EFFECT OF PROJECT EMPLOYEES' SOFT SKILLS ON PERFORMANCE OF PUBLIC ENERGY SECTOR PROJECTS IN KENYA

ANNASTACIA KATUMBI KAVITA-MUSEMBI

DOCTOR OF PHILOSOPHY

(Project management)

JOMO KENYATTA UNIVERSITY OF

AGRICULTURE AND TECHNOLOGY

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Effect of project employees' soft skills on performance of public energy sector projects in Kenya

Annastacia Katumbi Kavita-Musembi

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

Signature: ………………………. Date: ………………………………

    Annastacia Katumbi Kavita-Musembi

This thesis has been submitted for examination with our approval as the university supervisors.

Signature: ………………………. Date: ………………………………

    Dr. Wario Guyo,PhD

    JKUAT, Kenya

Signature: ………………………. Date: ………………………………

    Dr. Dorothy Ndunge Kyalo,PhD

    UoN, Kenya

Signature: ………………………. Date: ………………………………

    Dr. Aflonia Mbuthia, PhD

    Kenyatta Universitym Kenya

DEDICATION

In honour of my parents Anthony Kavita Musinga (posthumously) and Magdalena Nzalu Musinga for their sacrifice. To my mother in-law Joyce Ndoti for her encouragement. To my husband Peter Musembi and to our children Ilga Wanza, Megan Ndinda and Edgar Mwendwa for their unwavering support. To all project management practitioners who will benefit from this report.

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ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance.
COHRED	College of Human Resource Development.
FME	Free Management E-books.
GDC	Geothermal Development Company.
IEA	Institute of Economic Affairs.
IT	Information Technology.
JKUAT	Jomo Kenyatta University of Agriculture and Technology.
KEEP	Kenya electricity expansion project.
KEMP	Kenya electricity modernization program.
KENGEN	Kenya Electricity Generating Company Limited.
KEPTAP	Kenya Petroleum Technical Assistance Project.
KETRACO	Kenya Electricity Transmission Company.
KFS	Kenya Forestry Service.
KPC	Kenya Pipeline Company Limited.
KPLC	Kenya Power and Lighting Company.
KPMG	K stands for Klynveld Piet Klynveld, **P** is for Peat William Barclay Peat, **M** stands for Marwick James Marwick, and **G** is for Goerdeler Dr. Reinhardt Goerdeler.
L&T	Labour and transport.
MoEP	Ministry of Energy and Petroleum.
NACOSTI	National Commission for Social Technology and Innovation.
NOC	National Oil Corporation.
PMBOK	Project Management Body of Knowledge.
PMI	Project management institute

PMIS   Project Management Information System.

REA   Rural Electrification Authority.

ODI   Overseas development institute

DEFINITION OF TERMS

An effect   is a change that results when something is done or happens. It is an event, condition, or state of affairs that is produced by a cause (Merriam-Webster dictionary, 2015).

An employee   is someone who is paid to work on behalf of another person (Cambridge academic content dictionary, 2016). The Merriam-Webster dictionary defines an **employee** as "one employed by another usually for wages or salary and in a position below the executive level"

Characteristics of the leader are the essential leadership traits demonstrated by a person (Spears, 2010).

Communication skills refer to the project managers' and project leaders' capabilities to successfully express ideas and information to others and receive ideas and information from others (Shaikh, 2012)

Conflict resolution   is the process of eliminating discrepancies (Ward, 2012).

Content efficiency   refers to a level of performance of a project job at minimum time and effort. It describes a process that uses the lowest amount of input to create the greatest amount of outputs (Investopedia.com).

Controlling stakeholder engagement is the process through which the project manager understands each stakeholder's interest, and what information the stakeholder's would like to see in performance reports (Kerzner,2011).

Cost   is a resource forfeited to achieve an objective (Magutu et al, 2013).

Cost efficiency   is a strategy whereby the greatest project accomplishment is achieved for the least amount of financial investment (business dictionary.com).

Decision-making   is the procedure by which managers respond to opportunities and threats by examining alternatives and

settling on some courses of action (Ivancewich et al, 2011; Fulop, 2014).

Negotiation   is a process involving two or more parties with varying needs and goals, who discuss issues to find mutually acceptable solutions (Verreyne & Steen, 2014).

Organizational environment is composed of forces or institutions around an organization which affect performance, processes, and resources. It includes all of the elements external to the organization which have the probability of affecting the organization's activities (Steward, 2016).

Project communication are the activities associated with the creation, collection, distribution and end disposition of project information, and the identification of responsibilities for project team members and other project stakeholders who participate in project communication management(Hill,2010).

Project performance   According to Prabhakhar (2008), project performance includes the degree to which the project's technical performance objective has been attained on time and within budget; and the contribution that the project has made to the organization's strategic mission.

Quality decisions   are decisions made when the project manager considers many alternatives (Townsend, 2013)

Soft skills   are human skills which involve communication, negotiation, expectation (stakeholder) management, influencing, problem solving and decision making (Pereira, 2013). According to Verma (2009) "Soft skills are people skills supported by our emotional intelligence that help us behave in a socially acceptable manner and adapt ourselves in a social environment so that others are comfortable in our company and vice versa."

Stakeholder identification is the process of recognizing the project's various stakeholders and their respective expectation (Tonnquist et al, 2009).

Stakeholder involvement is the procedure used by an organization to keep relevant stakeholders for the purpose of achieving accepted outcomes (AA1000 Stakeholder Engagement Standard, 2011).

