-called 'Pearson correlation coefficient', a statistical tool to study the relationship strength between two numerically measured and continuous variables.

It measures the degree of the linear relationship between two variables, with correlation ranging from -1 to +1. The strength of the relationship will depend on what variables are measured and the sample size.

When plotting these numbers on a linear graph, the relationship between variables can become apparent before they are calculated (see Figure 4.8).

When scatterplots are shown close to the line, it means there is a strong relationship between the variables—the closer they are to the line, the stronger the correlation (while further away denotes a weak correlation). Meanwhile, if the line appears almost parallel to the graph's x-axis due to scatterplots' random placement, it can be assumed that there is either a weak correlation or none at all between variables.



**Figure 4.8: Examples of Pearson's Correlation Coefficient**  
Source: Fleetwood (2016)

Based on our research and analysis, there is a significant positive correlation between project managers' leadership styles and employee performance in the construction industry in Cape Town (refer to Table 4.19).

The strength of the relationship between leadership styles and employee performance, numerically measured, was 1.00. A correlation of  $r = 1.000$ ;  $p < 0.05$  suggests there is a strong positive relationship between leadership styles and employee performance.

**Sig. (1-tailed):** this is the p-value associated with the correlation. A 1-tailed test is done when the hypothesis (or prediction) is directional. When using a one-tailed test, you are testing for the possibility of the relationship in one direction and completely disregarding the possibility of a relationship in the other direction.

**N:** this is the number of samples that was used in the correlation. Because we have no missing data in this data set, all correlations were based on all 377 samples in the data set. However, if some variables had missing values, the N's would be different for the different correlations.

**Table 4.19: Model summary and coefficients**

Model Summary <sup>b</sup>						
Model	Change Statistics				Sig. F Change	Durbin-Watson
	R Square Change	F Change	df1	df2		
1	0.94 <sup>a</sup>	10555.200	4	15	.000	2.960

a. Predictors: (Constant), Autocratic Leadership, Transformational Leadership, Transactional Leadership, Democratic Leadership / b. Dependent Variable: Ascertain the extent of the impact of leadership style on employees' performance

Coefficients						
Model		Unstandardized		Standardized		
		B	Std. Error	Beta	t	
1	(Constant)	-698.536	0.000		-7663192.452	.000
	Transformational Leadership	27.292	0.000	1.896	19884448.693	.000
	Transactional Leadership	-20.648	0.000	-1.343	-1707288.489	.000
	Democratic Leadership	15.641	0.000	1.792	9749420.295	.000
	Autocratic Leadership	-12.760	0.000	-1.281	-6596007.191	.000

a. Dependent Variable: Employees' performance

In Table 4.19, the model summary provides the correlation coefficient and coefficient of determination (r-square or  $r^2$ ) for the regression model. As we have already seen, a coefficient of 0.94 suggests there is a strong positive relationship between leadership styles and employee performance while  $r^2=0.94$  (94%) suggests that the independent variable has a strong positive impact on employee performance. This implies that 94% of variations in the perceived employee performance can be explained by the type of leadership styles the project managers adopted.

The resulting model summary and coefficients tables below show that the full model is statistically significant ( $F = 0.741$ ;  $df = 4,15$ ;  $\text{Sig. } F \text{ Change} = 0.000$ ). This statistic reveals that, if the chosen significance level is less than 0.05, the researcher can discard the null hypothesis and conclude the alternative, of the overall significance of leadership styles as a determinant of employee performance. The F-test affirmed that leadership styles can effectively and efficiently enhance employee performance in the construction industry in Cape Town.

In this case, we will reject the null hypothesis ( $H_0$ ), which states "There is no statistically significant relationship between leadership styles and employee performance". The coefficients table gives us the values for the regression line; the adjusted R-squared coefficient for this regression model is 1.000, which means leadership styles have a 100% impact on employee performance.

#### **4.2.4.2.2 Reporting regression and correlation output analysis test results of leadership style and employee performance**

In summary, the researcher conducted regression to investigate the relationship between the leadership styles of Cape Town construction project managers and the performance of subordinate employees. We developed a correlation matrix, along with probability values for all variables.

