UNIVERSITY OF KWAZULU-NATAL

AN INVESTIGATION OF CHALLENGES AFFECTING THE IMPLEMENTATION OF PROJECT MANAGEMENT PRACTICES: A CASE STUDY OF MSUNDUZI EXPANDED PUBLIC WORKS PROGRAMME CLEARING PROJECT

By

MAKHOSAZANA NTANDOKAZI MKHWANAZI

208503544

A dissertation submitted in fulfilment of the requirements for the degree of Master of Commerce

School of Management, IT, and Governance

College of Law and Management Studies

Supervisor: DR REFILOE GLADYS KHOASE

Co-Supervisor: DR EVELYN DERERA

2019

DECLARATION

I, Makhosazana Ntandokazi Mkhwanazi declare that

(i) The research reported in this dissertation/thesis, except where otherwise indicated, is my original research.

(ii) This dissertation/thesis has not been submitted for any degree or examination at any other university.

(iii) This dissertation/thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.

(iv) This dissertation/thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:

a) their words have been re-written but the general information attributed to them has been referenced;
b) where their exact words have been used, their writing has been placed inside quotation marks, and referenced.

(v) Where I have reproduced a publication of which I am an author, co-author or editor, I have indicated in detail which part of the publication was actually written by myself alone and have fully referenced such publications.

(vi) This dissertation/thesis does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the dissertation/thesis and in the References sections.

Signature: 

Date: 05 June 2019

ACKNOWLEDGEMENTS

Firstly, I would like to thank my Lord and Saviour for His abundance upon my life. He has seen me through this journey, His grace is sufficient!

I would like to thank my two supervisors Dr Refiloe Gladys Khoase and Dr Evelyn Derera for their guidance, wisdom and knowledge which was unfailingly offered to me during this research. Thank you for your constant motivation.

A special thank you to all the participants who agreed to participate in this study, none of this would be possible without you.

Thank you to Mzulu Alexandre Dlamini for his invaluable input during this study and constant support. I also acknowledge and thank my colleagues for their participation and insight.

A special thank you to Mike Mkhwanazi, Mathabo Mkhwanazi, Nokwazi Chonco, Fundisiwe Mtolo and Thando Mkhwanazi who constantly support my drive and vision. Thank you for your prayers and believing in me.

DEDICATION

I dedicate this study to my family for being my source of inspiration. They push me to work hard and achieve all the goals I have set for myself, inspiring me to pursue my dreams and instilling passion for success. Through them, I believe in the power of education, my appreciation is endless.

ABSTRACT

In 2003, the Expanded Public Works Programme was introduced as a complementary measure to decrease the growing unemployment and poverty rates in South Africa. EPWP focused on expanding methods of labour-intensive production through government-funded projects in order to produce more employment prospects. Recent studies have raised questions on the effectiveness of EPWP in achieving both its environmental and poverty alleviation goals. Recent studies have identified that EPWP has been facing poor performance and inability to meet set annual targets due to poor Project Management. It is against this background that this study investigated the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP clearing project. The study was undertaken in Pietermaritzburg, which is situated in KwaZulu-Natal Province. This study was exploratory; it adopted a qualitative case study approach, primarily investigating the Msunduzi EPWP project. In-depth interviews were used to interview the target population of thirty-one. The target population comprised of all the people in the Project Management level of the Msunduzi EPWP project, including the EPWP board members who oversee Project Management issues for the EPWP projects. Data collected was analysed thematically. Themes that emerged from the analysis of data are presented and discussed under relevant headings formulated from specific research objectives. The results revealed that majority of the people managing the teams do not possess any Project Management qualification. There was also evidence of lacking of training, the Project Manager and contractors were not receiving relevant training to aid them in their job roles. Lack of resources posed as a major contributor to poor Project Management, which has resulted in poor auditing and reporting. There was also no efficient system of Monitoring and Evaluation. The results also revealed that top management intervention in resolving existing Project Management challenges was minimal, it was stated that no strategies have been implemented as a resolution to all identified challenges. In addition, the study revealed that internal administrative delays caused non-compliance in several Project Management practices. This has caused serious implications on the performance of the Msunduzi EPWP project. Several recommendations were established by the researcher to address the Project Management challenges identified in this study. The researcher anticipates that the recommendations will benefit a number of people including government, local leadership, Project Managers, scholars, project workers, contractor, implementing agent's, and suppliers.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

APM	Agile Project Management
IASP	Invasive Alien Species Programme
APO	Annual Plan of Operations
EPWP	Expanded Public Works Programme
DPW	Department of Public Works
PMI	Project Management Institute
M&E	Monitoring and Evaluation
PRINCE2	Project In Controlled Environments
PMBOK	Project Management Book of Knowledge
PERT	Programme Evaluation Review Technique
KPI	Key Performance Indicator
PFMA	Public Financial Management Act
GWMESPF	Government-wide Monitoring and Evaluation System Policy Framework
CCPM	Critical

CHAPTER ONE

INTRODUCTION, BACKGROUND AND MOTIVATION OF THE STUDY

1.1. INTRODUCTION

Like any other profession, Project Management has been practiced for several years and has grown over the years. According to Seymour and Hussein (2014), in the 1900s there was evidence of Project Management practices. It was only years later that organisations started applying Project Management tools and techniques in operating small to multifaceted projects. The Project Management Institute, PMI (2013:3) defined a project as an impermanent attempt undertaken to create a distinctive product, result or service. Schwalbe (2015:4) defined a project as a group of tasks that have a beginning and an end, for example the construction of a community hall. In addition, a project requires operating resources, such as people, equipment, software, and other assets (Schwalbe, 2015). There should be funds allocated to a project, these funds may emanate from interested and affected parties or from stakeholders (Schwalbe, 2015). In every project there is a sense of uncertainty due to the project's uniqueness. Uncertainty is one of the greatest challenges in Project Management as it also invokes risk (Schwalbe, 2015).

According to PMI (2013:5) Project Management is the implementation of skills, knowledge, tools, and techniques to project undertakings to meet a project's requirements. Lester (2014:5) defined Project Management as the planning, monitoring and control of all aspects of a project and the motivation of all those involved in it, in order to achieve the project objectives within agreed criteria of time, cost and performance. According to Ika (2009) there has been a keen interest in the field of Project Management over the last few years from academics and specialists in the field. More than just a passing innovation, correct Project Management practices offer organisations the means to be well-organised, effective, and competitive in an ever-changing, complex, and unpredictable environment. The implementation of Project Management practices sustains projects and aids in their successful completion (Ika, 2009). This study will investigate the challenges affecting the implementation of Project Management practices.

1.2. BACKGROUND AND CONTEXT OF THE STUDY

According to Bokolo (2013), in 2003 the South African government announced the Expanded Public Works Programme (EPWP) as a complementary measure to decrease the growing unemployment and poverty rates. Thwala (2011) stated that the programme focused on expanding methods of labour-intensive production through government-funded projects in order to produce more employment prospects. The aim for the EPWP is to employ more people in productive work by limiting machinery usage on site and by employing people to perform these duties (Thwala, 2011). The EPWP is divided into four sectors that conducted numerous projects in South Africa (IASP, 2011). This study will review the Invasive Alien Species Programme (IASP) a directorate within the Department of Economic Development, Tourism, and Environmental Affairs that implements the EPWP projects. The Invasive Alien Species Programme (IASP) has over fifty clearing projects in KwaZulu-Natal. Each project employs an average of four to ten teams per project (although some projects have up to 22 teams). Each team has one contractor and ten to twenty-nine beneficiaries. In KwaZulu-Natal the estimated total number of beneficiaries working in the Invasive Alien Species Programme is 6000 (Johansen, 2018).

According to Nino, Subbarao, & Milazzo (2009) the main objectives of the EPWP are:

- To create temporary occupational opportunities to increase the income levels of the unwaged and underprivileged; and
- EPWP attempts to improve public services (Nino *et al.*, 2009).

According to Bokolo (2013) although the EPWP created employment opportunities, appropriate monitoring and evaluation mechanisms are lacking. Mkhwanazi (2017) stated that the process of implementing the EPWP projects needs to be reviewed as is it not being implemented adequately. Site inspections that monitor work progress and compliance audits are being overlooked. Operational work done by the project workers has been equated to a rushed job (Mkhwanazi, 2017). According to McCutcheon (2018) the EPWP has been facing poor performance and inability to meet set annual targets. Recent studies have raised questions on the effectiveness of EPWP in achieving both its environmental and poverty alleviation goals (McCutcheon, 2018). It is important for this research to be conducted in order to suggest how the EPWP and similar programmes may develop, become sustainable and reach their targets. This study allowed the researcher to identify challenges affecting the

implementation of Project Management practices and to recommend new systems of operation for a more successfully monitored and sustainable EPWP.

1.3. OVERVIEW OF THE EPWP

Phillips (2004:7) defined the EPWP as a South African-based programme, with the main aim of alleviating poverty by decreasing the rate of unemployment, especially for females, youth, and disabled people through various trainings and employment-generating opportunities. According to Department of Public Works (2014) the EPWP is under pressure as too many expectations were created when it was formed. This study is vital as the programme is currently unrewarding, millions are being spent annually but the operational outcome is very disappointing (Phillips, Harrison, Mondlane, Van Steenderen, Gordon, Oosthuizen, Weir-Smith, & Altman, 2009). The programme is not meeting its targets or objectives due to the lack of Project Management (Phillips *et al*., 2009). Samson (2015) discovered that the EPWP monitoring and evaluation structures do not display a complete overview of development and performance outcomes within the EPWP. Samson (2015) further discovered that the EPWP programme implementers and coordinators were non-compliant; they were not conducting the monitoring procedures. However, this did not come as a surprise given the low quality of monitoring methods reported by the auditors (Samson, 2015).

Another challenge that was identified by Samson (2015) was late stipend payments. Late payments were a common occurrence in this programme. There was a continuous low prioritization of payments from the seniors, and this highly frustrated the project workers (Samson, 2015). Samson (2015) discovered that the EPWP monitoring and evaluation structures do not display a complete overview of the development and performance outcomes of the EPWP. As the above authors have stated, there are currently existing Project Management challenges in the EPWP. This study has identified the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP clearing project. In the closing chapter, recommendations have been made on how Project Management can be improved significantly in the EPWP.

1.4. RESEARCH PROBLEM

McConnachie, Cowling, Shackleton and Knight (2013) stated that the EPWPs have been put forward as win–win solutions for achieving societal goals for ecological restoration and poverty alleviation. However, little is documented regarding the challenges of implementing such projects. Authors such as McCord (2008) and Filmer & Fox (2014) have critiqued the

EPWP stating that it is poorly managed. Phillips *et al*., (2009) asserted that weak monitoring by the national and provincial departments needs to be addressed if the EPWP is to be strengthened. According to Mkhwanazi (2017), the EPWP has gained a bad reputation of not producing quality service delivery. It has been said that the EPWP teams sleep or have lunch all day; the EPWP objectives have become unclear over the years (Mkhwanazi, 2017).

The EPWPs are often condemned for being 'make-work' programmes, involving unrewarding activities. All these convictions emanate from poor application of Project Management practices (Phillips, 2004:2). There has been no evidence of development or performance strategies over the years (Phillips, 2004:2). Annually money is being awarded to the EPWP projects, the project are not managed properly, money gets wasted, and project workers do not take their jobs seriously. All these factors result in poor public service. Furthermore, project deliverables are inadequate, targets are not met and the EPWP projects are deemed fruitless (Phillips, 2004:2). If this study had not been conducted, the challenges affecting proper Project Management in the EPWP would remain unidentified. Millions would continue to be invested into a non-performing programme and eventually the EPWP will fail and shutdown. Over the years the EPWP has provided numerous benefits for local rural communities; however its weaknesses are centred on poor Project Management (Phillips, 2004). This study has identified the challenges affecting the implementation of Project Management practices in the EPWP. This information will assist in making the necessary changes to improve the programmes operations.

1.5. SIGNIFICANCE OF STUDY

Although studies have been done on poor Project Management practices in government funded projects in a global context, there still remains a gap in the studies of South African government-funded projects that identify the challenges hindering proper Project Management practices. According to PMI (2016:235) 122 million is wasted for every 1 billion invested in projects, and this is due to poor Project Management. This is an indication that poor Project Management is a global challenge. In a study conducted by Asare (2017) it was identified that in the developing nations there is a need for Project Management to be taken more seriously to avoid the reported organisational disorders. Leuvennink (2012) stated that there should be integrated management of all projects in Africa, whereby one Project Management methodology is established and implemented. This will aid in having a unified system and strategic direction and there will be fewer project failures reported (Leuvennink, 2012). According to (Thwala, 2011) the number of South African projects that have failed is

high; more than one third of projects are failing to reach their objectives. There is very little literature pertaining to poor Project Management practices in South African government-funded projects, which is where government has invested most of their funds.

There was a need to conduct this study as the findings will enlighten the EPWPs and organisations similar to the EPWPs to take proactive measures that can mitigate the risk of project failure; and its associated consequences such as wastage of resources. The researcher hopes that this study's recommendations will be considered for the improvement of the effectiveness of the EPWP Project Management practices. According to Hedeman (2006) a number of studies have assessed project implementation using theoretical frameworks other than for Projects in Controlled Environments (PRINCE2). However, PRINCE2 has been recognised to be effective in assessing Projects Management practices because it is a flexible and adaptable approach that minimises risk. The framework covers numerous disciplines and undertakings required within a project (Hedeman, 2006). In the specific context of South Africa, there is a large body of literature that investigates projects (Thwala, 2011). However, only a few researchers looked at this aspect using a well-established theoretical framework (Thwala, 2011). Thus, this research attempted to address the gaps.

1.6. RESEARCH OBJECTIVES

This research has four research objectives:

- To investigate current Project Management practices in the EPWP;
- To investigate the challenges affecting Project Management practices in the EPWP;
- To investigate the strategies applied to mitigate the challenges affecting the implementation of Project Management practices; and
- To devise an effective Project Management framework for the EPWP.

1.7. RESEARCH QUESTIONS

This research has four research questions:

- What are the current Project Management practices in the EPWP?
- What are the challenges affecting Project Management practices in the EPWP?
- What strategies are applied to mitigate the challenges affecting the implementation of Project Management practices?
- What would be an effective Project Management framework for the EPWP?

1.8. LIMITATIONS OF STUDY

In order to have had provided research findings that were more reflective of the EPWP, the study should have sampled the EPWP projects across South Africa. However, time and financial constraints did not permit this to be undertaken, hence a case study of one of the EPWP projects (Msunduzi Project) was investigated. There is great flexibility in focus group interviews, discussions take place which may evoke other topics valuable for the study, and much insight is gained by the interviewer. However, for this study in-depth interviews were more beneficial as it allowed the participants to be free to express their opinions and to relate their experiences unlike in a group setting where there is less privacy. These limitations did not limit the researcher from achieving the research objectives, the research findings identified major challenges affecting the implementation of Project Management practices that the EPWP is facing.

1.9. RESEARCH METHODOLOGY

This study was conducted as a qualitative case study with an exploratory approach as not much research had been done on this topic. This study involved a case study. This allowed the researcher to study a real life challenge affecting the implementation of Project Management in detail and to get accurate findings. In-depth interviews were conducted to gather information from the participants. The reason the researcher chose to use interviews instead of other qualitative data collection methods was because more information could be shared by the participants in in-depth interviews to assist in answering the research questions. Participants were able to expand on and to emphasise details that were considered to be crucial to this study.

The target population for this study was thirty-one people. This population involved people who provide a managerial oversight of the Msunduzi EPWP clearing project. These people included all people at the management level of the project as well as the board members of the Msunduzi EPWP clearing project. This study adopted a census research approach; therefore, the target population for the study was utilised as the sample size. This study did not adopt a sampling technique as this study was census-based. All the people in the target population participated in this study.

In this study, thematic analysis was adopted. This involves sorting, classifying and categorising each piece of data and arranging the themes that reflect the key concerns of respondents (Maiga, 2017). Thematic analyses assisted the researcher in establishing themes

that contributed to answering the research objectives; the themes presented the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP project.

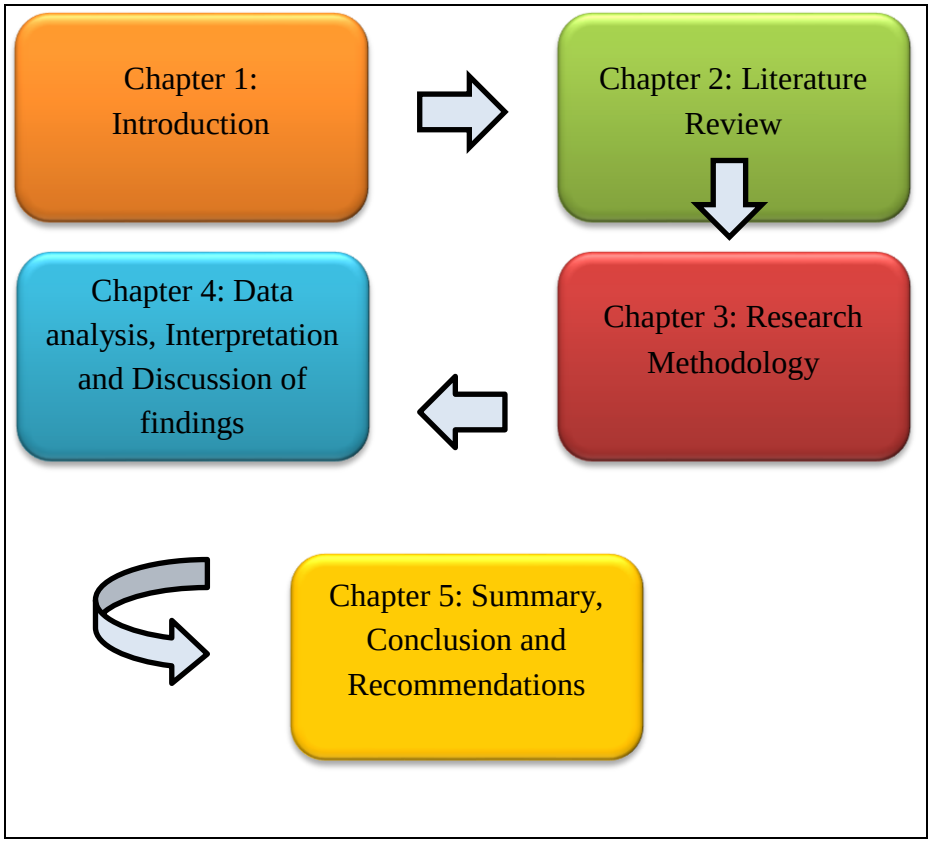


Figure 1. 1. Structure of dissertation

Source: (Author's own illustration)

1.10. STRUCTURE OF DISSERTATION

This dissertation is structured into five chapters:

Chapter 1: Introduction

Chapter one serves as an introduction of the dissertation. It is the foundation the study and it provided information which positions the study. It gives the reader knowledge of what the study is about and what the motive of the study is. This chapter highlighted the study's aims and objectives, the background, the purpose of conducting the study, as well as the motivation for study.

Chapter 2: Literature review

This chapter reviewed previous studies pertaining to this research topic. It provided the reader with more knowledge on the topic. This chapter reviewed literature on the challenges affecting the implementation of Project Management practices in the EPWP. It further reviewed the development of Project Management, the role of the Project Manager, Project life cycle, Project Management challenges and strategies to mitigate these challenges.

Chapter 3: Research methodology

Chapter three discussed the methodology adopted to answer the research objectives by detailing the research procedures. It included the sampling strategy, sample size, research design, data collection methods, research process, data analysis, data quality, credibility and reliability, and concluded with how ethical considerations were observed.

Chapter 4: Data analysis, findings and discussions

Chapter four presented the findings which were gathered from the in-depth interviews during data collection. It further analysed and discussed the findings of the study in relation to obtainable literature and the theoretical framework (PRINCE2).

Chapter 5: Recommendations and conclusion

Chapter five is the concluding chapter; it concluded the study and provided useful recommendations to both the internal and externally affected parties. It summarised the findings of the study and recommended potential areas for future research.

1.11. SUMMARY

This chapter introduced the study, and presented the following subtopics: background of the study, the significance of the study, the research problem, research objectives and research questions. This chapter also presented the limitations of the study, the research methodology as well as the structure of the study.

Chapter two, reviewed literature on Project Management practices as well as the challenges affecting Project Management in the EPWP and other similar programmes. It further reviewed other literature which was considered applicable to this study.

CHAPTER TWO

LITERATURE REVIEW

2.1. INTRODUCTION

This chapter reviews relevant literature pertaining to the aim of this research. It attempts to provide an insight into the literature by other scholars and researchers on the aspect of challenges affecting the successful implementation of Project Management in projects. The literature gathered for this study presumed that the EPWP is currently experiencing challenges; hence the topic for this study alluded to this notion and it proceeded to investigate these challenges. This chapter covered the following major areas; the nature of Project Management particularly looking at the Project Management practices (Knowledge Areas); the development of Project Management; project life cycle; the role of Project Managerssuccessful and unsuccessful projects; as well as an overview of the EPWP. This chapter also discussed the theoretical frameworks guiding Project Management particularly PRINCE2 methodology which is the model for this study.

2.2. PROJECTS AND PROJECT MANAGEMENT

The Project Management Institute, PMI (2013:3) defined a project as a temporary group action designed to produce a distinctive service, product, or result and defined Project Management as the application of tools, understanding, skills, and systems to project undertakings to meet the project requirements. Merna & Al-Thani (2008:55) defined a project as a distinctive investment of resources to accomplish specific objectives, such as the production of goods, generation of profit or the delivery of a service. Across the world, projects and Project Management have been defined similarly, the distinguishing feature of a project is the role played by the Project Manager (Merna & Al-Thani, 2008). PMI (2013:48) stated that Project Management is universal, and that every city in the world is implementing Project Management in a project or development taking place. Over the years the need for Project Management has increased as there are escalating numbers of developments taking place worldwide.

PMI (2013) stated that the world has become interconnected; global Project Management continues to be on the rise. Global Project Management has been defined as the implementation of Project Management practices across the borders (PMI, 2013). In global Project Management, projects operate with the project stakeholders in different parts of the

world and the project operations occur in numerous geographical areas. The Virgin Group of organisations is a good example of global Project Management (PMI, 2013). According to Asare (2017) in developing countries, Project Management has been identified as a flexible and effective monitoring and evaluation approach. It is regarded as having the greatest value for developing countries. However, there still remains a need for the training of native's skill in order to achieve stronger project application (Asare, 2017). According to Leuvennink (2012), the South African government has made plans of achieving improved service delivery, sustainable development and infrastructure through perpetual Project Management. However, government-funded projects are experiencing challenges due to unstable management. Political influences are also very evident, thus there are regular changes and often a lack of top management participation (Leuvennink, 2012).

According to Merna & Al-Thani (2008) a project essentially requires a sponsor, Project Manager and project team. The Project Manager is only as good as the project team he or she leads. Thus, it is incorrect to state that the success of a project solely depends on the Project Manager. According to PMI (2008:13) a proficient Project Manager must simultaneously manage the four basic elements of a project which are; resources, time, money, and most importantly the scope of the project (PMI, 2008:13). All four elements are interrelated and must be managed cohesively for the project to be successful. However, people involved in a project remain the greatest asset that needs to be guided for the successful completion of a project (PMI, 2008:13). The project team comprises: the Project Manager, project workers, and other team members associated with the project that carry out the work but are not directly involved with managing the project (PMI, 2013). The team members are individuals with common project knowledge or with a particular skill needed for the completion of a project.

2.3. PROJECT LIFE CYCLE

PMI (2013:38) stated that a project life cycle (also known as process groups) is the process that a project has to go through from the beginning until the closing stage which is the end of the project. According to PMI (2013:39) a project has five stages. It goes through:

- ***Project initiation****:* This entails defining a project or a new phase within the project and seeking approval.

- ***Planning***: This process establishes the scope of the project, defines the objectives, and defines the course of action required to attain the objectives.

- ***Execution***: This process involves the completion of the work defined in the Project Management plan.

- ***Monitoring and Controlling***: This highlights the processes used to check, evaluate, and control the progress and performance of the project; it identifies any areas where changes to the plan are to be made and it implements changes.

- ***Closing***: This entails processes executed to complete all activities within the process groups and formally closes the project (PMI, 2013:39).

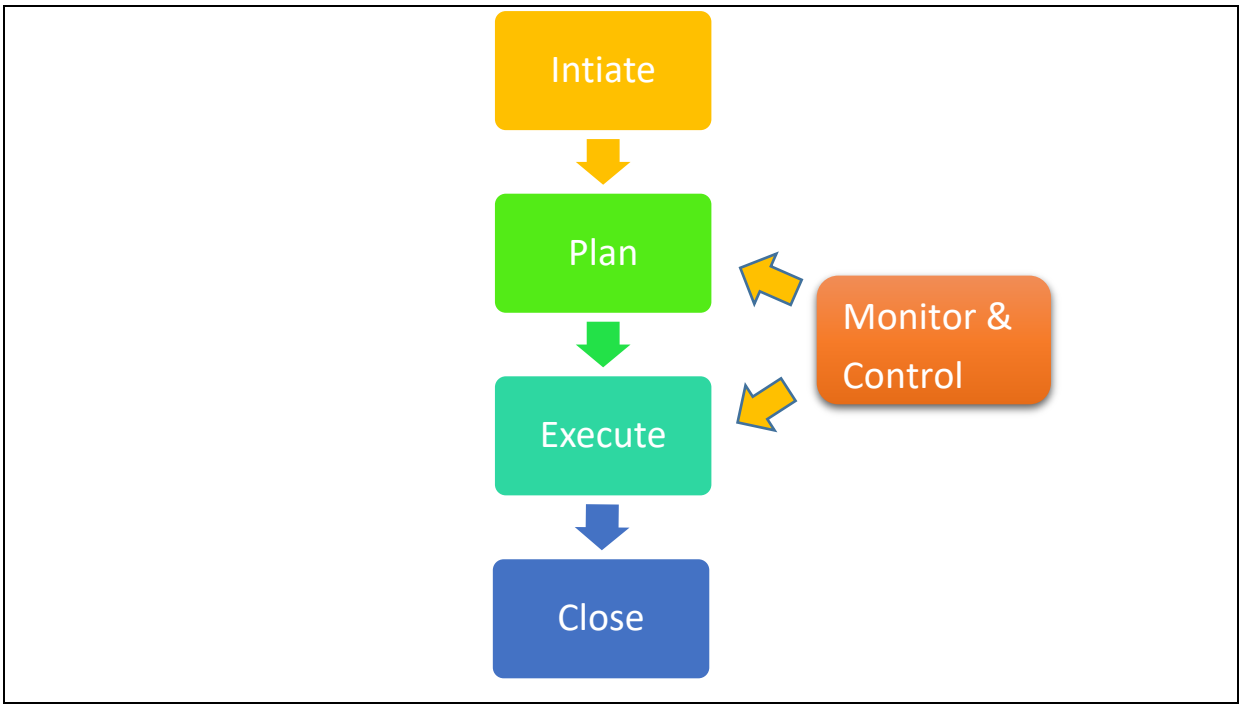


Figure 2. 1. Project Management stages

Source: Adapted from PMI (2013:39)

Figure 2.1 above illustrates the monitoring and controlling stage interacting with other stages. Project Management requires the monitoring and control stage to occur simultaneously, and operate cohesively with the planning and execution stage (PMI, 2013). Every project should go through all these five stages, the monitoring and control stage is vital, it ensures that the project is meeting its targets and maintaining quality standards (PMI, 2013).

2.3.1. Project Life Cycle and the Project Manager

Kwak, Park, Chung & Ghosh (2012:27) highlighted that the Project Manager's role should be implemented in all five project life cycle (process group) stages. The Project Manager develops the project objectives from the initial stage and provides the planned budget and project timeframe (Kwak *et al*., 2012). The project stakeholders have the authority to accept or reject the project proposal by the project sponsor. Once the approval for the proposal has been received, the Project Manager starts to plan in detail and to record all key activities on the task list that will be used as the foundation for creating a complete project plan (Kwak *et al*., 2012). Project objectives are discussed with the key team members accountable for each major activity. Essential resources are identified and agreed upon. A project plan and a task list are then created by the Project Manager (Kwak *et al*., 2012).

When work operations begin, the Project Manager manages tasks, evaluates project development and monitors the three restraints, namely, time, costs and quality (Kwak *et al*., 2012). At this stage the Project Manager obtains and delivers feedback on improvement, facilitates the procurement of resources and sorts out any challenges that may be detrimental to the progress of the project. In the final phase of the project (closing stage), the Project Manager makes sure that the project workers produce the planned deliverables indicated in the Annual Plan of Operations (APO). The APO is used to track if the project has delivered on what it had set out to do in initial planning. (Kwak *et al*., 2012). When the project is completed, the project team is then disbanded, third-party contractors are remunerated, contracts are concluded, and the project is officially shutdown (Kwak *et al*., 2012).

2.3.2. Post implementation review

This is the stage the Project Manager evaluates the outcomes against quality standards, guaranteeing that all the objectives have been achieved within predetermined timeframe and budget (Kwak *et al*., 2012). The Project Manager records and reports the outcome to top management and stakeholders, and formally does a project hand over to the relevant persons (Kwak *et al*., 2012). A project handover may be done to another Department, Municipality or Landowner (Phillips, 2004).

2.4. THE ROLE OF A PROJECT MANAGER

Robichaud and Anantatmula (2010), contend that a Project Manager is accountable for planning the project scope, milestones and delivery timelines in discussion and agreement with the project sponsor. Eweje, Muller & Turner (2012) stated that the duties of a Project

Manager are that of a principal-agent. The Project Manager is the representative of the owner (principal). According to the PMI (2013), the Project Manager is accountable for providing a particular end result, within an agreed timeframe, cost and quality standards. The authors cited above (Robichaud & Anantatmula, 2010:56) and Eweje, Muller & Turner, (2012:96) concurred that a Project Manager's role is to warrant that:

a) The project is initiated and planned efficiently;

b) A competent project team is selected and recruited;

c) Tasks are strategically planned and scheduled accordingly;

d) The project plan is executed, and challenges are resolved; and that

e) In the closing stage, the outcomes are reviewed and the project team is dissolved.

2.5. CHARACTERISTICS OF AN EFFECTIVE PROJECT MANAGER

Belbin (2013) posited that to have a successful organisation it depends on the competence of the project team. Similarly, Robbins, Judge, Millett & Boyle (2013) stated that a Project Manager must demonstrate practical, managerial and social skills. He or she should be a multi-tasker; should be able to communicate effectively; should be able to resolve conflicts, should be a good negotiator and should have a clear understanding of the political environment within the organisation. Based on Chatterjee's (2014) study, there are two important characteristics a Project Manager must have, which are to pay attention to detail and to understand and implement risk management.

Haughey (2010) indicated that in order for a Project Manager to be effective, he or she should be customer-orientated. The Project Manager should be a good coordinator and planner; he or she must be able mentor the project team, and must be able to handle risk management (Haughey, 2010). Ray (2014) noted that Project Managers who have practical skills of the project operations accomplish better results than those that do not have the practical skills. These knowledgeable Project Managers cannot be misinformed by other people who may have ulterior motives for the project, and they cannot make poor decisions due to insufficient project knowledge. A Project Manager must also obtain good organisational skills. They must

be able to plan, manage and control the operations of the project to guarantee its success (Ray, 2014).

According to Kerzner (2013:72) a Project Manager should have good financial, social, and interpersonal skills. He or she must be capable of coping with difficulties that may arise amongst the project workers. Similarly, Macaulay (2012) stated that an effective Project Manager must be a problem-solver, who is persistent, thoughtful, determined, straight-forward, imaginative, stress tolerant and a good communicator. These attributes are supported by Nixon, Harrington & Parker (2012) who agree that a good Project Manager needs to build trust within their team, show concern for others when solving problems, and demonstrate genuine compassion.

Northouse (2015) stated that Project Managers that have a good leadership style show concern for their project team. Di Vincenzo & Mascia (2012) recommend that a Project Manager should have attended basic skills training in computers, communication, and mathematics. Di Vincenzo and Mascia (2012) further added that Project Managers should at least obtain a bachelor's degree in the business or management field. A Project Manager may have all of these criteria's but what's paramount is to be principled in the knowledge obtained. In support of Di Vincenzo & Mascia (2012), Sage, Dainty & Brookes (2014) noted that it is important for a Project Manager to have a good academic background as it aids in the understanding of the project environment. Zivcakova & Wood (2015) agreed with Di Vincenzo & Mascia, (2012) in that good ethics forms trust and truthfulness, and that Project Managers must practice good ethics when performing their duties.

2.6. INFLUENCE OF TRAINING ON A PROJECT MANAGER'S PERFORMANCE

According to Cherian & Jacob (2013) many industries are practicing Project Management through projects formed. Some organisations are finding themselves in a dilemma where key people managing the projects are lacking basic skills. They are inadequately trained, therefore are incompetent in their job roles. In this instance training becomes paramount for Project Managers (Cherian & Jacob 2013). Based on Huang & Zhang's (2013) study, Project Managers perform better when they are trained, compared to those that have little training in the Project Management field. Those that have been trained have a better understanding and appreciation for their job role. Similarly, Taylor & Woelfer (2012) argued that adequately trained Project Managers execute their duties better than those that are not trained. Trained Project Managers have an advantage over untrained Project Managers. There are many

benefits an organisation gains in providing training to employees, such as, better control of resources and improved risk management. Taylor and Woelfer (2012) stated that trained employees have been rated to have higher job satisfaction rates and improved long-term career prospects.

According to Knapp (2010) the role of a Project Manager involves guiding the project from initiation stage through to the closing stage. He or she needs to stimulate the team leading and directing them towards their objectives. A trained Project Manager ensures that these duties are executed to reach the final stage. Knapp (2010) further added that one of the key requirements in successful construction organisations is to ensure that Project Managers obtain the core proficiencies that are essential to be successful in their role as Project Managers.

2.7. PROJECT MANAGEMENT STAR

Previously, the Project Management triangle was used as a tool to measure project success. However, in 2008 the Project Management triangle (budget, scope, and schedule) was no longer recognised as the source of measuring project success (PMI, 2008). Projects that were using the project triangle were still experiencing high failure rates. PMI (2008) stated that for a project to successful, Project Management should not only focus on cost, scope and schedule but should also look at other key elements that aid the success of a project. The Project Management star was later established as a way to combat the challenges that were faced by projects previously using the Project Management triangle to measure success (PMI, 2008).

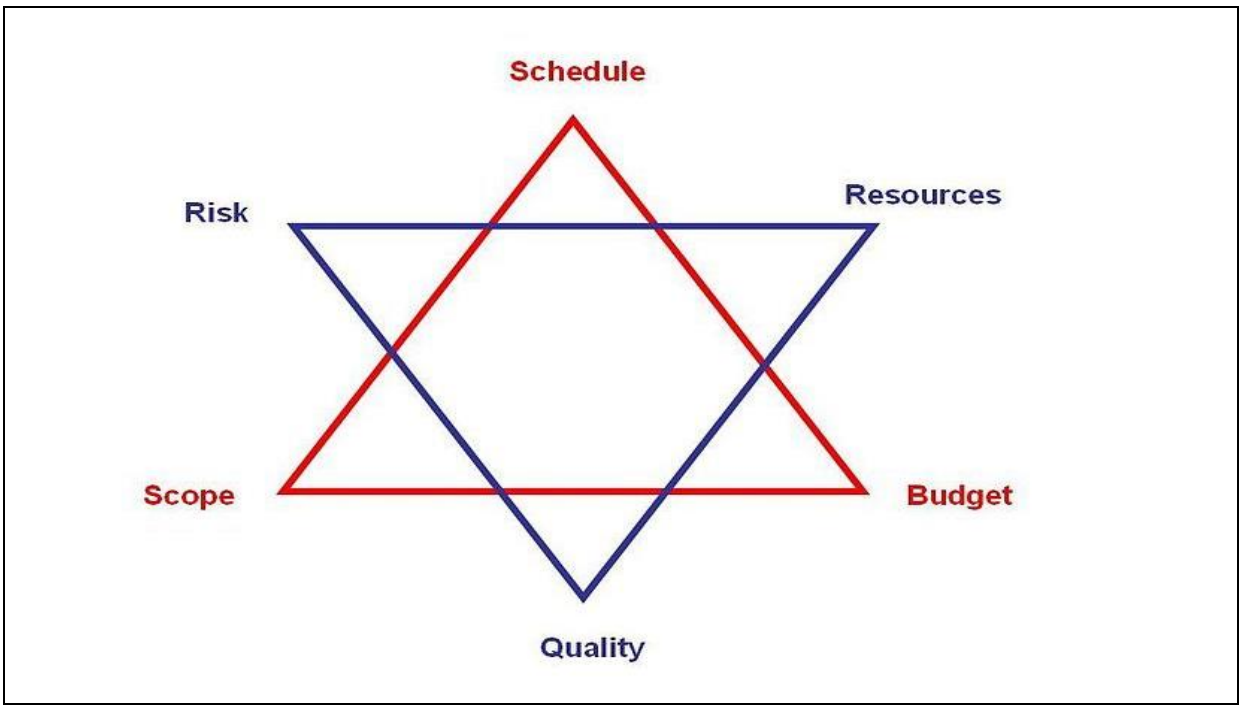


Figure 2. 2. Project Management Star

Source: Adapted Schwalbe (2015:7)

In Figure 2.2 above, the old Project Management triangle has been expanded; a new triangle has been added with three input features which are quality, risk and resources. With the addition of this triangle the Project Management star was established comprising six Project Management elements, which are: schedule, resources, budget, quality, scope, and risk (PMI, 2008). These six elements were identified as the critical elements to be managed for the survival and success of a project (PMI, 2008).