Stakeholder management is the process of communicating and working with stakeholders to meet their needs and addressing issues as they occur (Moore, 2011).

Stakeholder relationships are the interfaces existing between all the stakeholders (Kerzner, 2011).

Strategy refers to an intricate network of thoughts, ideas, insights, experiences, goals, expertise, memories, perceptions, and expectations which give wide-ranging direction for specific actions with the aim of achieving certain goals (Nickols, 2016).

Time refers to "the measured or measurable period during which an action, process, or condition exists or continues "(Merriam-Webster Dictionary, 2012).

Time efficiency can be defined as the ability to accomplish something with the least time and effort. It is competency in performance (dictionary.com)

ABSTRACT

The purpose for this study was to investigate the effect of employees' soft skills on project performance in the Kenyan energy sector. The objectives, on the other hand, were to establish the effect of employees' leadership skills on performance of projects in the Kenyan public energy sector; to determine the effect of employees' communication skills on performance of projects in the sector; to ascertain the upshot of stakeholder management skills on performance of projects; to establish the effect of the employees' problem solving skills on performance of projects in the energy sector; and to find out the moderating effect of the organizational environment on the bond between employees' soft skills and project performance. In line with these objectives, five hypotheses were developed and pragmatic paradigm adopted to support a mixed method research design. In particular the study employed both cross-sectional and correlation design. Purposive sampling technique was employed to select the projects that were studied. The unit of analysis was the public energy sector projects in Kenya. The population comprised 94 ongoing projects in the energy sector ending between January2016 to December 2018 while the units of observation were the project supervisors in charge of the projects. In particular the study focused on the transmission projects, the generation projects, nuclear projects and the distribution projects. 76 projects were chosen for the study. Two questionnaires were formulated. A Questionnaire that comprised of closed and open-ended research questions taking the format of five point Likert-type interval scale was used to assemble primary data from project supervisors. A second questionnaire that required information on the projects was formulated for the project managers. The statistical Package for Social Sciences (SPSS) program version 23 was utilized to conduct regression analysis, its results used to determine coefficients of multiple regression models, test hypotheses, evaluate reliability of estimated relationship and establish sample regression model. The study established that employees' leadership skills positively affect project performance in the energy sector in Kenya. The study also ascertained that communication skills positively affect project performance in the energy sector in Kenya. The research further found out that employees' stakeholder management skills positively affects project performance in the energy sector in Kenya. The employees' problem solving skills also have a significant effect on performance of energy sector projects in Kenya. The study also revealed that the organizational environment lacks a noteworthy moderating effect on the bond between employees' soft skills and project performance in the energy sector in Kenya. On the basis of these findings, the study recommends that project managers should coach and mentor, empower and inspire the project team employees. It also advocates for information shared to be largely shaped by preferences of the communities served by the project and for information concerning project activities to be widely availed to the public. The research also recommends stakeholder involvement at every stage of the project life cycle. Furthermore, it suggests that a conducive environment should be created for stakeholders to interact with each other and support one another by sharing resources and intellectual property. In addition, the study recommends that to solve problems in projects, a problem solving strategy and problem solving tools are required. On the organizational environment, the study advises on the need for a favourable internal and external organizational environments for projects to perform well.

CHAPTER ONE

INTRODUCTION

This chapter provides the study's background and statement of the problem. It explains why and how the issue studied is a problem and to whom it is a problem. The chapter also presents the general and specific objectives and research hypotheses.

1.1 Background of the study

Management of projects is facing a crunch although to a large extend unacknowledged and undervalued. This is confirmed by the poor performance of projects with 98.8% of them underperforming when quantified against cost, time, value, scope, customer satisfaction and strategic objectives (The Standish Group, 2014b). Although the professional standards have been formalized, projects still keep on failing with scary occurrence (Kapsali, 2013). Most projects especially in the public sector can be categorized as failed projects because on average 45% of them have surpassed their budgets and 70% late despite delivering less than 56% of their projected value (MCKinsey & company, 2012). Unclear business objectives, incompatible stakeholders and excessive re-work are some causes of project failure (Geneca, 2010-2011).

1.1.1 The Global Perspective.

According to KPMG -New Zealand (2010), 70% of organizations have suffered project failure in at least one of their projects whereas 50% of the organizations failed to achieve their objectives. Large scale engineering projects in the whole world have been experiencing grave performance hitches where an estimated price of $985 million (Miller & Lessard, 2011). According to Shanmugapriya and Subramanian (2013) about 60% of construction projects in India are reeling under cost and time overruns. At completion, Seven Korean megaprojects, had their final cost increased by 122.4% compared to the original budgeted cost. The estimated cost overrun for 29 medium sized projects studied during the same period was 32.5%. Heon (2009). According to Zujo et

al (2010), out of 177 projects in Bosnia and Herzegovina, 51.40 % of them had time overruns while 41.23% of them also had cost overrun. Similarly, 81% of 333 projects in Croatia had cost overruns. Only 30% of construction projects in Saudi Arabia are completed within calendar, with time overrun estimated to run between 10% and 30% (Assaf & Al-Hejji, 2009).

Moreover, out of 359 projects in studied in Malaysia only 46.8% of public sector projects and 37.2% of private sector projects were completed within the budget, with a 2.08% deviation from the budgeted cost (Endut, Akintoye & Kolley, 2009). In addition, they established that both the public and private sector construction projects in experienced cost overruns exceeding 50%. Only 20.5% of the public sector projects were completed within specified time and 46.8% of projects finalized within the budgeted cost. A mere 33.35% of private sector projects and 37.2% of public sector projects were accomplished within the postulated time and budget correspondingly.