The result indicated all leadership styles are highly correlated with employee performance, although there is a difference in the magnitude of all Pearson moment correlation coefficient ranges between 0.88 to 0.97. This implies a strong positive and significant relationship between employee performance and the different leadership styles employed by project managers in Cape Town's construction industry.

The regression coefficient result revealed that transactional and autocratic leadership styles have a negative impact on employees' performance, while democratic and transformational leadership reveal positive impact. This is demonstrated on the model

summary and coefficients tables (see Table 4.19). We discarded the null hypothesis based on the coefficients table and its values for the regression line (since F-stat probability was less than 0.05).

We can therefore conclude project managers' leadership styles are a highly significant determinant of employees' performance. The intuitiveness of the result revealed employees can be motivated by inclusive decision making in an organization.

#### 4.2.4.3 Research Question Three

**Research question (RQ):** Which conceptual framework model improves leadership quality and performance?

This section of the study provides a conceptual framework for improving leadership, based on the findings of the survey questionnaire that was issued to project managers and construction workers on job sites in Cape Town. It will attempt to address the current void in the local body of industry knowledge and literature, and in doing so, help improve the quality of leadership style and performance of employees.

Our questionnaire asked respondents to use the five-point Likert scale to rank which potential tools could help improve their daily performance on site. The findings are revealed in Table 4.20.

**Table 4.20 Potential tools for improving leadership quality and employee performance in Cape Town's construction industry**

<b>Developing a conceptual framework to improve leadership quality / performance</b>	<b>Rank</b>
I believe continuing to learn and improve my skills through workshops, courses or training can influence my performance and that of my colleagues for the better.	1
I believe being willing to admit and learn from failures or weaknesses can influence my performance and that of my colleagues for the better.	2
I believe actively working to improve my communication skills and the flow of information within our project team can influence my performance and that of my colleagues for the better.	3
I believe maintaining a positive attitude at work can influence my performance and that of my colleagues for the better.	4
I believe setting definitive goals and following action plans can influence my performance and that of my colleagues for the better.	5

It is interesting to note that most respondents prioritised opportunities for learning and skills improvement. They also listed a willingness to admit and learn from failures or weaknesses as secondly crucial to improving employee performance.

Improving communication skills and the flow of information within the project team or company was deemed thirdly important, with respondents saying this could help positively impact employee performance.

Next, respondents identified the benefits of maintaining a positive attitude throughout the project and in office, followed by the ability to set definitive goals and follow through on action plans.

When it came to developing a conceptual framework action plan and detailing the means to improve both project managers' leadership and subordinates' performance, respondents ranked their answers in Table 4.21:

**Table 4.21 Conceptual framework action and the means to achieve it**

<b>Conceptual framework action</b>	<b>Course of action / means</b>	<b>Rank</b>
Learning and improving skills	Workshops, <u>courses</u> or training	1
Promote a willingness to admit and learn from failures or weaknesses	Facilitate communication, learn from others, workshops, <u>courses</u> or training	2
Improve communication skills and the flow of information within the project team and the company	Facilitate meetings, make communication a priority, develop active listening skills, respect your audience	3
Maintain a positive attitude throughout the project or at work	Fill the mind with positive input, be kind to others, assume responsibility, and choose the right response	4
Set definitive goals and follow through on action plans	Make sure goals are specific, measurable, attainable, relevant and time efficient	5

Team performance is “an important building block of an organization”, according to Abbas and Yaqoob (2009:269-292) especially since individuals cannot work in silos on a construction project; they must collaborate and communicate.