2.8. PROJECT MANAGEMENT PRACTICES: KNOWLEDGE AREA'S

The PMI (2013) indicated that knowledge areas (also known as Project Management practice) have "a comprehensive set of concepts, activities and terms that make up a professional field: the Project Management field". There are ten knowledge areas used on most projects, most of the time. These knowledge areas are: project integration management; project scope management; project time management; project quality management; project human resource management; project communications management; project risk management; project procurement management and project stakeholder management (PMI, 2013).

2.8.1. Project integration management

According to the PMI (2013) project integration management includes making choices about resource provision and handling the interdependencies among the Project Management knowledge areas". Below is an overview of six key features in project integration management:

- Developing a project charter - which is a document that gives authority for the implementation of the project;

- Developing a Project Management plan - by preparing, defining and coordinating all secondary plans and incorporating them into a comprehensive Project Management plan;

- Directing and managing the project - the process of executing and checking the work documented in the Project Management plan and applying approved changes to accomplish the project objectives;

- Monitoring and controlling the project work - by reviewing, tracking and reporting project progress against planned performance objectives;

- Perform integrated change control - by revising and approving all change appeals, as well as managing changes to deliverables and communicating their disposition; and

- Close project - the process of concluding all activities across the project life cycle to formally shutdown the project (PMI, 2013).

2.8.2. Project scope management

PMI (2008) defined project scope management as a process of ensuring that all the work required to complete the project successfully is executed. Below is a summary of the Project Management scope which includes the following five aspects:

- Plan scope management- defining, validating and controlling the project scope plan including what should and shouldn't be done in the project;

- Collect requirements- the process of defining, managing and recording stakeholder needs and requirements to meet the project goals;

- Define the scope- developing an in-depth description of the project;

- Create a Work Breakdown Structure (WBS) - by segmenting project deliverables and project operations into smaller and manageable units;

- Validate the scope- by formalizing acceptance of the completed deliverables; and

- Control the scope- by regularly monitoring the status of the project (PMI, 2008).

2.8.3. Project time management

Team (2014) asserted that project time management is a process that ensures timely completion of the project. Below is an overview of the project time management processes:

- Plan schedule management - by establishing the policies and documentation for preparing, developing, implementing, managing and controlling the project schedule;

- Define activities - by identifying the nature of tasks to be done;

- Sequence activities - by recognizing and documenting relationships among the project activities;

- Estimate activity resources - by estimating the type and amounts of materials, tools, human resource and other supplies required for the execution of each activity;

- Estimate activity durations - by estimating the timeframe schedule to complete activities with projected resources;

- Develop schedule - by examining activity sequences, timeframe, resource necessities, and schedule limitations to create the project schedule model; and

- Control schedule - by monitoring, updating project progress and managing changes to the project schedule to achieve the objectives (Team, 2014).

2.8.4. Project cost management

Team (2014) established that project cost management is the process of planning, estimating, budgeting, and managing project costs so that the project can complete its operations within the planned budget. Below is a summary of the following project cost management processes:

- Plan cost management - by establishing the policies, procedures, and documentation for controlling project costs;

- Estimate costs - by developing an estimation of the financial resources necessary to complete project activities;

- Determine budget - by combining the estimated costs of each activity to form an authorized cost baseline; and

- Control costs - by observing the status of the project, updating project costs and managing changes to the cost baseline (Team, 2014).

2.8.5. Project quality management

According to Newton (2015) project quality management includes quality policies, objectives, and responsibilities for the project to meet its objectives. It supports continuous process improvement activities and ensures that the project requirements are met and validated. Below is a summary of the project quality management processes that include:

- Plan quality management- by identifying quality standards for the project and its deliverables and recording how project compliance will be demonstrated;

- Perform quality assurance- by auditing project quality requirements to ensure that appropriate quality standards are maintained; and

- Control quality- by documenting and monitoring results of executed quality activities to measure performance and recommend required changes (Newton, 2015).

2.8.6. Project human resource management

Schwalbe (2015) stated that project human resource management includes the processes of developing and managing a project team. Below is an overview of the project human resource management processes that are as follows:

- Plan human resource management - by identifying project roles, responsibilities, essential skills, and reporting relationships;

- Acquire project team - by confirming human resource availability and getting the team together to complete project activities;

- Develop project team - by improving team member interaction, and occupational environment to enhance project performance; and

- Manage project team - by tracking team performance, giving feedback, resolving disputes, and handling changes to enhance project performance (Schwalbe, 2015).

2.8.7. Project communications management

Schwalbe (2015) noted that project communications management is the process followed to ensure that effective communication creates a bridge between diverse stakeholders who have different levels of expertise, different perspectives and interests. As Schwalbe (2015) emphasised, a number of professionals agree that the principle threat to project success is failure to communicate. Unceasing communication must flow without any barriers for improved implementation. Below is a summary of the project communications management processes, that are as follows:

- Plan communications management - by developing an appropriate method and plan for project communications based on stakeholder needs, requirements and available organisational resources;
- Manage communications - by creating, collecting, and storing project information in accordance with the communications management plan; and

- Control communications - by monitoring and controlling communications throughout the project life cycle (Schwalbe, 2015).

2.8.8. Project risk management

According to Newton (2015) project risk management is the process of identifying, analysing, response planning, and monitoring risk associated with a project. The aims of project risk management are to decrease the likelihood and influence of negative events in the project as well as to increase the likelihood and influence of positive events. Summarized below are the project risk management processes:

- Plan risk management- by defining how to plan risk management activities for a project;
- Identify risks- by determining which risks are likely to affect the project negatively and documenting them;
- Perform qualitative risk analysis- by prioritizing risks for further analysis;
- Perform quantitative risk analysis - by numerically evaluating the effect of identified risks on the project objectives;
- Plan risk responses- by developing actions to reduce threats to project objectives; and
- Control risks- by implementing risk response plans, controlling remaining risks, identifying new risks, and evaluating risk management throughout the project (Newton, 2015).

2.8.9. Project procurement management

The PMI (2013) defined project procurement management as the process needed to buy or secure products and services needed for the project operations. Below is a summary of the project procurement management processes:

- Plan procurement management - by recording project procurement resolutions, specifying the method to be used, and finding potential suppliers;
- Conduct procurements - by obtaining suppliers response, selecting a supplier, and awarding the contract;

- Control procurements - by managing and monitoring contract production and performance, making necessary changes and rectifications; and

- Close procurements - by concluding each project procurement interaction (PMI, 2013).

2.8.10. Project stakeholder management

Bourne and Walker (2008) indicated that project stakeholder management is a process required to identify groups, people, or organisations that are impacted by or could impact the implementation of the project. Below is a summary of the Project Stakeholder Management processes:

- Identify stakeholders - by identifying the people, groups, or organisations that could impact or be impacted by a decision, activity, or outcome of the project; and analysing and documenting relevant information regarding their interests, involvement, interdependencies, influence, and potential impact on project success;

- Plan stakeholder management - by developing suitable management strategies to involve stakeholders successfully throughout the project life cycle, based on their interests, needs, and probable influence on the project's success or otherwise;

- Manage stakeholder engagement - by communicating and operating with stakeholders to meet their expectations, resolve concerns as they happen, and foster stakeholder satisfaction throughout the project life cycle; and

- Control stakeholder engagement - by monitoring overall project stakeholder relationships and strategies for engaging them (Bourne and Walker 2008).

According to CGAIR (2017) it is of paramount importance for the activities within the knowledge areas to take place during the correct stages of the Project Management process groups for project success to be achieved. Table 2.1 below depicts the relationship matrix between each of the knowledge areas and the process groups.

Table 2. 1. Relationship Matrix

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Time Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Resources 6.5 Estimate Activity Durations 6.6 Develop Schedule		6.7 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1 Plan Quality Management	8.2 Perform Quality Assurance	8.3 Control Quality	
9. Project Human Resource Management		9.1 Plan Human Resource Management	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Control Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses		11.6 Control Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	12.4 Close Procurements
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Management	13.3 Manage Stakeholder Engagement	13.4 Control Stakeholder Engagement	

Source: CGAIR (2017:9)

2.9. THE DEVELOPMENT OF PROJECT MANAGEMENT

Morris & Pinto (2010) traced back the origin of Project Management to the chemical industry preceding World War Two. However, Shafritz, Ott & Jang (2015) speculated that Project Management was originally formed from Henri Fayol's identification of the five functions of a manager in 1949, which were, organising, directing, planning, coordinating, and controlling.

Darling & Whitty (2016) indicated that Project Management techniques have multiplied in the past decade, technology and engineering spheres have developed immensely. Project Management has also been adopted in services as diverse as health, arts, education, and social services. There are three project structures which are used for project planning and controlling, these structures are the foundation of Project Management. These three spheres are known to have developed the Project Management industry; they are the Gantt chart, network diagram and the critical path method (Darling & Whitty, 2016).

2.9.1. The Gantt chart

According to Sharp, Enzi, Fountoulakis, Lam, & Rabbior (2012) a Gantt chart is an example of a project structure that can be used to describe a project. "A Gantt chart is a graphical illustration that depicts the time dependency of several tasks of a project within a project schedule" (Sharp *et al*., 2012). A Gantt chart helps to plan, organise, and to track specific tasks in a project. A Gantt chart presents a bar chart that demonstrates a project schedule (Sharp *et al*., 2012).

Gantt charts demonstrate the start and finish dates of the project elements and summary of a project. The chart has an "X" and "Y" axis, it begins in an upper left "X" and "Y" where each project element takes up space by a horizontal bar rule (Sharp *et al*., 2012). Although a Gantt chart is better understood for small projects that fit on a single sheet or screen, they can become complicated and unsuitable for projects with more than thirty activities (Sharp *et al*., 2012).

2.9.2. Network diagram

Slack, Chambers, and Johnston (2010) stated that the shortfall of the Gantt chart as a planning and monitoring technique in multifaceted projects led to the evolution of the Programme Evaluation and Review Technique (PERT). The PERT originated in the planning and monitoring of major defence projects in the US Navy (Slack *et al*., 2010). The PERT

method acknowledges that activity durations and costs in Project Management are not fixed and that probability theory can be applied to estimations. In the PERT network "the duration of each activity is estimated on a most likely, expectant, and a pessimistic basis. This method of network planning uses probabilistic time estimations: (Slack *et al*., 2010).

2.9.3. The critical path method

As the complexity of projects increases, it becomes essential to identify the relations between activities (Slack *et al*., 2010). "The critical path method models the project by clarifying the associations between activities in the form of a diagram. In all network diagrams where the activities have similar relations, there will be several activities which will lead from the start to the end of the entire project. These sequences of activities are called paths: (Slack *et al*., 2010). Each path will have a total duration which is the sum of the whole project. A critical path has the longest sequence of activities of the network. It is called the critical path because any interruption in any of the activities along the sequence will delay the whole project (Slack *et al*., 2010). All three projects structures have their strengths and weaknesses; they are known to be the structures that developed Project Management. Some smaller organisations are still implementing these project structures in the operations of their projects and are successfully doing so.

2.10. FACTORS AFFECTING THE IMPLEMENTATION OF PROJECT MANAGEMENT PRACTICES

According to the PMI (2008) worldwide there are ten critical factors that affect the implementation of Project Management practices:

- The underestimation of cost and/or schedule;
- Failure to establish appropriate control over requirements and/or scope;
- Lack of communications;
- Failure to engage stakeholders;
- Failure to address culture change issues;
- Lack of oversight;

- Poor quality workmanship;
- Lack of risk management;
- Failure to understand or address system performance requirements; and
- Poorly planned or managed transitions (PMI, 2008).

According to the PMI (2008) those involved in the project monitoring often fail to take a proactive approach in solving uncertainties. As a result, project delays and financial overruns are frequently faced due to ignorance of potential risk (PMI, 2008). In a study conducted by Rwelamila & Purushottam (2012) it was highlighted that in Africa there are few projects with good project monitoring and feedback structures. Most of these projects experience late provision of complete control of information at each project life cycle phase of the project. Rwelamila & Purushottam (2012) added that most projects in Africa have a challenge with poor communication systems and have poor recruitment and selection systems for the core project workers. High political influences within organisations are also a common challenge which exerts a negative impact on the projects and leads to corrupted Project Management practices in most developing countries (Rwelamila & Purushottam, 2012).

Similarly, Lester (2014) stated that the lack of proper financial planning and lack of clearly defined targets, objectives and responsibilities can be considered as major Project Management challenges in South African projects. Lester (2014) stated that another problem that affects Project Management in South Africa severely is the project team's lack of motivation and interest towards the project activities and tasks. Lester (2014) asserted that project team members should be skilful and well trained to overcome technical challenges and must be able to perform duties and tasks assigned in a project. Their training should be optimal and should be conducted just before the project implementation starts (Lester, 2014). According to Unit (2004) training is the pillar of the EPWP. The sustainability of the programme can be obstructed by the failure to meet the training obligations. Samson (2015) highlighted that even when training is ideally suitable, it is considered relevant if learners who are deemed competent are essentially empowered to do their work better than they did before the training. Numerous factors have affected the implementation of Project Management practices across the globe which has led to projects failing and shutting down operations prematurely (Samson, 2015).

2.11. UNSUCCESSFUL PROJECTS

There have been a number of projects around the world that have failed due to inadequate Project Management. In Singapore, access to sufficient public housing for all has been an escalating challenge (Hwang, Zhao, & Ng, 2013). To meet the housing demand, the Singapore government decided to decrease the waiting time of future owners of the public houses, which meant that the completion would have to be on time, and thus posing more schedule pressures on parties involved in the project construction of public housing (Hwang *et al*., 2013). The inability to deliver within set timeframes and delays resulted in the inability of achieving the schedule aims of the project, creating late completion, cost overruns, client disappointment, and other consequent problems (Hwang *et al*., 2013).

Long, Lee, & Lee (2008) noted that inadequate site management relating to material distribution, lack of determination of project employees, poor project site monitoring, and lack of communication between stakeholders were the key causes of construction delays in Vietnam construction projects. Mahamid, Bruland, & Dmaidi (2011) identified five factors that contributed to West Bank (Palestine) road construction failure in 2011. In their survey a total of fifty-two Project Management related delays were identified during their study. The results of the survey concluded that the top five severe delay causes were political influences, awarding projects to lowest bid price, payment delay by owner, and the shortage of tools and equipment (Mahamid *et al*., 2011). According to Ting, Khoo, & Wong (2009) the Malaysian construction industry impacts significantly on the country's economy. Yet it has been afflicted with negative publicity of cost overruns, uncontrolled and impractical schedules, poor workmanship, accidents, disengagement among project team members, abandoned and incomplete projects, all these outcomes have impacted negatively on the implementation of Project Management practices (Ting *et al*., 2009).

Hedeman (2006) highlighted some of the reasons given for project failure. He identified some of the project failures emanating from a lack of a Business Case (lack of project feasibility study). Secondly, the lack of support from the top management and executives of the organisation that significantly impacted negatively on projects. Not having a clear aim or objective has also been identified as a factor leading to project failure (Hedeman, 2006). Hedeman (2006) further stated that the lack of quality control within project operations has been found to be detrimental to the project; regular quality audits are vital. The lack of change controls can cause project failures, change should be anticipated and the appropriate control measures should be taken. Lastly, the lack of involvement of the end user from the

initiation stage of the project can lead to the deliverables not being accepted at the closing stage of the project (Hedeman, 2006).

2.12. SUCCESSFUL PROJECTS

According to Mi Pinnington (2014) the success of a project was assessed in relation to accomplishing the project's objectives and planned outcomes in compliance with predetermined timeframes, performance and cost (Mir and Pinnington, 2014). As the understanding and knowledge of Project Management developed, the "Project Management triangle" was no longer valid to define project success. Project success was recognised to be a complex, multi-dimensional concept involving numerous attributes (Mir & Pinnington, 2014). In Davis (2014) study nine themes describing success factors of projects were adopted; communication and cooperation, time management, identifying objectives, stakeholder satisfaction, use of final product, cost and budget aspects, competencies of the Project Manager, premeditated benefits of the project and top management support.

Ling, Low, Wang, & Lim (2009) acknowledged the importance of project scheduling as an essential indicator of project success. Palmer (2016) stressed that comprehensive planning creates a successful project from the initial stage. All stakeholders should participate during the planning stage and should be aware of which direction the project is taking (Palmer, 2016). Planning assists the team to meet deadlines, remain organised, keep the project team focused and on track, and keeps stakeholders alert on project progress. Palmer (2016) stated that during the planning (initial phase), it is vital to create a risk log with an action plan for the risks that the project could incur. He further added that stakeholders should be aware of the projects risk log and be able to access it. If an incident occurs, the team can quickly resolve the issue with the management plan that has already been established (Palmer, 2016). The risk log gives the project team confidence when confronted with risks and assists the stakeholders feel comfortable with the project's progression.

Palmer (2016) also stressed the importance of allocating the right people to each aspect of the project and of making sure there is a good working relationship amongst the employees. Additionally, the project team should be completely knowledgeable and involved with planned project activities in order to have the most successful outcome, making communication the critical aspect in Project Management (Palmer, 2016). Keeping open communication within the team is absolutely essential. It is also important that the project team remains well-informed of their roles and responsibilities so that deliverables are

achieved (Palmer, 2016). Based on the study by Hwang *et al*., (2013), an organisation can capitalise on its probability of constantly achieving project success by employing, training, and cultivating superior Project Managers.

2.13. STRATEGIES APPLIED FOR MITIGATING CHALLENGES AFFECTING PROJECT MANAGEMENT

According to Solutions (2011) a Project Manager was identified as being the key person to address proactively the root causes that result in projects being unsuccessful. Constant training of the Project Manager was recognized as a mitigation strategy to reduce Project Management challenges (Solutions, 2011). Solutions (2011) further stated that globally there are six main mitigation strategies used to recover troubled projects:

1. Improving communication amongst the project team and implementing stakeholder management. This is done by getting stakeholders to adapt to change needed to recover the project, these changes may be budget, scope or resources. In the absence of managing change, a number of challenges erupt which can be detrimental to the project;

2. Re-planning, redefining, re-modifying and reducing the scope;

3. Ensure that there are adequate resources to execute tasks;

4. Quick response to technical issues;

5. Replace incompetent Project Manager or bring in a specialist who will be able to manage recovery, for example, an implementing agent; and

- Companies are to adopt a standard Project Management methodology which they can use as a guideline in managing projects (Solutions, 2011).

Similarly (BIA, 2011) stated that a strategy that can be applied for mitigating challenges affecting Project Management is to revise the project plan using a S.M.A.R.T approach:

S- Be <u>specific</u> in planning.
M-Your project must be <u>measurable</u>; you should be able to quantify progress.

A- Project goals should be attainable, taking into consideration available resources.
R- Project must be relevant; there should be a need for it.
T- Project must be time-bound, without delays, and on schedule with operations (BIA, 2011).

According to Mthembu (2009) in South Africa most companies have adopted team building sessions which allows the project members to spend time together, bond, and form strong work relations. This is a good strategy to reduce conflict within the work environment as it tends to impact positively on Project Management (Mthembu, 2009).

2.14. ROLE OF THE EPWP

In the Post-apartheid era, the EPWP was established as an agent to attempt to decrease poverty in South Africa (Lieuw-Kie-Song, 2009). Various South African departments such as the Department of Water and Sanitation, Department of Agriculture and Rural Development, Department of Public Works, amongst others formulated projects to contribute to social justice under the banner of the EPWP initiative (See Appendix C).

Department of Public Works (2005) stated that the immediate goal of the EPWP is to alleviate unemployment for a minimum of one million people by 2009; they further stated that this goal would be achieved by creating work opportunities using the following four methods:

1. Introducing more labour intensive infrastructure projects funded by government;

2. Provide employment in public Environmental Programmes such as Working for Water;

3. Provide employment in public social programmes such as Community Care Workers; and

4. Providing work experience component of small enterprise learnerships by using government funds on goods and services (Department of Public Works, 2005).

According to King-Dejardin and Santos (2009) the EPWP is an effort by the South African government to use funds on goods and services to generate job prospects for the unemployed. This opportunity is accompanied with training for the purpose of skills development. The

ultimate goal of the EPWP is to decrease unemployment by creating temporary job opportunities either by government, non-government organisations or contractors. Due to the programme being temporary, the public sector body came up with exit strategies for the beneficiaries when they leave the programme. This was done to close the gap between the second economy and the first economy. Figure 2.3 is an overview of the exit strategies created for the project workers.

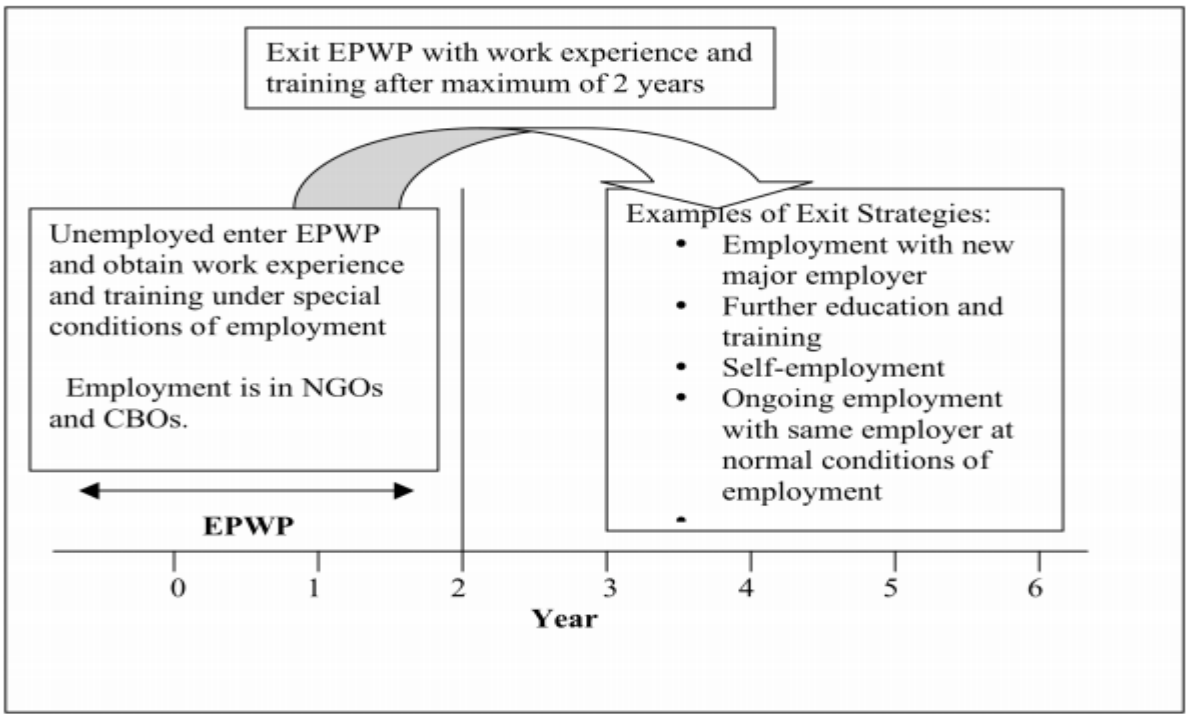


Figure 2. 3. Role of EPWP in addressing unemployment

King-Dejardin and Santos (2009:102)

According to Department of Public Works (2014), the EPWP was formed to close the immense poverty gap in South Africa. However, the programme was under pressure as too many expectations were created when it was formed. A number of challenges were recorded and have been listed below:

- Labour intensive methods were perceived as outdated, slow and poor in quality;

- Lack of compliance in terms of reporting work done as well as supply chain requirements were a major challenge;

- There were indications of the projects being taken for patronage. Accusations surfaced that in certain communities the EPWP selection of project workers was misused by politicians for patronage gain. Due to this, key developmental outcomes were undermined; and

- Expectations grew of the EPWP eventually providing permanent employment to the workers. These expectations had to be expelled and it had to be communicated to the project workers that their employment was only short-term (Department of Public Works, 2014).

More challenges were identified by several other authors. Mthembu (2009) noted that over two successive financial years, there had been no budget allocated for the EPWP social sector programme. Therefore there were no funds available to get the most out of resources and to increase capacity. According to Hemson (2007) a healthy project budget is essential. The EPWP sectors have a lack of committed funds. Since there is no sole sponsor for the EPWP, project budgets have to be collected and allocated from departmental or municipal budgets. Hemson (2007) indicated that the project budget should be buffered and protected from poaching for other purposes. It is believed that municipalities and departments implementing the EPWP are using EPWP funds for other projects leaving inadequate funds for operations. The issue of project budget continues to be a challenge across all the EPWP sectors.

Mthembu (2009) also noted that there was poor communication amongst the government departments facilitating the EPWP projects. Kobokana (2007) suggested that lack of shared knowledge posed as an EPWP challenge. Some project workers worked for a long period of time without knowing what the project was actually about. According to Kobokana (2007) employees working within projects need to be qualified in Project Management. They should know clearly the objectives of the EPWP in order for effective implementation and operation of the EPWP projects. The more critical positions in the project team needed more training and not only on-the-job training (Kobokana, 2007). According to Glowasz (2014) experience is vital as it provides you with soft skills necessary such as networking, assertiveness, and leadership, organisation politics and communication skills. These skills are more relevant than theorise taught in class (Glowasz, 2014). According to Varad (2018) in today's society education is important. A person with the smallest amount of knowledge puts themselves in a position where they can handle situations better than someone without knowledge (Varad, 2018).

Critics such as Samson (2007) and McCord (2004) argued that the skills training provided for the EPWP projects was inadequate and unlikely to bring operational changes. McCord (2004) argued that EPWP provides employment, income, and training, however, the training does not differentiate the EPWP project workers from other workers in the labour market who have not been trained. Samson (2007) uncovered numerous ways in which EPWP employment spreads in the challenge of immense casualisation of labour whereby needy people are required to settle for poor quality jobs. An example of this was the Zivuseni Project which was founded by the Gauteng Provincial Government in 2002. It operated as a Special Public Works Programme, in an interview conducted by Samson, (2007:254) a project worker stated we accepted this job because we don't have anything. The statement made by this project worker referred to the inequality of wages in comparison to the municipal pick-it-up workers who were doing the exact same work (Samson, 2007).

Samson (2007) noted that one of the EPWPs objectives and aims was for government departments to provide employment opportunities with resources that they already have. However, findings suggested that in operations more resources were needed for the coordination and management of this programme. Based on Ngcobo's (2013) study, it was emphasised that there are several constraints within government involving lack of capacity. These constraints include a lack of human capital, lack of resources, and the government system itself poses as a challenge. Government's inability to provide the necessary resources on time to execute work efficiently is a worldwide phenomenon (Ngcobo, 2013). There is no sense of urgency, this is demonstrated by the fact that government developed several policies that took several years to be applied effectively (Ngcobo, 2013). In Hemson's (2007) study, the challenge of underreporting by the EPWP Projects Managers was identified. The challenge starts to develop as many Project Managers neglect to maintain a solid schedule of their projects and reporting tends to be done by the National Department and not by the provincial Project Managers (Hemson, 2007).

In Samson's (2007) study, he further identified that there was a low prioritisation of the EPWP by the Senior Managers (who are the ones that assign the resources). Samson (2007) recommended that Senior Managers engage and involve themselves more with the EPWP for the programme to be more functional. Another challenge that was identified by Samson (2015) and mentioned earlier in 1.3 above, was late stipend payments. In Kwazulu-Natal, Gauteng, and North West EPWP projects it was reported by the participants that they could

wait for three months or longer to receive their payments. Late payments were a common occurrence in this programme and there was continuous low prioritization especially in payments, and this highly frustrated the project workers (Samson, 2015). The PSC's (2007:107) audit report on government poverty reduction programmes stated that "project management methodologies are often not applied and outcomes are not monitored or evaluated". This report further stated that there was no evidence of effective monitoring systems to effectively assess and evaluate the impact of these programmes (PSC, 2007).

In interviews conducted by Samson (2015:33) it was stated that the excuses used were "we are waiting for signatures" or "we are having internal issues". There was no evidence of efficient monitoring of payments, national coordinators for the programme were unaware of the magnitude of these challenges, therefore were unable to respond timeously to the payments delays (Samson, 2015). Training was also noted as a challenge, participants were not receiving relevant training. The participants stated that "relevant training was insufficient, more relevant training was necessary" (Samson, 2015:34). There are several recommendations Samson (2015) made in his study as a means to resolve encountered the EPWP challenges, below are the recommendations:

- Promote strategic management commitment with EPWP;
- Develop EPWP monitoring and evaluation systems;
- Provide sufficient resources for the implementation and operations of the EPWP;
- Ensure that training and skills development is of high priority;
- Reassess and develop the EPWP employment process; and
- Ensure that key implementation inadequacies are addressed (Samson (2015).

Over the years the EPWP has provided numerous benefits for local rural communities. However its weaknesses are centred on poor Project Management practices (Phillips, 2004).

2.15. MONITORING AND EVALUATION IN A SOUTH AFRICAN CONTEXT

All government organisations are required to organise, perform, monitor and evaluate the programmes and projects implemented. A project cannot function without being evaluated against what was initially planned (PSC, 2007). The *Public Finance Management Act (PFMA) (Act 1 of 1999)* mandates that all government departments adhere to norms by planning, developing then submitting their strategic plans. Financial and non-financial resources need to be allocated, and the outcomes need to be monitored closely (PSC, 2007).

In 2004, the South African government announced the *Government-wide Monitoring and Evaluation System Policy Framework (GWMESPF)* to improve performance by encompassing a framework for Monitoring and Evaluation (M&E) of Government programmes. That were then required to be monitored and evaluated according to the PFMA, Treasury Regulations (to monitor finances) as well as the GWMESPF. The GWMESPF was initiated due to some departments failing to meet performance goals and objectives stated in the PFMA (PSC, 2007). In 2007, the GWMESPF stated that all governmental departments, municipalities and stakeholders were required to have implemented an M&E system in their organisations (PSC, 2007). However, audit findings reported from Auditor-General and the Public Service Commission discovered that there was lack of information pertaining to the performance of these these organisations (PSC, 2007).

2.15.1. Monitoring and Evaluation in the EPWP

There is an EPWP policy that governs the application of the EPWP operations, it is imperative for this policy to be adhered to (Unit, 2004). The EPWP policy is detailed in Appendix A. The M&E guideline is a vital element in implementing the EPWP. M&E guides and reviews project development; it identifies the problems projects are faced with; and highlights challenges that need to be resolved. If this framework were used appropriately, it could enhance the quality of service in the EPWP (Unit, 2004). M&E of the EPWP has been recognised as an extremely significant component in the implementation of the programme. Information derived from monitoring and evaluation provides management with particulars they need to identify challenges, assess progress, make changes and detect problem areas to be addressed (Unit, 2004).

The M&E framework consists of numerous reporting systems; it requires regular reporting from the contractor and Project Manager (Unit, 2004). These reports are to be submitted daily, weekly, monthly, quarterly and annually, depending on the nature of the report. Reporting is a crucial tool that can be used to ensure that projects are compliant and

progressing. Without these reports these projects cannot be properly managed (IASP, 2011). According to Unit (2004) the EPWP has many reporting tools which measure certain aspects of the project. An example of a reporting tool is a monthly key performance indicator (KPI) report, it guides the project financially, controlling planned and actual budget expenditure (IASP, 2011). A narrative report accompanies the KPI report which gives an update of the project progress including all the activities done by the Project Manager that month (IASP, 2011).

Project Managers are responsible for collecting and filing project information to ensure the validity of the project and for audit purposes. Projects are externally audited annually to check if they are complying. Based on the EPWP, 2011 ruling, the following information is to be collected by the Project Manager:

- Beneficiary list of all the project workers information, such as name/surname, identity number, age, gender, disability status, and training attended;

- Site information of the people at work daily, records of absenteeism are to be noted by the contractor and are to be reflected on the time sheet;

- Payment schedule of people who worked and got paid. The payment register should be signed by the project workers in acceptance of their payments. Project workers paid by electronic transfers should also sign as acknowledgement of receiving payment;

- Employment information should reflect job opportunities and person days created per quarter; and
- Financial information indicating planned and actual figures, budget spent, committed funds, and funds to declare at the end of the financial year (EPWP, 2011).

In a study done by Samson (2015) it was discovered that the EPWP monitoring and evaluation structures do not display a complete overview of development and performance outcomes within the EPWP. The EPWP programme implementers and coordinators were not complying; they were not conducting the monitoring procedures (Samson, 2015). However, as remarked earlier, this did not come as a surprise given the low quality monitoring methods reported by auditors (Samson, 2015).

2.16. THEORETICAL FRAMEWORK

According to Grant & Osanloo (2014) in every study, the theoretical framework is the 'blueprint' for the whole thesis investigation. It is the guide which shapes and builds a study. It provides the foundation on how the researcher will epistemologically, methodologically, philosophically and logically approach the dissertation holistically (Grant & Osanloo, 2014). Lovitts (2005) stated that research should be logically interpreted, and should align with the research questions.

There are several common Project Management theoretical frameworks which can be used as frameworks in initiating and maintaining projects (CGAIR, 2017). Some of the commonly used Project Management methodologies are the Waterfall Model, Critical Chain Project Management, Agile, Contract Management and PRINCE2 (CGAIR, 2017). This study has adopted the Project In Controlled Environments (PRINCE2) theoretical framework to assist in developing the hypotheses and in serving as a guide to identify logical relationships among variables.

2.16.1. Waterfall Model Framework

According to CGAIR (2017) the Waterfall model sequences all the tasks leading to the ultimate deliverable, all tasks are worked in order, one after the other. This methodology is ideal for projects that make physical objects such as computers, cars, buildings, and where the project plans can be replicated for future production (CGAIR, 2017). According to Bassil (2012) the Waterfall model contains five phases, namely; analysis, design, implementation, testing, and maintenance:

- Analysis Phase: In this phase comprehensive description of the software being developed, looking at elements such as purpose, perspective, scope, software attributes, functions, user characteristics, and database requirements;

- Design Phase: In this phase all the planning and problem solving for software solution gets done;

- Implementation Phase: It is the process of converting business requirements, blueprints and design into production environment, text files and databases are formed;

- Testing Phase: It is commonly known as validation and verification, which is a process for validating if the software solution meets and the pre-planned requirements and conditions, the question to be asked is if the intended purpose has been accomplished; and

- Maintenance Phase: It is the process of adjusting and amending a software solution to improve output, performance and quality, and to correct errors (Bassil, 2012).

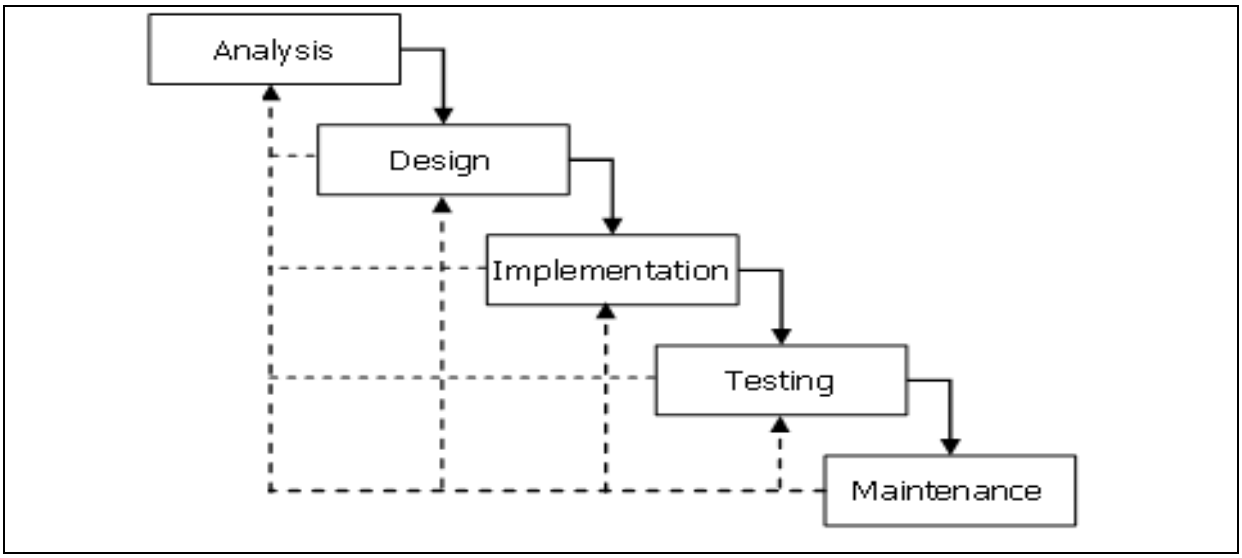


Figure 2. 4. Waterfall Model Framework

Source: Bassil (2012:2)

Figure 2.4 above illustrates the five stages of the Waterfall Model. The disadvantage of using this methodology is that if the significance and aim of the project changes, the sequence will be interrupted, creating a challenge in the maintaining of the model (CGAIR, 2017).