Abdul-Rahman, et al (2013) reported that in Bosnia and Herzegovina, 29 out of 53 infrastructure projects experienced a cost overrun of 6.84% while the residual 24 re-construction projects had an estimated cost overrun of 9.23% on average. In Pakistan, cost overrun ranges from 10% for small-sized firms to 40% for large construction firms, with the percentage set to increase to 60% for medium-sized firms (Azhar, Farooqui & Ahmed, 2008). Aziz (2013) who studied 15 diverse projects in Kuwait reported that only one project had been completed without a cost overrun. Aziz (2013) also stated that about 70% of the construction projects in Oman experienced time and cost overruns.

1.1.2 Regional Perspective

A recent survey of capital projects in sub Saharan Africa by PWC (2014) recounted that projects had a cost overrun ranging between 10% and 50%. A report by Deloitte East Africa indicates that 48 percent of projects were over budget and about 87 percent of projects were completed beyond the estimated time. The Deloitte Construction 2017 report finds that in Africa, a meager 20 percent of projects attain economic conclusion and to proceed to implementation.

Project failure is a national malady in Nigeria (Okereke, 2012). A government committee report revealed that out of 609 ongoing projects, 285 projects were abandoned at different stages of accomplishment (Daily Times, 2013). Moreover, according to Enagi and Ochoche (2013), although government of Nigeria has invested heavily, prominent Information Technology projects such as the Abuja Investment and Property Development Company (AIPDC) incurred a loss of about 3.8billion naira and the Energo Nigeria Limited transmission substation failed to achieve even 5 per cent implementation. Ewa (2013) records that most of the projects in tertiary institutions in Nigeria do not realize the objectives they were set to achieve.

An abandoned Projects Audit commission report (2011) exposed that for the past 40 years   11, 886 federal government projects in Nigeria were abandoned throughout the country for a variety of causes including cost and time overruns. One such abandoned project in is the Ajaokuta Steel Company which was abandoned for over thirty years and cost more than US\$ 9 billion (Mold, 2012). A study of ongoing construction projects in Abuja showed that cost overruns ranged from the lowest of 5.56% with a project completion level of 90%, and within 88% of the estimated project duration, to an extreme of 216.08% with a meager 5% project completion level, and within 8.3% of the planned time (Saidu & Shakandu, 2017). The study also revealed that altogether the projects had an estimated cost overrun of 44.46%, with an average project completion level of 52.4%, and within 91.4% of the average estimated project time limit. Furthermore, Ernst andYoung (2014) stated that 64% of the infrastructure projects in the oil and gas industry were over budget and in one certain case the budgeted cost exceeded by as much as 59% signifying an increase of US\$500 billion.

A report by Bentil et al (2017) revealed that over 40% of building projects in Ghana have exceeded budget and encountered delays. The construction projects exceeded the budgeted cost by 75% and have been delayed by 146%. The maximum cost overruns recorded were 376%   and maximum time delays of 400%. A World Bank Report (2012) reveals that, "13 out of 26 World Bank funded projects in Ghana which should

have completed within three to five years, have run far beyond their completion dates, with some running for eight to nine years. This has resulted in over US$1.5 billion above the approved US$2.3 billion.

The Bujagali Hydro Power project in Uganda experienced a cost upsurge from a projected cost of 430 million US dollars to 860 million US dollars by March 2007(Gbahabo & Ajuwon, 2017). Apolot, et al (2011) observed that only 40% of the 535 of the Civil Aviation Authority of Uganda projects, were within the budgeted cost, while 7% of the projects were below the budget. 84% of these excessive costs were caused by variations in the project scope, while the rest were largely associated with the rise in the price of materials.

Baloyi & Bekker (2011) recorded that the construction of FIFA 2010 World Cup stadia in different cities in South Africa were over budget by between 5% and 94%. Kaliba et al (2009) recorded that road construction projects in Zambia faced exceeded the budgeted cost by 50% due delays and other factors. Amandin and Kule (2016) who studied construction projects in Gasabo district Kigali city discovered that of the projects executed between 2009-2012, 65.7% suffered time overruns while 5.2% exceeded budget.

1.1.3 Local Perspective

In Kenya, projects have been experiencing cost and time overruns as well as quality issues, even with high quality training of project professionals (Muguchu, 2012; Gwaya, et al, 2014). Sometimes teams are reconstituted with new team leaders and project managers to no avail (Gwaya et al., 2014). A report on CDF projects indicated that 48% exceeded the budget and 87% went beyond the stipulated time with Agricultural projects exceeding their budgeted costs by about 71% whereas projects in industrial sector suffered 68.3% escalations in cost and time (Ngacho & Das, 2013).

A 2018 report by Deloitte reveals that fewer than a 20% of public initiatives in Kenya are completed within schedule which leads to penalties and costs related to project

delays. . According to the report only 16.7 per cent of the projects were likely to be completed on time. The Africa wide report by Deloitte titled "A shift to more but less", Cost and time overruns contribute significantly to the abandonment and failure in Kenya. It further says that 87 per cent of all public projects in Kenya suffered time delays while 48 per cent overshot their budgets. The judiciary's ksh10.5 billion infrastructure development project which should have been completed in five years was late at the time of the report with the government seeking a two year extension.