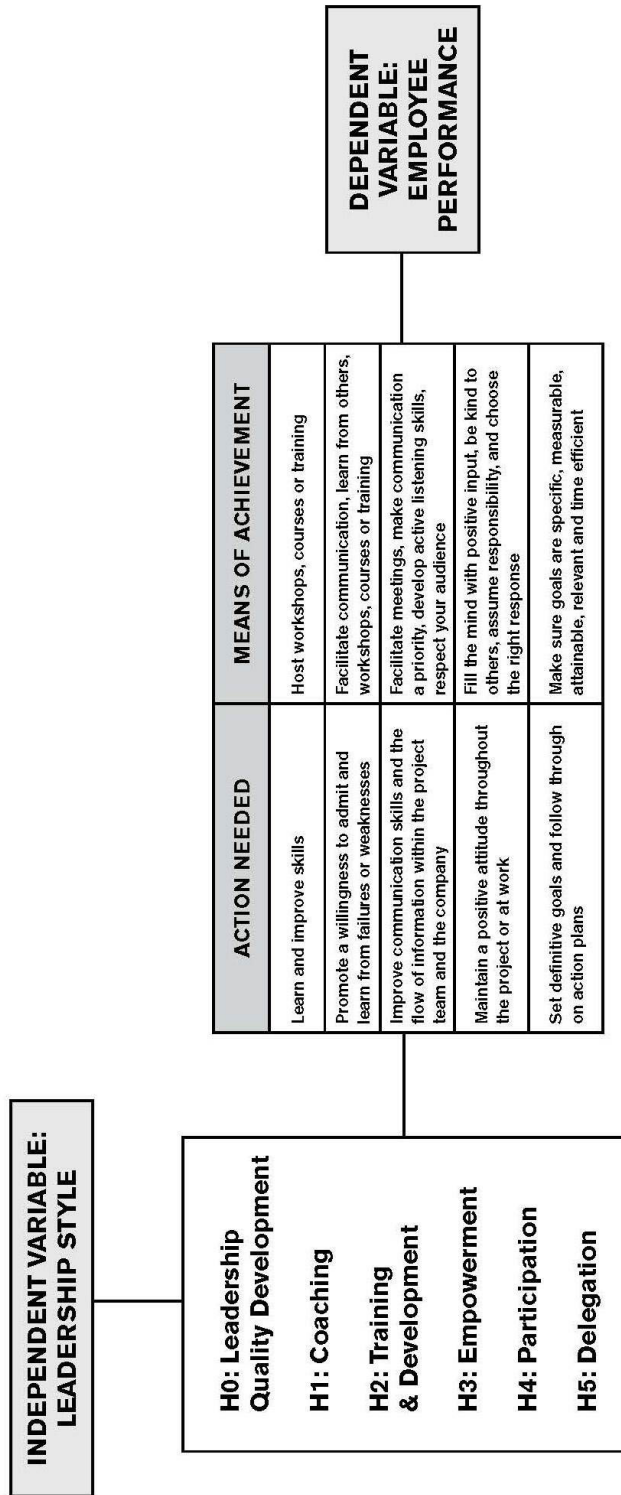


Figure 4.9: Conceptual framework for leadership development

As such, project managers have a critical role in ensuring results are achieved. Saad and Majid (2014:1759) state: “A capable leader provides guidance for the organization and leads followers toward achieving desired goals. Therefore, organizations need to have efficient leaders to lead and motivate their employees”.

As part of responding to Research Question Three, we must frame the independent variable (leadership style) and dependent variable (employee performance) in the context of a conceptual theoretical framework.

The conceptual framework graphic (Figure 4.9) shows the conceptual framework for leadership development. Based on our research and the findings discussed throughout this study, it provides a model for improving leadership quality and performance in Cape Town’s construction industry.

The existing literature outlined in Chapter 2 of this thesis provides more detail on the variables that influence employee performance for the good—primarily, variables such as coaching, empowerment, participation, training and development, and delegation.

#### **4.2.4.3.1 Coaching**

Coaching is commonly utilised to highlight issues on site, particularly when employees lack the necessary expertise to problem solve.

This two-way communication style encourages constructive feedback between project managers and their workers, often with coaches (in this case, project managers) pointing out areas that need improvement and offering solutions to tackle the issues.

Beyond immediate issues, coaching can also help address entrenched belief systems, behaviours, and unhelpful habits that hinder positive performance, writes Du Toit (2007).

#### **4.2.4.3.2 Training and development**

Training and development address skill deficits among employees so they can improve their performance. According to Sahinidis and Bouris (2008:47), training reduces the need for management supervision over time, and “improves the drive, initiative, and quality of work of employees, thus assisting them to be more committed to achieving the goals and objectives of the organisation”.