2.16.2. Agile Project Management Framework

According to Dyba, Dingsayr, & Moe, (2014) Agile is a software development used for planning, developing and managing software projects. The purpose of Agile Project Management (APM) is to review lessons learned and to improve from there. Hass (2007) stated that in Agile Project Management the project team continuously assesses the developing invention (product) and attains instant feedback from users or sponsors. The project team studies and develops the invention (product); they also improve work methods per consecutive cycle (Hass, 2007). After streamlined planning has been completed, detailed

planning, design, requirements, and tests are undertaken; these take place in cycles (Hass, 2007). The APM method allows for immediate adjustments and amendments to the invention (or product) as it is continually being observed. For APM to be successful the project team needs to be fully dedicated and should have a customer which represents the end user, all project members should be centrally located (Hass, 2007). Figure 2.5 below presents the cycle in Agile Project Management.

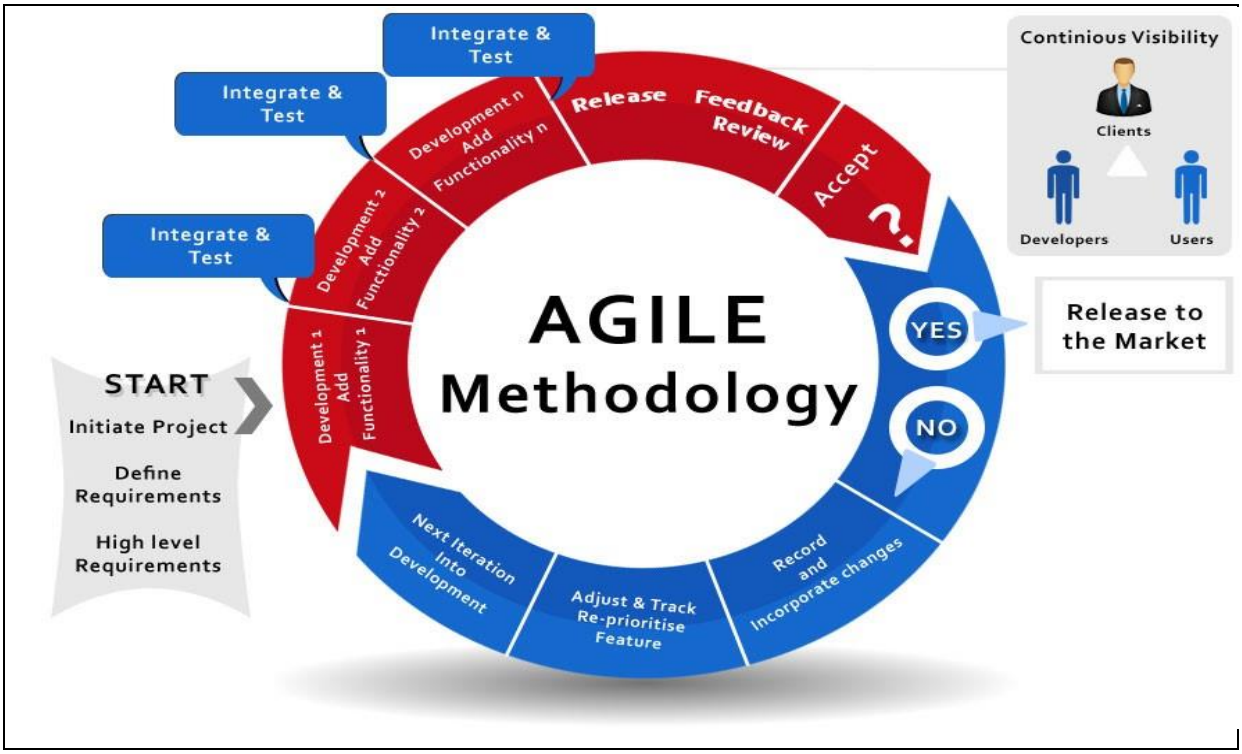


Figure 2. 5. Agile Project Management Framework

Source: Kuchroo (2016:1)

According to Dyba *et al.*, (2014) the features to be applied per development cycle are cooperatively decided upon by the project team and the customer. APM is currently being used by small centrally located projects that do not encompass any risk management systems. Dove, (2014) noted that the APM method is not as effective in larger global projects as they require thorough risk management. Marić (2017) noted that Agile and Waterfall methodologies have continuously been compared in accomplishing successful projects, it has been proven that Agile projects are most preferred as they are three times more successful in project delivery than Waterfall projects.

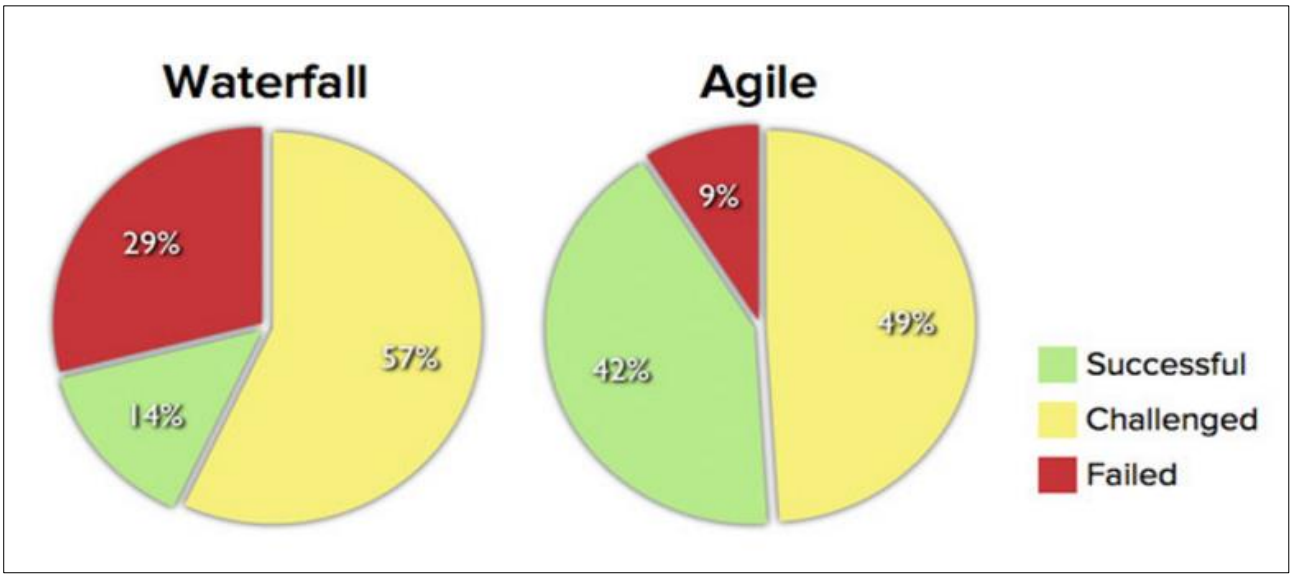


Figure 2. 6. Waterfall v. Agile

Source: Marić (2017:5)

Figure 2.6 displays the results reported from a study, showing Agile as the more successful methodology, this study was based on projects implemented from 2002 – 2012 (Marić, 2017). A successful project was regarded as being one that is on time, within budget, and with planned outcomes. Although Agile was recorded as being more successful that Waterfall it is not applicable to every project and is not necessarily a problem solver for delivery challenges (Marić, 2017).

2.16.3. Critical Chain Project Management Framework

Critical Chain Project Management (CCPM) is also a Project Management methodology. According to Naor *et al*., (2013) CCPM targets to complete projects in the least time possible and perform additional projects without the need for added resources. The Critical Chain is the set of tasks that has the longest path to project completion, it provides projected conclusion date of the entire project, originally this methodology was used to manage project scheduling (Naor *et al*., 2013). CCPM puts a major emphasis on the resources required to finish the project's activities. A project schedule is created which highlights the critical tasks needing to be done; the 'Critical Chain'. Resources are reserved for tasks of high priority. Buffers of time are built around each project task and this helps to ensure that deadlines are met (CGAIR, 2017).

Rand (2000) indicated that the development of CCPM was due to continuing problems such as delays, overspending, increasing needs to reduce specifications, and other adverse effects on Project Management. The failure to rectify these problems allowed for the CCPM approach to be implemented (Rand, 2000). Gupta & Andersen (2012) noted that, the CCPM methodology is not so suitable, if a key resource which is used in multiple projects runs out; there will be a ripple effect where a delay in a single task creates a delay for the tasks to follow. The timeframe for the completion of the projects lengthens and there is no way to recover the delays (Gupta & Andersen, 2012). Figure 2.7 below depicts the number of weeks each task operates before it is completed. Only when it is completed can a new task begin, CCPM buffers have been presented in this diagram below (Marić, 2017).

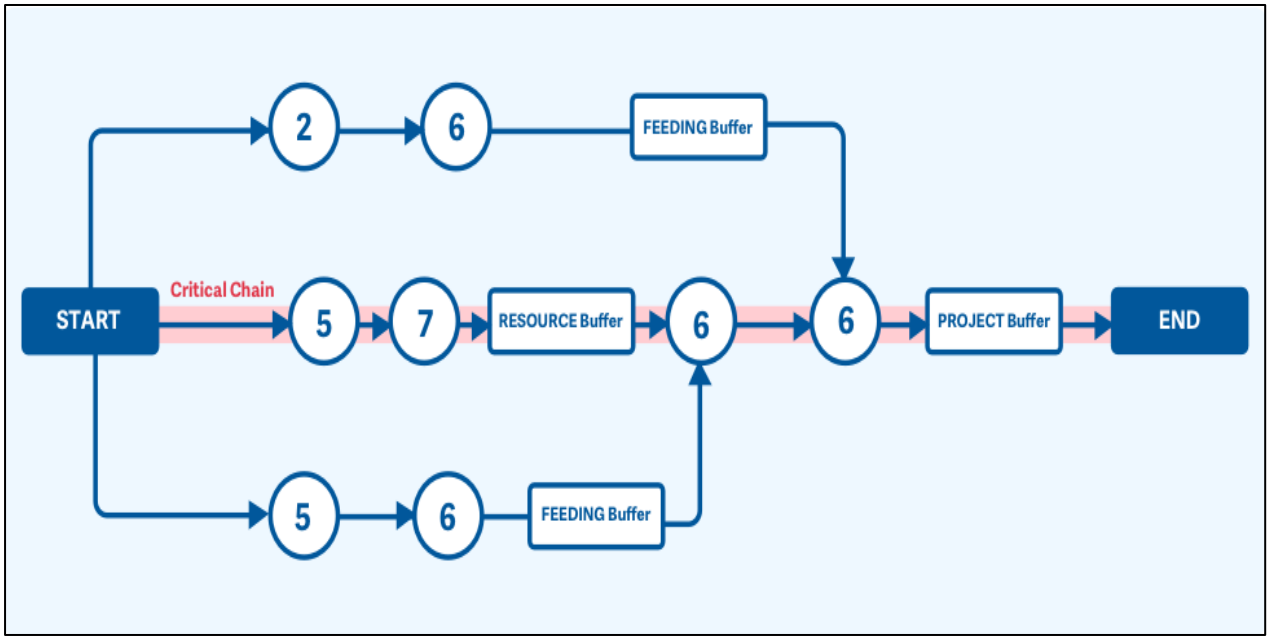


Figure 2. 7. Critical Chain Project Management Framework

Source: Marić (2017:6)

According to Marić (2017) there are four buffers in CCPM:

- Project Buffer- it safeguards the project from exceeding the planned schedule and it makes sure the end date remains the same. The project buffer is between the final task and the conclusion date,

- Feeding Buffer- it protects the critical chain, it is inserted on non-critical chain paths between the final tasks so that any delays that may take place on the non-critical chain path do not affect the critical chain path,

- Resource Buffer- it is inserted into the critical chain path ensuring that all necessary These resources as regarded as critical resources, and resources such as people, funds, and equipment are accessible throughout the project.

- Capacity Buffer- ensures that on-call resources become available should there be a case of unexpected budget concerns (Marić, 2017).

2.16.4. Contract Management Framework

According to the National treasury (2010) the Contract Management Framework (CMF) is a detailed document that has established requirements for government organisations concerning the management of contract agreements. Every operation assumed by an organisation involves the signing of some sort of contract whether openly agreed in writing, or indirectly implied through actions (National treasury, 2010). Contracts that are managed appropriately ensure that services are provided within agreed cost and agreed specification. Contracts that are not managed properly may have a negative impact on government as a whole. National treasury (2010) noted the following as consequences of poor contract management:

- Inefficient supplier, buyer or other stakeholder relations;

- Negative reputation;

- Prolonged legal disputes;

- Cost overruns;

- Procurement of goods not within specification; and possibly

- Service delivery failure (*National treasury*, 2010).

Contract management is not only essential for financial management but it also promotes effective service delivery. This framework is generic which allows Departments and Municipalities to approve their own policies and procedures relating to contract management (*National treasury*, 2010).

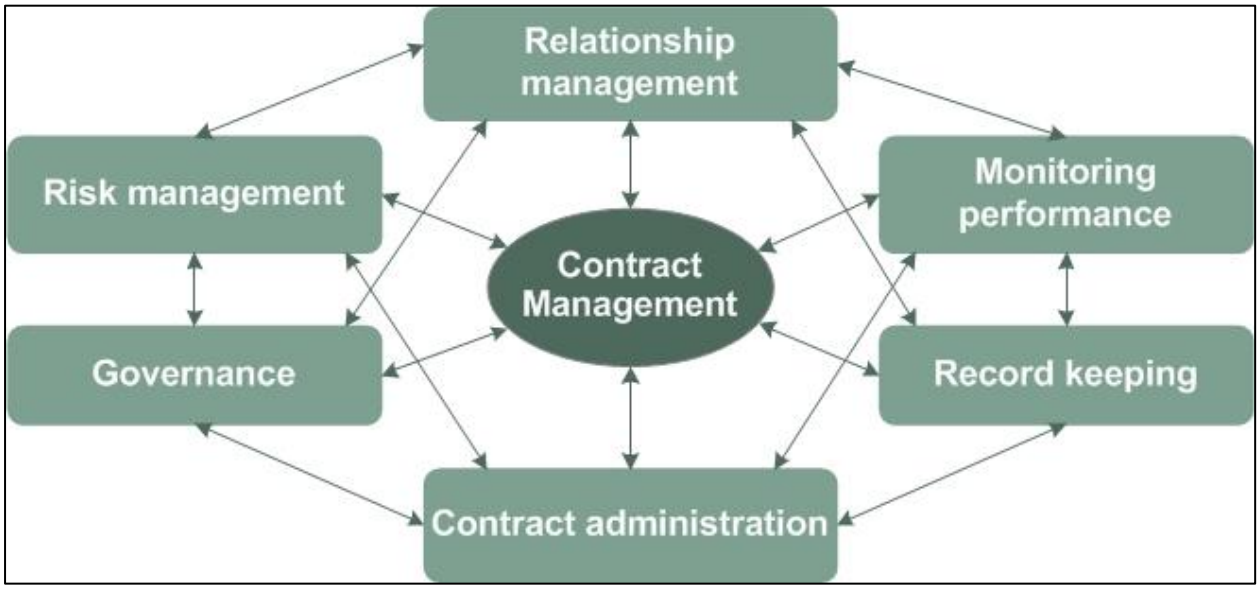


Figure 2. 8. Contract Management Framework

Source: Department of Finance (2010:1)

As presented in Figure 2.8, there are six themes within this framework which control contract management. These themes include; relationship management, monitoring performance, record keeping, contract administration, governance and risk management. Based on National treasury (2010) all these themes work hand in hand in creating a successful framework. All these themes need to be adopted and implemented so that the management of contracts/projects can be effective.

2.16.5. PRINCE2

This study will adopt the *Project In Controlled Environments (PRINCE2)* theoretical framework, This theoretical framework is a technique for the management of projects used by the United Kingdom government (CGIAR, 2017). In the PRINCE2 framework crucial activities such as compiling the business justification and the allocation of resources are owned by a regulated project board while a Project Manager manages the lower level, daily

activities such as project scheduling. This methodology gives project teams superior control of resources and the ability to lessen risks effectively (CGIAR, 2017).

PRINCE2 is a process-based method. Its focus is on organisation and control over the whole project, from start to end. Projects are strategically planned before kick-off, each stage of the project life cycle is carefully organized, and all loose ends are attended to before the project ends. According to CGIAR (2017), in the PRINCE2 framework, challenges are identified and resolved immediately before they build up. During the initiation stage in PRINCE2, all the possible challenges are already planned for and by doing so, risk is planned for (CGIAR, 2017). The researcher chose to use this methodology instead of any other for the following six reasons:

1. PRINCE2 puts emphasis in making the Business Case the foundation of the project, it clearly outlines the reasons to initiate the project as well as its benefits to the organization;

2. PRINCE2 has a clearly defined outcome;

3. PRINCE2 quality controls are carried out regularly;

4. PRINCE2 puts an emphasis on systematically managing each stage of the project life cycle;

5. Risk management is considered a major element; and

6. All the key elements of Project Management are cohesive in the framework. From the beginning of the project to the end everything is planned, structured and monitored (Hedeman, 2006).

The researcher anticipates that this methodology will support the theory of this research study. According to CGIAR (2017) PRINCE2 method is built on seven principles, seven themes and seven processes, it proposes that projects should be separated into different stages.

2.16.5.1. PRINCE2 principles

Based on CGIAR's (2017) study, there are seven PRINCE2 principles; they act as a framework for efficient Project Management practice. The following are the seven principles:

- Principle 1: Projects must have **business justification**; there should be a clear need for why the project should exist. There should be a defined customer, expected benefits, and a detailed cost valuation.

- Principle 2: Teams should **learn** from each stage, lessons are required and should be noted at every phase in the process, these lessons should then be used for the growth of the organisation.

- Principle 3: **Roles and responsibilities** should clearly be defined, everyone needs to know their duties and responsibilities, project workers should know what their jobs entail.

- Principle 4: Work is **planned** in all stages; projects are divided into separate work phases, with periodic assessments to record lessons learned and to confirm if the project is going on well towards the project's objectives.

- Principle 5: Project boards '**manage by exception**', board members are normally senior professionals or experts who do not manage the operational day-to-day activities. They establish standard requirements for cost, time, risk, and scope; they delegate everyday management to Project Managers. The project board agrees on the best approach to take should problems arise that are detrimental to the project operations. The Project Manager has the authority to align the project back on track should it be running late or exceeding the budget.

- Principle 6: Teams keep a continuous **emphasis on quality**; deliverables are frequently checked against what is expected through the routine of a quality register.

- Principle 7: The method is **tailored** for each project, PRINCE2 method itself should be adjusted to address the needs of each project. The amount of oversight and

planning should be changed to fit the scope of the project and the number of people involved (CGIAR, 2017).

2.16.5.2. PRINCE2 themes

According to CGIAR (2017) there are seven themes of PRINCE2 that outline areas of Project Management needed to be addressed constantly until project closure. The following are the seven themes defined in PRINCE2:

- Theme 1: **Business case** - Which benefits does the organisation gain for implementing the project?

- Theme 2: **Organisation** - How will the project member's individual roles and responsibilities be clearly defined to successfully manage the project?

- Theme 3: **Quality** – What are the quality goals and how will the project achieve them?

- Theme 4: **Plans** - The process required to consolidate the project plans and PRINCE2 methods that should be used.

- Theme 5: **Risk** - How will the Project Manager address the doubts during planning stage?

- Theme 6: **Change** - How will the Project Manager address unexpected concerns or demands for change?

- Theme 7: **Progress** - The ongoing feasibility and assessment of whether the project should proceed (CGIAR, 2017).

2.16.5.3. PRINCE2 processes

Based on CGIAR's (2017) study, there are seven processes of PRINCE2; they describe the responsibilities such as who will do what, and when. The following are the seven processes:

a) Process 1: <u>Starting up a project</u>

In this stage the project team is employed, and a project induction is conducted. The objective for this process is to create conditions for starting the project (CGIAR, 2017).

b) Process 2: Initiating a project

In this stage, the project brief is used to consolidate other management documents that will be required during the project. The methods to be used to guarantee quality during the project is outlined together with the overall methods for controlling the project (project controls). Project files are created, as well as an overall plan, for example, an *Annual Plan of Operations*. A strategy for the next stage of the project is also formulated.

c) Process 3**:** Directing a project

This process also considers the way in which the board can give ad hoc direction to a project and the way in which the project should be shut down.

d) Process 4: Controlling a stage

The controlling process dictates how each individual stage should be controlled. It describes the daily management of the Project Manager, it stipulates the way in which work should be monitored and how progress should be reported to the project board, it looks at methods through which certain project issues should be reported to the project board. When recording and assessing project concerns, the ways in which corrective action will be taken should be clear (CGIAR, 2017).

e) Process 5: Managing product delivery

The objectives of the managing product delivery process are:

- To ensure that products allocated to the team are authorised and acceptable, ensuring that the Project Manager and suppliers are clear about what is expected in terms of cost, quality and timeframes;

- To ensure that the products are produced within the planned specifications; and

- To ensure that precise progress information is provided to the Project Manager at an agreed timeframe as a guarantee that expectations will be achieved (CGIAR, 2017).

f) Process 6: Managing stage boundaries

Managing stage boundaries states what should be done towards the end of a stage. Each stage of the project should be planned and the overall project plan, business case and risk register should be amended as necessary. This process also covers what should be done should the project diverge from its original plans. It allows the project board to make a go or no go authorisation regarding the progress of the project (CGIAR, 2017).

g) Process 7: Closing a project

This process looks at operations that should be completed at the end of a project. The project should be officially de-commissioned, follow-up actions should be acknowledged and the project should be formally evaluated (CGIAR, 2017).

PRINCE2 can be very helpful in managing complex projects with detailed planning and continuous performance tracking. Majority of time is dedicated to planning; PRINCE2 also helps in controlling time and budget (CGIAR, 2017). Figure 2.9 below represents the PRINCE2 theoretical framework; it includes all the elements that need to be applied in order for Project Management practices to be implemented successfully.

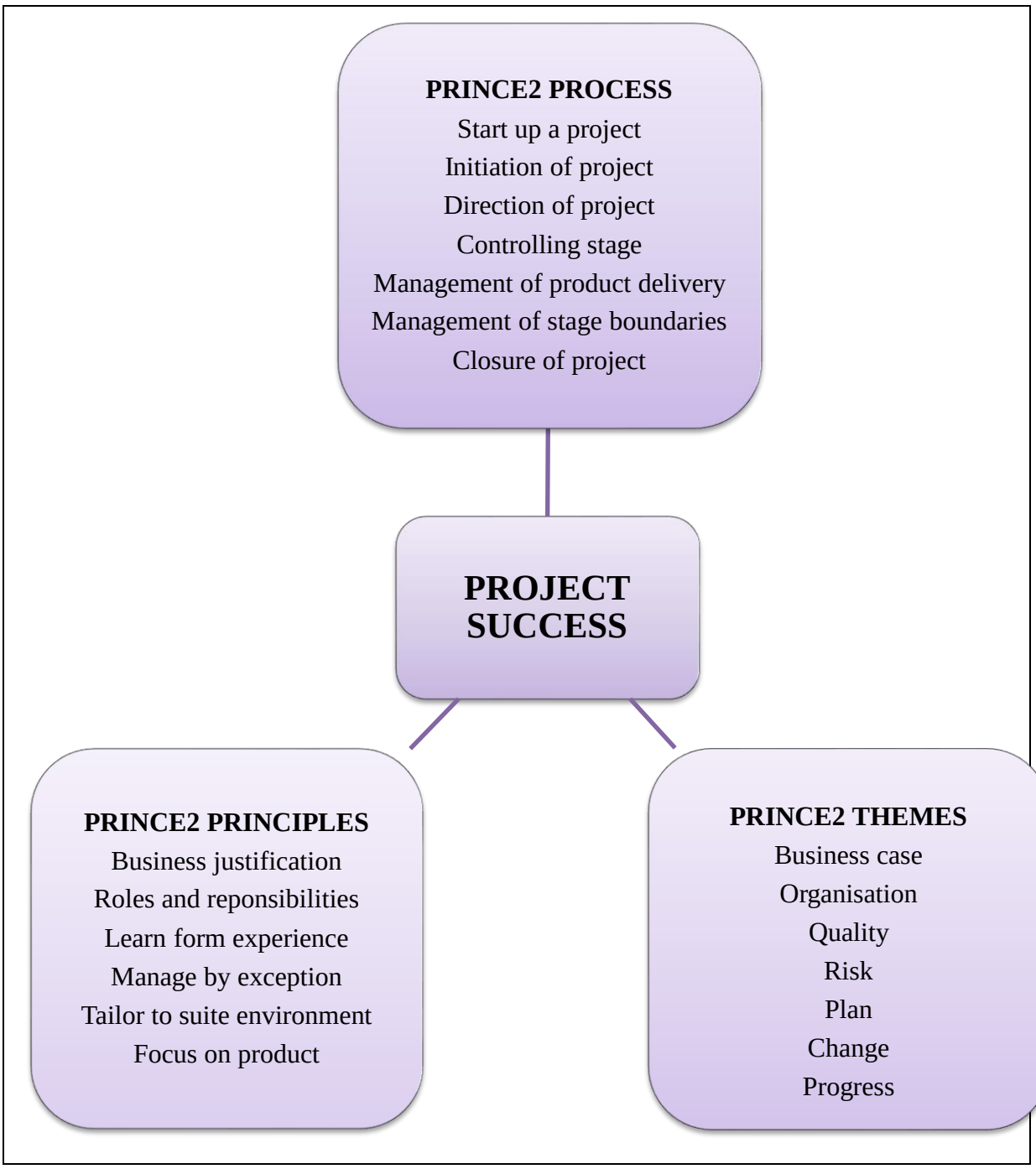


Figure 2. 9. PRINCE2

Source: Adapted from CGAIR (2017:11-13)

For each stage of the project life cycle PRINCE2 processes need to be applied in order for a project to be successful. If PRINCE2 was implemented in the EPWP programme, challenges obstructing satisfactory Project Management practices would be resolved, it would also create major changes to the EPWP that would develop and sustain the programme long-term, resulting in quality deliverables and better implementation of Project Management.

Table 2.2 below is a comparative overview of the four methodologies that have previously been discussed. Table 2.2 projects the advantages and disadvantages of each methodology.

Table 2. 2. Project Management Theoretical Framework

PM Theoretical Frameworks	Pros	Cons
Waterfall	Waterfall can be used for highly complex and critical projects.	Waterfall is a very inflexible methodology which doesn't allow the flexible changing of projects.
CCPM	CCPM is ideal for projects that depend highly on resources for operations. With resources pre-arranged it is easy to arrange the project team in their roles and responsibilities.	Requires unique software and requires mastering the process
Agile	Methodology is flexible and adjustable at any time, it is ideal for innovative software projects, where new concepts and inventions can be incorporated into the existing framework.	Stakeholder are very involved in this methodology
PRINCE2	PRINCE2 assists in corporate planning, it helps with performance evaluations as well as risk management.	Change is not easily adaptable by the project team, the process requires a lot of documentation amendments

Source: Adopted from Marić (2017:6)

2.17. CONCEPT MATRIX

Authors	Project Management	Project Management practices	Overview of EPWP	Factors affecting the implementation of Project Management practices	Strategies applied for mitigating challenges affecting Project Management	Theoretical framework: PRINCE2
PMI (2008)	✓			✓		
PMI (2013)	✓	✓				
Merna and Al-Thani (2008)	✓					
Heldman (2009)		✓				
Team (2014)		✓				
Newton (2015)		✓				
Schwalbe (2015)		✓				
Bourne and Walker (2008)		✓				
CGAIR (2017)		✓				✓
Lieuw-Kie-Song (2009)			✓			
Phillips (2004)			✓			
Department of Public Works (2005)			✓			
Department of Public Works (2014)			✓			
Mthembu (2009)			✓		✓	
Kobokana (2007)			✓			
Samson (2007)			✓			
Samson (2015)			✓	✓		
McCord (2004)			✓			
Rwelamila and Purushottam				✓		

(2012)						
Lester (2014)				✓		
Marić (2017)						✓
Unit (2004)						
EPWP (2011)						
Solution (2011)					✓	
BIA (2011)					✓	

2.18. SUMMARY

This chapter reviewed relevant literature pertaining to the research objectives of this study. It gave insight into the literature by other scholars and researchers on the aspect of current Project Management practices in the EPWP; factors influencing poor Project Management; strategies applied to mitigate the challenges affecting the implementation of Project Management practices and also discussed Project Management methodologies, particularly PRINCE2 which is the theoretical framework for this study.

Critics such as Mthembu (2009), Kobokana (2007), Samson (2007) and McCord (2004) have argued that the EPWP Monitoring and Evaluation systems have let the programme down resulting in its poor performance. The above authors have pointed out, there are numerous challenges that affect the implementation of Project Management practices in projects, some projects have failed and shutdown due to poor Project Management practices (Hwang *et al*., 2013). Authors such as Mir and Pinnington (2014), Davis (2014), Palmer (2016) and Ling *et al*., (2009) have identified how Project Management practices can be applied for successful project performance. Results from this study are expected to help the EPWP in creating projects that are more sustainable by mitigating challenges affecting the implementation of Project Management practices.

The following chapter discusses the research methodology applied in this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. INTRODUCTION

This chapter outlined the steps that the researcher followed to conduct this study. According to Mingers (2013) research methodology is the procedure a researcher uses when obtaining information about a social phenomenon. This chapter presents the research design, research strategies as well as the data collection methods adopted to gather the data to be presented. Rajasekar, Philominathan, & Chinnathambi (2013) stated that research is a consistent and methodical search for new and valuable information on a specific topic. The main reasons for conducting research are to determine new facts, to prove and examine important facts, and to investigate a procedure or phenomenon (Rajasekar *et al*., 2013). Another reason to conduct research is to develop new concepts and to resolve and understand scientific/non-scientific discoveries. Research assists in recommending other interventions for predominant challenges (Rajasekar *et al*., 2013). The research methods used in conducting this study assisted the researcher in answering the research questions by identifying the challenges affecting the implementation of Project Management practices in the Msunduzi Expanded Public Works Programme (EPWP) clearing project.

3.1.1. RESEARCH OBJECTIVES

- To investigate current Project Management practices in the EPWP;
- To investigate the challenges affecting Project Management practices in the EPWP;
- To investigate the strategies applied to mitigate the challenges affecting the implementation of Project Management practices; and
- To devise an effective Project Management framework for the EPWP.

3.2. RESEARCH ONION

In Saunders *et al.,* (2009) study, a diagram displayed an holistic overview of methodologies for research in the form of ‘an onion’. In the middle of the onion is the focal point which is the research problem. Around it are several strata that have to be ‘peeled off’ before arriving at the focus area. The layers are vital when considering the research methodology to be used. These layers have been identified as research philosophies, research approaches, research strategies, research choices, research time horizons, and research techniques. Presented in

Figure 3.1 is Saunders *et al.*, (2009) explicit inclusive framework for the entire research process.

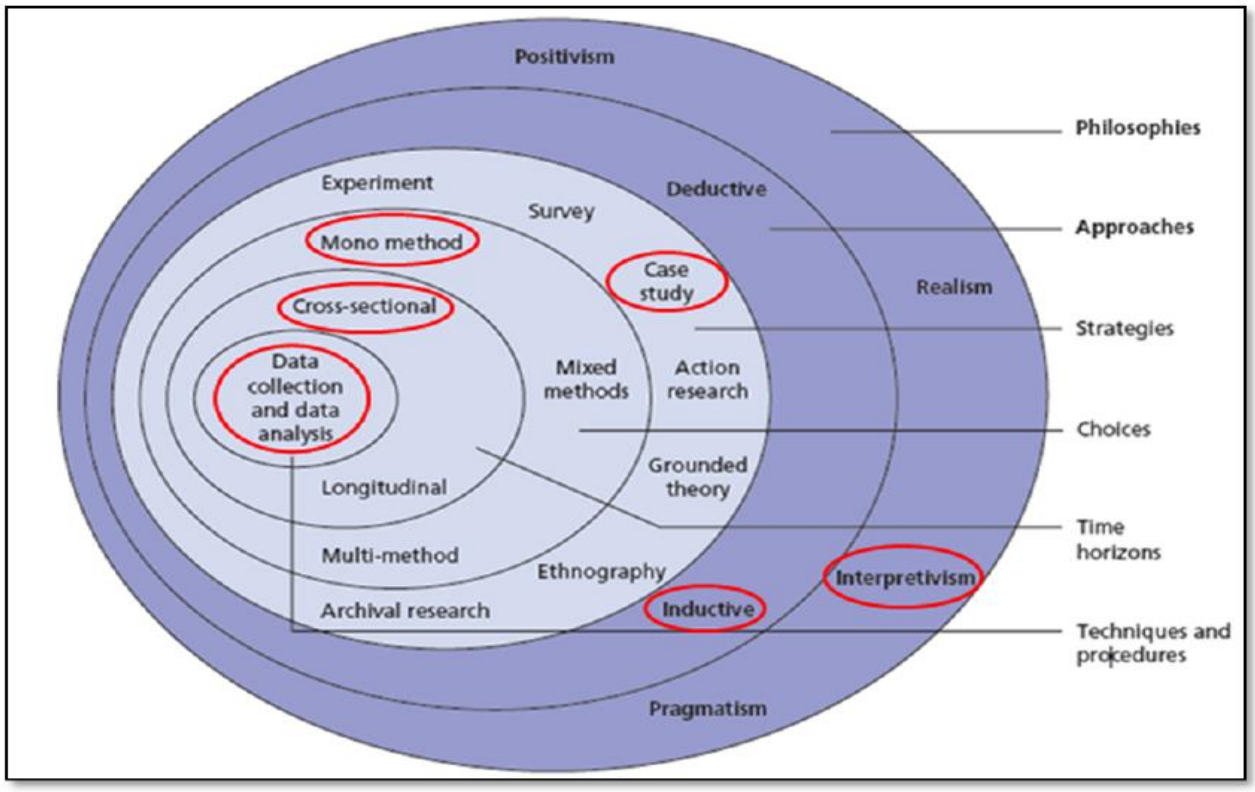


Figure 3. 1. Research onion

Source: Saunders *et al*. (2009:130)

The research onion adopted from the study by Saunders *et al.* (2009:130) was used as the guideline for this research. In this study, the highlighted methodologies have been selected as the research methodologies which are the most advantageous for the resolution of the study's research problem. The following sections will unpack each of the research layers so as to get an holistic overview of research methodologies.

3.3. RESEARCH PHILOSOPHIES

According Jonker & Pennink (2010) a research philosophy, also known as a research paradigm is a set of important assumptions and philosophies that theorise how the world is understood. The philosophies are found on the first layer of the research onion (Saunders *et al*., 2009). The research philosophies serve as a rational framework directing the conduct of the researcher (Jonker and Pennink, 2010). Quite often the philosophical history commonly remains unspoken in most research, this background impacts on the practice of research. Authors such as Neuman, (2011); Berry & Otley, (2004); Creswell, (2009); and Saunders *et*

al., (2009) stress the importance of establishing the research paradigm applied in conducting research. It materially effects how a researcher takes on a social study in the way it is presented and understood (Wahyuni, 2012). For this study, the researcher adopted an interpretivist research approach which was most suitable for this type of research due to its ability to reveal reality rather than to convey statistics. Table 3.1 is an overview of the basic fundamental beliefs of research paradigms as they relate to research methodology literature (Saunders *et al.*, 2009:144; Hallebone & Priest, 2009).

Table 3. 1. Fundamental beliefs of research paradigms

RESEARCH PARADIGMS				
Fundamental beliefs	***Positivism (Naïve realism)***	***Post-`positivism (Critical Realism)***	***Interpretivism (Constructivism)***	***Pragmatism***
Ontology: the researchers view on the nature of reality	Single reality, Reality is apart from the researcher.	No single reality, Reality is subjective and multiple, Interpreted through social conditioning.	Reality is created by individuals in groups, Subjective, may modify, multiple.	Social real life issues, The truth is what matters, A methodology is selected that will best answer the research question.
Epistemology: the view on what is noted as satisfactory information	Observer is independent of undertaken research, Focus on reliable and usable tools to uncover phenomena, Factual,	Only evident phenomena can provide trustworthy information, Factual,	Observer is independent of undertaken research, Focus on discovering underlying meaning. Focus is detailed on the situation, and the reality behind these details.	The best method to use is the one that solves the problem the best
Axiology: the role of values in research that shape the narrative	Value-free research, Research is undertaken in a value-free way, The researcher is independent of the data and upholds an objective position.	Value-laden research, The researcher has a biased viewpoint on social views, experiences and childhood.	Value-bond research, The researcher is part of what is being researched, and is inseparable from subject matter therefore subjective.	Value-bound research, Goal-orientated, Researcher adopts an objective and subjective perspective.

Research Methodology: Procedure used to acquire knowledge	Quantitative	Quantitative or Qualitative	Qualitative	Quantitative and qualitative Mixed methods

Source: Adapted from (Saunders *et al*., 2009:144)

3.3.1. Positivist

According to Neuman (2011) positivist researchers pursue data to establish lawful generalisations or a nomothetic overview. This is done by conducting value-free research to quantify a social phenomenon. The belief of positivists is that several researchers conducting a study with the same problem will be likely to obtain comparable results. This is done by cautiously utilizing arithmetical assessments and implementing a similar research processes in examining a large sample (Creswell 2009). A mutual belief of positivists is that a universal generalisation can be adopted across contexts; this is now known as Naïve Realism (Wahyuni, 2012).