Statistics on road construction projects in Kenya show that KeNHA projects have been experiencing increased costs and delays (World Bank, 2014). According to the report the Thika Super Highway construction project had a cost overrun of KSH 8.01 billion and time overrun of 2years.

1.1.4 Energy Sector

According to the MOEP project implementation status report (march 2015-march 2016) projects in the energy sector in Kenya are categorized into Generation projects, Transmission projects, Distribution projects, Oil and Gas projects, Renewable Energy Development Projects, and Nuclear Power Projects. The Generation projects are under KENGEN and GDC, while the transmission projects are undertaken by KETRACO. The distribution projects fall under KPLC and REA while the oil and gas projects are operated by NOC. Renewable Energy Development projects are operated by MOEP and KFS whereas nuclear power projects are operated by the KNEB.

1.1.5 Performance Of Energy Sector Projects in Kenya

According to Kariungi (2014) energy sector projects in Kenya have not performed to their expectations in terms of completion on time, on budget and quality. This is partly due to transmission losses which stood at 3.55% in 2009/2010 and 3.5% in 2010/2011 (KPLC, 2012-2016). In 2010/2011 distribution loses stood at 16.2% and delays in obtaining agreements, attainment financial closure, acquisition of land, as well as delays by Contractors (Electricity Sub-Sector Medium Term Plan, 2012-2016). The KPLC Master plan (2011) records that the electrification process is very slow with only 20% of the population being reached. According to KAM (2012), Kenya ranks position 115 out of 183 with regard to time electricity takes to reach the final consumer. The investment prospectus (2013-2016) records that only about 26% of the rural Kenyan population have electricity; 74% are not connected. The proportion of those who had access to electricity in urban areas was 60%, whereas in rural areas the proportion was 7% (ODI, 2016). The report further adds that although the government of Kenya and donors have significantly invested in grid expansion which has increased access to electricity since 2000, millions of Kenyans can still not access electricity.

A study by Kagiri (2014) on failure of projects in the Energy sector in terms of cost and time overruns reveals that there exists a significant time variance in time and cost during

execution of projects. Projects in the Kenyan Energy sector are delayed by between 4 to 36 months and have cost overruns of between 1% to 83%. The table below gives a summary of some projects as provided by the various project managers.

Table 1.1: Summary of Projects

Project	Type of project	% variance in cost	Time variance in months
Kipevu I	Generation	19%	Completed within specified time
Olkaria II	Generation	28.3%	14 months
280MW Olkaria I&IV Geothermal Project	Generation	41.3%	4 months
Kindaruma-Mwingi-Garissa line	Transmission	8.8%	28 months
Eldoret-Kitale Line	Transmission	60%	36months
Olkaria-Suswa	Transmission	22%	31 months
Machakos-Konza	Transmission	5.9%	10 months
Rift valley and north Kenya schools	Distribution	19%	18months.
S. Nyanza, C.Kenya and c.rift schools	Distribution	1%	16 months
Mt.Kenya and c.rift schools	Distribution	21%	25 months
South nyanza/central rift schools	Distribution	20%	19 months
Eastern/north eastern schools	Distribution	50%	19 MONTHS
Coast region schools	Distribution	20%	17 months
Jomvu substation	Distribution	83%	12 months
Mishomoroni	Distribution	20%	25 months

Kipevu	Distribution	5.8%	14 months
Grid study	Nuclear	60%	10 months
SEA	Nuclear	1%	4 months
NRB	Nuclear	10%	24 months
SITING	Nuclear	20%	On course

Source: KETRACO, KNEB, Kengen and GDC, REA and KPLC, KNEB

1.1.6 Soft Skills

Due to the complex environment within which projects operate (Gillard, 2009) employees need ability and style to execute a project to a fruitful close. Historically, technical skills were the most important competencies for project employees but today soft skills for instance leadership, conflict management, persuasion and communication are the most important competences (Robles, 2012). Soft skills balance the efficiency of hard skills because project results are attained through people (Gillard, 2009). Therefore, failure by project managers to provide leadership in team work management, leads to project failure.

A research on world bank funded projects in Kenya revealed that soft skills such as communication are important for the project to run from design, through to implementation (Ackel, Kidombo & Gakuu, 2012). This study focused on leadership skills, communication skills and stakeholder management skills. Studies on leadership have shown strong leadership as being critical to project accomplishment (Mascia, 2012).

Project communication consists of actions that relate to collection, creation, disposition and distribution of information related to project management as well as identification of responsibilities played by team members among other stakeholders involved the management of communication processes (Hill, 2010). Tipili et al (2014), and Cataldo and Ehrlich (2011) claim that it provides vital links among ideas, people and information

required in project management. As a result, poor or insufficient communication is a contributor to project failure (Tipili et al, 2014). Communication is essential for securing project approval, securing concord on pertinent issues, resources and solutions, reinforcing processes, driving actions aimed at improving project management, enhancing leaders' credibility and showing the complete results of the project (Cataldo & Ehrlich, 2011).

Project employees must manage the projects' stakeholders in order to win their support (Thompson, 2011). Stakeholders can include those who approve the project, the project financiers, those who provide resources such as labour, equipment, materials and facilities, as well as the beneficiaries of the project (KPMG, 2013).

Problem solving is the process of eliminating discrepancies (Ward, 2012). According to Porter, Rempel &Mansky (2010) problem solving should focus on solving the underlying problems, collaboration with both internal and external players, and promoting compliance by participants. Heldman (2011) adds that tackling problems early ensures that they do not escalate out of control. Project managers should deal with small problems before they add up to become big problems (Mobley, 2015).