Most commonly, training and development is carried out via formal means (such as workshops, courses, or conferences), or informally (through learning from others on site). When employees lack the skills and knowledge to carry out a given task, this may lead to feelings of inadequacy and a lack of motivation. This, in turn, can lead to conflict when goals are not achieved and ultimately impact organisational success.

Companies must fill the gap between desired and actual performance, through training and development programs, Sahinidis and Bouris (2008:47).

#### **4.2.4.3.3 Empowerment**

Duvall (1999) defines success as “achievement, accomplishment and attainment” and states these are all outcomes of empowerment. When employees are empowered, he says, they achieve personal success, along with organisational success (accomplished through the achievement of shared goals).

When team members share work experiences that are mutually beneficial, they can meet their need for social and personal growth, and tend to feel more satisfied with their work.

Bartram and Casimir (2007) state that empowerment has “significant positive correlations with both performance and satisfaction”. In fact, they found empowerment was “more strongly correlated with the in-role performance of followers than with satisfaction with the leader”.

#### **4.2.4.3.4 Participation**

Researchers suggest participation can be a useful tool to encourage employees to use their talents and skills to address problems on site.

When studying American and Chinese managers in China, Chen and Tjosvold (2006) discovered that involving employees in the decision-making process and creating an environment where workers felt open to share and discuss problems could increase employees’ job performance and reduce the rates of turnover.

#### **4.2.4.3.5 Delegation**

Delegation involves the assignment of tasks, responsibilities, and authority to employees, according to Yukl (2002) and describes a variety of methods for power sharing with individual subordinates.

While there can be many reasons to delegate (including instances where a project manager is too busy to complete tasks), one of the best reasons is to develop subordinates' skills and confidence.

### **4.3 Conclusion**

This chapter detailed the data provided by our survey questionnaires and addressed our original research questions, supporting the work of previous researchers and scholars. The research proves a strong correlation between a project manager's leadership style and employees' performance in the construction industry in Cape Town. Therefore, it is crucial to develop effective leadership.

Toor and Ofori (2008:628-630) suggest leadership development in the construction industry "requires fixed attention". As the industry continues to face an onslaught of socio-economic, environmental, political, and business challenges, effective leadership can help mitigate these issues, the authors suggest.

From a theoretical standpoint, the insight outlined in this chapter will help address a void in the current body of industry knowledge, and in doing so, help improve the quality of leadership style and performance of employees. Practically, this study's findings can prove useful for project managers and company leaders. The data gives us a glimpse into the perceptions of construction project managers and subordinate employees; what works on site and what does not.

The study's findings and recommendations will allow those in positions of influence to design and implement strategic and effective leadership styles to improve team performance. Moreover, from a policy perspective, this study's findings will be useful to inform the development of training for project managers in Cape Town.

Based on the study's data and findings described herein, the next chapter will present final thoughts, conclusions, and our recommendations for future study.

## **CHAPTER FIVE: RECOMMENDATIONS AND CONCLUSION**

### **5.1 Introduction**

In this chapter—the study’s summary—we will present conclusions and recommendations that are relevant to our original research objectives. Based on these conclusions, we will identify aspects for consideration and future investigation.

The researcher investigated the impact of project managers’ leadership styles on employee performance in Cape Town’s construction industry, in accordance with the study’s goals. This chapter will discuss the data and findings of the research questionnaires in relation to our original objectives. We will then illustrate how these objectives have been answered based on our research data and analysis, as well as our review of relevant literature.

### **5.2 Research objectives and key findings**

The main objective of this study was to investigate the impact of project managers’ leadership styles on employee performance in the construction industry in Cape Town. Specifically, the objectives of this study were as follows:

#### **5.2.1 Research Objective One**

To determine the impact of project managers’ leadership styles as they relate to the performance of employees.

This objective was achieved through the distribution of a structured questionnaire and the responses of 377 project managers and construction employees in Cape Town. Their responses were analysed by the researcher using an ANOVA test (with the descriptive method) and a post-hoc test (using the Bonferroni Method). The results revealed that the impact of a project manager’s leadership style on employee performance was statistically significant.