3.3.2. Post-positivists

Post-positivists critique the notion of complete truth in social science research, especially when studying the way in which humans behave. Likewise, the post-positivists are also accustomed to generalisation, but acknowledge that understanding is an outcome of social conditioning. This process is known as the Critical Realist stance. This means that knowledge of social realism should be understood in a certain perspective of significant law or vigorous social configurations which have produced the apparent phenomena within the social world (Wahyuni, 2012).

3.3.3. Interpretivism

Interpretivism, unlike postpositivism, lends itself to what is known as constructivism. Interpretivist researchers believe that reality is created by social artists and people's views of it (Hennink, Hutter and Bailey, 2011). They recognise that people's upbringings, opinions and understandings aid the continuous construction of realism taking place through social dealings. Hennink *et al*., (2011) further stated that social realism can change and have numerous perceptions. According to Wahyuni (2012) interpetivists prefer to interact and have discussions with learned participants. Interpetivists favour working with qualitative data instead of quantitative data. Qualitative data provides quality descriptions of social concepts unlike the generalisation or nomonethic methodology implemented by postpositivist researchers (Neuman, 2011). Interpretivists adopt a descriptive form of analysis to describe

the social reality being examined, this approach is also known as idiographic method (Neuman 2011).

Sekaran and Bougie (2016) noted that the 'interpretivist' paradigm emphasises the necessity of putting analysis in context. The interpretive paradigm is about understanding the world from personal experiences of people. This study is situated in the interpretivist paradigm. This paradigm uses qualitative methods such as in-depth interviews, and depends on the link between the researcher and subject (Sekaran & Bougie, 2016). The researcher also chose this paradigm as it would assist understand the EPWP from the subjective experiences of the respondents who have direct contact with the programme.

3.3.4. Pragmatism

Based on Creswell's (2013) study, pragmatism is not confined to one viewpoint of reality. Pragmatic researchers are free of choice. They are can select the approaches, methods, and processes of research that can be tailored to the purpose of their study (Creswell, 2013)**.** Pragmatist researchers prefer applying both qualitative and quantitative data; this is because it allows for superior understanding of social reality (Wahyuni, 2012). There are different types of pragmatists, researchers adopting this research paradigm focus on the findings of the research rather than on the precursor condition as seen in post-positivist paradigm (Creswell 2013). Pragmatists do not have a set philosophy on what makes good research, instead they believe that research grounded on either unbiased, noticeable phenomenon or subjective meanings holds out the prospect of creating credible research (Sekaran & Bougie, 2016). Pragmatists believe that more focus should be directed towards the research problem and towards apprehending the problem, than focusing on which methodology to use (Creswell, 2013). Pragmatists are also called mixed methods researchers; they look to various approaches to gathering and examining data instead of selecting one methodology. They believe that multiple methods best address a research problem (Creswell, 2013).

3.4. RESEARCH APPROACHES

The second **layer** of Saunders *et al*., (2009) research onion is the research approach which consists of the deductive and inductive approach. The difference between these two approaches is that the deductive approach attempts to test existing theory whilst the inductive approach aims at generating new theory developing from data (Gabriel, 2013).

Deductive

The deductive approach allows the researcher to answer questions they may have at the beginning of their study. The question may be a statement or speculation. The gathered data can then confirm or reject these questions. This approach focuses on utilising existing literature to classify ideas and theories that the researcher will test (Saunders *et al*., 2009:153).

Inductive

Unlike the deductive approach, the inductive approach encompasses gathering data from mediums such as interviews and then creating or identifying a theory based on the results from the findings (Saunders *et al*., 2009:155). This approach can also be used by a researcher if they want to create their own theory. This study is inductive in nature as the researcher was interested in developing a new theory which emerged from the data provided by the respondents.

3.5. RESEARCH DESIGN

According to Bryman & Bell (2007) a research design provides a structure for the collecting and analysing of data. van Wyk (2012) stated that the research design articulates what data is required, and what methods to be used to collect and analyse data. Similarly, De Vaus (2014:182) stated that "the purpose of a research design is to ensure that information obtained from the data collection process allows the researcher to address the research questions in an analytical manner and as clearly as possible". Rajasker *et al*., (2013) stated that research answers questions that the ordinary person may not know. Without research very few discoveries would have been made and the world would not have evolved as fast as it has done and which it continues to do..

Based on the research onion, the research design or research choice is located on the fourth layer of the research onion. The researcher has to identify whether the study is mono method, mixed method or multi method. Quite often researchers adopt one method which uses one method to analyse data, either qualitative or quantitative methodology (Al-Zefeiti & Mohammad, 2015). According to Thomas (2010) qualitative and quantitative research are common research method classifications. Qualitative and quantitative research looks at the different elements in the nature of data. These two research methods can be differentiated by the ways data is collected and analysed (Thomas, 2010).

3.5.1. Qualitative research

According to Myers (2013), qualitative research is intended to assist researchers to understand people's social and cultural conditions within which they live. Qualitative research includes observations, fieldwork, interviews, texts, documents and the researcher's impressions (Myers, 2013). According to Rajasekar *et al.*, (2013) qualitative research is concerned with the phenomenon concerning quality. Some of the features of qualitative study are:

- Non-statistical: use of expressive words, applying intellect;
- The intention is to get the meaning, emotion and to define the situation;
- Qualitative information cannot be graphed;
- It is experimental; and
- It examines the how and why of making decisions (Rajasekar *et al.*, 2013).

A qualitative research approach was adopted as the methodology for this study. The choice was informed by the need to explore broadly on the research topic and build additional knowledge on this study subject matter. According to Thomas & Magilvy (2011) to develop understanding of the subject matter qualitative researchers gather more information on the focus area of the research and familiarise themselves with the topic. According to Baxter and Jack (2008) a qualitative case study enables the researcher to examine a complex phenomenon within their studies' context. If this approach is applied correctly the researcher can develop a theory, and develop an intervention (Baxter & Jack, 2008). This study was conducted as a qualitative case study with an exploratory approach as no research has been done on the challenges affecting the implementation of Project Management practices in the Msunduzi (EPWP) clearing project.

3.5.2. Quantitative research

According to Myers (2009) quantitative research is data in numerical form or data that can be interpreted using numbers; it is numerically or statistically assessed. In agreement with Myers (2009), Muhambe (2012) stated that quantitative research is identified on an arithmetical

scale. Quantitative research is often used in the natural sciences and is said to be more reputable. Quantitative data is used to study common trends in a population and uses statistical approaches to determine magnitude, quantity or scope (Myers, 2009). Rajasekar *et al*., (2013) stated that quantitative research is centred on amount or quantity. A quantitative method is conveyed or defined in terms of measures. Some of the features of quantitative study are:

- Non-descriptive, arithmetical, applies figures or calculation and uses amounts;
- Evidence is evaluated using numerical values'
- The outcomes are regularly displayed in diagrams and tables;
- It is decisive; and
- It examines the where, when, what of making decisions (Rajasekar *et al*., 2013).

According to Thomas (2010), quantitative researchers quantify variables and display the relationship between the variables using inferential statistics such as differences between means, correlations, or relative frequencies. The main focus is on testing a theory (Thomas, 2010). Below Table 3.2 displays the difference in qualitative and quantitative data. It gives a clear understanding of the contexts in which that these two research methods can be used.

Table 3. 2. Qualitative v. Quantitative

Qualitative	**Quantitative**
• Data collected in words and images	• Deals with numbers
• Data can be observed	• Data can be measured and listed
• Studies relationships	• Examines a phenomenon
• Focuses on the narrative and text from the respondents	• Uses statistical analysis

• Quality= Qualitative	• Quantity= Quantitative

Source: Brief (2012:12)

3.5.3. Mixed methods

According to Thomas & Magilvy (2011) researchers can use a combination of quantitative and qualitative research methods. This helps discover information that they could have missed having used only one approach. For instance, one approach can be used for finding information; the other can be used to confirm the first approach used (Thomas & Magilvy, 2011). The mixed method enriched the depth of the scientific discovery. In one phase of the study the researcher may choose to use a qualitative approach, a quantitative approach can then be used for the last phase of the study. In a mixed method, the two types of data are gathered in sequence or synchronously. For example, some researchers may use a focus group or an interview which is qualitative, and also use an experiment which is quantitative (Thomas & Magilvy, 2011). Creswell & Clark (2011) also stated that a mixed method is advantageous for projects with several phases or for preliminary results that need to be further elaborated on.

3.5.4. Multi-method

In contrast to mixed methods, multi-methods include gathering data using both qualitative and quantitative data. However, the main focus lies in only one data source. For example, collecting quantitative data and analysing it using more than one type of quantitative data analysis.

3.6. RESEARCH STRATEGIES

In a study by Saunders *et al,* (2009:200), research strategy was defined as "the broad plan the researcher adopts in answering the research questions". Similarly Bryman (2008:698) defined research strategy as "an overall coordination of conducting research". According to Ritchie, Lewis, Nicholls, & Ormston (2013) the research strategy gives the general direction the research is taking and the procedures to be used when conducting the study. Saunders *et al.,* (2009) highlighted that the research strategy is carefully chosen based on the research questions as well as on the research objectives. Other issues to consider when selecting the research strategy are the obtainable literature on the subject matter being researched, resources availability, timeframe for study, and the philosophical foundation of the researcher

(Saunders *et al.,* 2009). Research strategies are found in the third layer of Saunders *et al.,* (2009) research onion. This layer consists of seven strategies which can be used to collect data namely, experiment, survey, case study, action research, grounded theory, ethnography and archival research.

3.6.1. Experiment

Experiments use a group of people to test phenomena. These people are neutral, and not effected by the phenomena. This strategy is complex and not easy to replicate. This type of strategy gives the researcher data which can be analysed statistically. The purpose of this type of research is to have variables which can be measured, calculated and compared (Al-Zefeiti & Mohammad, 2015).

3.6.2. Survey

This strategy in the research onion is commonly associated with the deductive approach. This strategy is easy to conduct and is the most economical. It allows the researcher to collect huge amounts of rich and reliable data which answer the what, who, when and how questions of the research (Al-Zefeiti & Mohammad, 2015).

3.6.3. Case Study

Simons (2009:21) defined a case study as an in-depth assessment from different perceptions of the intricacy and inimitability of a specific project, program, strategy, organization, or system in an 'actual life' context. Cousin (2005) stated that case studies allow for improved understanding of the subject matter. According to Merriam (2009), Creswell (2013:93) maintains that this qualitative approach studies a real-life, contemporary confined structure (*a case*) or multiple confined structures (*cases*) in a specified timeframe, through exhaustive, detailed data collection. Similarly, Gerring (2004:342) defined a case study as a concentrated study of one unit, the intention is to understand a larger class of comparable units which are observed over a specific period.

A case study research is justified by the element of analysis, the process the study takes, and the result of the study, all these elements are fundamentally the case (Merriam, 2009). According to Thomas (2011) a case study does not have a comparative approach; its aim should not be to produce generalised outcomes to all populations. Stake (2013) defined a case study as a rigorous, methodical analysis of a group, community or organisation where the researcher analyses detailed data relating to several variables.

This study was case study based, the case study allowed the researcher to study this real life challenge affecting the implementation of Project Management in detail and to get accurate findings. According to Stake (2013) a case study allows the researcher to capture information in a more explanatory manner by answering the *'what',* 'why' and *how*' questions. The researcher used a qualitative case study method as it contributed to the larger study of challenges affecting the implementation of Project Management in the EPWP projects. It also allowed the researcher to understand the current Project Management status in the Msunduzi project in greater depth. According to Gerring (2004) there are several types of case studies in research; exploratory, descriptive and explanatory. This study adopted an exploratory case study approach.

Exploratory case study

This case study is primarily used for theory building; it may be conducted preceding the definition of the research questions and hypotheses (Gerring, 2004). According to Yin (2009) exploratory case studies attempt to discover any phenomenon which is identified by the researcher as a point of interest. The questions asked in the case study open up the floor, allowing the researcher to probe further. It promotes further investigation of the subject matter (Yin, 2009). In this case study the researcher can conduct small scale data collection before the hypotheses and research questions are proposed. The pre-data collection assists in formulating a framework for the study. A pilot study is generally used in an exploratory case study (Yin, 2009). According to De Massis & Kotlar (2014) an exploratory case study is used when the purpose of the study is to find out and understand how a certain occurrence takes place. This study adopted an exploratory case study approach.

Descriptive case study

According Gerring (2004) a descriptive case study attempts to define diverse characteristics of the research phenomenon. This type of case study is also used for theory building. It identifies the different single case studies with the aim of possibly establishing a framework. According to Yin (2009) a descriptive case study describes a certain occurrence in the context in which it happened. McDonough & McDonough (2014) stated that this case study is generally in a narrative form. A challenge that was identified is that this case study needs to have a descriptive theory to support the phenomena or occurrence. Should it fail to be supported by descriptive theory, then this case study is regarded as lacking rigor.

Explanatory case study

Based on Gerring's (2004) study, an explanatory case study seeks to examine causal relationships amongst data. This case study is primarily used for theory testing. This type of case study is supported by why and how questions as they examine the relationship between dissimilar theories (Gerring, 2004). According to McDonough & McDonough (2014) an explanatory case study observes data carefully and in detail in order to explain the phenomenon at an in-depth level. Yin (2009) asserted that this kind of case study attempts to find the link between the 'case' and its context in a real life setting.

3.6.4. Action research

The purpose of this research strategy is to attempt to identify and resolve a particulate issue. This type of research can be conducted by an organization to identify the problem through research so that they can mitigate the problem. Action research consists of the following processes:

1. Having an objective;
2. Identifying a solution to the problem; and
3. An action plan on how to deal with the problem (Al-Zefeiti & Mohammad, 2015).

3.6.5. Grounded theory

This research strategy relies on building theory from observations. Inductive methods are used by forecasting and explaining the behaviour and social relationships. Grounded theory seeks out social patterns. Predictions made from observations are then tested. New theories are discovered, these theories are grounded due to existing literature and theory on the topic (Al-Zefeiti & Mohammad, 2015). This is a complex research strategy which requires extensive data analysis and repeated re-analysis in order to find new theory; it is best suited for unexplored research projects (Gabriel, 2013).

3.6.6. Ethnography

Ethnography stems from anthropology which is the study of human behaviour. To conduct research using this method, the researchers would have to immerse themselves in that

community or environment. This research strategy is time consuming due to the slow process of adaption and change (Al-Zefeiti & Mohammad, 2015).

3.6.7. Archival research

This type of research strategy consists of using existing information as well as archive documents. Archival research allows the researcher to do an analysis and explanation of changes taking place over a long period of time, this analysis can be done in a descriptive manner (Al-Zefeiti & Mohammad, 2015). It should be noted that this type of research can lead to incorrect results, which tarnishes the credibility of the research (Saunders *et al*., 2009).

3.7. RESEARCH TIME HORIZONS

The fifth layer of the research onion by Saunders *et al*. (2009:130) consists of two research time horizons; cross-sectional and longitudinal.

Cross-sectional

Cross-sectional method can be used when conducting a short term study. In this time horizon both qualitative and quantitative research methods can be used. An example of this type of method would be the study of a group of people's behaviour or the study of a particular individual over a specific time frame (Saunders *et al*., 2009).

Longitudinal

The longitudinal method can be used when conducting a long-term study. In this time horizon both qualitative and quantitative research methods can be used. The difference with this research time horizon is that studies are conducted with particular samples over a long time frame (Saunders *et al*., 2009).

3.8. STUDY SITE

The study site is in Pietermaritzburg (Msunduzi) which is situated in Kwazulu-Natal province (See Appendix D). The Msunduzi EPWP Project clears invasive alien species that cover 80 per cent of the Pietermaritzburg area (IASP, 2011). Attached is Appendix G which has a clear display of Msunduzi Project boundaries.

3.9. TARGET POPULATION

According to Sekaran & Bougie (2016) the population of a study refers to the entire group of people the researcher wishes to investigate. Based on Goodenough & Waite's (2012) study, the word 'population' refers to the individuals within the group being reviewed and the word 'sample' refers to a smaller group of people selected to partake in the study. The target population for this study are all the people involved in the management of the Msunduzi project. The target population was used is in line with this study. The target population comprised all people in the Project Management level as well as people such as the EPWP board members who oversee Project Management issues for the project. According to the Msunduzi project Project Manager, the Msunduzi Project has one (1) Project Manager, one (1) landowner, fourteen (14) contractors, and two hundred and twenty four (224) project workers (Johansen, 2018). The 224 projects workers did not form part of this study as they are not involved in the Project Management of the Msunduzi Project. In addition to the Msunduzi project population; there are five Managers at IASP, plus ten EPWP board members who form part of the target population for this study. Presented in Table 3.3 is the overview of the target population for this study.

Table 3. 3. Target population

TARGET POPULATION	
EPWP board members	10
IASP Managers (1 Senior Manager + 2 Deputy Managers + 2 Area Managers)	5
Project Manager	1
Landowner	1
Contractors	14
TOTAL	**31**

Source: Author's compilation

The target population for this study is thirty-one people. The target population are all the individuals involved in the Project Management of the Msunduzi Project. The target

population identified for this study was able to identify the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP project.

3.10. SAMPLE SIZE

De Vaus (2014) defined a sample as a finite part of a numerical population whose knowledge and experience is studied to accumulate understanding about the entire population. A sample size is also defined as the sum of people to be included in the study (Malhotra, 2016). According to Pan & Tan (2011) a case study that has less than fifteen interviews is generally deemed as insufficient. According to Surbhi (2016) a census implies that the data is collected from every member of the large population, representing the entire group. This study is census based; therefore the target population is representative of the sample size of thirty-one people involved in the Project Management of the Msunduzi EPWP project.

3.11. SAMPLE STRATEGY

According to Henn, Weinstein & Foard (2009) sampling strategies are separated into two categories: probability also known as representative sampling and nonprobability is known as judgmental sampling. Based on Kothari (2004) study, there are two sample designs; these are known as non-probability sampling and probability sampling.

Non-probability sampling

Non-probability sampling is a sampling procedure whereby some of the population units stand no chance of being selected to form part of a study. There are different types of non-probability sampling such as judgement sampling, deliberate sampling, and purposive sampling (Kothari, 2004). Walliman (2011) noted that the selection of features for a study by a non-random system is called non-probability sampling. This type of sampling is ideal when the total population is impossible to access, or in the case of a quick survey (Walliman, 2011).

Probability sampling

According to Kothari (2004) probability sampling is also called ‘chance sampling’ or ‘random sampling’. In this sampling design, the different units of the population have an equivalent possibility of being included in the sample. Through a selection process, individual units are selected, similar to a lottery method (Kothari, 2004). This study did not adopt a sampling technique as this study is census based. No selections were done on who

would partake in this study. All the people involved in the Project Management of the Msunduzi project (target population) were interviewed.

3.12. SAMPLING METHOD

Sampling method refers to the procedures and rules by which some elements of the population are selected. There are several types of sample methods used by researchers (Kothari, 2004).

Convenience sampling

Convenience sampling is a non-probability sampling technique also known as haphazard sampling (Welman *et al*., 2005; Saunders *et al*., 2009). Convenience sampling involves a considered selection of particular elements to partake in the study by the researcher (Saunders *et al*., 2009). Using this technique allows the researcher to choose features of the population that are accessible and decide if they are necessary for the study. This method provides quality information that enriches the study findings (Bryman & Bell, 2007; Malhotra, 2016). The selection of elements is based on them being suitable for the researcher (Malhotra, 2016).

Snowball sampling

Snowball sampling is the method of choosing a sample using participant's connections. Recruited participants are requested by the researcher to recommend more people who can contribute to the study (Babbie, 2013). According to Welman, Kruger & Mitchell (2005) the snowball sampling method is used when individuals from the sample population are approached to assist in identifying more people that could be of value to the study. These individuals identify people within their network such as friends, colleagues or acquaintances (Welman *et al*., 2005).

Purposive sampling

This type of sampling is considered desirable when small and specific characteristics of the population are studied intensively (Kothari, 2004). Rubin & Bellamy (2012) further added that purposive sampling is a process where individuals are chosen by the researcher to be part of the study with a purpose in mind. According to Saunders *et al*., (2009) purposive sampling assists the researcher to use their judgement to choose people or elements that will provide the best input for the credibility of the study.

Systematic sampling

According to Kothari (2004) randomness is part of this sampling method as random numbers are used to select the component with which to begin. This sampling method is most useful when sampling from a list. This method works in a way that a random point in the list is selected, from that point every n^{th} unit is chosen until all desired numbers are available (Kothari, 2004). There was no sampling method adopted in this study as it is census based. All the people in the target population participated in this study.

3.13. RESEARCH INSTRUMENT

According to Bless, Higson-Smith, & Kagee (2008) data collection is an organised gathering of information which is applicable to the research topic. Different techniques are used in the collection of data such as interviews, questionnaires, surveys, focus groups, observations and case studies (Bless *et al.,* 2008). Kothari (2004) stated that when dealing with research problems it is vital for researchers to collect and analyse appropriate data that will identify remedies to the research problem.

According to Kothari (2004) data can be collected in the following ways:

(i) Observation*:* This technique implies the gathering of information by way of researcher's personal observation. Respondents are not interviewed (Kothari, 2004). Through observation, data is gathered pertaining to the current happenings. Observation is not concerned with the past or the future attitudes or behaviours of the respondents (Kothari, 2004). This method is costly, and the information obtained from this method is limited. This type of method is not suitable when investigating a large sample (Kothari, 2004).

(ii) Telephone interviews: This technique involves the interviewer contacting the respondents via the telephone. This technique is not popular but is vital in industrial surveys in developed countries, especially when there are time constraints to gather the data (Kothari, 2004).

(iii) Mailing questionnaires: In this technique, the respondents and the researcher do not come into contact. The respondents are mailed the questionnaire and are requested to return immediately after completion (Kothari, 2004). This

technique is mostly used in business surveys. A pilot study is conducted to check the validity of the questionnaire and to address any shortfalls within the questionnaire, if any (Kothari, 2004).

(iv) Schedules: In this technique an enumerator is employed and trained to collect data. The enumerator is given specific questions (schedules) for the data collection process; the enumerator conducts the data collection using these questions (Kothari, 2004). These schedules are answered by respondents. The enumerators are responsible for the participation of the respondents. Occasional field checks are done to make sure that the enumerators work was done accordingly (Kothari, 2004).

(v) Personal interview: The researcher follows a planned procedure to seek the answers to set questions through the use of personal interviews (Kothari, 2004). This technique of gathering data is conducted in an organised way, the output from the interview is largely dependent on the interviewer (Kothari, 2004). According to Thomas (2010) interviews are used to collect information through a verbal approach using pre-arranged questions. Yin (2009) stated that interviews are the most vital source of information in case study evidence where directed conversations are conducted.

The primary data for this study was collected using face-to-face in-depth interviews. In-depth interviews were used to explore the beliefs, opinions, and experiences of the research participants. According to Johnson & Christensen (2012) in-depth interviews allow the respondents to elaborate on their answers and for the researcher to get in-depth knowledge of the subject matter. Similarly, Malhotra (2016) added that personal in-depth interviews are unswerving and subjective, they involve a interaction with a single person with the aim of revealing principal motivations, opinions, and attitudes on a specific topic (Malhotra, 2016). The reason the researcher choose to use in-depth interviews instead of other qualitative data collection methods was because more information could be shared by the participants. The in-depth interviews assisted the researcher to answer the research questions for this study. Participants were able to expand and emphasize details that were crucial to this study (Sekaran & Bougie, 2016). This flexible method enabled the researcher to probe questions further and to get more information from the respondents. A detailed interview guide is

presented in Appendix B. According to Malhotra (2016) interviews can be *structured, semi-structured, or unstructured.*

3.13.1. Structured interviews

This type of interview has prearranged questions; these questions are clear, short and straight to the point (Thomas, 2010). These questions are not open-ended but closed-ended , meaning that the answers are precise. This method is simple to conduct, questions can be standardised to all participants so that the same questions are asked to all the participants (Thomas, 2010). In agreement with Thomas (2010), Stuckey (2013) indicated that in structured interviews the researcher follows a specified routine of asking a pre-planned set of questions in a prearranged order with limited response categories. Questions asked in this type of interview are similar to job interview questions, as all participants are asked the same questions to create consistency (Stuckey, 2013).

3.13.2. Semi-structured interviews

According to Thomas (2010) a semi-structured interview method uses both an unstructured and a structured process and they use both open- and closed-ended questions. This method is advantageous as it has both interview methods (Thomas, 2010). For the sake of consistency in the interviews, the interviewer has pre-arranged questions used as a guideline for all participants. During the interview the interviewer allows the interviewee to elaborate and to share more insights into the subject matter (Thomas, 2010). According to Stuckey (2013), in a semi-structured interview, the interviewee creates the framework for the topics to be covered and the responses of the participants determine the outcome of the interview process.

Semi-structured interviews were adopted for this study; the questions were both predetermined and open-ended. The process of collecting data began after the researcher's ethical clearance had been approved. The interview process took four weeks; each interview was forty-five minutes per participant. Thus, the data collection method that was adopted for this study enabled the researcher to identify the Project Management challenges in the Msunduzi EPWP clearing project.

3.13.3. Unstructured interviews

This type of interview has open-ended questions meaning that the interviewer and the interviewee engage in a brainstorming discussion about a specific topic (Thomas, 2010). The

interviewee is able to give opinions freely regarding the topic and the interviewer and interviewee are equally responsible for the direction the interview takes (Thomas, 2010).

3.13.4. Focus group interviews

Tong, Sainsbury, & Craig (2007) defined focus groups as semi-structured questions with groups of four to twelve people that come together and discuss particular topics. The moderator gives the group a topic and focal questions, while the participants answer them individually but are given an opportunity to discuss and interact with the other group members (Tong *et al*., 2007). This method is done so that the participants can interact and share their perspectives (Tong *et al*., 2007).

According to Thomas (2010) focus group interviews are less organised compared to the other interview groups discussed above. The reason for this is because it is very challenging to have structure in a group setting; however, rich data can be presented through interaction between the numerous individuals. For example, delicate matters that could have been overlooked in individual interviews may be discussed more comfortably in a group environment (Thomas, 2010). Within a group individuals are able to develop and communicate concepts they wouldn't have expressed on their own (Thomas, 2010). According to Shneiderman & Plaisant (2005) this kind of interview method is conducted after individual interviews have been done to further explore observations from individuals (Shneiderman & Plaisant, 2005). Saunders *et al.,* (2009:96) defined focus groups as "non-standardised dialogues conducted with two people or more".

3.14. STRUCTURE OF THE IN-DEPTH INTERVIEW GUIDE

Interview guides are a guideline of questions to be asked to the respondents in order to obtain rich data (Turner III, 2010). Qu & Dumay (2011) claimed that the advantage of conducting a research interview is in its exceptional capability to reveal the personal and incommunicable information of the respondent. It allows the interviewer to gain an understanding of the interviewee's assumptions and perspective (Qu & Dumay, 2011). Thus, the use of in-depth interviews in this research was warranted based on the qualitative nature of this study. This method was also justified based on the need for understanding and clarifying concepts in order to obtain insight into the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP project. For the purpose of this study, face-to-face interviews were conducted. Interviews enable the researcher to get detailed information

concerning the respondent's perspectives and experiences. The in-depth interview guide for this study was divided into five (5) sections which are discussed below:

3.14.1. Section A: Demographic information

Section A of the in-depth interview guide was designed to find out the personal profiles of the participants such as, gender, work experience, educational qualifications, and professional qualifications. This information was helpful in understanding the respondent's background and level of Project Management experience. Knowing this information provided the researcher with insight into the research objectives.

3.14.2. Section B: Current Project Management practices in the EPWP

The questions in Section B were intended to find out how the Msunduzi EPWP project was being managed. The researcher sought to find out the processes in place to ensure that the project delivers at the expected level. Authors such as Phillips, (2004); and McCord, (2009) have negative views on how the EPWP projects are being monitored and evaluated, stating that these projects were fruitless expenditure. In this section the researcher sought to find out if poor Project Management was evident in the Msunduzi Project. Participants were asked to describe the control measures in place to ensure maximum output from the Msunduzi EPWP project. This question was asked to probe and identify how the Msunduzi EPWP project is currently being managed. Furthermore in this section, the respondents described the metrics used to check whether the project is on track or not. The questions were asked because they provided the essence of understanding the current Project Management practices in the Msunduzi EPWP project. This section assisted in answering research objective one (1).

3.14.3. Section C: Challenges affecting Project Management practices in the EPWP

This section required respondents to answer questions intended to find out what the challenges affecting Project Management practices were. Authors such as PMI, (2013); Rwelamila & Purushottam, (2012); Lester, (2014); and Samson, (2015), identified several challenges affecting Project Management practices in the EPWP projects and in other projects. Firstly, participants were asked if there were any challenges affecting the implementation of Project Management practices in the Msunduzi EPWP clearing project. This question was asked to see if the respondents were aware of any challenges, or if these challenges even existed.

With prior knowledge from literature regarding these challenges in the EPWP project, respondents were requested to describe the different challenges affecting the implementation of Project Management practices in the Msunduzi EPWP clearing project. Moreover, the researcher required the respondent's to discuss the root causes of these challenges. The responses to these questions allowed the researcher to develop an effective conceptual framework for this project. These questions were asked mainly because research objective two (2) focussed on identifying the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP clearing project.

3.14.4. Section D: Strategies applied to mitigate the challenges affecting the implementation of Project Management

Section D of the in-depth interview guide was pursued to find out what strategies have been applied to mitigate current and foreseeable Project Management challenges. Questions such as:

> 'Please explain the strategies that have been implemented to mitigate the challenges affecting effective Project Management in the Msunduzi EPWP clearing project'

were asked. Finally, participants were asked what could be done to ensure that the Msunduzi EPWP clearing project is effectively managed.

3.14.5. Section E: Devise an effective Project Management framework for the EPWP

The concluding section of the in-depth interview guide was designed to develop an effective Project Management framework for the EPWP projects. Respondents were asked to discuss ways in which they think the Msunduzi project could better be managed. The respondents were given an opportunity to suggest any other framework that would be better suited for the EPWP projects. Finally, the researcher enlightened the respondents about the PRINCE2 methodology which is frequently used in projects and is the theoretical framework for this study. Authors such as CGIAR, (2017); and Hedeman, (2006) have highly recommended this framework due to its success rate in projects. Lastly, the respondents were asked to discuss the proposed framework. Questions presented in the in-depth interview guide were based on fulfilling the research objectives.

3.15. DATA ANALYSIS

According to Rubin & Bellamy (2012), data analysis is the art of inspecting unfiltered data and being able to draw conclusions from the raw data. Flick (2013) asserted that the analysis of qualitative data can have numerous purposes; the first purpose is to describe a

phenomenon in greater detail. The second purpose is to identify the differences and to look for explanations for these differences. The final purpose may be to develop a theory of the phenomenon from the analysis of data collected (Flick, 2013). Flick (2013) further highlighted that after data has been retrieved from the interviews it should be examined. Boeije (2010) stated that executing qualitative data analysis involves disassembling, segmenting and reconstructing data to form significant results in order to draw a conclusion. Boeije (2010) stated that the research questions and research objectives should be used as a guide when collecting information and logically reviewing it. This process requires taking raw data and interpreting it. Boejie (2010) further stated that there are four aspects of data analysis that need to be noted such as data preparation, data storage, transcribing recorded interviews and cleaning the data.

3.15.1. Data preparation

According to Boeije (2010) it is vital for raw data to be managed so that they can be arranged in a way that can be evaluated. Data that is generated from qualitative research is generally text-based, unlike quantitative research which comprises numeric values. Qualitative research data management encompasses three significant functions, that are data storage, transcribing auditory data, and cleaning the data (Boeije, 2010).

3.15.2. Data storage

According to Boeije (2010) storage of data is important; it considers the principle requirements necessary when conducting field research. It is necessary for hard copies of composed data to be documented, and kept safe in a file as well as electronically with password protection (Boeije, 2010). For this study, data was secured during research, soft copies were kept in a password protected laptop and hardcopies were locked in the researcher supervisor's office.

3.15.3. Transcribing recorded interviews

After interviews are conducted, transcripts have to be made. Transcripts are to be checked against recorded audio to check accurateness (Oliver, Serovich & Mason 2005). Checking accurateness is considered fundamental. Records containing linguistic parts, such as laughter, should be removed from transcripts. Transcribing recorded interviews focusses more on content and less on expression (Oliver *et al*., 2005).

3.15.4. Cleaning the data

All material identifying the participants and the organisation should be omitted. The data concerning the case organisation will be replaced by particular coding, for example Company 1 or C 1. It is important to replace the original case organisation with coding. The cleaning of data would be reviewed by a peer at a later stage of data analysis to analyse the constancy of coding (Boeije 2010). According to Clapper (2014) there are two types of data analysis used in qualitative data collection; content and thematic analysis. Content analysis and thematic analysis can be one and the same depending on the number of steps used and the type of qualitative research design.

Content analysis: may be more related to initial analysis and coding process where similar codes are analysed (Clapper, 2014). Given (2008) stated that content analysis is conducted by detecting themes and patterns within data. Conversely, qualitative content analysis focusses on representing truth by discovering meaning from word-based data (Silverman, 2011).

Thematic analysis: takes place after the coding process. Similar codes are aggregated to form major concepts or themes (Clapper, 2014). According to Hilal and Albri (2013) qualitative data analysis includes identifying the relationship between categories and themes of data in order to increase the understanding of the phenomenon being examined. In this study, thematic analysis will be adopted. Thematic analysis involves sorting, classifying and categorising each section of data and arranging the themes that reflect the key concerns of respondents (Maiga, 2017). According to Boejie (2010) thematic analysis allows the researcher methodically to detect any variance that appears in the empirical data. Therefore, the aim is to disclose imperative processes, concepts, and expert experiences between case organisations. Thematic analysis was adopted for this study. It assisted the researcher in establishing themes that contributed to answering this study's research objectives. Due to time constraints the researcher could not acquaint herself with the use of NViVo. However not using NViVo did not affect the quality of the analysis or the dissertation as a whole. The researcher was able to do the thematic analysis successfully without the aid of NViVo.

3.16. DATA QUALITY CONTROL

3.16.1. Reliability

Reliability refers to the degree to which the data collection techniques will produce consistent and truthful findings (Saunders, Lewis & Thornhill, 2012). According to Singh (2014) reliability and validity promote transparency in research, and this reduces the chances of

researcher biasness. Reliability focuses on establishing whether or not the outcomes of a study are repeatable. It also relates to whether or not the methods that were developed for concepts are unswerving (Bryman & Bell, 2007). Threats that can hinder reliability of study results are: respondent or researcher errors and respondent or researcher biasness (Saunders *et al*., 2009). Similarly Wilson (2010) stated that reliability issues are closely linked with the researcher having a subjectivity approach to the study which could manipulate the research findings and compromises the truthfulness of the entire study.

In quantitative research, reliability is the constancy, steadiness and repeatability of results. Results are considered reliable if constancy is attained in undistinguishable situations (Twycross & Shields, 2004). In this study, reliability was achieved by conducting a pilot study which involved pre-testing the questions on two Project Managers (from other the EPWP projects), who were not part of this study's sample. This pilot study was included in the data analysis chapter as a pilot study. The questions for the interviews were objective with the motive of getting the most accurate and just research findings.

3.16.2. Validity

Leedy & Ormrod (2010:52) stated that "the validity of a research instrument is if the research instrument measures what it is supposed to measure accordingly". Similarly, McNiff (2014) stated that validity denotes the accurateness of an assessment instrument; for example, whether it measures what it is supposed to measure or not. It is the extent to which the research findings are accurate and truthful. According to Pallant (2011), validity involves getting the research instrument to measure the concepts being studied properly. This is regarded as an essential requirement for research. According to Forza (2002) if a study does not assess reliability and validity, it will be challenging to identify and quantify errors on theoretical relationships being analysed. Validity in research has two categories, content and construct validity (Forza, 2002).

Content validity*:* Content validity measures the extent to which the measuring tools adequately cover the objectives of the study (Cooper & Schindler, 2003; Sekaran & Bougie, 2016). To ensure content validity in this study, the researcher conducted a thorough literature review in order to gain an in-depth understanding of the subject matter. Hence, the research instrument was developed based on the information gathered from the literature.

***Construct validity*:** An instrument has construct validity if it measures the constructs that it is intended to measure. In other words, the instrument should measure the variable which it is intended to measure (Welman *et al.*, 2007). In this regard, the in-depth interview guide was subjected to pre-testing (pilot study) in order to evaluate whether or not it encompassed most of the variables that are required to address the research objectives. The piloting of the in-depth interview guide is discussed in the following section.

According to Mohajan (2018) there are four ways to warrant validity of a research;

- Time frame for the study needs to be appropriate;
- The methodology chosen has to be tailored for the research, considering the characteristics of the study;
- The sample method chosen for the study has to be the most suitable; and
- The respondents must be truthful in answering questions and should not be pressured in any way (Mohajan, 2018).

Applying reliability and validity to this study has enhanced the quality of the content.

3.16.3. Piloting of the in-depth interview questions

According to Leedy & Ormrod (2010) the data collection instrument needs to be pretested on a few people to test if there are any flaws or if the data collection instrument is well understood by the participants. After pretesting it, it is often necessary to make amendments and to refine the questions. According to Saunders, Lewis, & Thornhill (2003) the pretesting process is completed prior to the data collection process. The pilot study assists in identifying any weaknesses in the research instrument whilst validating it (Sekaran & Bougie, 2016). An in-depth interview guide was created for this study. A pilot test was administered to two individuals who are working for the EPWP, but who were not part of this study sample. This was done to observe the design and viability of the planned research instrument. The outcome of the pilot test was used to analyse the quality of the questions in addressing the research questions (Henn *et al.*, 2009). According to Henn *et al.*, (2009) participants who have participated in the pilot study will be included in the data analysis; this is done to evade testing defects, which could influence the validity of the study.