1.2 Statement of problem

Energy sector projects in Kenya have not performed to their expectations in terms of completion on time, on budget and quality (Kariungi, 2014). A study by Kagiri and Wainaina (2013) on generation projects revealed that time overruns in the projects ranged between 4.6% to 53.4 %, whereas cost overruns ranged from 9.4% to 29% Data obtained from KENGEN and GDC indicates that generation projects are delayed for a period of between 4 months and 14 months while cost overrun ranges between 6% to 41.3%. Distribution project cost overruns range from 5.8% to 83% with time overruns ranging between 12 months to 25 months. For transmission projects the cost overruns lie between 5.9% to 60% with time delays running between 10-36 months.

Projects exceed time and budget due to poor cost estimation and poor schedules (Seddeeq et al, 2019), failure to involve users (The Standish Group,2013) inadequate planning (Seddeeq et al, 2019;The Standish Group,2013; Subramani, Sruthi & Kavitha, 2014; Malumfashi & Shuaibu,2012), Ineffective, inefficient and inexperienced project teams (Ackel et al, 2012; Allahaim & Liu, 2012; Love *et al.*, 2011; Memon *et al*, 2011; Ameh *et al.* (2010)), poor working relations and poor communication (Ackel et al,2012),and managerial incompetence (Ahiaga-Dagbui & Smith, 2014). Poor planning, lack of user involvement, inexperienced project teams, poor working relations, poor communication and managerial incompetence all indicate the shortfall in the use of soft skills in projects.

To deliver projects successfully, there has to be a link between team work from project members, leadership from manager and project's outcomes (Yang, Huang & Wu, 2010). John (2009) established that hard skills provide about 15% of projects' success whereas the rest of success comes from soft skills. Although studies have been done to explain project performance, there is none on the effect of employees' soft skills on performance of projects in Kenya. Based on this evidence, there was a necessity to examine the correlation between the soft skills of project employees and the performance of projects.

1.3 Objectives of the study

1.3.1 General objective

The study's general objective was to inspect the effect of employee's soft skills on the performance of public energy sector projects in Kenya.

1.3.2 Specific Objectives

The research was directed by the specific objectives below:

1. To find out the effect of employees' leadership skills on performance of projects in the public energy sector in Kenya.

2. To examine the effect of employees' communication skills on performance of projects in the public energy sector in Kenya.

3. To investigate the effect of employees' stakeholder management skills on project performance in the public energy sector in Kenya.

4. To establish the effect of the employees' problem solving skills on performance of projects in the public energy sector in Kenya.

5. To scrutinize the moderating effect of the organizational environment on the relationship between employees' soft skills and project performance in the public energy sector in Kenya.

1.4 Research Hypotheses

The hypotheses of the study are:

Ha_1: The project employees' leadership skills positively affect project performance in the public energy sector projects in Kenya.

Ha_2: The project employees' communication skills positively affect project performance in the public energy sector projects in Kenya

Ha_3: The project employees' stakeholder management skills positively affect project performance in the public energy sector projects in Kenya

Ha_4: The project employees' problem solving skills positively affect project performance in the public energy sector projects in Kenya is positive.

Ha$_5$: The organizational environment moderates the relationship between employees' soft skills and project performance in the public energy sector projects in Kenya.

1.5 Justification of the study

The screening and improvement of soft skills in project employees is essential for project performance (Muzio et al, 2007). Although a number of studies, papers, articles and literature focusing on soft skills of project managers exist, a study on the effect of employees' soft skills on project performance has not been undertaken in Kenya. The study is significant in assisting students of project management and practitioners, to better appreciate the effect employees' soft skills have on performance of projects.

In addition, the key findings will be provided in fora such as project management seminars and bodies such as Project Management Institute to inform project management practitioners. In other words it will enhance to the project management body of knowledge.

However, this investigation does not pretend to provide definite solutions to project management knowledge and improvement. It however raises findings for distribution and sharing across the project management industry.

1.6 Scope of the Study

In line with the above objectives, the study restricted itself to Kenyan public energy sector. Particularly it laid its emphasis on the ongoing transmission, distribution, nuclear and generation Projects in the public energy sector in Kenya ending between January 2016 and December 2018.

There are many soft skills that can affect project performance. However, this study limited itself to leadership skills, communication skills, stakeholder management skills and problem solving skills and their effect on project performance. The moderating effect of organizational environment on the relationship between soft skills and project performance in the public energy sector in Kenya was also looked into.

1.7 Limitations of the Study

The findings of the study were restricted to projects in the Kenyan energy sector, due to the centrality of administrative and management structures that dictate uniformity in project design and planning. Due to sensitivity of some information that was required to conduct the study effectively, the researcher was unable to control respondents' responses on self-reported attributes such as attitudes, regulation and failure to answer some questions and the number of respondents who returned questionnaires. Nonetheless, to mitigate some risks emanating from this, the researcher wrote an introduction letter assuring the respondents that the information obtained from them would be confidential.

There was also the risk of failure to understand the questions by the respondents. In designing the questionnaire the wording of the questions, categorization, putting codes on the variables and universal acceptance was put into consideration. The questionnaire was then piloted to test for sequencing, language suitability and overall design (Campana, 2005). It was kept short, with a simple and easy to understand manner and double barreled questions were avoided (Gall et al, 2003). The survey applied a five point Likert-type scale to measure attitude (Sarantakos, 2005). It also adopted cross-sectional design, pragmatism and mixed method to manage the limitations.