#### **5.2.2 Research Objective Two**

To ascertain the extent of the impact of managers’ leadership style on employee performance.

The researched achieved this objective by the means described above (ie. a structured questionnaire, which was distributed to project managers and construction employees on site in Cape Town). To determine the relationship between the independent variable

(leadership styles) and the dependent variable (employee performance), the researcher analysed the data using an ANOVA test—this time, using the regression method—as well as correlation analysis. The results revealed there is a strong positive significant relationship between leadership styles and employee performance.

### **5.2.3 Research Objective Three**

To develop a conceptual framework to improve the relationship between leadership quality and performance.

The researcher achieved this objective through a thorough review of existing literature, as well as feedback from our survey questionnaire. Using this information, we developed a conceptual framework to aid project managers and organisations in improving leadership and employee performance. It highlights the importance of using leadership quality development tools such as coaching, empowerment, participation, delegation, training, and development to improve employee performance. In addition, it details specific and strategic means to implement these leadership quality development tools.

### **5.3 Limitations and delimitations of the study**

As stated in Chapter 1, our research was limited to Cape Town construction companies, construction project managers, and on-site subordinate construction workers. It investigated the impact of project managers' leadership styles on employees' performance in Cape Town's construction industry.

First, the researcher reviewed a wide pool of existing relevant literature on leadership and employee performance. Next, a structured questionnaire was crafted and distributed to 456 project managers and construction employees, of which 377 questionnaires were duly completed and analysed.

Due to the sheer number of construction companies in Cape Town, it proved difficult to gather data from every company and job site. Nevertheless, we do not anticipate that this limitation will influence the validity of the study's findings. Our research focused on companies with a major presence in the city (and a larger number of employees). The researcher also focused on surveying construction employees and project managers in general building construction (ie. residential, industrial, and commercial projects), rather than large-scale infrastructure projects or specialty trade contractors.

However, because this study was limited to construction companies in Cape Town only, the research findings should not be considered as illustrative of organisations in the rest of the country or Africa as a whole.

Our main challenge for this study was finding time for the questionnaires to be completed by busy project managers and construction employees, who often were battling deadlines on site and did not have time to fill out the survey.

The researcher also observed that some subordinate construction employees appeared hesitant to participate, either due to time constraints, a lack of understanding about the intentions of the study, or perhaps, out of fear of reporting their opinions of their project managers (despite the assurance that completed questionnaires would remain anonymous and not be reviewed by superiors). Further study is required to understand their reticence to participate. In contrast, most project managers participated readily and without hesitation.

Illiteracy and language barriers proved another issue with some construction employees. In instances where this came up, the researcher read the questionnaire aloud in English and had another construction worker translate to Afrikaans or Xhosa, as needed. We do not anticipate that this limitation impacted the validity of our findings.

#### **5.4 Significance of the study**

The data we gathered provides insight into Cape Town's project managers' leadership styles and their impact on employee performance in the construction industry. It highlighted how project managers' leadership is perceived, as well as the significance of its impact on employee performance.

The research contributes to leadership development of project managers in the local construction industry and helps address systemic misconceptions and recurring issues. The conceptual framework can be used as guidance for improving project managers' leadership, and subsequently, the performance of construction employees on site. In doing this, we anticipate organisations will observe improved project outcomes, including those related to budget and schedule.

#### **5.5 Conclusion and recommendations**

In analysing the findings of this study, we have proven a statistically significant positive correlation between project managers' leadership styles and the performance of subordinate construction employees. As such, it is necessary for construction

companies in Cape Town to invest in leadership development and training, as outlined in the conceptual framework of this study.

Jarad (2012) observed nine key long- and short-term factors for successful leadership development; long-term drivers such as retaining staff, equipping them for change, cultivating future leaders, growing the company, and ongoing professional development, as well as short-term drivers like increasing competitiveness and efficiencies, strengthening teams and motivating staff.

Moreover, Bogus and Rounds (2006) suggest all employees can grow to become better leaders through self-education, reading and watching helpful materials, attending seminars and conferences, having active organisational mentors, and through practical, hands-on experience.