3.16.4. Trustworthiness

According to Gunawan (2015) using qualitative research with detailed transcripts and audio recordings are some of the ways to ensure thoroughness and trustworthiness. The researcher

is employed by the Department of Economic Development, Tourism and Environmental Affairs under the Invasive Alien Species Programme (IASP) which is the organisation this study is investigating. For quality content, it is imperative that the researcher applies utmost trustworthiness. The researcher warranted trustworthiness by ensuring that all information gathered was recorded and analysed without any personal influences. There were no forced or artificial findings. Conformability was applied as the findings were grounded on data presented to the researcher. The researcher took personal notes which recorded the impressions and resolutions taken during the data collection process.

3.16.5. Credibility

Thomas (2010) defined credibility in qualitative research as the degree to which the data analysis is authentic and trustworthy. Credibility is similar to validity in a sense that the findings of the research match reality. It's been said that qualitative research has the prospect of representing multiple realities (Thomas, 2010). It is up to the reader to analyse the credibility of the study based on the readers understanding of the study. Some researchers have stated that there is no single reality, instead the reader creates their own reality (Thomas, 2010) According to Thomas & Magilvy (2011), to achieve credibility, the researcher must check for the authenticity of the data. Credibility can be ensured by quoting the participants responses verbatim (Thomas & Magilvy, 2011). Therefore, the researcher analysed the transcribed text after the interview process and assessed the similarity within the information that was collected. Furthermore, the researcher assessed the themes throughout the study that identified the challenges affecting the implementation of Project Management practices in the EPWP.

3.17. ETHICAL CONSIDERATIONS

In Creswell's (2003) study, it was highlighted that it is the responsibility of the researcher to assure that the values, rights, and requests of the participants are met. Miles & Huberman (1994) created a list of several issues that the researcher ought to consider when doing data analysis. Miles & Huberman (1994) reiterated the importance of taking the following issues into consideration before, during and after conducting research. Below is the list of issues to consider:

1. Informed consent (ensuring that the participants are aware of the nature of the study and how they are involved). According to Zikmund, Babin, Carr & Griffin (2012) a

consent form is a signed agreement by the respondent to partake in the study, acknowledging what is required from them;

2. Risk and harm (ensuring that the participants are not implicated in any way due to the research conducted);

3. Trust and honesty (ensuring that the research conducted is true and impartial);

4. Confidentiality, discretion, and anonymity (ensuring that the study does not impose too much on group behaviour); and

5. Advocacy and intervention (the researcher should know what to do should a participant exhibit unsafe or unlawful behaviour)
(Miles & Huberman, 1994).

Silverman (2011) argued that cultural compassion is crucial and should be applied in the communication between the researcher and the participant throughout the interview process. In this study, the researcher explained to the participants that they are at liberty to withdraw from their voluntary participation at any time, should they desire. A brief meeting was held with the participants, the aim of which was to inform the participants of the nature of the study and to reassure the participants that they would remain anonymous throughout the study. The respondents were alerted to the fact that the interview content would not implicate them in any way, but would be used for academic purposes only and would remain confidential. The participants were informed about the objectives of the study and that they will be able to ask questions should they need clarity on a particular issue. This allowed the participants to express their opinions freely and truthfully, aiding the researcher to get accurate findings regarding the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP clearing project. An informed consent form was signed by all the participants prior to the interviews, reflecting an agreement to partake in this study.

3.18. SUMMARY

Research methodology is the most important part of a researchers study as it entails all the details of how the researcher gathered and analysed collected data for the study. This chapter provided the validations for the different methods and techniques applied; it further provided

justifications for the possible use of these methods and techniques. The main issues were graphically represented in the well-known research onion, which included all the research method elements namely; research design, research population, research paradigms, data analysis and data collection techniques. The research instrument as well as the in-depth interview guide was discussed. Data quality control was also discussed focussing on reliability, validity, trustworthiness and credibility. This chapter concluded by discussing how ethical considerations were incorporated into this study. The following chapter will discuss the findings of this study.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION OF FINDINGS

4.1. INTRODUCTION

In this Chapter, the researcher will present the data analysis, interpretation and review. The chapter begins by discussing the response rates of this study and discusses the findings gathered from the interviews. These findings will be linked to the theoretical framework (PRINCE2) as well as the literature gathered in Chapter two. Chapter four is divided into six sections. Section A contains the personal information of respondents such as their gender, educational qualifications, position in the organisation, years of experience, and how many projects they oversee. Section B discusses data on the current Project Management practices in the EPWP. Section C presents the challenges affecting Project Management practices in the EPWP. Section D discusses the strategies applied to mitigate the challenges affecting the implementation of Project Management. This last section which is Section E devises a Project Management framework for EPWP which is anticipated to be effective. The summary of the research findings will also be presented in this chapter. The qualitative data is presented with information from in-depth interviews discussed in sections B, C, D, and E. The empirical findings are presented and analysed according to the four research objectives of the study. Thematic analysis is used to analyse the data. This information is presented in graphs and pie charts.

4.2. RESPONSE RATE

The sample size for the study was thirty-one people. The thirty-one people are all individuals involved in the Project Management of the Msunduzi EPWP Project, and all participated. Therefore the response rate was 100%. The sample size included one Project Manager, one landowner, five IASP managers, ten EPWP board members, and fourteen contractors. All the respondents were involved in the in-depth interviews. It was a tedious and lengthily process attempting to locate all the members of the sample population, but the researcher was able to conduct all intended interviews. It should be noted that the researcher had initially intended to do all interviews face-to-face, however some of the respondents were travelling frequently and were unavailable to participate in such interviews, but kindly availed themselves for

telephonic in-depth interviews. Eleven of the thirty-one interviews (35%) were conducted telephonically.

4.3. DESCRIPTIVE STATISTICS

This section is the general background information of the respondents who took part in the study. Thirty-one individuals who are involved in the Project Management of the Msunduzi EPWP project were interviewed in order to collate background information on the following: their gender, educational qualification, position in the organisation, years of experience, and how many projects they oversaw. The breakdown of the category of respondents who took part in this study are presented in Figure 4.1.

Category of respondents

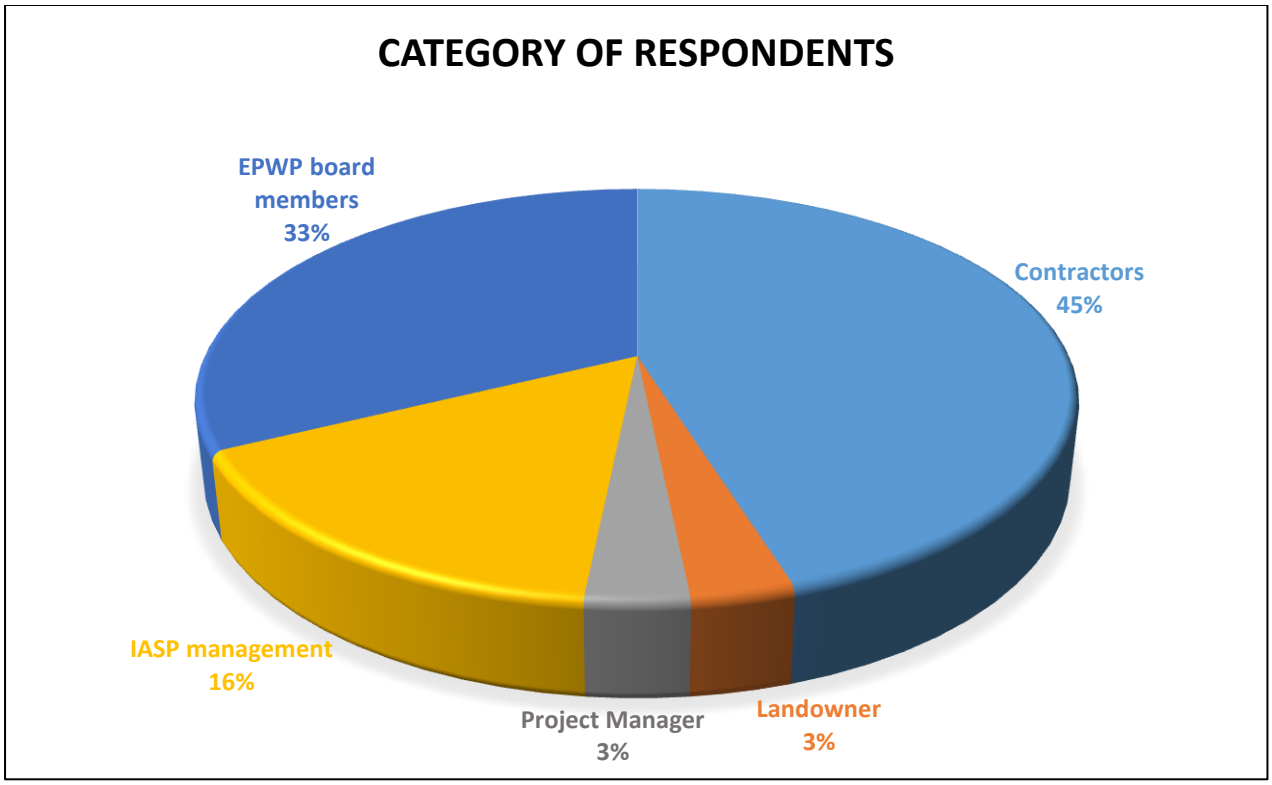


Figure 4. 1: Category of respondents

Figure 4.1 illustrates the breakdown of research participants in their five categories. There are five different role players in the Project Management of the Msunduzi EPWP project. All these individuals play a pivotal role in ensuring that the project is successful. These categories filter downwards from top management to lower management (contractors). The majority of respondents were contractors, and they represent (45%) of the study sample. The contractors are responsible for the daily supervision of their teams. Contractors work closely

with the project workers. Project workers are the ones who are on the ground, doing the operational work. Contractors have a great influence on the productivity of the team.

The EPWP board members represent (33%) of this study's sample. They are top management and make all the strategic decisions concerning the EPW programme. The board members govern the running of the entire programme, including the policies, budget and integration of different stakeholders. The IASP Management, represents (16%) of this study's sample. This category reports to the EPWP board members. The IASP Management consists of two Area Managers, two Deputy Managers and one Senior Manager. They are responsible for the implementation of the EPWP projects in the IASP. They consolidate all the figures for the work done, the people employed, and person days achieved by the EPWP. According to Palmer (2016) the role and participation of the top management is critical in determining a project's success. All stakeholders should participate during the planning stage and should be aware of which direction the project is taking.

The Project Manager represents (3%) of this study's sample. The role of the Project Manager is the most important one in the EPWP programme. According to the PMI (2013), the Project Manager is accountable for providing a particular end result, within an agreed time, cost and quality standard. In the Msunduzi EPWP project there is one landowner who presents (3%) of this study's sample. The Project Manager is responsible for checking the area worked and for signing the invoice for payment once operations are complete.

Gender of respondents

For the researcher to establish the personal information regarding the gender of respondents interviewed, the respondents were requested to tick the appropriate gender box. Figure 4.2 below displays the gender of respondents.

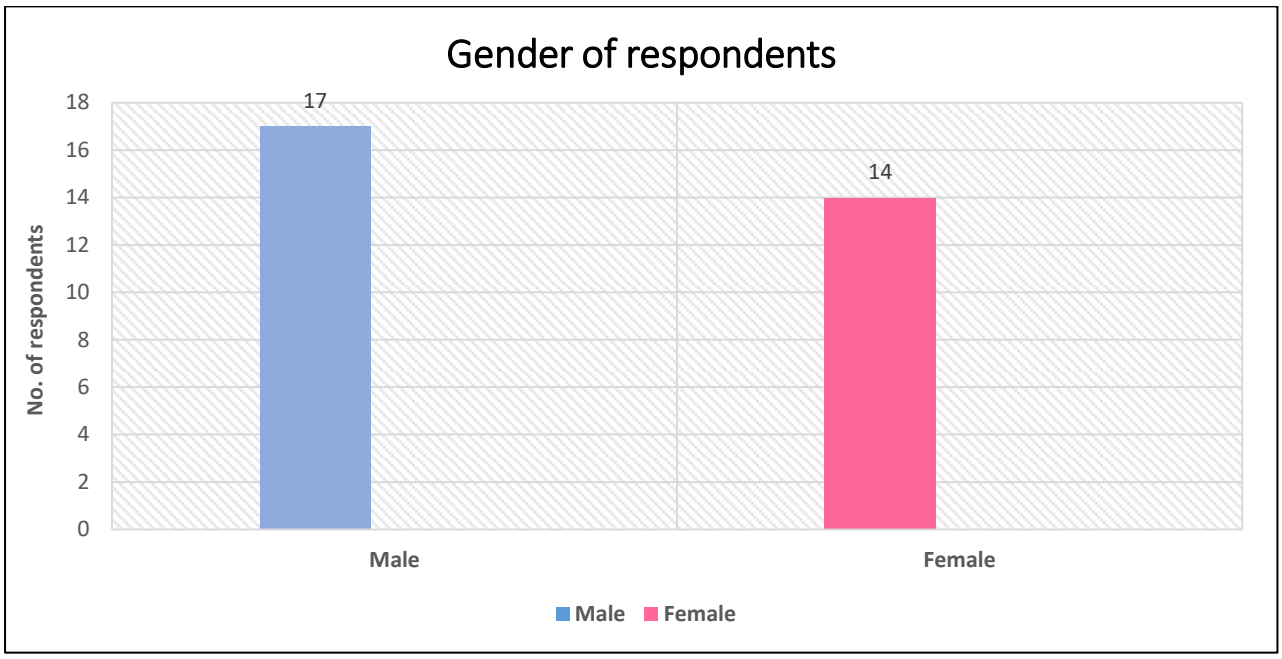


Figure 4. 2: Gender of respondents

Displayed on Figure 4.2 is the representation of the respondent's gender. This study encompasses seventeen males representing (54.8%) of the study sample and fourteen females which represent (45.1%) of the study sample. There is a small gender difference in the gender of respondents as there are more males in the Project Management of the Msunduzi EPWP project.

Years involved in EPWP

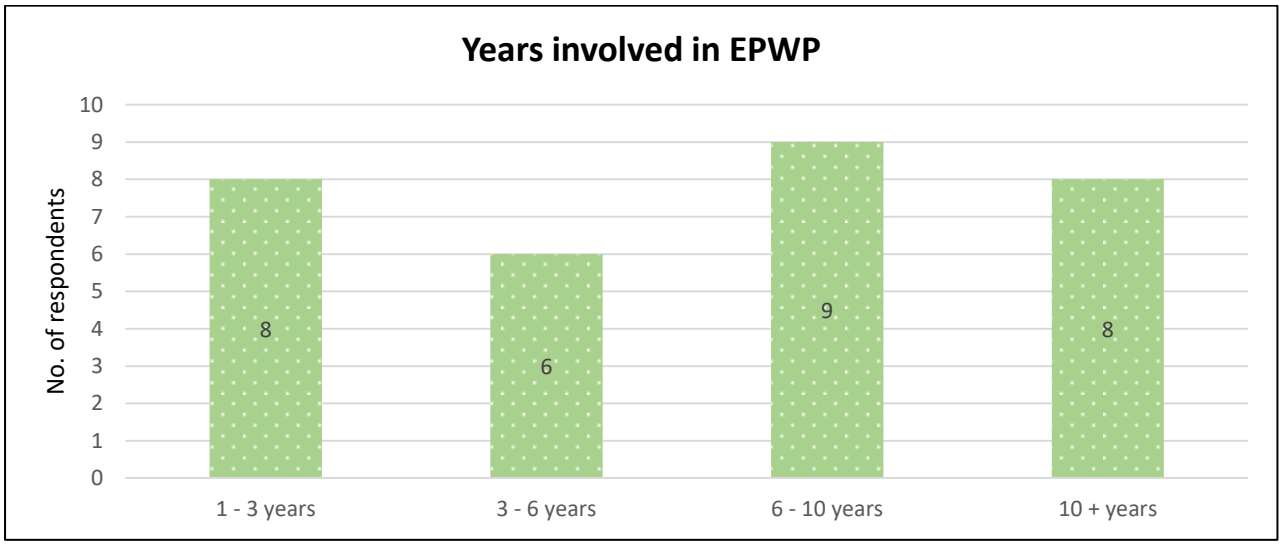


Figure 4. 3: Years involved in EPWP

As indicated in Figure 4.3, the majority of people involved in the Project Management of Msunduzi EPWP project (nine respondents), indicated that they had been involved with the EPW Programme for 6-10 years, representing (29%) of the study sample. Eight respondents had operated in the EPWP for 1-3 years representing (25.8%) of the study sample. Another (25.8%) represented eight respondents that had been involved in the EPWP for ten years and more. Finally, six respondents said they have 3-6 years' experience working within the EPWP, representing (19.3%) of the study sample. These figures show that the majority of the respondents had six and more years of experience within the EPWP, whilst eight out of thirty-one respondents were fairly new in the EPWP. According to Glowasz (2014) experience is vital as it provides you with soft skills necessary such as networking, assertiveness, and leadership, organisation politics and communication skills. These skills are more relevant than theory taught in class (Glowasz, 2014).

Highest qualification obtained

According to Varad (2018) in today's society education is important. A person with the smallest amount of knowledge puts themselves in a position where they can handle situations better than someone without knowledge. In this regard, the respondents were requested to tick the box with their highest qualification. The difference in the educational background is vast amongst the five categories; the contractors which are in the lower management have basic education levels compared to the top management which possess postgraduate qualifications. Figure 4.4 displays the educational qualification of the thirty-one respondents.

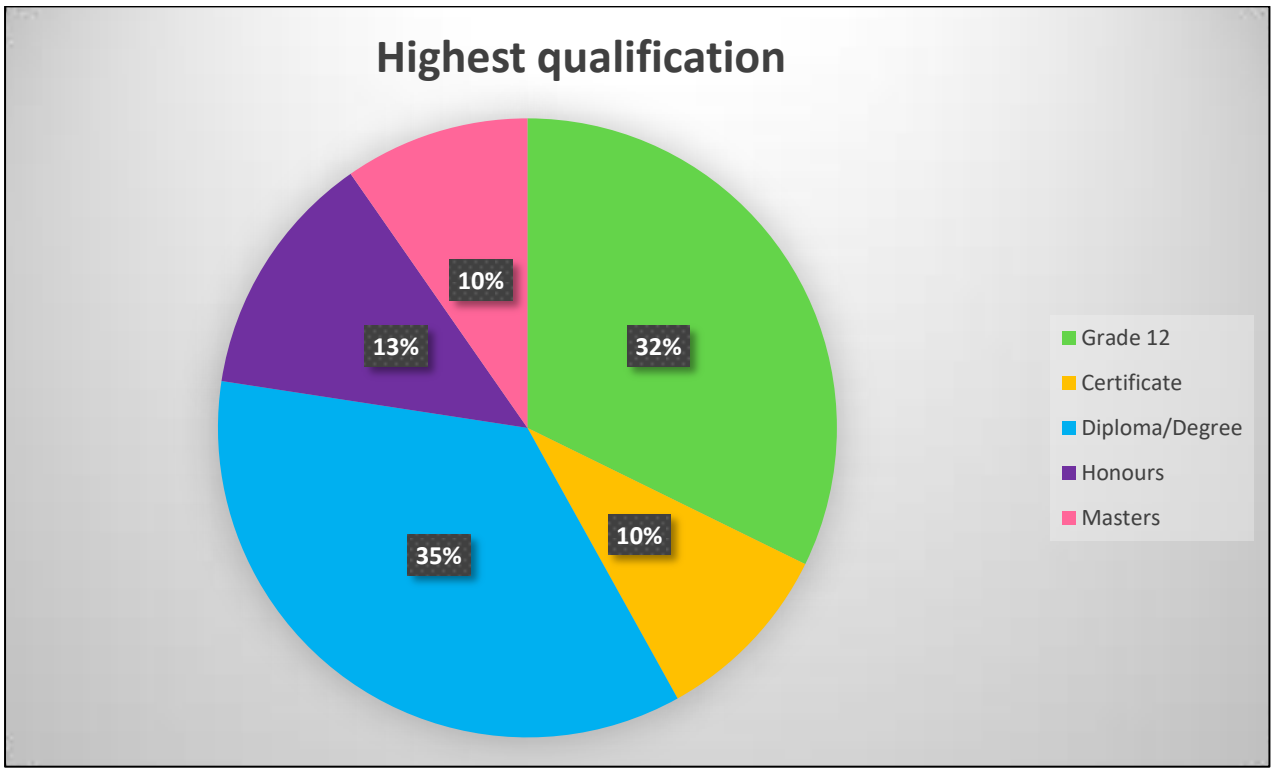


Figure 4. 4: Highest qualification

Figure 4.4 shows that the majority of the respondents have diplomas or degrees which represents (35%) of the study sample. It is noted that (32%) of the respondents obtained their Grade 12 qualification and had not studied any further. Respondent 9 highlighted that:

> *"I was raised by a single parent, my mother couldn't afford for me to go to University, and I had to make means [earn a living] after Grade 12 to support my family".*

A total of (13%) of the respondents have an honours degree, whilst (10%) of the respondents obtained a certificate. The certificates obtained by the respondents vary from human resources, public relations to administration. Respondent 6 stated that:

> *"After matric, I studied further and obtained a certificate in human resources (HR). I have been applying for a job in HR for over two years but haven't been lucky. I was happy when I got this job to be a contractor because I could financially support myself and my family".*

The last (10%) of the respondents have attained their Master's degrees. It was found that most of the respondents with undergraduate and postgraduate diplomas/degrees do not have a Project Management qualification, but do have a qualification relating to Project Management such as Environmental Management and Business Administration.

Project Management certificate

According to Glowasz (2014) a Project Management certificate is important as it provides you with basic tools to execute a Project Management role. In this regard, respondents were asked if they had obtained any Project Management certificate. Figure 4.5 displays the number of people that have obtained any sort of Project Management certificate from any of the different institutions.

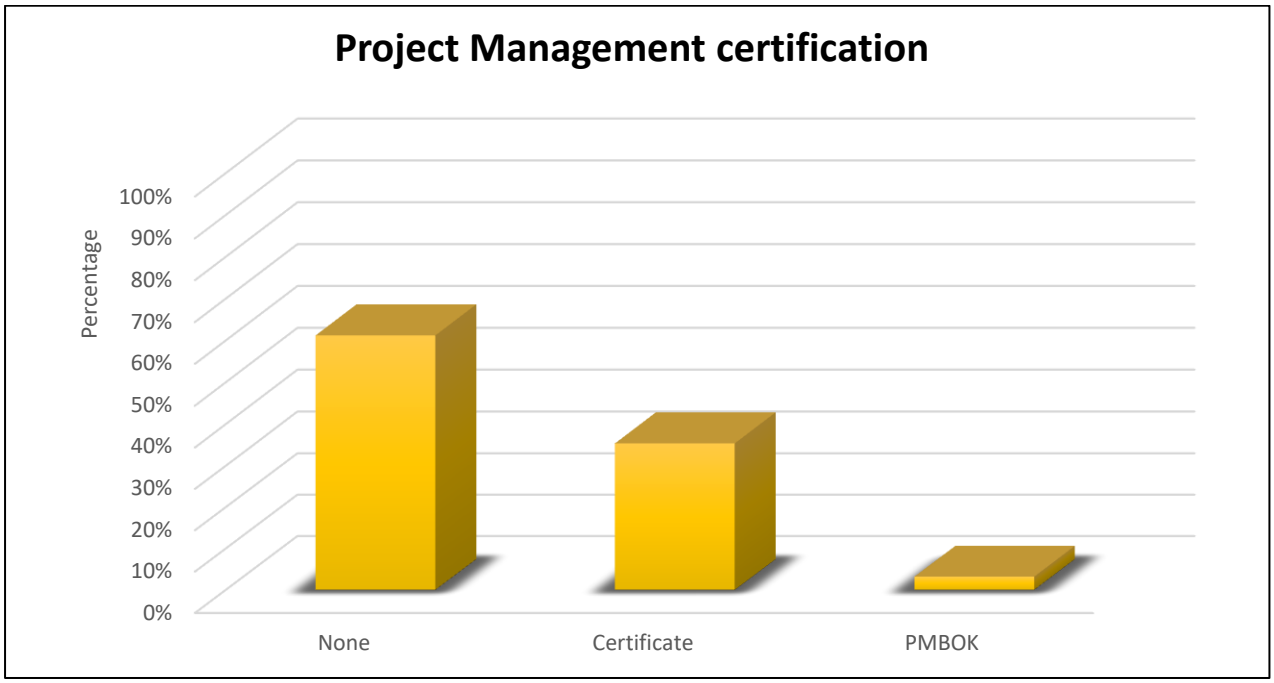


Figure 4. 5: Project Management certification

The majority of respondents (61.2%) do not possess any Project Management certificate. They had not undergone any training that develops their Project Management skills. Most of these respondents stated that they would love to attend training and obtain certification as it would help them understand and love the job they are doing even more. Respondent 14 stated that:

"I have always wanted to do this training, however it has never been offered by the Department. I have requested it for several years now. I know that it would help me in my current job role".

Other respondents representing (35.4%) of the target population stated that they had obtained a Project Management certificate. These certificates were obtained from several different institutions. Respondent 15 stated that:

"I did a 12 month advance Project Management course at the University of South Africa. I passed and received my certificate in 2015. Doing this course was the best decision I made".

One respondent representing (3%) of this study's sample size stated that they had undertaken a PMBOK training and received a certificate of competency. Figure 4.5 indicated that the majority of the people working within the Project Management of the Msunduzi EPWP project have not capacitated themselves in the field they are in. The majority do not possess any academic background in Project Management.

Projects overseen per respondents

Below is an overview how many projects are overseen per category.

Table 4. 1. Projects overseen

Designation	Projects or teams overseen per respondent
Contractor	1 team
Landowner	14 team
Project Manager	3 projects
IASP management (per manager)	20+ projects
EPWP board	0

As presented in Table 4.1, the individuals involved in the Project Management of Msunduzi EPWP project each oversee different number of projects or teams. The Msunduzi EPWP project comprises of fourteen teams, each team supervised by a contractor. This is illustrated by Respondent 2:

"I oversee one team in the Msunduzi EPWP project which has [of] thirteen general workers".

The Msunduzi EPWP project has one landowner who oversees the entire project. The landowner is responsible for checking the areas cleared before the contractors invoice for payment. The landowner gives the stamp of approval by signing the invoice. Without the landowner's signature, the teams cannot invoice for payment. The Msunduzi EPWP Project Manager manages three projects including the Msunduzi EPWP project. The total number of teams in all three projects managed by the Project Manager is twenty-four. All these teams need to be monitored closely to ensure compliance and efficiency. Respondent 16 records that:

"I am currently managing twenty-four teams. I am not coping. These teams are too many for one person to manage. Having so many teams to manage creates inefficiency which is beyond my power".

The respondent further pointed out that the IASP manual states that each Project Manager should manage a maximum of eight teams in order to meet targets. Eight teams is the considered benchmark of what one person is capable of managing, however that is not the case.

The IASP management do not manage the day to day operations of the projects but oversee the reporting of the work done. They are responsible for the statistics reported by the Project Manager, procurement of resources, strategic planning and decision-making. IASP is divided into three regions, North, Central and South. Each manager in their different levels is responsible for managing a specific region. They each oversee twenty or more projects. The EPWP board members do not oversee any project operations, they are on a strategic level where they manage the entire EPWP.

4.4 RESEARCH OBJECTIVE ONE: TO INVESTIGATE CURRENT PROJECT MANAGEMENT PRACTICES IN THE EPWP

The aim of research objective one is to investigate how the EPW Programme is currently operating as well as to assess the practices being implemented to monitor and control the programme. This research objective will assist identification of any implementation gaps

creating Project Management challenges. Data is presented in tables highlighting the themes that were identified as well as the frequency of responses. The findings from the interviews include the similarities, differences, and direct quotes from the respondents. Three questions were developed to answer this research objective.

4.4.1 Processes in place to ensure that the project delivers to expected level

In order to establish the current Project Management practices in the EPWP, respondents were asked to narrate on the processes in place to ensure that the project delivers to the expected level.

Table 4. 2. Project operations meeting set targets

Themes	Frequency of responses
EPWP policy	**8**
Daily supervision	**6**
Toolbox talk	**5**
Weekly M & E	**3**
Time management	**3**
IASP guild lines	**2**
Scope management	**2**
Pre and post site verification	**1**
Induction training	**1**

Based on the respondents feedback it can be noted that nine themes emerged from the responses received from thirty-one respondents. As illustrated in Table 4.2, the first category contains majority of participants (eight); who stated that the EPWP policy (Appendix A) is essential in ensuring that the project delivers to the expected level. Respondents expressed that the EPWP policy gives an overall picture of what the programme is about. Everyone involved in the programme is made aware of their role and responsibilities. Respondent 1 pointed out that:

> *"The EPWP policy has all the information you may need in managing an EPWP project, it is like a guild line. Project Managers should use this policy when*

conducting inducting training to the project workers before operations begin. It helps them have a clear understand of what they are employed to do".

Respondent 3 emphasised that:

"EPWP policy highlights the conditions of employment. It clearly stipulates it aims, objectives and expectations. All the people involved in the programme know the programme conditions as well as their roles and responsibilities".

Daily supervision emerged as a theme, with six respondents stating that the only way to achieve planned targets is for the workers to be continuously monitored and closely watched.

Respondent 2 expressed the view that:

"Project workers only work well under supervision, the minute you turn your back they stop working and take frequent lunches. Project workers will not fully operate the whole day in the absence of the supervisor/contractor".

Respondent 4 observed that:

"Without daily supervision, a lot of problems arise such as absenteeism, conflicts, laziness, leaving work at any time, incidents and demotivation. For work to progress smoothly, the contractor needs to oversee and be responsible. They should be there first to see if the project is falling behind schedule and know how to rectify arising challenges".

The third theme includes five participants who stated that the toolbox talk is the only way they could ensure that the project delivers to expected level. Respondent 5 stated that:

"The toolbox talk is a daily morning meeting which is held with the entire team, chaired by the contractor. Issues of urgency/challenges are discussed; people are given a platform to suggest new ideas or areas of concern. This talk encourages participation and unity amongst the project workers; it allows them to put greater effort in their work. Work is always on track".

The fourth theme which was identified by three respondents was weekly monitoring and evaluation by the Project Manager. The respondents stated that it is the responsibility of the Project Manager to ensure that the project is a success, therefore regular monitoring and evaluation is necessary.

Respondent 30 highlighted that:

> *"The Project Manager needs to constantly be infield regularly checking if work is being done correctly and checking quality standards. This assists in securing that the project delivers to expected targets. It is unfortunate that these checks are not always done as the Project Manager may not have transport to regularly visit sites for monitoring".*

Time management is the fifth theme which emerged. The respondents identified time management as being essential to accomplishing project delivery. They indicated that managing time allows the project leader to create and keep deadlines. Time on project activities in consciously monitored to increase productivity and effectiveness. This is amplified by Respondent 14 who indicated that:

> *"Poor time management leads to unsatisfactory results, eventually leading to project failure. A project cannot operate without having clear planned targets which acts as the guild line to what is expected of the project to produce".*

The sixth category which emerged with two respondents noted the IASP guild lines. These two respondents stated that the IASP guild lines were the most crucial factor in ensuring that projects deliver on set targets. It guild lines exactly how each person involved in the programme should work. Respondent 11 pointed out that:

> *"The IASP (guild line) [Guide lines]…" is more specific on operational procedures, how to work, where to work, when to work and why this kind of work is done. It highlights the quality standards that are expected of every project. Norms and standards are distinguished".*

Two respondents indicated that scope management was one of the Project Management practices in EPWP which ensure project delivery. Respondent 16 stated that:

"Pre- and post-site verifications are an essential process in ensuring that the project delivers. The Project Manager is supposed to check the site before and after work is completed to assess what was actually done. This verification assists in identifying if compliance was adhered to, monitors current and future risks as well as quality control".

One respondent considered induction training to be a practice used in ensuring that the project delivers expected targets. As Respondent 22 puts it:

"The induction training (gets)[provides] all project workers with knowledge of the work environment as well as the terms and conditions. It is an interaction between the Project Manager and project workers. Detailed knowledge of planned expectations is shared with the team. Everyone involved in the project is made aware of their duties. Project workers are given the opportunity to ask questions where clarity in needed".

It can be concluded from the responses that there are several Project Management practices in the EPWP. All the people involved in the Project Management of the EPWP projects are aware of the processes in place to ensuring project delivery. The concern would be if these practices are executed or not. Some respondents stated that they may be aware of the processes in place to ensuring the project delivers to expected level but are not applying those practices. Several respondents admitted that non-compliance to Project Management practices has been a major issue in the past years.

The majority of the respondents identified the EPWP policy as the binding element in ensuring that the project delivers to the expected level. According to Unit, (2004), there is an EPWP policy that governs the application of the EPWP operations, it is imperative for this policy to be adhered to. Only a few respondents from the study sample stated that induction training was vital in ensuring that the project delivers at the expected level. Lester, (2014) was in agreement with what the respondents stated when they asserted that project team members should be skilful and well trained to overcome technical challenges and must be able to perform duties and tasks assigned in a project. Their training should be optimal and should be conducted just before the project implementation starts (Lester, 2014). Lester (2014) stressed the importance of induction training as it prepares the workers for the year ahead.

In relation to the PRINCE2 theoretical framework, the majority of the processes identified in this study which ensure that the Msunduzi EPWP project delivers to the expected level, fall within the PRINCE2 processes. The PRINCE2 controlling process dictates how each individual stage should be controlled. It describes the daily management of the Project Manager, it stipulates the way in which work should be monitored and how progress should be reported to the project board, and it looks at methods through which certain project issues should be reported to the project board (CGIAR, 2017). According to the feedback from the respondents, two themes do not fall under the PRINCE2 framework but are very important, and are being implemented by the EPWP. These themes are policies and guide-lines.

4.4.2. Control measures in place to ensure maximum output from the project

In order to establish the control measures in place to ensure maximum output from the project, respondents were asked to declare the control processes they use to make sure that maximum output is achieved in the Msunduzi EPWP project.

Table 4. 3. Control measures for maximum output

Themes	Frequency of responses
Training	**13**
Site inspections	**8**
Meetings	**4**
Work Breakdown Structure	**4**
Team-building	**1**
Norms and standards	**1**

As presented in Table 4.3, six themes emerged from the in-depth interviews. The first theme was identified by the majority of respondents (thirteen); they stated that training was used as a control measure to ensure maximum output from the project. According to Respondent 21:

> *"The EPWP offers beneficiaries numerous trainings to develop their skill. The most important training is the induction training which is done (in) [at] the beginning of every financial year. For new project workers it lays the foundation of the programme, objectives and operational standards. For returning project workers it serves as a refresher course".*

Respondent 2 highlighted the importance of training in propelling maximum output by stating that:

> *"Training allows us to understanding our work more. It gives us confidence as we know exactly what we are doing. We are also able to assist new employees that are still waiting to be trained as we are more capacitated".*

The second theme was identified by eight participants who stated that site inspections were used as a control measure to ensure maximum output from the project. These site inspections include pre- and post-inspections conducted by the contractor and Project Manager before or after every contract had been undertaken.

Respondent 11 indicated that:

> *"Site inspections assist us as contractors to identify downfalls that we may have not seen. They also play a big role in improving the project workers satisfaction. When the Project Manager does not come to site, the project workers start complaining and get demotivated. The project workers always look forward to the feedback the Project Manager will give them in every visit, just so they can know they are doing a good job. When the Project Manager does not come to site for a long period I can see the productivity levels slowly drop".*

The third theme (four participants) suggested that meetings were an important control measure which ensured that the project was performing to the maximum. This was illustrated by Respondent 4 who pointed out that:

> *"There are [a]number of meeting[s] which are mandatory for project success. These meeting[s] make sure that communication is conveyed to the correct people at the correct time. The most important meeting is the Health and Safety meeting which is conducted after every contract. The Project Manager meets with the contractor, and Health and Safety representatives (two) to discuss health and safety issues such as risk, incidents, and accidents".*

Respondent 13 said that:

"Project Advisory meetings are very important in ensuring maximum output from the EPWP projects. It involves everyone involved in the implementation of the project, including the traditional authority representatives such as the Chief (Inkosi), induna, councillors, community development worker, policeman, and other stakeholders. These people are highly respected in the community and make sure that the project is in full operation. All project developments or downfalls are communicated to them, and the[y] take action when individuals need to be reprimanded. Unfortunately these meetings do not take place as often as they should and the project output is dampened by that".

The fourth theme includes four participants who stated a Work Breakdown Structure promotes maximum output from the project. This was elaborated on by Respondent 15 who stated that:

"*Project workers divide the duties amongst themselves, certain people will do certain activates to make sure that collectively everything is done on time".*

The fifth theme which emerged was team building. Respondent 14 stated that:

"*The team building exercises we have at the end of the financial year brings the team together and promote[s] unity. It has a great influence in project performance and maximum output".*

The last theme was identified as norms and standards. Respondent 16 pointed out that:

"Norms and standard[s] are used as the (guild line)[guide-line] to how many days a certain number of people can work to complete [a] task within [the] stipulated timeframe".