The return of the questionnaire was slow. To mitigate this, the researcher kept in touch with the project supervisors through phone calls and collected the filled questionnaires in person.

The respondents may have been biased when answering the questions. This could have led to the presence of outliers, skewness or no real patterns emerging from the data.

The presence of outliers made initial analysis of data hard. The hurdle of outliers, was overcome through Winsorization of the data (field, 2013). Winsorization is the minimization of outliers' influence on data by either changing outliers' value or

assigning them lower weight so that they can be close to other values (Dixon, 1960). In this study, the outliers were adjusted until they got closer to the other values in the set.

In order to lower the incidence of limitations associated with the participants and ethics, a covering letter was attached to the questionnaire. The cover letter explained the background, aim of collecting the data and the researcher's contacts in case the need arose for participants to seek further clarification about the intention and purpose of the study (Campana, 2010). Participation in the study was voluntary. The cover letter also neutralized any doubts and suspicion the participants could have had about the study, thereby motivating the respondents to participate. Furthermore, it ensured anonymity and confidentiality as respondents were not obligated to provide their identities.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The section provides the literatures which were considered pertinent to the objectives of the study. In particular, the chapter reviewed literature specific to project performance, leadership skills, communication skills, stakeholder management skill, problem Solving skills and organizational environment. The chapter presents a theoretical review and a conceptual framework.

2.2 Theoretical review

In this chapter various theories were discussed. According to Eisenhart (1991), a theoretical framework is a construction utilized to guide the study on the basis of formal theory. It offers the researcher a lens with which to observe the world (Abeywardena & Tham, 2012). It is constructed using conventional, logical accounts of certain relationships and phenomena. The theories that explain the soft skills under investigation are contingency theories (Leadership), theory of self-interest (communication), and systems theory (stakeholder management).

2.2.1 Contingency theories and leadership

The contingency theories were proposed by Fred Fiedler in 1958. The contingency theories state that the success of a leader is linked to the connection between his/her characteristics, behaviour and the situation in which he/she is operating (Charkrabarti, 2014). According to the Fieldler (1958) contingency model, the performance of a group of people is dependent on the leader's leadership style, and how favourable the situation is. Different styles of leadership work better in different situations. For example task oriented leaders perform better in extremely favourable and exceedingly unfavourable conditions while association –oriented leaders do well in modest conditions. Fiedler's contingency theory claims that effective leadership depends on leadership style and

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control of that leadership over prevailing situations. According to the theory, there needs to be good relationship between the project leaders and the project employees, tasks with lucid procedures and goals, and leader's ability to offer rewards and punishments. Lack of these three in the right blend and background results in leadership failure. This theory is important for this study because it talks about the importance of the leadership style which is one of the factors being researched on.

2.2.2 Theory of Self interest and communication

The theory of self-interest was proposed by Monge and Contractor (2003). This theory provides a framework within which to deal with communication networks, stakeholder involvement in the communication process, communication costs and team involvement in the communication process. The theory of self- interest is further divided into transaction cost economics and social capital theory. The social capital theory focuses on the properties of communication networks to which people are connected. The structure of the network provides people with opportunities to provide information, communication and other social resources with the hope of reaping benefits. This theory is relevant to the study in that it deals with stakeholder involvement and team involvement in the communication process which forms part of the study.

2.2.3 Systems theory and stakeholder management

It was proposed by Freeman and McVea in 1948. It recommends the use of systems theory and organizational theory for stakeholder management. The segment of system's theory which is relevant to stakeholder management was first put forward by Ackoff and Churchman in 1947. The system's theory stresses the external links that are part of every organization. It emphasizes the identification of stakeholders and the interconnections between them. Systems theory focuses on the development of collective strategies that optimize the network. In 1967 Thomson introduced the idea of 'clientele' which takes into account groups outside the conventional boundaries of the organization. The systems theory emphasizes the significance of expanding analysis of strategic problems to include all stakeholders. It is applicable to this study because it stresses on the need

for organizations to have links with external stakeholders. It also puts emphasis on identification of stakeholders and the importance of stakeholder relationships which form part of the study.

2.2.4 The standard problem solving theory and problem solving

The theory was first suggested by Newell, Shaw & Simon in 1958. Its focus is on how human beings respond when confronted with unfamiliar tasks. According to this theory, problem solving involves the use of "the problem space hypothesis." Problem solvers applying this theory apply the means-ends analysis concept. This involves identifying variances between the expected and prevailing situation, choosing operators which will lessen the variances, and then relating the operators to the present situation.

This theory is applicable to this study because it offers an organized, methodical approach to resolving difficulties and making improvements (Connelly, 2015).

2.2.4 Summary of Theories

The relationship among the three theories is summarized as follows in this study.