This study showed us how leadership styles of construction project managers have significant impact on employee performance, and overall project delivery. To improve the success of projects and encourage good leadership that has a positive impact on employee performance, we recommend the following:

- In line with our study, construction companies in Cape Town should invest time and financial resources towards leadership development workshops, training courses, and skills improvement;
- Construction companies should work to improve their project managers' communication skills, along with the flow of information within project teams and the company;
- Project managers and company leaders should seek opportunities to empower potential leaders who show promise and a diligent work ethic;
- Project leaders and subordinate employees should seek opportunities to improve morale throughout the project, through incentives (even if they are not financial).

## **5.6 Recommendations for future research**

This study has triggered many points to be studied by future researchers, including the following questions:

- Which is more effective when ensuring a project's success in Cape Town's construction industry: good leadership or good management?
- How does the race of a project manager impact leadership styles and employee performance in the construction industry in Cape Town?

- How does the level of education of a project manager impact leadership styles and employee performance in the construction industry in Cape Town?
- How do construction workers in Cape Town perceive project success (ie. what factors make a project 'successful' according to employees)?
- How does communication (including employees' levels of spoken and written language literacy) impact employee performance in Cape Town's construction industry?
- How can construction companies develop and implement their own effective management framework models to improve leadership quality and performance in the construction industry in Cape Town, based on leadership styles that are proven to be effective?
- What contributes to a culture of fear or hesitation among construction workers on job sites in Cape Town when it comes to responding to anonymous research questionnaires?
- What is the impact of leadership quality development tools when it comes to factors like employee productivity, performance, profitability, or behaviour?

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## APPENDIX A

### DESIGN OF QUESTIONNAIRE

#### Studying the impact of project managers' leadership style on employee performance in a construction company in Cape Town

The targeted population for this research is construction project managers and employees of all management levels in the construction industry, as well as employees on various construction sites.

#### SECTION A. DEMOGRAPHY

##### 1. Age

0-25	
26-35	
36-45	
46-55	
56-65	
66-75	

##### 2. Gender

Male	
Female	
Other	

##### 3. Race

Black	
White	
Coloured	
Other	

#### 4. Education

No schooling	
Primary School	
High School	
University/College	

#### 5. Marital status

Single	
Married	
Divorced	
Widowed	

#### 6. Professional title

Project manager	
General contractor	
Sub contractor	
General workers	

#### 7. Duration

0-11 months	
1-5years	
6-15years	
16-30 years	
31-50 years	
51+ years	



## SECTION B: LEADERSHIP STYLE AND PERFORMANCE

<b>Project Manager's Leadership Style (All participants to answer this section)</b>						
<p>For each statement or question below, please indicate which is most applicable by marking the box with "X".</p> <p>1 = strongly disagree            2 = disagree            3 = neutral            4 = agree            5 = strongly agree</p>						
<b>Transformational Leadership</b>						
	<b>From 1 as the lowest starting grading until 5 highest ending grading.</b>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
1	When we have a job to do, I'm in there with everyone else doing my part.					
2	I help others with their self-development					
3	A leader must represent higher morality.					
4	A significant part of my leadership is that of a teacher.					
5	I spend considerable energy in instilling hope among my workers.					
<b>Transactional leadership</b>						
1	My personnel usually obey my instructions and commands.					
2	I motivate employees through payment and rewards.					
3	I manage others by setting standards that we agree on.					
4	I emphasise discipline when my subordinates do something wrong.					
5	I facilitate events for my employees.					
<b>Democratic Leadership</b>						
1	I involve employees in project decision making process.					
2	I keep the lines of communication open at all the time.					
3	I sometimes ask my subordinates for ideas.					
4	A leader gathers feedback from subordinates for deciding					
5	I encourage creativity and new ideas.					