These findings show that there are several methods used in ensuring that the Msunduzi EPWP project produces maximum output. Some respondents stated that they are aware of the steps or methods to be taken to ensure maximum output, however, these measures were not implemented due to the reccurring challenges prohibiting them. These challenges are discussed in Section C. Majority of the respondents identified training as the mandatory

element in ensuring maximum output from the project. According Taylor & Woelfer (2012), there are many benefits an organisation gains in providing training to employees, such as, better control of resources and improved risk management. Taylor & Woelfer (2012) stated that trained employees have been rated as having higher job satisfaction rates and improved long-term career prospects.

Only a few respondents from this study sample indicated that team-building was an important factor in propelling the project towards maximum output. In agreement with this theme is Mthembu (2009) who noted that in South Africa most companies have adopted team building sessions which allows the project members to spent time together, bond, and form strong work relations. This is a good strategy to reduce conflict within the work environment as it tends to impact positively on Project Management (Mthembu, 2009). In relation to the PRINCE2 theoretical framework all the processes identified which ensure that the Msunduzi EPWP project produces maximum output, are to be found within the PRINCE2 principles. This means that the themes identified by the respondents are themes that can be found in the PRINCE2.

4.4.3. Metrics used to track project performance

In order to establish the matrix used to track project performance, the respondents were asked to explain how they track the performance of the project.

Table 4. 4. Metrics used to track project performance

Themes	Frequency of responses
Annual Plan of Operations	**22**
Not sure, it's the Project Managers responsibility	**8**

As presented in Table 4.4, two themes were identified regarding the metrics used to track project performance. A majority of the respondents (twenty-two) stated that they regularly track the performance of the project by checking the figures on the Annual Plan of Operations (APO). The APO is a one year period management plan; it is presented in a tabular form with specific activities. Each month the Project Manager reports the projects performance on the APO. The APO keeps track of the planned figures, and compares these with the actual figures. If the project is under-performing, the APO will identify in which

months the project fell short. The majority of the respondents pointed out that this is the best way to track project performance on a monthly basis. Respondent 16 stated that:

> *"APO is a project guide. All the plans are done in the beginning of the year and presented on the APO. The spread sheet is populated monthly, each month you can compare how you performed against your planned figures. The APO allows you to compare performance monthly or quarterly".*

Respondent 18 highlighted that:

> *"The APO is the most important metric(s) used to track project progress. If you've planned to use R100 000 in March and at the end of March you spend R 120 000, the APO indicates on the budget column that you've overspent by R20 000".*

As illustrated by Respondent 19:

> *"The APO is easy (and) to populate, it is the most vital reporting tool. All managers in IASP use it to do their own reports. The APO allows you to compare the projects performance from three years ago[up] to now. Under- or over- expenditure is identified immediately and can be rectified the following month".*

The second theme was identified by eight respondents, which represents (25.8%) of the study sample. These respondents stated that they were not sure which metrics had been used to monitor or track project performance. They believe that it is the duty of the Project Manager to make sure that the project is meeting targets. Respondent 2 stated that:

> *"We all play our individual roles in the project. Project workers deal with the operations (groundwork) and the Project Manager is responsible for making sure the project performs, the Project Manager submits the reports stating the project's status".*

Respondent 9 stated that:

> *"It is the Project Managers responsibility to track the project, so I wouldn't know which metrics they use".*

These findings show that over 80% of the study sample state that the metrics they are using is the APO. The APO is considered the most effective in tracking the projects performance. Leaving only a few respondents who were unaware which metrics the Project Manager uses to track the progress of the project. The majority of the respondents identified that they use the APO to track the project performance. This theme agrees with previous studies which confirmed that the APO (business plan) is essential for all projects in tracking their progress. Kwak *et al*. (2012) indicated that the Project Manager makes sure that the project workers produce the planned deliverables indicated in the Annual Plan of Operations (APO). The APO is used to track if the project has delivered on what it had set out to do in initial planning (Kwak *et al*., 2012).

In relation to the PRINCE2 theoretical framework, the APO is mentioned as a necessary practice in the PRINCE2 processes, principles and themes. This means that the APO which was identified by the respondents can be found as an element promoting project success in the PRINCE2 framework.

4.5. RESEARCH OBJECTIVE TWO: TO INVESTIGATE THE CHALLENGES AFFECTING PROJECT MANAGEMENT PRACTICES IN & EPWP

The aim of research objective two is to identify the challenges that are hindering the Msunduzi EPWP project. Previous studies have identified problems that EPWP as a programme if facing. This research objective will assist identify what these challenges are and where they are derived from so that recommendations can be done accordingly. Data are presented in tables highlighting the themes that were identified as well as the frequency of responses. The findings from the interviews include the similarities, differences, and direct quotes from the respondents. For this research objective four questions were developed to answer this objective.

4.5.1. Challenges affecting the implementation of Project Management practices in the Msunduzi EPWP project

In order to establish the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP project, respondents were asked to describe the challenges they have encountered with this programme. Numerous challenges were identified which indicate that there is poor Project Management in the EPWP. As stated by the respondents,

these challenges are not a new phenomenon; some of the challenges have existed since the project was implemented.

Table 4. 5. Challenges affecting the implementation of Project Management

Themes	Frequency of responses
Lack of budget	**8**
Lack of resources	**6**
Late start of work	**4**
Too many contractors	**3**
Late payment of work done	**3**
Political influences	**2**
Untrained workers	**1**
High turnover	**1**
Change of leadership	**1**
Under reporting	**1**
Ghost employees	**1**

Based on the respondent's feedback, Table 4.5 presents the several challenges affecting the implementation of Project Management practices in Msunduzi EPWP project. Eleven themes emerged; the first theme consists of the majority of the study sample, with eight respondents. These respondents expressed the view that the lack of budget was the prominent challenge in the Msunduzi EPWP project. As illustrated in the words of Respondent 9:

> *"Budget cuts are a huge problem, over the years budget awarded has become smaller and smaller yet there is so much work. Last financial year this project worked for 15 days in the entire year. This programme is failing to meet its objectives".*

Respondent 12 amplified that:

> *"EPWP has two main purposes, to alleviate poverty and to protect the environment by removing the alien species which are an environmental hazard. However, EPWP is failing at doing both these objectives. This project is fruitless, the budget is so small, and close to no work is done every year. They might as well close it down".*

Similarly, Respondent 11 shared that:

> *"Lack of budget opens the door too many other challenges such as lack of resources, lack of training, and lack of project awareness. The necessary processes the project should go through such as the registration of COIDA or UIF is not adhered to as the project operations are short term".*

The second theme was proposed by six respondents. These respondents maintain that the lack of resources is the biggest challenge affecting the implementation of Project Management practices. This is exemplified in Respondent 20:

> *"Year after year, the Department is failing us. We have tried to procure resources for all our teams but have not been successful in doing so. I am ashamed to say that this is the third consecutive year where all our teams are working without PPE. We haven't provided them with the tools they need to execute their jobs properly".*

Respondent 22 stated that:

> *"This team is not branded; they are not identifiable with the organisation they work for. This is challenge because they work in the community. Community members refuse for them to work in their properties because they do not know them. This is discouraging for the workers, very discouraging to them. People mock them because they claim they work for EPWP yet wear jeans and slops to work".*

As Respondents 23 puts it:

> *"Not providing people with sufficient resources increases the chances of incidents/accidents (infield)[in the field]. This issue is not new".*

The third theme includes four respondents who identified the late start of work operations as one of the challenges affecting the implementation of Project Management practices. This challenge emanates from slow Departmental administration processes. Respondent 6 pointed out that:

"A few years ago operations use to start in June, nowhere days we start working in October or November without enough time to complete budget. We then feel the pressure that we are behind schedule and have to work quickly in order to meet set targets".

The fourth theme includes three respondents who stated that having too many contractors in one project has contributed as a challenge affecting Project Management practices in the Msunduzi EPWP project. Respondent 24 asserted that:

"The number of contractors per projects varies. This project has too many contractors for one Project Manager to handle. The Project Manager is unable to visit all the sites and do other administrative duties on time. Secondly, the contractors are scattered all over Pietermaritzburg. There is no uniformity in their operations. The fruits of their labour are unrecognisable because they do not work one area and finish it, and then move onto the next one. Everyone is all over the show".

The fifth theme was identified by three respondents who expressed the view that late payments for work produced had become a major challenge for this project. People were working but not getting paid on time. Respondent 1 expressed this challenge and added that:

"The EPWP policy states that the contractor should be paid within thirty-five days. Most of the time we get paid later than that. We are then told that it was internal issues that caused the delay in payment. When people are not paid on time month after month they start becoming unproductive, I've seen that a lot in my team'.

Two respondents stated that political influences are a challenge in the implementation of Project Management practices. Respondent 4 highlighted that:

"...Leaders in communities have a certain way in which they want the project to operate which benefits them. They want to dictate where we work, who we recruit etc, they forget that we work with (guild lines)[Guide lines]..."

Political influences were also identified as a challenge affecting the implementation of Project Management practices. Respondent 26 stated that:

"Stakeholders tend to greatly influence these projects especially in the recruitment of contractors; they get their friend or family employed without going through the correct recruitment channels. These friends/family tend (to) not [to] respect their jobs and do as they please. Some do not pitch (at) up for work or supervise the project workers poorly".

Another respondent stated that the high turnover of project workers in this project is a challenge. A lot of expenses are consumed in training project workers. When a project worker leaves they leave with those skills, a new person is then employed that needs to be trained. Procuring the project accredited training is a process; therefore the team becomes exposed to working with untrained project workers which are a hazard to themselves and to the rest of the team. Respondent 30 identified the change of leadership as one of the challenge's affecting the implementation of Project Management:

"The frequent change of leadership affects the programme. Some managers are employed not knowing how [the]EPWP works; therefore poor decisions have been made. There has been evidence of poor governance, poor management and poor reporting from managers. The change in MECs negatively impacted the programme as a whole, where major administrative changes were implemented. These changes have negatively impacted EPWP operations".

Another respondent identified under-reporting as a challenge. This challenge stems from the late start of work and poor departmental administration. Respondent 31 pointed out that:

"Projects start work late, therefore [the] budget[ed item] i(n)[s] not completed on time, leading to under-reporting (in evident). The result of under-reporting is that National Treasury awards a small budget the following year, due to the inability to complete it the year before. Smaller budget creates more problems as the team's only work two months or less per annum. Also, the work completed is not reported on the EPWP system on time. There are not enough data capturers to do this job. Under-reporting is perceived as under preforming".

The last theme which emerged was the challenge of ghost workers. Respondent 17 indicated that:

"Ghost workers are people that are said to be working but do not exist. In the past [the] Msunduzi EPWP project has had ghost workers where a contractor claims to be working with twenty-nine project workers, only to find that they are working with twenty people and claiming money for the other workers that did not work. This is a fraudulent act done by contractors to steal money from the department. Due to this fraudulent act, work that should be done by twenty-nine people is done by twenty people. Therefore, operational quality standards are reduced to meet target and contracts are not being completed on time".

These findings show that there are a variety of challenges affecting the implementation of Project Management practices in the Msunduzi EPWP project. The respondents mentioned that the challenges this programme face are not new. Instead additional challenges continue to be added onto the list. The majority of the respondents indicated that the lack of budget was the most prevalent challenge. This challenge fuels other challenges such as lack of resources. This agrees with previous studies which confirm that the lack of project budget results in low performance and productivity. According to Hemson (2007) a healthy project budget is essential. The EPWP sectors have a lack of committed funds. Since there is no sole sponsor for EPWP, project budgets have to be collected and allocated from Departmental or Municipal budgets. Hemson (2007) indicated that the project budget should be buffered and protected from poaching for other purposes. It is believed that Municipalities and Departments implementing the EPWP are using the EPWP funds for other projects leaving inadequate funds for operations. The issue of project budget continues to be a challenge across all the EPWP sectors.

The least respondents identified under-reporting as the key challenge affecting the implementation of Project Management practices. This theme was supported by previous studies identifying under-reporting as one of the downfalls of any project. According to Hemson (2007) the challenge starts to develop as many Project Managers neglect to maintain a solid schedule of their projects and reporting tends to be done by the National Department and not by the provincial Project Managers. Based on Hemson's (2007) findings, the constraints identified as suppressing progress in the EPWP include lack of proper reporting.

Based on the feedback from the respondent's regarding the challenges affecting EPWP, it is evident that there are certain Project Management practices which are not applied in the EPWP. These Project Management practices can be found in the PRINCE2 theoretical

framework. EPWP currently does not have a standardised framework guiding the project operations. The practices to be adopted by EPWP include; risk management, change management, management of product delivery, management of stage boundaries and focus on the product. The EPWP needs to implement these practices as a means of mitigating the current challenges affecting Project Management.

4.5.2. Root cause of Project Management challenges

In order to establish the root cause of the challenges previously mentioned, respondents were asked to speculate on the source of the challenges; where they consider the challenges emanate from.

Table 4. 6. Root cause of challenges

Themes	Frequency of responses
Department (Economic Development, Tourism and Environmental Affairs)	**14**
IASP Management	**11**
Political influences	**3**
Not sure	**1**
Project Manager	**1**
No standardised policy	**1**

Based on the respondents, six themes were identified regarding the root cause of the challenges affecting the implementation of Project Management practices. The majority of the respondents (fourteen) stated that the Department is the one to blame for the majority of challenges Msunduzi EPWP project is facing. Some respondents stated that the Department needs to change the way it operates in order for the EPWP to have a chance at being successfully implemented. Respondent 3 expressed the view that:

> *"The people that sign the invoiced payments sit with our payments for days and days before signing them. There is no sense of urgency. Supply chain management and finance unit is very slow at processing payments and creating order numbers, order numbers give you permission to start working; these are sometimes issued in November. Every time you call to query a late payment, you are given the run around*

by people within the same department, in same building. Each department plays a role in the outcome of their implemented projects".

According to Respondent 9:

"The department is responsible; budget is [there] but [it is] wrongly (placed)[allocated] to other programmes".

Respondent 19 observed that:

"*The procurement policies within the department cripple the programme. IASP can only procure protective clothing not more than R500 000 at a time. The process of awarding the tender to whoever will supply the merchandise is time consuming. R 500 000 worth of protective clothing is very little to supply everyone in the programme within IASP. For several years procurement has been an issue because of these policies. The policies do not accommodate this type of programme that has employed over 6000 people across Kwazulu-Natal".*

The second theme which emerged was respondents stating that the root cause of the challenges is IASP management. Respondents stated that management are the key people that ensure that the project operates smoothly, without their active participation the programme is at risk of producing poor results. Respondent 14 said that:

"I do not know who the IASP management is, but I know that when issues are raised the response is always that 'management is still working on it'. I have seen no effort in management resolving any issues".

The third theme includes three participants who stated that political influences are the root cause of all the above mentioned challenges. Respondent 26 pointed out that:

"Political influences are evident in this type of programme which is community based. Recruitment processes tend not to be fair and just. Financial extortion is also prevalent, and people always get away with it".

Other respondents were not sure what could be the root cause of these challenges. Other respondents blamed the Project Manager as the sole culprit for these challenges. Whilst another respondents stated that the non-standardisation of the EPWP policy is the major root cause because the EPWP is a programme yet it implemented differently in different departments.

The majority of the respondents indicated that the Departments implementing the EPWP projects are the ones to blame. In this study the Department of Economic Development, Tourism and Environmental Affairs was identified as the root cause of all the above challenges affecting the implementation of the Msunduzi EPWP project. The respondent's indicated that some Departments are performing better than others, but ultimately the Departments implementing the EPWP projects are responsible for the programmes outcome. This agrees with previous studies which confirm that Departments are having a challenge with implementing this programme effectively.

According to Hemson (2007) the EPWP has a multi-faceted entity; it requires strong inter-departmental harmonisation to prosper. It has been noted that most of the Departments involved with EPWP projects are fading away and making minimal contribution to the sector. Hemson (2007) further established that not all Departments are reporting on their EPWP operations. Due to the extremely complex web of direction and oversight, this has created strain on the ability of the EPWP implementers to bring together Departments in all sectors into developing sustainable EPWP projects. Mthembu (2009) noted that there was poor communication amongst the government Departments facilitating EPWP projects.

The fewest respondents identified the Project Manager as the root cause to all the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP project. This theme was supported by previous studies recognising that the Project Manager was identified as being the key person to proactively address the root causes creating projects to be unsuccessful. (Solutions, 2011). In the Msunduzi EPWP project, the challenges continue to multiply even in the presence of the Project Manager, hence this is why the respondents identified the Project Manager as the weak link. According to Merna & Al-Thani, (2008) the distinguishing feature of a project is the role played by the Project Manager.

According to one of the PRINCE2 processes, the direction of the programme should be clear and mandated. Everyone should be in sync and have an understanding the direction of the project. Based on the feedback from the respondents it is evident that there is no clear direction of the programme as there is currently no standardised framework. The PRINCE2 process to be adopted by EPWP is 'direction of programme'. These are practices which navigate the project to its desired designation.

4.5.3. Mechanisms in place to diagnose current challenges

In order to establish the mechanisms in place to diagnose current challenges, respondents were asked to describe how they detect challenges currently happening within the project.

Table 4. 7. Mechanism used to diagnose current challenges

Themes	Frequency of responses
Technical support group	**7**
Tool box talk	**5**
Reports	**4**
No mechanism	**4**
Site inspection	**4**
Meetings	**3**
Audits	**3**
IASP manual	**1**

As presented in Table 4.7, eight themes were identified as mechanisms used to diagnose current challenges that the EPWP is experiencing. Based on the respondent's feedback, it is evident that there are a number of ways to identify challenges. The majority of the respondents (seven) identified the technical support group as a mechanism in place to diagnose challenges affecting the implementation of Project Management practices. Thus, according to Respondent 27:

> *"The technical support group notifies stakeholders of any problems they may identify. This support group represents [the] Department of Public Works (EPWP), they conduct audit visits and meetings with stakeholders to make them aware of how they are preforming".*

Respondent 31 stated that:

> *"All four sectors have a technical support group, they aid Departments and Municipalities on how they should be operating and regulate compliance in order to reduce poor performance and low quality standards".*

The second theme identified was the tool box talk; respondents stated that they use it as a mechanism to diagnose current challenges in the implementation of the Msunduzi EPWP project. The toolbox talk is a gathering of all project workers every morning to discuss project matters. Respondent 13 stated that:

> *"Every morning we discuss what we will do for the day and discuss problems people are experiencing. It is in this platform that current challenges are diagnosed and reported to the Project Manager".*

According to Respondent 8:

> *"During the tool box talk we usually talk about our progress whist noting challenges we are facing and what impact these challenges have on our production levels".*

The third theme identified was reports. Reports are also used as a mechanism to diagnose current challenges affecting the implementation of Project Management practices. Respondent 21 stated that:

> *"There are different types of reports but the one that assists in diagnosing challenges is the monthly Key Performance Indicator (KPI) report. This report is submitted by the Project Manager to the Area Manager, giving a narrative assessment of the projects monthly progress. It has a section where the Project Manager highlights all the challenges".*

Other respondents stated that there are no mechanisms in place to diagnose current challenges affecting the implementation of Project Management practices. Respondent 7 pointed out that:

"*There is no mechanism used to diagnose challenges, we've always had issues, and that's never changed".*

The fourth theme was identified by four respondents who stated that site inspections are used to diagnose current challenges affecting the implementation of Project Management practices. Respondent 18 expressed the view that:

"Site inspections can be conducted by the Project Manager (internal) or auditors (external). What these people aim to do is to find loopholes within operations and rectify them. Unfortunately, if the site inspections are done in a rush or not done at all, the existing challenges continue".

Three respondents identified meetings as a means to diagnose challenges affecting project implementation. As illustrated by Respondent 20:

"Meetings are a great platform to identify challenges that the programme is facing; whether its weekly regional meetings, staff meetings, implementation meetings, strategic meetings, sector meeting or forum meetings. All these platforms bring strategic thinkers together. Challenges are normally always on the agenda".

The sixth theme identified by the respondents was audits. Some respondent's stated that audits are primarily what Msunduzi EPWP project uses to diagnose current project implementation challenges. According to Respondent 22:

"Audits are conducted annually. The feedback from the audits identifies challenges, non-compliance and basically where the project is failing. That feedback assists in making sure that changes are made so that the following audit has clean results".

The eighth theme identified was the IASP manual. Respondent 23 stated that:

"The IASP manual is used as a (guild line) [guide-line] for the project. If operations are not in sync with the (guild line)[guide-line] then non-compliance arises".

It can be concluded from the responses that there are a number of mechanisms in place to diagnose current challenges in the Msunduzi EPWP project. Some respondents indicated that

they use reports to diagnose if there are any challenges or setbacks the project is encountering. The respondents expressed the view that there are several reports a Project Manager can use to diagnose challenges the project is facing, one of them being the Key Performance Indicator report. According to IASP (2011), reports are an important tool that can be used to ensure that projects are complying and progressing, without these reports projects are not being managed appropriately (IASP, 2011).

The technical support group was another element used to diagnose current challenges. According to Unit (2007) technical support groups were coordinated by the Department of Public Works to provide technical assistance for the different sectors. This group provides Project Management and training assistance. In the Msunduzi EPWP project, the technical support group assists in procuring training needs, however, the process of procuring these trainings is lengthy with terms and conditions. According to CGIAR (2017), in the PRINCE2 framework, challenges are identified and resolve immediately before they build up. The EPWP needs to adopt the PRINCE2 initiation stage practices. In PRINCE2, all the possible challenges are already planned for, and by doing so, risk is eliminated (CGIAR, 2017).

4.5.4. Mechanisms in place to identify foreseeable challenges

In order to establish the mechanisms in place to diagnose future challenges, respondents were asked to describe how they detect foreseeable challenges within the project.

Table 4. 8. Mechanisms used to diagnose potential challenges

Themes	Frequency of responses
No mechanism	**11**
Tool box talk	**6**
Monitoring and evaluation (internal and external)	**5**
Sector meetings	**4**
Strategic meetings	**3**
Technical support group	**1**
Site inspection	**1**

As presented in Table 4.8, seven themes where identified. The majority of the respondents (eleven) stated that there is no mechanism used to diagnose foreseeable challenges affecting

the implementation of Project Management practices. As illustrated by the words of Respondent 23:

> *"We currently have no mechanisms to diagnose potential problems. Previously we had a guy that was a researcher in the programme. He was able to diagnose challenges IASP could incur within operations and amendment would be done to avoid those challenges. However, we do not have a researcher in the programme anymore.*

The second theme identified by six respondents was the toolbox talk. Respondents stated that the toolbox talk allowed them to diagnose foreseeable challenge's that could affect project implementation of Project Management practices.

Respondent 15 stated that:

> *"The discussion that happens during the toolbox session covers both current and potential future challenges. We talk about potential dangers such as working in high risk areas".*

Other respondents (five) identified monitoring and evaluation as being one of the ways in which they diagnose potential challenges. According to Respondent 3:

> *"Monitoring and evaluation is done by the Project Manager, they are able to identify the problems that are likely to occur".*

Another theme identified was sector meetings. Respondents stated that:

> *"Sector meetings are very important. All sectors representatives are present at that meeting. They share challenges their sectors are experiencing. These challenges are then attempted to get resolved on a sector level rather than a project level. Those that are not experiencing the noted challenges are able to see if those challenges will affect their sector".*

The fifth theme identified was strategic meetings. Respondents stated that these meetings are conducted quarterly. The purpose of these meetings is to make sure that the organisation is still aligned to its aims, objectives and motives. Respondent 20 reported that:

> *"Previously strategic meetings have assisted IASP to perform better. These meetings are very important as they provide focus and direction to turn a plan into action. During this meeting potential challenges are identified".*

The technical support group was identified as a theme. One respondent stated that this support group is able to identify all the challenges experienced in each sector after all their evaluations with their stakeholders. The last theme identified was site inspection. One respondent stated that a site inspection is able to diagnose foreseeable challenges. Respondent 10 pointed out that:

> *"A site inspection is able to identified future challenges. For example, if the project team will be working in an unsafe sloppy area, without the proper PPE. The person doing the site inspection of that area can then conclude that this area will likely have high incidents, near misses or accidents due to the arising factors".*

It can be concluded from the responses that there are a number of mechanisms in place to diagnose foreseeable challenges in the Msunduzi EPWP project. Some respondents indicated that they use monitoring and evaluation to diagnose if there are any challenges that could transpire. This theme tallies with previous literature stating that monitoring and evaluation of the EPWP has been recognised as an extremely significant component in the implementation of the programme. Information derived from monitoring and evaluation provides management with particulars they need to identify challenges, assess progress, make changes and detect problem areas to be addressed (Unit, 2004).

Other respondents identified sector meetings as an important mechanism used to diagnose foreseeable challenges. This platform allows stakeholders in each sector to engage with each other openly and to talk broadly about their successes or challenges. Stakeholders are able to gain knowledge of potential challenges during those meetings. As Schwalbe (2015) emphasised, a number of professionals agree that the principle threat to project success is failure to communicate. Unceasing communication must flow without any barriers for improved implementation. Sector meetings become the best place to improve communication

and detect any challenges. In relation to the PRINCE2 theoretical framework, the majority of the mechanisms in place to diagnose foreseeable challenges in the Msunduzi EPWP project are practices within the PRINCE2 framework. The themes identified by the respondents sit within PRINCE2.

4.6. RESEARCH OBJECTIVE THREE: TO INVESTIGATE THE STRATEGIES APPLIED TO MITIGATE THE CHALLENGES AFFECTING THE IMPLEMENTATION OF PROJECT MANAGEMENT

The aim of research objective three was to find out if there had been any strategies that have previously been implemented to mitigate the challenges affecting the implementation of Project Management. This research objective identified ways in which the Msunduzi EPWP project can be managed better so as to become more productive. Data was presented in tables highlighting the themes that were identified as well as the frequency of responses. The findings from the interviews include the similarities, differences, and direct quotes from the respondents. For this research objective, three questions were developed to answer the objective.

4.6.1. Strategies applied to mitigate challenges affecting Project Management

In order to establish the strategies that have previously been applied to mitigate the challenges affecting the implementation of Project Management, respondents were asked to explain these strategies.

Table 4. 9. Strategies implemented to mitigate Project Management challenges

Themes	Frequency of responses
Not aware of any	**16**
Phase 4 (policy amendments)	**11**
Payment process faster	**2**
Researcher	**2**

Based on Table 4.9, four themes emerged from the respondents. The majority of the respondents (sixteen) indicated that they were not aware of any strategies implemented to mitigate Project Management challenges in the Msunduzi EPWP project. According to Respondent 16:

"There are currently no strategies I am aware of that have been implemented to mitigate Project Management challenges. This issue is a management issue(s), they are the only ones with the level of authority to deal with these issues. All the challenges come from internally, the(se)[re] are no external factors creating these challenges".

The second theme that emerged was Phase 4. Phase 4 is a formation of new strategies implemented by the Department of Public Works for the EPWP. It was stated that this 4th Phase would share the best practices for the implementation of the EPWP. Respondent 24 expressed the view that:

"The focus is now on Phase 4, mistakes and challenges reported in Phase 3 have been rectified in Phase 4. It has strategic approaches that will assist [us to] achieve [the] desired results".

Another theme which emerged was the faster payment process that has been implemented by IASP. Respondent 14 indicated that:

"Previously the issue of late payments has always been a hot topic. But now a system has been put in place where people responsible for the signing off of payments are restricted to a certain number of days with[in which to make the payment (with them). This strategy is working, now you won't find managers with payments on their desks for weeks and weeks".

The fourth theme was identified by two people from this study sample. These respondents indicated that having someone who was doing research on work operations was a strategy which was previously used to diagnose and mitigate challenges affecting effective Project Management in the Msunduzi EPWP project.
Respondent 22 pointed out that:

"The researcher was always up to date with policies and new laws that are being implemented nationally. He was like an advisor on how operat(es)[ions] should be implemented. We never had all these challenges back then. A researcher is a vital element to any organisation. Currently IASP doesn't not have a specialist doing research".

Based on the respondents feedback most of them are not aware of any strategies that have been implemented in the Msunduzi EPWP project to mitigate challenges affecting the implementation of Project Management practices. However, previous studies indicate that there are several strategies that the EPWP can implement to mitigate challenges affecting Project Management. One of the strategies includes improving communication amongst the project team and implementing stakeholder management. This is done by getting stakeholders to adapt to change needed to recover the project. These changes may involve the budget, the scope or resources (Solutions, 2011). One of the PRINCE2 Project Management practices is to plan and manage change. Based on the findings, the Msunduzi EPWP project is currently not implementing this practice. In the absence of managing change, a number of challenges erupt which can be detrimental to the project. EPWP will have to adopt the PRINCE2 'plan and manage change' practice in order to mitigate challenges effecting Project Management.

4.6.2. Effectiveness of strategies

In order to establish the effectiveness of the above strategies, respondents were asked to elaborate on the efficiency or inefficiency of the strategies implemented.

Table 4. 10. Effectiveness of strategies

Themes	Frequency of responses
No strategies	**16**
Effective	**15**

As presented in Table 4.10, two themes where identified. The majority of the respondents (sixteen) previously stated that they were not aware of any strategies implemented to mitigate Project Management challenges. When asked to comment on the effectiveness, they stated that there were no strategies applied. The other fifteen respondents considered the strategies they have identified in Table 4.9 to be effective. Respondent 28 articulated that:

> *"Phase 4, will be implemented in 2019. It will bring (upon)[about] a lot of change. It will incorporate a change in operations, minimising the current challenges. It also incorporates recruitment (guild lines)[guide-lines] which will be streamlined across all the departments implementing EPWP".*

As illustrated in the words of Respondent 30:

> *"Phase 4 is a fixer-upper. In Phase 3, all the challenges were recorded and dealt with in Phase 4. Phase 4 is has policy amendments which allow for operations to run smoothly. I believe that Phase 4 will be effective; it just needs to be implemented properly.*

Based on the findings 52 per cent of the respondents were unaware for any strategies implemented. They stated that they could not comment on the effectiveness of the strategies as there were no strategies implemented. The other 48 per cent of the respondent's stated that the two of the three strategies identified previously have not been implemented as yet, but have the potential to be very effective when implemented during 2019. The third strategy (faster payment process) has been deemed to be effective. According to Solutions (2011) the effectiveness of a strategy impacts greatly on the project. It warrants an organisation that is proactive rather than reactive. It gives the organisation a sense of direction and it accelerates operational competence (Solutions, 2011).

According to CGIAR (2017), the PRINCE2 is a process-based method, its focus is on organisation and control over the whole project, from start to finish. Projects are strategically planned before kick-off, each stage of the project life cycle is carefully organised, and all loose ends are attended to before the project ends. If this framework is adopted properly, it ensures effectiveness of applied strategies (CGIAR, 2017).

4.6.3. Effective management of the Msunduzi EPWP project

In order to devise a better management system for the Msunduzi EPWP project, respondents were asked to give their views on what could be done to ensure that the project is effectively managed.

Table 4. 11. Effective management of the Msunduzi EPWP project

Themes	**Frequency of responses**
Procurement of resources	**6**
Training	**6**

Align project with policies	**5**
More budget	**3**
Prioritisation of areas to be cleared	**3**
Engagement with stakeholders	**3**
Decreased number of contractors	**2**
Faster administration from the Department	**2**
Monitoring and evaluation to be done on time	**1**

Based on the respondent's feedback, nine themes were identified as being the most effective ways to manage the Msunduzi EPWP project. There are a number of attributes that the respondents identified as being the best and most effective. As illustrated in Table 4.11, the majority of the participants indicated that the procurement of resources would have a significant impact on the Project Management of Msunduzi EPWP project. Some respondents stated that the challenges Msunduzi EPWP project are currently experiencing are due to lack of resources. Respondent 20 stated that:

> *"Resources are the basic tool for any organisation. The project will stand better chances of reaching targets and producing quality work if they have adequate resources. The Project Manager also needs to be equipped with the necessary resources in order (for them) to execute the(ir) job efficiently".*

The second theme which emerged was training. Six respondents identified training as a fundamental element in ensuring that the Msunduzi EPWP is effectively managed. Respondent 31 indicated that:

> *"Project Managers are the ones who need the most training. They need specialised trainings to elevate their skill so that they can manage and supervise at an advanced level".*

According to Respondent 10:

> *"We need more training, every year we are promised training but never receive it. Training will assist increase our performance, strengthen our skill and assist all the*

project workers to have the same knowledge".

Another theme which was identified by five respondents is to align the project with policies. Respondents 17 noted that:

> *"Policies are principles applied to (guild0 [guide] outcomes. Therefore a project operating out of policy is doomed for failure. Projects need to align themselves with policies, they are there for a reason, and they endorse the well-being of the project".*

The fourth theme identified was for more budget availability. Respondent 1stated that:

> *"Budget is important as it determines the specifications of the project operations, such as how many months the project will operate, how many people will be employed etc. We need more budget in the Msunduzi EPWP so we can work more months in the year".*

Prioritisation of areas to be cleared was also a theme which emerged. Three respondents stated that areas in the Msunduzi area need to be prioritised. Respondent 7 indicated that:

> *"Good quality clearing is not evident because the teams are scattered all over Pietermaritzburg. Msunduzi EPWP project needs to regroup and work in one area till it is completed before moving onto another area".*

The sixth theme which emerged is the engagement with stakeholders. Respondents stated that if engagement with stakeholders were to be stronger, the Msunduzi EPWP project could be better managed. Stakeholder interaction is considered important in this programme as it is community-based. Respondent 19 stated that:

> *"Stakeholder engagement ensures that everyone is invested into the project, the project relies on these relationships to keep it going. Stakeholder's have a huge influence in the progress of the project. If they are against the project it could potentially even close down and not serve its purpose".*

The seventh theme identified by two respondents is to decrease the number of contractors. Respondent 8 stated that:

"There are too many contractors. For effective management they need to be decreased so that the Project Manager can cope. Also the more contractors there are, the less money there is for each contractor, therefore the project ends up working for one or two months".

The eighth theme which emerged was faster administration from the Department. Two respondents stated that in order for the Msunduzi EPWP project to be better managed, the Department needs to ensure that their administration process is quicker. According to Respondent 1:

"…Departmental processes are complex and lengthy…"

Respondents 21 explained that:

"We wait for four months or longer for order numbers to be generated. Then you ask yourself what could possibly take them that long. That's the process we are told. Slow administration processes cause the projects to start late, starting late means that work must be rushed to cover the time lost".

The final theme that emerged was for monitoring and evaluation to be done on time. One respondent stated that monitoring and evaluation is vital in a project for tracking implementation. Respondent 3 indicated that:

"The Msunduzi EPWP project should have timely monitoring and evaluation. M&E should be before operations start and on the last day of operations. This is done to be control the work being done and the effectiveness of the team. M&E done on time will assist [in] track[ing] changes that may need to be implemented".

The majority of the respondents indicated that training the project team could be one of the ways to manage the Msunduzi EPWP effectively. Respondents indicated that training is essential in any work environment. They stated that they have been promised training every financial year but have not been receiving it. New employees that have joined the programme have only received induction training and no accredited skill enhancing training. According to Taylor & Woelfer (2012), there are many benefits an organisation gains in providing training to employees, such as, better control of resources and improved risk management.

Taylor & Woelfer (2012) further stated that trained employees have been rated to have higher job satisfaction rates and improved long-term career prospects. Unit (2004) stated that training is the pillar of the EPWP. The sustainability of the programme can be obstructed by the failure to meet the training obligations.

The fewest number of respondents from this study sample, indicated that monitoring and evaluation should be done on time in order for the Msunduzi EPWP projects to be effectively managed. As PSC, (2007) asserted, all government organisations are required to organise, perform, monitor and evaluate the programmes and projects implemented. A project cannot function without being evaluated against what was initially planned. Critics such as Mthembu (2009), Kobokana (2007), Samson (2007) and McCord (2004) have argued that the EPWP Monitoring and Evaluation systems have let the programme down resulting in its poor performance. Based on the findings, the respondents have emphasised this point expressed by the critics.

In relation to the PRINCE2 theoretical framework, planning is one of the PRINCE2 themes. Good planning is a major element in promoting project success. However, based on the findings, the Msunduzi EPWP project lacks effective planning. Training plans are made every year but training is not provided to the project workers. According to the PRINCE2, the training plans in Msunduzi EPWP have not been applied successfully nor have the monitoring and evaluation plans.

4.7. RESEARCH OBJECTIVE FOUR: TO DEVISE AN EFFECTIVE PROJECT MANAGEMENT FRAMEWORK FOR THE EPWP

The aim of research objective four was to devise a framework which will best suit EPWP operations. This research objective assisted the researcher to identify other frameworks that the respondents believed would bring change in the EPWP. This objective analysed the PRINCE2 as a proposed framework for the EPWP operations. The researcher anticipated making recommendations in Chapter five which would be inclusive of the PRINCE2 framework as well as the criteria's of a suitable Project Management framework identified by the respondents. Data are presented in tables highlighting the themes that were identified as well as the frequency of responses. The findings from the interviews include the similarities, differences, and direct quotes from the respondents. For this research objective, two questions were developed to answer this objective.

4.7.1 The most suitable framework suggested by the respondents

In order to establish the most suitable framework which was proposed by the respondents, they were asked to state which framework they would recommend as the best framework to be implemented in the EPWP.