Table2.1: Theoretical interrelationship

Theory	Arguments	Application to study
Contingency theories	The performance of a group of people is dependent on the leader's leadership style, and how favourable the situation is. Different styles of leadership work better in different situations. There is need for good relationship between the project leaders and the project employees, tasks with lucid procedures and goals, and the ability for the leader to offer rewards and punishments.	Project leaders should apply various leadership styles depending on the situation. Styles that enable project leaders to mentor, coach, inspire and empower project employees are recommended

Theory	Arguments	Application to study
Theory of self interest	Project performance is dependent on effectiveness of communication between the various stakeholders in a project. This calls for clear communication channels. The channels provide stakeholders with opportunities to provide information, communication and other social resources with the hope of reaping benefits.	This theory provides a framework within which to deal with communication networks, stakeholder involvement in the communication process, communication costs and team involvement in the communication process.
Systems theory	Project performance depends on both the stakeholders within and stakeholders without the organization The stakeholders should be identified and the relationships between them managed to ensure a smooth running of the projects.	The system's theory stresses the external links that are part of every organization. It emphasizes the identification of stakeholders and the interconnections between them.
Standard problem solving theory	Issues and problems could be resolved effortlessly and with better outcomes by using a problem solving model which is an organized, orderly approach to resolving issues and creating enhancements	Problem solvers applying this theory apply the means-ends analysis concept. This involves identifying differences between the preferred and current state, selecting operators which will minimize the variances, and then relating the operators to the prevailing state of affairs.

2.2.5 Conceptual framework

A conceptual framework is a system of related concepts (Jabareen, 2009). Marshall and Rossman (2006) define it as a set of ideas on which the research is structured. It enables the researcher to establish a relationship between already existing literature and his/her

research goals. A conceptual framework outlines probable courses of action and/or provides favored approaches to implementation of ideas.

Through proper leadership, the project leader can get the best out of the project team on which he/she is dependent for effective execution of the venture (Awan et al, 2015). Soft leadership focuses much of its attention on character, communication, charisma, empathy, courage, persuasion, compassion and setting good personal examples (Rao, 2012). Anantatmula (2010) affirms that the project leader can provide direction by clearly defining the project mission, enabling him/her to translate it into measurable project outcomes. In order to achieve stability and order among team members, the project manager should carefully define the roles and processes clearly (Anantatmula, 2010). Project leadership brings motivation, direction, clarity and purpose among team members (McDonough 2000; Thamhain 2004a, mentioned by Awan et al 2015). Top management support is vital for projects' success; thus, projects' leaders must aim at earning support from top management (Anantatmula, 2010). Based on this review, the study aimed at finding out the effect of employees' leadership skills on the performance of public energy sector projects in Kenya.

Communication is essential in every project. According to Cataldo and Ehrlich (2011), Tipili, Ojeba and Ilyasu (2014) effective communication is essential for profitability, productivity and replicates working opportunities in projects. Tipili et al (2014) add that communication plays fundamental roles in all phases of projects. Genuine communication between the project managers and the members of the project teams solves intermediary concerns which adversely influence project success (Turaga, 2014). Kibe (2014) also observes that Good communication, keeps everyone glued to the goals and priorities of the project while providing feedback on progress. Based on this review, the study set out to establish the effect of employees' communication skills on performance of projects in the energy sector projects in Kenya.

Stakeholder management contributes to successful project performance (Eskerod & Jepsen, 2013). Moore (2011) defines management of stakeholder expectations as a practice of working and communicating with stakeholders with an aim of addressing the issues they raise and meeting their needs. Through effective stakeholder management, a project manager can therefore align project's requirements, fix issues that might undermine project implementation, understand risk tolerance from stakeholders' perspective and prevent scope creep (Team FME, 2014). Moore (2011) adds that active stakeholders' expectation management reduce the risks of project failure due to unsettled issues and minimizes project disruptions. According to Thompson (2011), project managers can utilize opinions from influential stakeholders to shape the implementation of projects and secure support from authoritative stakeholders. Based on this review, the investigation sought to find out the effect of employees' stakeholder management skills on performance of public energy sector projects in Kenya.

Project managers handle many issues during project execution. Problem solving involves the elimination of discrepancies (Ward, 2012). Project managers who can solve problems are capable of influencing project teams and achieving project performance (Awan et al, 2015). On the basis of this literature the investigation sought after establishing the effect of the project employees' problem-solving skills on the performance of public energy sector projects in Kenya.

Organizations are increasingly becoming anxious about performance (Njuguna-Kinyua, Munyoki & Kibera, 2014). An organization's performance is dictated by the forces and intricacies within and outside the organization. An organization's external factors influence the accessibility to resources. As the organization's environment changes, organizations must ensure that the scarce resources they get from the environment are efficiently and effectively utilized. Based on this review the study hoped to examine the moderating effect on the relationship between the employees' soft skills and the performance of the energy sector projects in Kenya.

This short review of literature has led to the formulation of supposed relationships between the variables under investigation. It is illustrated by the conceptual model in figure 2.1 on the next page.

Independent Variables   Moderating Variables   Dependent

Leadership skills

  - Coaching and mentoring the project team
  - Empowering team members
  - Inspiring the project team

Organizational environment

  - Internal environment
  - External environment

Communication skills

  - Strategic communication of results
  - Knowledge management

Project performance

  - Level of completion
  - Cost
  - Time

Stakeholder management skills

  - Stakeholder analysis
  - Managing stakeholder engagement
  - Stakeholder relationships

Problem solving skills

  - Areas that require problem solving
  - Problem solving tools and strategies

Figure 2.1: Conceptual Framework

Table 2.1: Operationalization of variables

Variable	Type of Variable	Indicators	Measurements	Measurement scales	Type of analysis	Tools of Analysis
Leadership skills	Independent variable	• Coaching and mentoring the project team • Empowering team members • Inspiring the project team	Role played by project manager	Ordinal	Quantitative and qualitative techniques	Regression And descriptive
Communication skills.	Independent variable	• Strategic communication of results	Relevance of communication skills on communication of results	ordinal	Quantitative and qualitative techniques	Regression and descriptive
		• Knowledge management	Relevance of communication skills on communication of results skills on knowledge management	Ordinal	Quantitative and qualitative techniques	Regression and descriptive
		• Decision making	Relevance of communication skills on decision-making	Ordinal	Quantitative and qualitative techniques	Regression and descriptive
Stakeholder management skills	Independent variable	Stakeholder analysis	Focus on relevance of stakeholder analysis to project performance	Ordinal	Quantitative and qualitative techniques	Regression and descriptive