<b>Autocratic leadership</b>						
1	I ask for little or no input from my workers.					
2	I always stand for what I know is right.					
3	I persuade others to do things my way.					
4	As the leader I am the only one who initiates methods and processes.					
5	I monitor all projects that I'm in charge of to ensure the team meets its goal.					
<p><b>Understanding the impact of project managers' leadership styles on employee performance</b></p> <p><b>Participants: General construction employees only (no project manager response required)</b></p> <p><b>For each statement or question below, please indicate which is most applicable by marking the box with an "X".</b></p> <p>1 = strongly disagree  2 = disagree  3 = neutral  4 = agree  5 = strongly agree</p>						
<b>Transformational Leadership</b>						
1	I perform better when my project manager is present when there's work and does his or her part.					
2	I perform better when my project manager helps me with my self-development.					
3	I perform better when my project manager represents higher morality.					
4	I perform better when a significant part of my project manager's leadership is that of a teacher.					
5	I perform better when my project manager spends considerable energy instilling hope in us.					
<b>Transactional leadership</b>						
1	I perform better when my team obeys my project manager's instructions and commands.					
2	I perform better when my project manager motivates me through payment and rewards.					

3	I perform better when my project manager manages us by setting standards that we agree on.					
4	I perform better when my project manager emphasises discipline when I do something wrong.					
5	I perform better when the project manager facilitates events for me.					
<b>Democratic leadership</b>						
1	I perform better when the project leader involves me in project decision making process.					
2	I perform better when the project manager keeps the communication open at all the time.					
3	I perform better when the project manager sometimes asks me for ideas.					
4	I perform better when the project manager gathers feedback from me for decision making.					
5	I perform better when the project manager encourages creativity and new ideas.					
<b>Autocratic leadership</b>						
1	I perform better when the project manager asks for little or no input from me.					
2	I perform better when the project manager always stands for what he or she knows is right.					
3	I perform better when the project manager persuades me to do things his or her way.					
4	I perform better when the project leader is the only one who initiates methods and processes.					
5	I perform better when the project leader monitors all projects that he or she is in charge of to ensure the team meets its goal.					

**Ascertaining the extent of the impact of leadership style on employees' performance**

**For each statement or question below, please indicate which is most applicable by marking the box with "X".**

- 1 = not at all
- 2 = to some extent
- 3 = to a moderate extent
- 4 = to a great extent
- 5 = to a very great extent

1	To what extent is your performance impacted by your project manager's control over the outcome of decisions?					
2	To what extent is your performance impacted by new procedures, created and implemented by your project managers after something goes wrong?					
3	To what extent is your performance impacted when your project manager fails to communicate regularly (at least once per day) the expectations and deadlines for your work?					
4	To what extent is your performance impacted when your project manager allows you to determine what needs to be done and how to complete these tasks?					
5	To what extent is your performance impacted when your project manager creates an environment where you take ownership of the project and you are allowed to participate in the decision-making process?					

**Developing a conceptual framework to improve leadership quality and performance**

**For each statement or question below, please indicate which is most applicable by marking the box with "X".**

- 1 = strongly disagree
- 2 = disagree
- 3 = neutral
- 4 = agree
- 5 = strongly agree

1	I believe maintaining a positive attitude at work can influence my performance, for the better.					
2	I believe setting definitive goals and following action plans can influence my performance, for the better.					

3	I believe actively working to improve my communication skills and the flow of information within our project team can influence my performance, for the better.					
4	I believe being willing to admit and learn from failures or weaknesses can influence my performance, for the better.					
5	I believe continuing to learn and improve my skills through workshops, courses or training can influence my performance, for the better.					

**SECTION C: OPEN QUESTIONS (Optional)**

1. List three factors you like or dislike about your project manager’s leadership style:
  
2. List three factors that positively or negatively impact your performance for a project you are currently working on:
  
3. Which of the following traits (if any) describe your project manager?
  - Strong Communication
  - Passion & Commitment
  - Positivity
  - Innovation
  - Collaboration
  
4. Is there anything else you would like to add?

**APPENDIX B**

**LANGUAGE EDITOR CERTIFICATE**

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**Author:** Jean Luc Kalambayi

**Document title:** Impact of Project Managers' Leadership Style on Employee Performance in a Construction Company in Cape Town

**Date Issued:** 15 September 2020

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## **APPENDIX C**

### **TURNITIN PLAGIARISM REPORT**



# Master's Thesis

*by* Jean Luc Kalambayi

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