Table 4. 12. Suitable framework for EPWP

Themes	Frequency of responses
Contract Management Framework	**10**
Not that I know of	**10**
Plan Do Check Act (PDCA)	**8**
M & E framework	**3**

Based on the respondent's feedback, four themes were identified as being the suitable framework for the EPWP. As illustrated in Table 4.12, the majority of the participants (ten) suggest that the Contract Management Framework should be implemented in the EPWP. According to Respondent 29:

> *"The Contract Management Framework has processes and procedures that an organisation needs to adopt in order to manage performance. It is important for the programme to adopt a framework which puts high priority in risk management".*

Respondent 18 stated that:

> *"...This framework would allow EPWP to have contract managers who are strategic thinkers..."*

Respondent 21 pointed out that:

> *"The Contract Management Framework is the ideal framework for EPWP as it is project-based. This framework is bounded by policies and laws which assist in controlling consequence management".*

The second theme (or non-theme) emerged from the reaction of nine participates who stated that they had no idea which framework would best suit the EPWP. Respondent 1 and 2 stated that they were not aware of any Project Management framework. Respondent 4 indicated that:

> *"I cannot suggest a better framework right now, but an intervention needs to be done soon".*

Similarly, Respondent 7 pointed out that:

> *"I am not aware of any frameworks".*

Other respondents (eight) suggested that the EPWP should adopt the Plan Do Check Act (PDCA) framework. Respondent 15 stated that:

> *"This framework would allow for corrective action to take place. This framework closely monitors quality. The adoption of PDCA would allow for challenges and setbacks to be addressed before moving onto another contract".*

Some respondents suggested that the Monitoring and Evaluation framework would best suit EPWP. As Respondent 14 puts it:

> *"The M&E framework would improve the current reporting system in EPWP. Reporting is vital in identifying the gaps for improvement. If reporting mechanisms are lacking, no one can account for the status of the project".*

Based on the findings, most of the respondents have little knowledge of appropriate Project Management frameworks. Some respondents have heard of the Contract Management Framework through reading or heard about it from colleagues. They suggested that CMF could be a framework that could easily be adopted in the EPWP. According to National Treasury (2010) the Contract Management Framework (CMF) is a detailed document that has established requirements for government organisations concerning the management of contract agreements. Contract management is not only essential for financial management but it also promotes effective service delivery. This framework is generic which allows

Departments and Municipalities to approve their own policies and procedures relating to contract management (National Treasury, 2010).

Contract Management Framework is a framework that was suggested by the respondents, the similarity between CMF and the PRINCE2 is that they both have practices which promote project success. However, the frameworks are dissimilar as CMF framework focuses on projects bound by contractual agreements whilst the PRINCE2 is open to projects in any industry.

4.7.2 Perceptions of the proposed framework (PRINCE2)

Respondents were shown a diagram of PRINCE2; the operational procedures of the framework were presented to them, highlighting the themes, principals and processes.

Table 4. 13. Views on PRINCE2 framework to be implemented in EPWP

Themes	Frequency of responses
Excellent for EPWP	**25**
Not suitable for EPWP	**6**

As presented in Table 4.13, twenty-five out of thirty-one respondents (80.6%) had positive views of the PRINCE2. They viewed it as a framework that could be implemented to bring about change in the EPWP. The majority of the respondents had never heard of PRINCE2. Respondent 5 stated that:

> *"This framework has organised Project Management operations. It is exactly what this programme needs. It is flexible and seems like it can be applied in any industry".*

Respondent 8 commented that:

> *"The programme is in a crisis, any framework is better than the current non-existent framework".*

Similarly, Respondent 10 stated that:

"…EPWP can consider itself desperate for any intervention…"

Respondent 22 pointed out that:

> *"PRINCE2 themes encompass values which have been over looked by the programme; themes such as quality, planning for change and progress".*

On the other hand, the second theme was identified by six respondents representing (19.3%) of the study, indicating that the PRINCE2 framework could be effective for other programmes but not for EPWP. These six respondents did not support implementing PRINCE2 in the programme. Respondent 3 pointed out that:

"…PRINCE2 seems like a complicated framework…"

Respondent 13 and 21 both argued that:

> *"EPWP needs a framework which is project based. A generic framework will not be as effective".*

It can therefore be concluded that the majority of respondents support the implementation of PRINCE2, with a few in doubt. It was highlighted that the current framework is non-existent. EPWP has four sectors, and all of them are operating differently. It was suggested that there should be one framework that would incorporate all the sectors promoting amalgamated operations. Knowing the respondents point of view regarding the proposed framework was important in this research in order to establish appropriate recommendations that would be likely to suit EPWP.

The findings agree with previous studies which confirm that all the key elements of Project Management are already present in the PRINCE2 framework. From the beginning of the project to the end everything is planned, structured and monitored (Hedeman, 2006). According to CGIAR, (2017), PRINCE2 is a process-based method, its focus is on organisation and control over the whole project, from start to finish. The findings support the framework recommended by the researcher.

4.8. SUMMARY OF RESEARCH FINDINGS

4.8.1. Research objective one

To investigate current Project Management practices in the EPWP

The aim of research objective one was to investigate how the EPW Programme is currently operating as well as to assess the practices being implemented to monitor and control the programme. This research objective should assist in identifying any implementation gaps that create Project Management challenges. The empirical findings reveal that respondents practice the following as processes in place to ensure that the project is delivered at the expected level; induction training, scope management, time management, weekly M&E, and pre-/post- site inspections. The respondents stated that they practice all the above functions in order for the project to meet expected targets. Some respondents indicated that daily supervision by the contractor is essential and that the morning sessions of the toolbox talk are helpful in making the whole team proactive. The majority of the respondents reveal that they implement the Msunduzi EPWP project using the EPWP policy as well as the IASP guide-lines. However, it was indicated by several respondents that the processes they are using to ensure that the project delivers at the expected level are ineffective as they still find themselves under-performing.

To ensure maximum output from the project. Findings revealed that meetings are regularly conducted where the project teams work breakdown structure is reviewed. One respondent revealed that they implement team building exercises annually to create a strong bond amongst the project team, this revitalises people and promotes better performance. Norms and standards were also identified by the respondents as a control measure to ensure that the teams are doing the amount of work they should be doing. Findings further revealed that the APO was the commonly used metric to track project performance. However, some of the respondents were unaware of which metrics is used to track project performance and stated that it is the responsibility of the Project Manager to track performance not theirs. This finding indicates that some respondents are not tracking the project's performance and that there is a misunderstanding of roles and responsibilities. Everyone involved in the project should have knowledge of or interest to know how the project is performing.

4.8.2. Research objective two

To investigate the challenges affecting Project Management practices in the EPWP

The aim of research objective two was to identify the challenges that are hindering the Msunduzi EPWP project. Previous studies have identified problems that the EPWP as a programme, if facing. This research will assist the researcher to identify what these challenges are and where they are derived from so that recommendations can be drawn up accordingly.

The findings reveal that there is minimal training made available for the project workers. Due to a high turnover of project workers training becomes essential, but it is rarely made available. The lack of shared knowledge in the Msunduzi EPWP project posed a challenge. Some project workers have worked for a long period of time without knowing what the project was actually about. For the amount of contractors employed in this project, the awarded budget is very little; it only permits the project to be operational for two or three months. Due to the short working period, it reveals that Msunduzi EPWP project will not provide sustainable employment opportunities for the beneficiaries. The EPWP jobs are merely temporary and cannot provide the beneficiaries with stability, therefore it should not be labelled as a poverty alleviation programme. Other findings reveal that there is no evidence of any effective monitoring system to assess and evaluate the impact of this programme.

The findings also revealed that political influences have had a major impact on operations. Project Management resources have been diverted due to those influences. The constant change in leadership also posed a threat to the Msunduzi EPWP project, because changes and strategic decisions could not be taken over the past years due to these changes. The findings further indicate that there are insufficient resources available for the project workers and the Project Manager to do their jobs efficiently. Under-reporting was also identified as a challenge; the EPWP system does not have all the correct project information records as this is not recorded by the Invasive Alien Species Programme (IASP) data capturers on time. One respondent revealed that there are ghost workers amongst the Msunduzi EPWP project teams, meaning that some contractors are invoicing and getting paid for people who did not work. This challenge stems from poor site verifications. The person conducting the site verification should always do a head count of the people in the field for that day so as to curb contractors from reporting the incorrect number of people.

The Department (Economic Development, Tourism and Environmental Affairs) and the Project Manager of the Msunduzi EPWP project have been identified by the respondents as a root cause of all these challenges. Another root cause identified in the findings is the non-standardisation of the EPWP operations across the sectors. The IASP management was identified by a few respondents as the root cause, and only one respondent (out of thirty-one respondents) was not sure what or who the root cause could be. Some respondents revealed that they use reports, the technical support group, toolbox talk, the IASP manual, meetings and audits as tools used to diagnose current Project Management challenges in the Msunduzi EPWP project. However, a majority of the respondents did not know how they diagnose challenges affecting Project Management practices; therefore they cannot plan for those challenges or mitigate them before they happen.

Majority of the respondents stated that there were no mechanisms used to diagnose foreseeable challenges. This puts the Msunduzi EPWP project in a vulnerable position as they cannot plan for change should risk arise. Other respondents stated that they use sector meetings as a platform to review their operations and to identify potential challenges. The findings also revealed that the toolbox talk, monitoring and evaluation, strategic meetings, the technical support group and site inspections were used to diagnose potential challenges which could affect the implementation of Project Management practices.

4.8.3. Research objective three

To investigate the strategies applied to mitigate the challenges affecting the implementation of Project Management practices.

The aim of research objective three was to find out if there had been any strategies that had previously been implemented to mitigate the challenges affecting the implementation of Project Management. This research objective wished to find out if the strategies identified have been effective or otherwise in mitigating the challenges. Secondly, this research objective will identify ways in which the Msunduzi EPWP project can be managed better so as to enable it to become a sustainable project.

The findings reveal that the majority of the respondents are not aware of any strategies that have previously been implemented to mitigate Project Management challenges in the Msunduzi EPWP project. The respondents stated that this could mean two things; Either there has not been any strategies previously implemented or the strategies were unsuccessful before

they could be recognised as strategies implemented. Findings further revealed that Phase 4 was regarded as a strategy which could redirect the EPWP when it is implemented in 2019. The payment flow strategy was also identified by the respondents who stated that in the financial year 2018/2019 the process of payment was much more efficient compared to previous years where they waited a long time to receive payment. Regarding the effectiveness of the identified strategies, the two identified strategies were deemed effective. The responses revealed that previously there have been some successful strategies; however those strategies are no longer practiced. The IASP use to have a researcher who was an advisor to the programme but currently there is no researcher. This has led to the Msunduzi EPWP project having an outdated operational system.

4.8.4. Research objective four

To devise an effective Project Management framework for the EPWP

The aim of research objective four was to devise a framework which will best suit the EPWP operations. This research objective will assist the researcher to identify other frameworks that the respondents believe will effect change in the EPWP. The PRINCE2 framework was proposed for EPWP operations. The findings revealed that the majority of the respondents are not aware of other Project Management frameworks being implemented by other entities. Further findings revealed three other management frameworks, namely; Contract Management Framework, Plan Do Check Act and the M&E framework. These frameworks were suggested by a few respondents as suitable frameworks for EPWP. The respondent's perception of PRINCE2 was exceptional. The respondents revealed that this framework could be implemented across all the EPWP sectors to create uniformity in operations and to propel the Msunduzi EPWP project towards successful implementation of Project Management practices.

4.9. SUMMARY

The aim of Chapter four was to analyse the data collected from the interviews, to interpret and discuss the findings. The data was collected using in-depth interviews conducted with thirty-one individuals who are involved in the Project Management of the Msunduzi EPWP project. The results from the findings were presented using graphs, charts, and tables. The findings established that the current Project Management practices in the Msunduzi EPWP project are ineffective. The practices have not been implemented effectively and poor Project Management practices have contributed to the numerous challenges that were identified. The

EPWP is suffering from a number of challenges affecting the implementation of Project Management practices. The main challenges identified were; lack of a suitable budget and lack of resources. These challenges are ongoing, and there is no effective mechanism in place to detect the challenges before they emerge. Besides the faster payment strategy, currently, there is no effective strategy implemented to mitigate challenges affecting Project Management. However, Phase 4 is a new strategy which will be implemented in 2019. Some respondents stated that this strategy should be effective as it has acknowledged and rectified previously reported EPWP challenges which emerged in Phases 1-3.

The results from the findings also identify new and effective ways in which Msunduzi EPWP can be managed better. Respondents identified a suitable framework that could be implemented in the Msunduzi EPWP project. The respondent's perception of PRINCE2 was positive. The respondents stated that they are eager for a new intervention which will change the programme and make it more durable.

The objectives and intentions of this study can be said to have been accomplished since the individuals interviewed spoke at length about their current Project Management practices, the challenges that are affecting Project Management practices, and the strategies that have been applied. These respondents were also able to devise an effective Project Management framework for the Msunduzi EPWP project. All the themes were discussed in detail. Finally, the Department of Public Works who are the main implementers of EPWP need to be aware of the challenges other Departments, and Municipalities are facing with managing the EPWP projects. A new management framework such as the PRINCE2 needs to be implemented soon before the programme completely fails. South Africa has a high rate of unemployment which is damaging the economy. EPWP is a great incentive to assist in curbing poverty by providing people with short-term employment opportunities, however the objectives should not be blurred. Quality outcomes and proper service delivery needs to be the paramount objective.

The following is the concluding chapter (five), this chapter will summarise all four chapters. Conclusions and recommendations will be discussed in chapter five.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1. INTRODUCTION

This chapter presents the summary of the study and also provides conclusions and recommendations based on the study's findings. The previous chapter discussed the results of this study. Chapter five discusses the summary of the major issues discussed in chapter one to chapter four. Key findings are re-emphasised; thereafter the conclusions are drawn from the study findings. In chapter five recommendations will be provided as well as the implications of the study. The contribution to the body of knowledge, limitations of the study as well as future research are presented in this chapter.

5.2. CONCLUSION OF RESEARCH FINDINGS

5.2.1. Findings based on background information provided by respondents

The response rate was 100%; all thirty-one people involved in the Project Management of the Msunduzi EPWP Project participated. In the category of respondents, the majority were contractors. They represented 45 per cent of the study sample. The contractors are responsible for the daily supervision of their team. This indicated that the contractors represented the majority of the people involved in the Project Management of the Msunduzi EPWP project. Regarding the gender of the respondents, seventeen males represented (54.8%) of the study sample and fourteen females represented (45.1%) of the study sample. This indicated that there is a small gender difference between the respondents. However, there are more males than females in the Project Management of the Msunduzi EPWP project.

With regard to the years the respondents had been involved with the EPWP, it was indicated in Figure 4.3 that the majority of people involved in the Project Management of Msunduzi EPWP project (nine respondents), indicated that they had been involved with the EPW Programme for 6-10 years, representing a majority (29%) of the study sample. The majority of the people involved with the Project Management of the Msunduzi EPWP project have been with the project for a while and have experience within this programme. On the other hand eight respondents had operated in the EPWP for 1-3 years, representing (25.8%) of the

study sample; making this group of people fairly new, with very little experience working within the EPWP. Overall, the majority of the respondents (twenty-three out of thirty-one) have 3 to 10+ years of experience.

The majority of the respondents have obtained diplomas or degrees which represents (35%) of the study sample. This indicated that the majority of the respondents have obtained a tertiary qualification. It was found that most of the respondents with undergraduate and postgraduate diplomas/degrees do not have a Project Management qualification, but a qualification relating to Project Management such as Environmental Management, Business Administration and Public Management. The majority of respondents (61.2%) do not possess any Project Management certificate. They had not undergone any training that develops their Project Management skills. This indicated that the respondents may be educated, but not necessarily in Project Management. Table 4.1 indicated that the majority of people that oversee the most projects are the IASP management. Although this category does not do ground/field work, they have more projects to account for on a strategic level.

5.2.2 Summary of empirical findings of the study relating to research objectives

5.2.2.1. Research objective one: To investigate current Project Management practices in the EPWP

The empirical findings reveal that respondents practice the following as processes in place to ensure that the project delivers to the expected level; induction training, scope management, time management, weekly M&E, and pre-/post-site inspections. The respondents stated that they practice all the above functions in order for the project to meet expected targets. The majority of the respondents reveal that they implement the Msunduzi EPWP project using the EPWP policy as well as the IASP guide-lines. However, it was indicated by several respondents that the processes they are using to ensure that the project delivers to the expected level are ineffective as they still find themselves under-performing. Findings revealed that meetings are regularly conducted where the project teams work breakdown structure is reviewed. Findings further revealed that the APO was the commonly used metric to track project performance. However, some of the respondents were unaware of which metrics is used to track project performance and stated that it is the responsibility of the Project Manager to track performance not theirs. These findings indicate that some respondents are not tracking the projects performance and that there is a misunderstanding of roles and responsibilities.

5.2.2.2. Research objective two: To investigate the challenges affecting project management practices in the EPWP

The empirical findings reveal that there is minimal training made available for the project workers. Due to a high turnover of project workers training becomes essential, but it is rarely made available. Due to the short working period, it revealed that the Msunduzi EPWP project will not provide sustainable employment opportunities for the beneficiaries. Findings reveal that there is no evidence of an effective monitoring systems to efficiently assess and evaluate the impact of challenges in this programme. The findings further indicate that there are insufficient resources available for the project workers and the Project Manager to do their jobs efficiently. The Department of Economic Development, Tourism and Environmental Affairs (EDTEA) and the Project Manager of the Msunduzi EPWP project have been identified by the respondents as the root cause of all these challenges. Majority of the respondents stated that there were no mechanisms used to diagnose foreseeable challenges. This puts the Msunduzi EPWP project in a vulnerable position as they cannot plan for change should risk arise. The majority of respondents stated that they use sector meetings as a platform to review their operations and identify potential challenges.

5.2.2.3. Research objective three: To investigate the strategies applied to mitigate the challenges affecting the implementation of Project Management

The findings reveal that the majority of the respondents are not aware of any strategies that have previously been implemented to mitigate Project Management challenges in the Msunduzi EPWP project. Findings further revealed that some respondents stated that Phase 4 was regarded as a turnaround strategy which will redirect the EPWP when implemented in 2019. The responses further revealed that previously there have been some successful strategies, however those strategies are no longer practiced. This has led to the Msunduzi EPWP project having an outdated operational system.

5.2.2.4. Research objective four: To devise an effective Project Management framework for EPWP

The findings revealed that the majority of the respondents are not aware of other Project Management frameworks being implemented by other entities. Further findings revealed three other Project Management frameworks which were acknowledged by the respondents,

namely; Contract Management Framework, Plan Do Check Act and the M&E framework. These frameworks were suggested by a few respondents as suitable frameworks for EPWP. The respondent's perception of PRINCE2 was exceptional. The respondents revealed that this framework could be implemented across all EPWP sectors to create uniformity in operations and to propel Msunduzi EPWP project towards successful implementation of Project Management practices.

5.3. RECOMMENDATIONS

5.3.1 Research Objective one

Communication

Currently, the communication amongst the project implementers is lacking. All the EPWP implementers (national, provincial, district and local) need to meet regularly to align themselves with the EPWP objectives and targets. They need to identify challenges and implement strategies to combat them. They also need to promote the effectiveness and sustainability of the programme. The EPWP brand needs to be strengthened, and that can only be done with all the implementers buy-in.

5.3.2 Research Objective two

Budget

According to the respondents, it was stated that the budget awarded per financial year to the Msunduzi EPWP project is insufficient for the sustainability of the project. More budget needs to be invested into this project in order for the project to work for a long period and cover all the work intended for them to do. Awarding to this project of a small budget is fruitless expenditure, they only work two months, the area cleared regrows again, unlike if they had more budget they'd be able to do follow up work. The Department of Public Works (DPW) needs to ensure that there is sufficient budget allocated to the Departments implementing EPWP projects. The Departments receiving the funds should ensure that the budget awarded goes towards the EPWP projects and that it is not used for other projects.

Operations

From the findings it is evident that IASP is not procuring the necessary resources on time. For several years the Directorate has had challenges procuring uniforms and equipment. There is no one liable for beneficiaries not having uniforms and equipment. One of the respondents in the findings stated that noncompliance is not an issue any more but a norm. The Department of Economic Development, Tourism and Environmental Affairs needs to

reprioritize its budget plans, review the number of projects being implemented annually and make budget available to procure the required appropriate resources.

Strategic planning needs to be done, where refocusing and transformation take place. IASP needs to scale down the Msunduzi EPWP project, there are too many contractors and only one Project Manager who has to manage them. Quality is better than quantity. To curb political influences identified in the findings, IASP needs to strengthen the use of a project advisory committee platform and to inform them about the current challenges of the project. These platforms should be used to solicit buy-in in finding sustainable solutions which may in the short term meaning employing fewer people to release some of the project funds allocated to the project to procure the required resources.

As indicated in the findings, there is no standardisation in reporting EPWP projects. Reporting structures need to be revised. The EPWP needs to have its own reporting templates which will be used by the implementers. This standardised template will assist guide that all the sectors to report the same information. The EPWP needs to be considered as a programme and not as an individual project within certain Departments, uniformity needs to be created. The findings further stipulated that there were a few respondents with a Project Management qualification. It is therefore recommended that all the people involved with the Project Management of the EPWP projects need to obtain a Project Management certificate. This should be made a prerequisite. In the case of the contractors who are unlikely to have that certificate, the EDTEA should train them within the first three months of joining the programme on how to operate in a project environment. The Project Management training should be made mandatory for all those involved in the Project Management of Msunduzi EPWP project. The Project Manager should also be offered the opportunity to acquire an internationally recognized certificate such as PRINCE2, to enhance his/her skill and knowledge.

Training

EDTEA needs to prioritise training for the Project Management employees and the beneficiaries. As mentioned in the findings, there is a lack of training made available for beneficiaries. Continuous skills and development training should be offered by EDTEA to the project workers and Project Manager, as outlined in the EPWP Policy. The training will allow the workers to better understand their work and will change the culture of under-performing. Training is important for the Project Manager to be able to promote a strong work ethic. The

DPW also needs to strengthen their Training Unit, so they can provide training to all the EPWP implementers.

Job creation

The DPW should consider creating long-term employment opportunities rather than short-term employment. Short term employment promotes having project workers who have little or no experience in the field they are in. It also impacts on the challenges identified in this study such as the need for training. Long-term employment will promote workers with experience, who will be equipped to get better jobs after exiting the programme. This is one of EPWP's objectives; to cultivate the project workers so that when they exit they have the necessary skills to empower themselves. The budget awarded should accommodate long-term employment which will provide more exposure and high productivity.

5.3.3 Research Objective three

Monitoring and evaluation

According to the findings, the monitoring and evaluation system is currently inefficient. It is recommended that DPW not only invests in getting the EPWP projects implemented but also to ensure that they are adequately monitored and evaluated. Currently, external M&E is done once a year, and that's if the project is selected for auditing. External M&E should be executed by DPW every quarter, this will ensure that the projects are compiliant, challenges can be identified and promptly rectified. M&E needs to be a continuous process as long as the Msunduzi EPWP project is in process. M&E is the key strategy to mitigating some of the challenges affecting the implementation of adequate Project Management practices.

5.3.4. Research Objective four

Functional Model

It is evident in the findings that the beneficiaries do not perform tasks efficiency without supervision. Below is the proposed IASP organogram for more efficient operations.

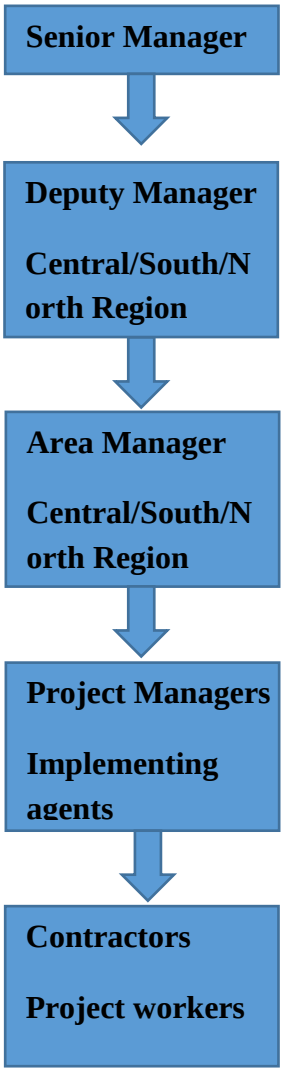


Figure 5. 1. IASP organogram

To curb the problem of non-efficiency in the Msunduzi EPWP project, IASP should consider employing an implementing agent. The implementing agent would be highly beneficial to IASP. The agents would provide daily supervision of the teams. It was stated in the findings that the Project Manager becomes overworked when the projects start operating and it becomes difficult to monitor all sites accordingly. The implementing agent and Project Managers would share duties. The implementing agent would be responsible for the implementation of the projects and daily supervision. The Project Managers would oversee that project by doing regular monitoring, evaluation and reporting. The implementing agent

would assist in a challenge which was identified in the findings which was the poor monitoring and evaluation. The implementing agent would be responsible for the payment of beneficiaries and procurement of resources, these duties would be taken over from the Department. It would definitely curb the Departmental administrative delays and contractors would get paid on time.

5.4 CONTRIBUTION TO THE BODY OF KNOWLEDGE

Although studies have been done on poor Project Management practices in government-funded projects on a global context, there still remains a gap in studies of South African government- funded projects that identify the challenges hindering proper Project Management practices. According to PMI (2016) 122 million is wasted for every 1 billion invested in projects, and this is due to poor Project Management. This is an indication that poor Project Management is a global challenge. This study was able to contribute to the body of knowledge as it identified the challenge's affecting the implementation of Project Management practices in one of the EPWP projects in Pietermaritzburg. The findings produced new knowledge which adds value to the body of knowledge. The case study area (Msunduzi EPWP project) introduces new data pertaining to this project as there has been no research previously done regarding this project.

This study further adds to the body of knowledge on the PRINCE2 theoretical framework, based on existing literature by authors (CGAIR, 2017); (Marić, 2017). The study found that new perceptions of the PRINCE2 were made by a South African based government funded programme (EPWP). South Africans are starting to become more aware of this Project Management framework which originated in the United Kingdom. Lastly, this research has added value to the body of knowledge due to the new operations model which was established as part of the recommendations. This model was established based on the findings and the urgent need for a new operational model which will decrease challenges affecting Project Management.

5.5 LIMITATIONS OF THE STUDY

This study consisted of all the people involved in the Project Management of the Msunduzi EPWP project. However, during the collection of data, the researcher identified that some of the issues that were raised by the respondents were issues that directly affected the beneficiaries who were not part of this studies sample. The study sample did not include the project workers who are initially the ones being managed. More depth could have been

created had these individuals been part of the study. The researcher did not include the project workers as they were being managed and had never been in a position where they were responsible of managing any project. However, this did not in any way compromise the value and reliability of the study as the study sample consisted of different categories of people in different management levels.

5.6 SUMMARY OF THE STUDY

This dissertation sought to analyse the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP project. In-depth interviews were conducted with thirty-one individuals involved in the Project Management of the Msunduzi EPWP project in Pietermaritzburg, South Africa. The dissertation was presented in five chapters. The initial chapter introduced the research study; the background of the study was highlighted alongside four research objectives which guided the research study. It is perceived that over the years the Expanded Public Works Programme (EPWP) has provided numerous benefits for the local rural communities, however, there are pitfalls that have been centred around poor Project Management. The EPWP has been facing a poor performance record and an inability to meet annual targets. Recent studies have raised questions concerning the effectiveness of the EPWP in achieving both its environmental and its poverty alleviation goals. The motivation of this study was to identify the challenges affecting the implementation of Project Management practices, thereafter, to recommend a new systems operation which could rectify the current challenges.

Chapter two of the thesis reviewed literature pertaining to the challenges in the EPWP. In particular, the challenges affecting the implementation of Project Management practices in the Msunduzi EPWP project. This chapter reviewed research studies that were conducted on Project Management operational matters. The outcome of the literature search was that the EPWP has great objectives; however the programme is poorly executed. Project Management practices are not being applied accordingly. Poor Project Management is an issue which has been identified by several authors as being problematic. In the absences of an operational framework, the programme continues to suffer.

Chapter three provided the research methodology of the study. It presented the research design, research strategies as well as the data collection methods adopted to gather the data which was presented. The research methods used in conducting this study assisted the researcher in answering the research questions by identifying the challenges affecting the

implementation of Project Management practices in the Msunduzi Expanded Public Works Programme (EPWP) clearing project. This chapter further provided details on the research approach (qualitative case study). The sample size, sampling techniques, and research instrument were described and validated. Chapter three was concluded by the discussion of the data quality control where reliability and validity were deliberated on and an indication was given of how they were achieved.

In Chapter four, the researcher presented the data analysis, interpretation and discussion of findings. The chapter began by discussing the response rates of this study and discussed the findings gathered from the interviews. These findings were then linked to the theoretical framework (PRINCE2) as well as the literature gathered in Chapter two. Chapter four was divided into six sections, section A to section E. These sections discussed all the information pertaining to the interviews.

5.7 FUTURE RESEARCH

This study investigated one of the EPWP projects in Pietermaritzburg (Msunduzi). Areas for potential future research include comparing one of the EPWP projects with a well-established clearing project such as Eskom's clearing project. These organisations are different but do the same work, one is government-funded whilst the other is a parastatal. Eskom clearing projects are considered to be very efficient. This type of research would assist identify the difference or gap in Project Management and project execution between the two organisations. Potentially, this future study could identify if EPWP could adopt the model being used by a well-established and sustainable company, evaluating all aspects of the project, not only the Project Management practices.

Further studies could also explore the challenges affecting Project Management practices in the other three EPWP sectors (infrastructure, social and non-state). There is very little research done on all four EPWP sectors which compares their operations. It would be interesting to know which sector is managing their projects more effectively, and how they go about doing so. This future study could also contribute in identifying if the challenges are occurring in the Environmental sector only, or in all the four EPWP sectors.

Future research studies could also consider exploring a different target sample which includes respondents which are not part of the Project Management of the EPWP projects. These respondents would be the beneficiaries who work within one of the EPWP projects or

beneficiaries who have exited from the programme. This future study could potentially assess the human capital development within EPWP (Environmental Sector). It is necessary to explore EPWP in its entirety, not only its challenges but the advantages that come with this programme.

REFERENCE LIST

Asare, A., (2017). Project Management for Developing Countries: Back to Basics.

Al-Zefeiti, S., and Mohammad, N., (2015). Methodological considerations in studying transformational leadership and its outcomes. *International Journal of Engineering Business Management, 7* (Godište 2015), pp.7-10.

Bassil, Y., (2012). A simulation model for the waterfall software development life cycle. *arXiv preprint arXiv:1205.6904*.

Baxter, P. and Jack, S., (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The qualitative report*, *13*(4), pp.544-559.

Belbin, R., (2013). *The coming shape of organisation*. Oxford: Routledge.

Berry, A., and Otley, D., (2004). "Case-Based Research in Accounting", in Humprey, C and Lee, B (eds), *The Real Life Guide to Accounting Research: A Behind-The-Scenes View of Using Qualitative Research Methods*, Elsevier, Oxford.

BIA., (2011). *Business Improvement Architects*. How to handle the top 5 challenges in managing your projects. Canada http://www.bia.ca Accessed: 01 August 2018.

Bless, C., Higson-Smith, C. and Kagee, A., (2008). *Fundamentals of social research methods:* an African perspective. (4th ed.). Capetown: Juta

Boeije, H., (2010). *Analysis in Qualitative Research*, Sage Publications, London.

Bokolo, S., (2013). *Integrating employment creation and skills development*: The case of Expanded Public Works Programmes in South Africa.

Bourne, L. and Walker, D., (2008). Project relationship management and the Stakeholder Circle™. International Journal of Managing Projects in Business, 1(1), pp.125-130.

Brief, A., (2012). Qualitative and quantitative research techniques for humanitarian needs assessment.

Bryman, A., and Bell, E., (2007). Business Research Methods. 2nd Edition. New York, US: Oxford University Press.

Bryman, A., (2008). Why do researchers integrate/combine/mesh/blend/mix/merge/fuse quantitative and qualitative research. *Advances in mixed methods research*, pp.87-100

CGIAR Internal Audit Unit., (2017). SMB-ARC-08 Project Management, Good Practice Note.

Chatterjee, S., (2014). *Managing Constraints and Removing Obstacles to Knowledge Management*, *6*(18), pp.90.

Cherian, J., and Jacob, J., (2013). Impact of self-efficacy on motivation and performance of employees. *International Journal of Business and Management*, *8*(14), pp.80-85.

Clapper, T., (2014). *Qualitative social research*. Research gate. Weill Cornell Medical College. http://www.researchgate.net Accessed: 20 August 2018.

Cousin, G., (2005). Case Study research. Journal of Geography in Higher Education, 29 (3) pp. 421-427.

Creswell, J.W., 2009. *Research design*: Qualitative and mixed methods approaches. London and Thousand Oaks: Sage Publications.

Creswell, J., and Clark, V., (2011). *Designing and conducting mixed methods research* (2nd ed.) Thousand Oaks, CA: Sage Publications, Inc.

Creswell, J., (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. (4th ed.) Los Angeles, US: Sage Publications.

Darling, E., and Whitty, S., (2016). The Project Management Office: it's just not what it used to be. *International Journal of Managing Projects in Business*, 9(2), pp.28-30.

Davis, K., (2014). Different stakeholder groups and their perceptions of project success, *International Journal of Project Management* 32, pp.189–201.

Department of Public Works., (2014). Phase 3 of the Expanded Public Works Programme (EPWP): briefing by Deputy Minister and Department. Parliamentary Monitoring Group https://pmg.org.za Accessed: 10 May 2018.

De Vaus, D., (2014). Diversity and change in Australian families: Statistical profiles. Australian Institute of Family Studies. 2004. Sydney: Sage.

Darling, E., and Whitty, S., (2016). The Project Management Office: it's just not what it used to be. *International Journal of Managing Projects in Business*, 9(2), pp.28-30.

Davis, K., (2014). Different stakeholder groups and their perceptions of project success, *International Journal of Project Management* 32, pp.189–201.

De Massis, A. and Kotlar, J., (2014). The case study method in family business research: Guidelines for qualitative scholarship. *Journal of Family Business Strategy*, *5*(1), pp.15-29.

Department of Finance., (2010). Government of Western Australia. Government Procurement, Austria.
https://www.finance.gov.au Accessed: 10 May 2018

Department of Public Works., (2005). Framework for Monitoring and Evaluation of the Expanded Public Works Programme.
http://www.epwp.gov.za Accessed: 11 May 2018

Department of Public Works., (2014). Phase 3 of the Expanded Public Works Programme (EPWP): briefing by Deputy Minister and Department. Parliamentary Monitoring Group https://pmg.org.za Accessed: 10 May 2018.

De Vaus, D., (2014). Diversity and change in Australian families: Statistical profiles. Australian Institute of Family Studies. 2004. Sydney: Sage.

Di Vincenzo, F., and Mascia, D., (2012). Social capital in project-based organisations: Its role, structure, and impact on project performance. *International Journal of Project Management*, 30(1), pp.5-14.

Dove, R., (2014). "Fundamentals of Agile Systems Engineering – Part 1 and Part 2". International Council on Systems Engineering IS14 Conference, Las Vegas.

Dyba, T., Dingsayr, T., and Moe, N., (2014). Software Project Management in a Changing World. Chapter 11. *Agile Project Management.* pp.277-300. Research gate. https://researchgate.net Accessed: 05 June 2018

EPWP., (2011). Expanded Public Works Programme. Non state sector: Procedure manual. Version 1. http://www.epwp.gov.za Accessed: 10 June 2018.

Eweje, J., Turner, R., and Müller, R., (2012). Maximizing strategic value from megaprojects: The influence of information-feed on decision-making by the Project Manager. *International Journal of Project Management*, 30(6), pp.69-105.

Filmer, D. and Fox, L., (2014). *Youth employment in sub-Saharan Africa*. The World Bank.

Flick, U., (2013). *The SAGE handbook of qualitative data analysis*. Sage.

Forza, C., (2002). Survey Research in Operations Management: A Process-based Perspective. International Journal of Operations and Production Management, 22 (2), pp.152-194.

Gabriel, D., (2013). Inductive and deductive approaches to research. http://www.deborahgabriel.com Accessed: 01 February 2019

Gerring, J., (2004). What is a case study and what is it good for? *American Political Science Review, 98*(2), pp.341-354.

Given, L., ed., (2008). *The Sage encyclopedia of qualitative research methods*. Sage publications.

Glowasz, M., (2014). What is more important for a Project Managers role: experience for qualification. https://quora.com Assessed 03 January 2019

Goodenough, A. and Waite, S., (2012). Real world research: a resource for users of social researchmethods in applied settings. *Journal of Education for Teaching*, 38(4), 13-51.

Grant, C. and Osanloo, A., (2014). Understanding, selecting, and integrating a theoretical framework in dissertation research: Creating the blueprint for your "house". *Administrative Issues Journal*, *4*(2), pp.4.

Gunawan, J., (2015). Ensuring trustworthiness in qualitative research. Belitung Nuring Journal, 1 (1), pp.10-11.

Gupta, M., and Andersen, S., (2012). Revisiting local TOC measures in an internal supply chain: A note. *International Journal of Production Research*, 50(19), pp.5363-5371.

Hallebone, E., and Priest, J., (2009). *Business and Management Research: Paradigms and Practices*, Palgrave Macmillan, New York.

Hass, K., (2007). The blending of traditional and agile project management. *PM world today*, *9*(5), pp.1-8.

Haughey, D., (2010). *A Brief History of Project Management.* pp.1-4. https://projectsmart.co.uk Accessed: 20 May 2018

Hedeman, B., (2006). Project Management based on PRINCE2TM-PRINCE2 Edition 2005. Van Haren Publishing (info@vanharen.net)

Henn, M., Weinstein, M. and Foard, N., (2009). *A critical introduction to social research*. Sage Publications.

Hennink, M., Hutter, I. and Bailey, A., (2011). *Qualitative research methods*. Sage Publications.

Hemson, D., (2007). Mid-term review of the Expanded Public Works Programme: component 3: analysis and review. South Africa.

Hilal, A., and Alabri, S., (2013). Using Nvivo for data analysis research. *International Interdisciplinary Journal of Education*, 2 (2), pp.181-186.

Huang, H, and Zhang, C., (2013). Cost management: a case study of a gardening firm project, *International Journal of Project Management* 15(2), pp.200-205. Gävle: University of Gävle.

Hwang, B., Zhao, X. and Ng, S., (2013). Identifying the critical factors affecting schedule performance of public housing projects. *Habitat International*, *38*, pp.214-221.

Ika, L., (2009). Project success as a topic in Project Management journals. *Project Management Journal*, *40* (4), pp.6-19.

Invasive Alien Species Programme Manual. (2011). Operating procedures for implementation of clearing projects. Department of Agriculture and Environmental Affairs. Kwazulu-Natal, South Africa.

Johansen, L., (2018). Personal communication, 19 May, 2018. Kwazulu-Natal, South Africa.

Johnson, B., and Christensen, L., (2012). Educational research: *Quantitative, qualitative and mixed approaches* (4th ed.). London: Sage Publications.

Jonker, J., and Pennink, B., (2010). *The essence of research methodology: A concise guide for master and PhD students in management science*. Springer Science & Business Media.

Kerzner, H., (2013). *Project Management: a systems approach to planning, scheduling, and controlling*: New Jersey: John Wiley & Sons.

King-Dejardin, A. and Santos, L.K., 2009. *National Seminar on Reducing Unemployment and Poverty: International Experiences and Proposals for the Expanded Public Works Programme Phase II*. ILO.

Knapp B., (2010). *Essential Project Management Templets.* USA, Project Management Excellence centre Inc.

Kobokana, S., (2007). *Reconciling Poverty reduction and biodiversity conservation. The case of Expanded Public Works Programme (EPWP) in Hluleka and Mkambati Nature Reserve*. MPhil thesis land and agrarian studies, South Africa.

Kothari, C., (2004). *Research Methodology. Methods and Techniques*. (2nd ed.) New Age International publisher. India.

Kuchroo (2016). The Role of QA in an Agile Model
https://blog.trigent.com Accessed: 10 June 2018

Kwak, Y., Park, J., Chung, B., and Ghosh, S., (2012). Understanding end-users' acceptance of enterprise resource planning (ERP) system in project-based sectors. *Engineering Management, IEEE Transactions on*, 59(2), pp.26-27.

Last, J., (Ed.) (2001). International Epidemiological Association, A Dictionary of Epidemiology (4th Ed.). New York: Oxford University Press

Leedy, P., and Ormrod, J., (2010). Practical research: planning and design (9th ed.). Boston: *Pearson Education International*.

Lester, A., (2014) Project Management, Planning, and Control Managing Engineering, Construction, and Manufacturing Projects to PMI, APM, and BSI Standards (6). Elseveir.

Leuvennink, J., (2012). Africa and the Project Management hurdle. Agenda No 2
http://www.usb.ac.za/agenda Accessed: 19 July 2018.

Lieuw-Kie-Song, M., (2009). *The South African Expanded Public Works (EPWP) 2004-2014.* Conference on employment. Guarantees Policies. New York. USA.

Ling, F., Low, S., Wang, S., and Lim, H., (2009). Key Project Management practices affecting Singaporean firms' project performance in China. *International Journal of Project Management*, 27(1), pp.59-71.

Lovitts, B. (2005). How to grade the dissertation. Academe, 91(6), pp.18-23.

Long, L., Lee, Y., and Lee, J., (2008). Delay and cost overruns in Vietnam large construction projects: a comparison with other selected countries. KSCE *Journal of Civil Engineering*, 12(6), pp.367-377.

Macaulay, L., (2012). *Requirements engineering*. Springer Science & Business Media.
London: Sage.

Mahamid, I., Bruland, A., and Dmaidi, N., (2011). Delay causes in road construction projects. *Journal of Management in Engineering*.

Maiga, Z., (2017). *Knowledge sharing among academics in selected Universities in Tanzania*. University of KwaZulu-Natal, South Africa.

Malhotra, R., (2016). *Empirical research in software engineering: concepts, analysis, and applications*. Chapman and Hall/CRC.

Marić, A., (2017). Comparison of Project Management frameworks and tools and their impact on project success. In *2nd International Scientific Conference LEAN Spring Summit.*

McConnachie, M., Cowling, R., Shackleton, C., and Knight, A., (2013). *The challenges of alleviating poverty through ecology restoration insights from South Africa's "Working for Water" Program*. Restoration Ecology, 21 (5), pp. 554-550.

McCutcheon, R., (2018). *Is the EPWP off track? IMIESA*, *43* (2), pp.46-47.

McCord, A., (2004). "*Policy Expectations and Programme Reality: The Poverty Reduction and Labour Market Impact of Two Public Works Programmes in South Africa*", ESAU Working Paper 8.

McCord, A., (2008). *Training within the South African national public works programme*. Human resources development review 2008, pp.555.

McDonough, J. and McDonough, S., (2014). *Research methods for English language teachers*. Routledge.
McNiff, J. (2014). *Writing and Doing Action Research*. Washington DC: Sage

Merna, T., and Al-Thani, F., (2008). Corporate Risk Management (2nd ed.). England: http://www.mida.gov.gh Accessed: 01 April 2018.

Miles, M., and Huberman, A., (1994). *Qualitative data analysis: An expanded source book* (2nd ed.) Thousand Oaks, CA: Sage.

Mingers, J., (2003). The Paucity of Multimethod Research: A Review of the Information Systems Literature. *Information Systems Journal*, Vol 13(3) pp. 233-249.

Mir, F., Pinnington, A., (2014). Exploring the value of Project Management: Linking Project Management Performance and Project Success, *International Journal of Project Management* 32, pp.202–217

Mkhwanazi, M., (2017) *Evaluating the tools used for measuring work quality within the Msinga EPWP clearing project*. University of KwaZulu-Natal, South Africa.

Mohajan, H., (2018). Two Criteria for Good Measurements in Research: Validity and Reliability.

Morris, P., and Pinto, J.K., (2010). *The Wiley guide to project, program, and portfolio management* (10). New Jersey: John Wiley & Sons.

Mrsic, M., (2017). *Critical Chain Project Management.* https://activecollab.com Accessed: 25 June 2018

Mthembu, B., (2009). Narrative Report: 2008 – 2009 Financial Years. Durban: eThekwini Municipality.

Muhambe, B., (2012). *Technology Initiatives in Academic Libraries: Status of Library 2.0 Within the Libraries of the University of KwaZulu-Natal* (Doctoral dissertation, University of KwaZulu-Natal, Pietermaritzburg).

Myers, M., (2009). *Qualitative Research in Business & Management*. Sage Publications, London.

Myers, M., (2013). *Qualitative research in business and management*. Sage Publications, London.

Naor, M., Bernardes, E., and Coman, A., (2013). Theory of constraints: Is it a theory and a good one? *International Journal of Production Research*, 51(2), pp.542-554

National Treasury., (2010). Contract Management Framework. Version: 1

Newton, P., (2015). Managing Project Risk. Project Skills
https://free-management-ebooks. com Accessed: 05 April 2018

Neuman, L., (2011). *Social Research Methods: Qualitative and Quantitative Approaches*. Boston: Sage.

Ngcobo, H.J., 2013. *The Effectiveness of the Earned Value Management System: A Case for Local Economic Development Projects* (Doctoral dissertation, University of KwaZulu-Natal, Durban).

Nino, C., Subbarao, K. and Milazzo A., (2009). *How to make public works work*: A review of the experiences. Washington, DC: World Bank (Social Protection Discussion Paper no 0905

Nixon, P., Harrington, M., and Parker, D., (2012). Leadership performance is significant to project success or failure: a critical analysis. *International Journal of productivity and performance management*, 61(2), pp.20-21.

Northouse, P., (2015). *Leadership: Theory and practice*. New Jersey: Sage.

Oliver, D., Serovich, J., and Mason, T., (2005). "Constraints and opportunities with interview transcription: Toward reflection in qualitative research", *Social Forces,* 48(2): pp.1273-1298.

Pallant, J., (2011). SPSS Survival Manual 4th edition: *A step by step guide to data analysis using SPSS version 18*. Maidenhead, Berkshire: Open University Press. Retrieved on from.

Palmer, F., (2016). *Five factors that lead to successful projects*. Project Management articles. https://project-management.com Accessed: 01 April 2018

Pan, S., and Tan, B., (2011). Demystifying case research: A structured–pragmatic– situational (SPS) approach to conducting case studies. *Information and Organization, 21*(3), pp.161-176.

Phillips, S., (2004). *Overcoming underdevelopment in South Africa's second economy. The Expanded Public Works Programme (EPWP).* Chief Operations Officer, National Department of Public Works. Jointly hosted by the UNDP, HSRC and DBSA.

Phillips, S., Harrison, K., Mondlane, M., Van Steenderen, W., Gordon, R., Oosthuizen, M., Weir-Smith, G. and Altman, M., (2009). Evaluation of the expanded public works programme (EPWP) in the North West. Development Policy Research Unit, University of Capetown.

Project Management Institute Inc., (2008). PMBOK Guide. (4th ed.), Pennsylvania: Project Management Institute Inc.

Project Management Institute Inc., (2013). PMBOK Guide. (5th ed.), Pennsylvania: Project Management Institute Inc.

Project Management Institute Inc., (2016). The high cost of low performance. Pulse of the profession. 8th Global Project Management survey.
http://www.pmi.org Accessed: 02 May 2018.

PSC, 2007. *Report on an Audit of Government's Poverty Reduction Programmes and Projects*. Published in the Republic of South Africa by The Public Service Commission. http://ww.psc.gov.za. Accessed: 10 October 2018.

Qu, S., and Dumay, J., (2011). The qualitative research interview. *Qualitative research in accounting & management*, *8*(3), pp.238-264.

Rajasekar, S., Philominathan, P., and Chinnathambi, V., (2013). *Research Methodology*. India. School of Physics.
http://www.arxiv.org Accessed: 07 July 2018.

Rand, G., (2000). Critical Chain: the Theory of Constraints Applied to Project Management, *International Journal of Project Management*, Vol. 18, pp.173-177.

Ray, S., (2014). A Study on Critical Success Factors for the Effective Program Management in Multiple Project Environments in Indian Retail Construction. *Journal of Civil Engineering and Environmental Technology (JCEET)*, 38(3), pp.49-56.

Ritchie, J., Lewis, J., Nicholls, C.,and Ormston, R. eds., (2013). *Qualitative research practice: A guide for social science students and researchers*. Sage.

Robbins, S., Judge, T., Millett, B., and Boyle, M., (2013). *Organisational behaviour*. Sydney: Pearson Higher Education AU.

Robichaud, L., and Anantatmula, V., (2010). Greening Project Management practices for sustainable construction. *Journal of Management in Engineering*, 27(1), pp.48-57.

Rubin, A. and Bellamy, J., (2012). *Practitioner's guide to using research for evidence-based practice*. New Jersey. John Wiley & Sons.

Rwelamila, P. and Purushottam, N., (2012). Project Management Trilogy Challenges in Africa-Where to From Here? *Project Management journal*, *43*(4), pp.5-13.

Sage, D., Dainty, A., and Brookes, N., (2014). A critical argument in favour of theoretical pluralism: Project failure and the many and varied limitations of Project Management. *International Journal of Project Management*, *32*(4), pp.44-55.

Samson, M., (2007). When public works programmes create second economy conditions: part two: policy and political choices. *Africanus*, *37*(2), pp.244-256.

Samson, M., (2015). Implementation Evaluation of EPWP in the Social Sector. Phase Two (2009/10- 2013/14). Final Summary Report. Economic Policy Research Institute.

Saunders, M., Lewis, P. and Thornhill, A., (2009). *Research methods for business students.* (5th ed.) England: Pearson Education Limited.

Saunders, M., Lewis, P. and Thornhill, A., (2012). *Research methods for business students*. (6th ed.) London: Prentice Hall.

Schwalbe, K., (2015). *Information technology Project Management*. United States of America. Cengage Learning.

Sekaran, U., and Bougie, R., (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.

Seymour, T., and Hussein, S., (2014). The History of Project Management. *International Journal of Management & Information Systems (IJMIS)*, *18*(4), pp.23-24

Shafritz, J., Ott, J., and Jang, Y., (2015). *Classics of organisation theory*. Singapore: Cengage Learning.

Sharp, N., Enzi, J., Fountoulakis, E., Lam, B. and Rabbior, M., (2012) International Business Machines Corp. *System and method for displaying gantt charts with other Project Management tools*. U.S. Patent 8,245,153.

Shneiderman, B., and Plaisant, C., (2005). *Designing the User Interface: Strategies for Effective Human-Computer Interaction.* (4th ed.) New York: New York: Addison- Wesley.

Silverman, D., (2011), *Interpreting Qualitative Data: A Guide to the Principles of Qualitative Research*, (4th ed.), Sage Publications, London.

Simons, H., (2009). *Case study research in practice*. SAGE publications.

Singh, A., (2014). *Conducting Case Study Research in Non-Profit Organisations*. Qualitative Market Research: An International Journal,17, pp.77–84.

Slack, N., Chambers, S. and Johnston, R., (2010). *Operations management*. Pearson education.

Solutions, P.M., (2011). Strategies for project recovery: A PM Solutions research report. *Project Management Solutions, Inc.* http://www.pmsolutions.com Accessed: 1 August 2018

Stake, R., (2013). *Multiple case study analysis*. Guilford Press.

Stuckey, H., (2013). *Three types of interviews: Qualitative research methods in social health*. Journal of Social Health and Diabetes, Vol 1 (2), pp.56.

Surbi, S., (2016). Difference between census and sampling. Key differences.

http://www.keydifferences.com Accessed: 21 June 2018.

Taylor, H., and Woelfer, J., (2012). Critical Behavioral Competencies for IT Project Managers: What Are They? How Are They Learned? *Project Management Techniques and Innovations in Information Technology*, 2 (8), pp.165-173.

Team, F.M.E., (2014). Project Time Management. https://free-management-ebooks.com ISBN 978-1-62620-981-3. Accessed: 20 April 2018

Teddlie, C. and Yu, F., (2007). Mixed methods sampling: A typology with examples. *Journal of mixed methods research*, *1*(1), pp.77-100.

Thomas, E. and Magilvy, J.K., (2011). Qualitative rigor or research validity in qualitative research. *Journal for specialists in paediatric nursing*, Vol 16 (2), pp.151-155.

Thwala, W., (2011). *Public works programmes as a tool to address unemployment and skills shortages among the youth in South Africa*. African Journal of Business Management, 5(15), pp.6011–6020.

Ting, S., Khoo, H., and Wong, S., (2009). Project Management Development in Malaysia: A Case Study. Department of Civil Engineering, University of Malaysia.

Tong, A., Sainsbury, P. and Craig, J., (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International journal for quality in health care*, *19*(6), pp.349-357.

Turner III, D., (2010). Qualitative Interview Design: A Practical Guide for Novice Investigators. *The Qualitative Report*, 15(3), pp.754.

Twycross, A., and Shields, L., (2004). Validity and Reliability-What's it All About? Part 2: Reliability in Quantitative Studies. Paediatric Nursing, 16(10), 36

Unit, E.P.W.P., (2004). Consolidated Programme Overview and Logical Framework Version 6. *South Africa, Department of Public Works, EPWP Unit. June*.

van Wyk, B., (2012). *Research and design methods Part 1*. University of Western Cape. https://www.uwc.ac.za/Students/Postgraduate/Documents/Research_and_Design_I.pdf Accessed: 21 August 2018.

Varad, M., (2018). Why education is important: Top 13 reasons. http://quora.com Assessed 02 January 2019.

Wahyuni, D., (2012). The research design maze: Understanding paradigms, cases, methods and methodologies. *Journal of Applied Management Accounting Research*, 10 (1), pp.69-80.

Willis, J., (2007). *Foundations of Qualitative Research*: Interpretive and Critical Approaches. SAGE Publications.

Welman, C., Kruger, F., and Mitchell, B., (2005). *Research Methodology* (3rd ed.). Oxford: Cape Town.

Wilson, J., (2010). *Essentials of Business Research*: A Guide to Doing Your Research Project. SAGE Publications.

Yin, R., (2009), *Case Study Research: Design and Methods*, (4th ed.) Sage Publications, Thousand Oaks, California

Zikmund, W., Babin, B., Carr, J., and Griffin, M., (2013). Business research methods. (9th ed.) Mason, USA: South-Western Cengage Learning.

Zivcakova, L., and Wood, E., (2015). Examining Instructional Interventions: Encouraging Academic Integrity Through Active Learning Approaches. *In Exploring Learning & Teaching in Higher Education*, 55(4), pp.19-25.

APPENDICES

APPENDIX A: EPWP POLICY

GOVERNMENT NOTICE

DEPARTMENT OF LABOUR

No. R. 347 4 May 2012

BASIC CONDITIONS OF EMPLOYMENT ACT, 1997

MINISTERIAL DETERMINATION 4: EXPANDED PUBLIC WORKS PROGRAMMES

I, Nelisiwe Mildred Oliphant, Minister of Labour, hereby in terms of section 50 of the Basic Conditions of Employment Act, 1997, make a Ministerial Determination establishing conditions of employment for employees in Expanded Public Works Programmes, South Africa, in the Schedule hereto and determine the second Monday after the date of publication of this notice as the date from which the provisions of the said Ministerial Determination shall become binding.

All the provisions of the Ministerial Determination: Expanded Public Works Programmes published under Government Notice R949 in Government Gazette 33665 of 22 October 2010 will be superseded by this ministerial determination with effect from the date of implementation.

NM OLIPHANT, MP
Minister of Labour
10/04/2012

SCHEDULE

MINISTERIAL DETERMINATION NO: 3 : EXPANDED PUBLIC WORKS PROGRAMMES

Index

1. **Definitions**

1.1 In this determination –

"expanded public works programme" means a programme to provide public or community assets or services through a labour intensive programme initiated by government and funded from public resources.

1.2 Without limiting subsection (1), the following programmes constitute Expanded Public Works Programmes:

(a) Environment and Culture Sector Programmes including: Working for Water, Working on Fire, Working for Wetlands, People and Parks, Working for Energy, Working for Woodlands, Working for the Coast, Landcare, Working on Waste, Working for Tourism, Investing in Culture Programmes

(b) Infrastructure Sector Programmes and Projects declared part of EPWP which may include the construction, rehabilitation and maintenance of: rural and low-volume roads, storm-water drains, water reticulation, basic sanitation, footpaths, sidewalks, bicycle paths, schools and clinics.

(c) Social Sector Programmes including Early Childhood Development, Home, Community Based Care, Community Safety and other community based programmes

(d) All projects and programmes accessing the EPWP wage incentive including those implemented by Non Governmental organisations (NGO) and Community Based Organisations (CBO) and the Community Works Programme.

(e) Any other programme deemed to be part of the EPWP as determined by the Department of Public Works

2. **Application**

This Determination applies to all employers and employees engaged in expanded public works programmes.

3. **The following provisions of the Basic Conditions of Employment Act do not apply to public works programmes –**

3.1 Section 10(2) [Overtime rate]

3.2	Section 14(3)	[Remuneration required for meal intervals of longer than 75 minutes]
3.3	Section 29(h) to (p)	[Written particulars of employment]
3.4	Section 30	[Display of employee's rights]
3.5	Section 41	[Severance pay]
3.6	Section 37	[Notice of termination]
3.7	Sections 51 – 58	[Sectoral Determinations]

4. Conditions

As set out in the ANNEXURE:

ANNEXURE

CONDITIONS OF EMPLOYMENT FOR EXPANDED PUBLIC WORKS PROGRAMMES

1. Introduction

1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on an Expanded Public Works Programme (EPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

1.2 In this document –

(a) "department" means any department of the State, implementing agent or contractor;

(b) "employer" means any department, implementing agency or contractor that hires workers to work in elementary occupations on a EPWP;

(c) "worker" means any person working in an elementary occupation on a EPWP;

(d) "elementary occupation" means any occupation involving unskilled or semi-skilled work;

(e) "management" means any person employed by a department or implementing agency to administer or execute an EPWP;

(f) "task" means a fixed quantity of work;

(g) "task-based work" means work in which a worker is paid a fixed rate for performing a task;

(h) "task-rated worker" means a worker paid on the basis of the number of tasks completed;

(i) "time-rated worker" means a worker paid on the basis of the length of time worked.

2. Terms of Work

2.1 Workers on an EPWP are employed on a temporary basis or contract basis.

ANNEXURE

CONDITIONS OF EMPLOYMENT FOR EXPANDED PUBLIC WORKS PROGRAMMES

1. Introduction

1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on an Expanded Public Works Programme (EPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

1.2 In this document –

(a) "department" means any department of the State, implementing agent or contractor;

(b) "employer" means any department, implementing agency or contractor that hires workers to work in elementary occupations on a EPWP;

(c) "worker" means any person working in an elementary occupation on a EPWP;

(d) "elementary occupation" means any occupation involving unskilled or semi-skilled work;

(e) "management" means any person employed by a department or implementing agency to administer or execute an EPWP;

(f) "task" means a fixed quantity of work;

(g) "task-based work" means work in which a worker is paid a fixed rate for performing a task;

(h) "task-rated worker" means a worker paid on the basis of the number of tasks completed;

(i) "time-rated worker" means a worker paid on the basis of the length of time worked.

2. Terms of Work

2.1 Workers on an EPWP are employed on a temporary basis or contract basis.

3. Normal Hours of Work

3.1 An employer may not set tasks or hours of work that require a worker to work–

(a) more than forty hours in any week;

(b) on more than five days in any week; and

(c) for more than eight hours on any day.

3.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.

3.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

4. Meal Breaks

4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

4.2 An employer and worker may agree on longer meal breaks.

4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

4.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

5. Special Conditions for Security Guards

5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.

5.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

6. **Daily Rest Period**

Every worker is entitled to a daily rest period of at least twelve consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

7. **Weekly Rest Period**

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

8. **Sick Leave**

8.1 Only workers who work more than 24 hours per month have the right to claim sick-pay in terms of this clause.

8.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.

8.3 A worker may accumulate a maximum of twelve days' sick leave in a year.

8.4 Accumulated sick-leave may not be transferred from one contract to another contract.

8.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.

8.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.

8.7 An employer must pay a worker sick pay on the worker's usual payday.

8.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –

(a) absent from work for more than two consecutive days; or

(b) absent from work on more than two occasions in any eight-week period.

8.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

8.10 A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

9. **Maternity Leave**

9.1 A worker may take up to four consecutive months' unpaid maternity leave.

9.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.

9.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.

9.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.

9.5 A worker may begin maternity leave –

(a) four weeks before the expected date of birth; or

(b) on an earlier date –

(i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or

(ii) if agreed to between employer and worker; or

(c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.

9.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

10. **Family responsibility leave**

10.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -

(a) when the employee's child is born;

(b) when the employee's child is sick;

(c) in the event of a death of –

(i) the employee's spouse or life partner;

(ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

11. **Statement of Conditions**

11.1 An employer must give a worker a statement containing the following details at the start of employment –

(a) the employer's name and address and the name of the EPWP;

(b) the tasks or job that the worker is to perform; and

(c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;

(d) the worker's rate of pay and how this is to be calculated;

(e) the training that the worker will receive during the EPWP.

11.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.

11.3 An employer must supply each worker with a copy of these conditions of employment.

12. **Keeping Records**

12.1 Every employer must keep a written record of at least the following –

(a) the worker's name and position;

APPENDIX B: INTERVIEW GUIDE

Title: An investigation of challenges affecting the implementation of Project Management practices: A case study of Msunduzi Expanded Public Works Programme clearing project.

Background information: It is perceived that over the years EPWP has provided numerous benefits for local rural communities. However, there are pitfalls that have been centred around poor Project Management. It is believed EPWP has been facing poor performance and inability to meet set annual targets. Recent studies have raised questions on the effectiveness of EPWP in achieving both its environmental and poverty alleviation goals. Thus, study seeks to identify these challenges and make recommendations for a new operational Project Management framework.

SECTION A: DEMOGRAPHIC INFORMATION

1. **What is your position in the company?**

Contractor	Landowner	Project Manager	Area Manager	Deputy Manager

Senior Manager	EPWP Board

2. **What is your gender?**

Male	Female

3. **How many years have you been involved in the EPW Programme?**

Less than a year	1-3 years	3-6 years	6-10 years	Over 10 years

4. **What is your highest qualification?**

PhD	Masters	Honours	Degree/Diploma	Certificate

Grade 12	Other

5. **Which of the following Project Management certifications do you possess?**

PRINCE 2	PMBOK	AGILE	Other *(Please specify*)

6. **How many projects within EPWP do you oversee?**

1-3	4-7	8-11	12 and more

QUESTIONS PERTAINING TO RESEARCH OBJECTIVES

SECTION B: Current Project Management practices in EPWP.

7. Please elaborate on the processes in place to ensure that the project delivers to the expected level?
8. Could you describe the control measures in place to ensure maximum output from the project?
9. Could you please describe the metrics used to check whether the project is on track?

SECTION C: Challenges affecting Project Management practices in EPWP.

10. Describe the different challenges affecting the implementation of Project Management practices in the Msunduzi EPWP clearing project?
11. Please discuss the root cause of these challenges?
12. Could you please discuss mechanisms in place to diagnose current challenges to the implementation of the project?
13. Could you please discuss mechanisms in place to identify potential (foreseeable) challenges?

SECTION D: Strategies applied to mitigate the challenges affecting the implementation of Project Management.

14. Could you please explain the strategies that have been implemented to mitigate the challenges affecting effective Project Management in the Msunduzi EPWP clearing project?
15. Are these strategies effective, please elaborate?

SECTION E: Devise an effective Project Management framework for EPWP.

16. Please discuss ways in which you think the Msunduzi project can be better managed?
17. Is there any better framework that you can suggest, please elaborate?
18. Please discuss the proposed framework (PRINCE2)?

THE END

Thank you for taking the time to partake in this interview and for your contribution to this study. It is sincerely appreciated.

Should you wish to receive a copy of the research findings, please provide your details below?

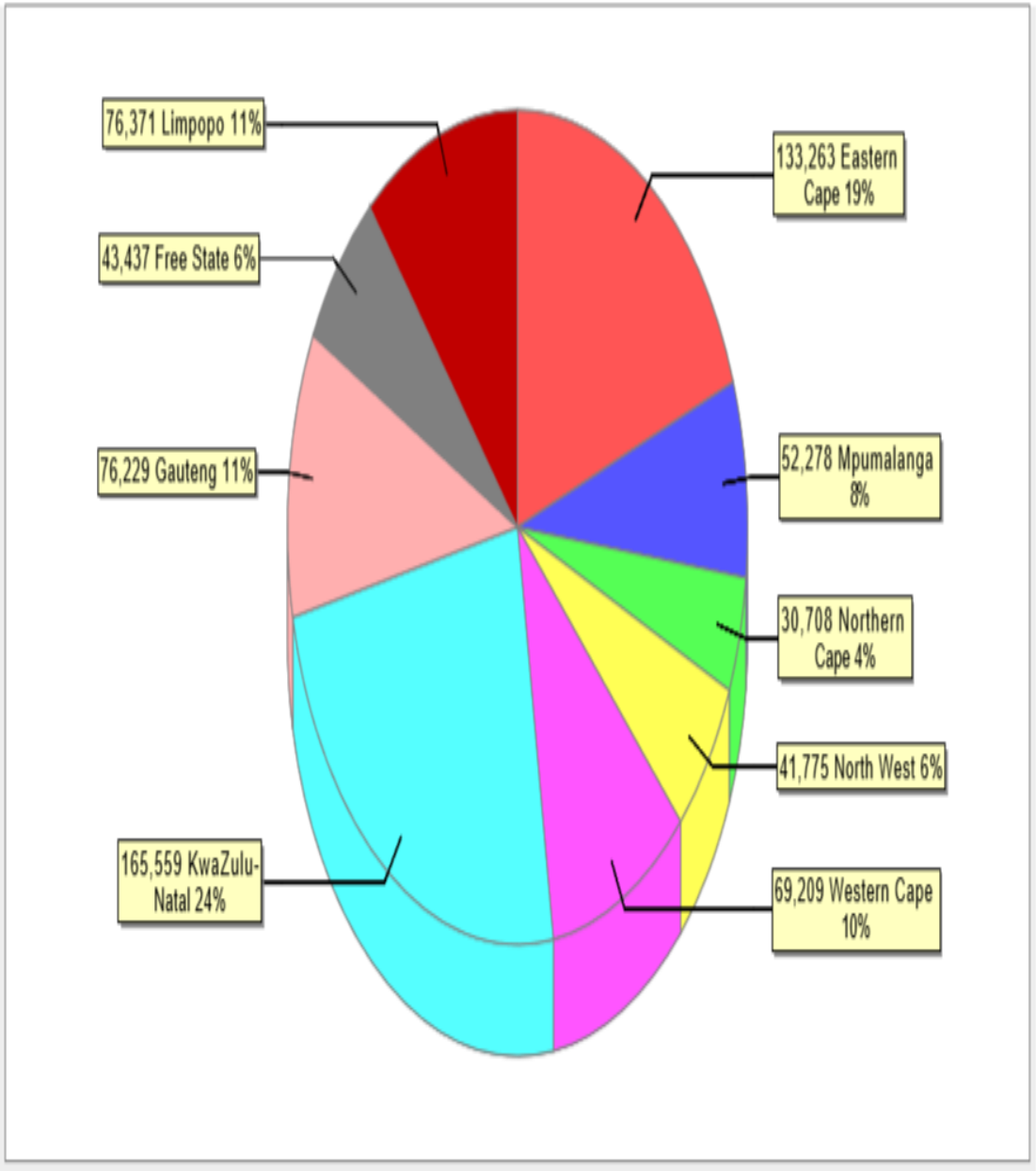
Name *(Optional)*

E-mail address:

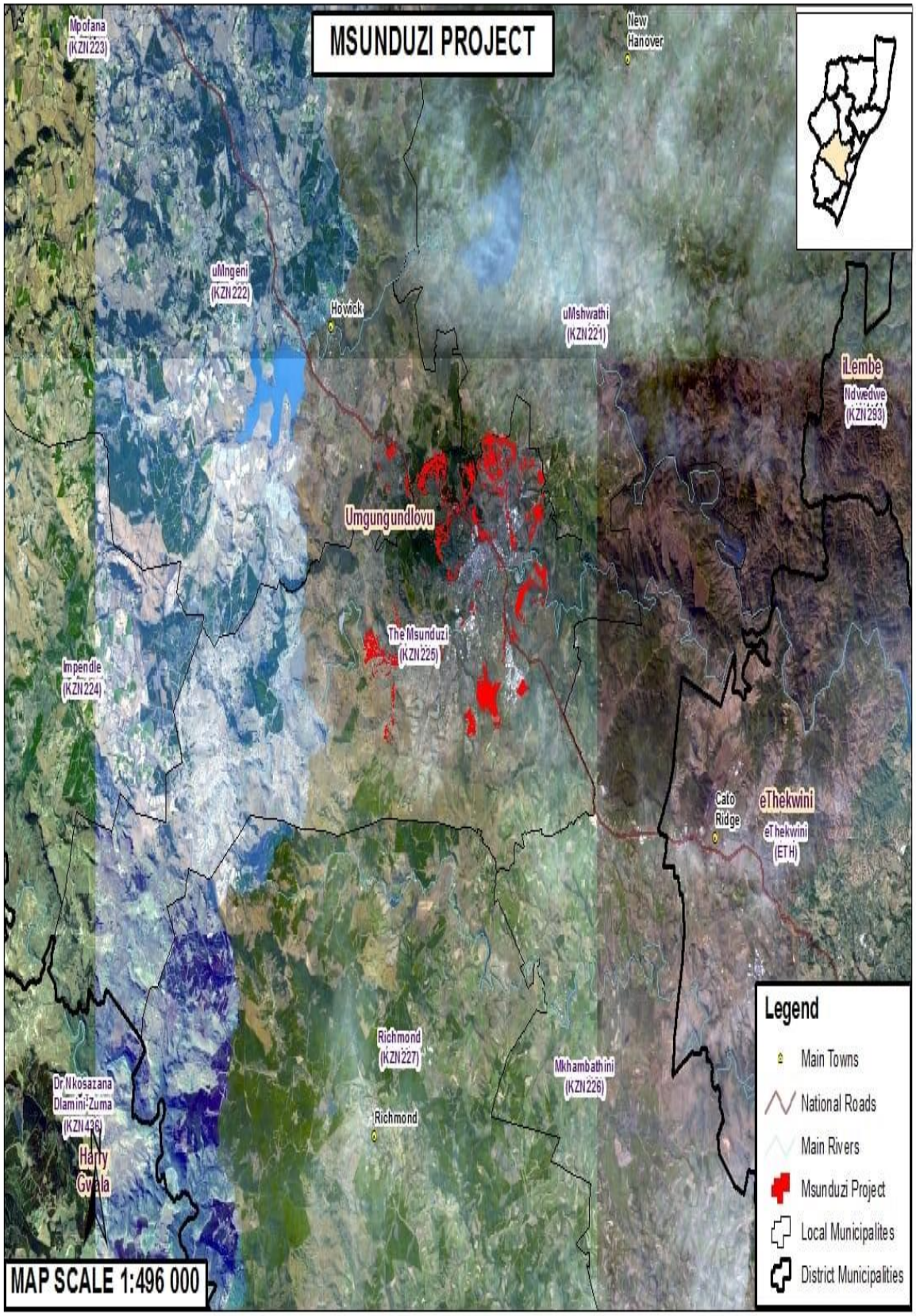
APPENDIX C: WORK OPPURTUNITIES CREATED IN 2017

Annexure B2: Expanded Public Works Programme (EPWP) Quarter 3 2017/2018 (Cumulative: 01 2017 to 31 DEC 2017)
Report: Overall National Total: Work Opportunities Created per Province

Total Work Opportunites created: 688,829



APPENDIX D: MSUNDUZI PROJECT MAP



APPENDIX E: GATEKEEPERS LETTER

edtea
Department:
Economic Development, Tourism and Environmental Affairs
PROVINCE OF KWAZULU-NATAL

Office of the Head of Department
270 Jabu Ndlovu Street, Pietermaritzburg, 3201
Tel: +27 (33) 264 2515, Fax: 033 264 2680
Private Bag X 9152
Pietermaritzburg, 3200
www.kznded.gov.za

To whom it may concern,

RE: PERMISSION TO CONDUCT RESEARCH ON AN INVESTIGATION OF CHALLENGES AFFECTING THE IMPLEMENTATION OF PROJECT MANAGEMENT PRACTICES: A CASE STUDY OF MSUNDUZI EXPANDED PUBLIC WORKS PROGRAMME CLEARING PROJECT.

The Department of Economic Development, Tourism and Environmental Affairs (Sub-directorate: Invasive Alien Species Programme) grants Ms Makhosazana Ntandokazi Mkhwanazi, a Masters in Commerce student at the University of KwaZulu-Natal, Student Number 208503544, permission to conduct research on the above research topic in the organisation.

Yours Sincerely,

Area Manager: IASP

Mr Joel Mlaba

0333476720

0824144135

30/10/18

UMNYANGO WEZOKUTHUTHUKISWA KOMNOTHO, EZOKUVAKASHA NOKONGIWA KWEMVELO KZN
Private Bag X9152, Pietermaritzburg 3200
2018 -10- 30
270 Jabu Ndlovu Street, Pietermaritzburg, 3200
DEPARTMENT OF ECONOMIC DEVELOPMENT, TOURISM AND ENVIRONMENTAL AFFAIRS

APPENDIX F: ETHICAL CLEARANCE

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

09 November 2018

Ms Makhosazana Ntandokazi Mkhwanazi (208503544)
School of Management, IT & Governance
Pietermaritzburg Campus

Dear Ms Mkhwanazi,

Protocol reference number: HSS/1780/018M
Project title: An investigation of challenges affecting the implementation of Project Management Practices: A case study of Msunduzi Expanded Public Works Programme Clearing Project

Approval Notification – Expedited Application

In response to your application received on 04 October 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Professor Shenuka Singh (Chair)

/ms

Cc Supervisor: Dr Refiloe Khoase and Dr Evelyn Derera
cc Academic Leader Research: Professor Isabel Martins
cc School Administrator: Ms Debbie Cunynghame

Humanities & Social Sciences Research Ethics Committee
Professor Shenuka Singh (Chair) / Dr Shamila Naidoo (Deputy Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** simbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
Website: www.ukzn.ac.za