Variable	Type of Variable	Indicators	Measurements	Measurement scales	Type of analysis	Tools of Analysis
		Managing stakeholder engagement	Relevance of managing stakeholder engagement to project performance	Ordinal	Quantitative and qualitative techniques	Regression and descriptive
		Stakeholder relationships	Focus on relevance of stakeholder relationships to project performance	Ordinal		
Problem solving skills	Independent variable	Areas that require problem solving	Focus on areas that require problem solving skills in relation to project performance	Ordinal	Quantitative and qualitative techniques	Regression and descriptive
		Problem solving tools and strategies	Focus on relevance of problem solving tools to project performance	Ordinal	Quantitative and qualitative	Regression and descriptive
		Role of project team	Focus on the relevance of team/group politics to problem-solving	Ordinal	Quantitative and qualitative.	Regression and descriptive
Project performance	Dependent	Level of completion	% level of completion	interval	Quantitative	
		Cost	Amount of money spent	interval	quantitativ	

Variable	Type of Variable	Indicators	Measurements	Measurement scales	Type of analysis	Tools of Analysis
		Time			e	
			Number of months	Interval	quantitative	
Organizational environment	Moderating Variable	Internal organizational environment	Focus on moderating effect of internal and external environment	Ordinal	Quantitative and qualitative	Stepwise regression
		External organizational environment				

2.3 Empirical framework

The study sought to ascertain the effect of employees' soft skills and organizational environment on performance of projects in the Kenyan public energy sector. The variables under study are project performance, leadership skills, communication skills, stakeholder management skills and organizational environment. According to Schryen et al. (2015) by reviewing literature, researchers are able to place their studies into historical and intellectual context; thus, the literature review was utilized to develop the above framework.

2.3.1 Leadership skills and project performance.

Most projects do not meet cost and time targets due to poor human relation, lack of commitment from team members, absence of motivation, low productivity and poor morale (Anantatmula, 2010). Jetu and Riedl (2012) noted that people play critical roles in the success of projects and therefore people related issues are vital for project performance (Anantatmula, 2010).

Project leaders who employ soft skills focus on a strong human resource management and put emphasis on strong ethical system among its teams. One important soft skill that

affects project performance is leadership. How well leadership skills are applied determines the level of staff morale, intensity of motivation, how well the team members relate, level of productivity as well as the degree of commitment towards the project. A research by Awan et al (2015) reveals that through proper leadership, the project manager can reap optimum benefits from the project employees on which he is dependent for successful implementation of the project. Lee (2009) outlined the four key parts played by a project manager as leadership, managerial, facilitation, and mentorship/coaching.

Coaching is the practice of arming people with the requisite implements, information and chances necessary to advance themselves and be more effective"(Styhre & Josephson, 2007). According to Ladyshewsky (2010), coaching is a fundamental ability vital for managers of projects which ought to be accentuated in initiatives geared towards organizational development. According to Hagen and Aguilar (2012) also argued that coaching is an essential task of   managers and leaders and therefore the project employees' learning results are expected to be enhanced if the project leader has coaching skills. Ellinger, Beattie, and Hamlin (2014) recorded that coaching for development of project employees has for a long time been a basic management action. McCarthy et al. (2015) also identified a connection between organizational ethos and the likelihood of the project manager displaying coaching tendencies. Beattie et al. (2014) identified lack of empirical research as one of the major weaknesses of coaching by project.

Ladyshewsky (2010) likewise claimed that coaching in the place of work ought to be part of the total structural development and managerial viewpoint. Anderson, Frankovelgia, and Hernez- Broome (2009) associated the coaching philosophy with extra confidence and honesty in projects, arguing it points to increased participation and transparency in decision making. The advancement of a coaching philosophy encompasses five steps: informal external coaching, the strategic use of external

coaching, coaching for all staff, coaching for every stakeholder and, finally, coaching externally to a wider community (Passmore & Jastrzebska, 2011).

Madsen (2014) and Berg and Karlsen, (2013), pointed out that to be a good coach a project manager should be a good listener, good observer, Focus on the needs of the team, ask discerning questions, serve as a self-reflecting glass, possess a candid attentiveness in facilitating, the building of instantaneous bond with the team, have emotional intelligence, have patience, have experience working in a dynamic situation, possess coaching skill and Possesses confidentiality.

Osterweil (2014) noted that, when coaching is combined with formal training, coaching and mentoring steadily advance a project team's practical project management ratings of the project that they are working on. Before coaching there is need for the coach to appreciate the project organization's corporate philosophy and anticipations for concerns such as compliance with a chosen business practice, usage of project management document models, the interfaces with other projects to provide a vital competence and their approach to project management. Mentorship and coaching allow the project teams a chance to experiment and apply what has been   learnt through the supervision of a mentor and at the same time receive a response on their accomplishment from the mentor. Mentorship is most constructive for projects in their early stages because it makes interventions extra focused to particular areas in the project like the planning function which comes early in the project (Osterweil, 2014). Coaching at this stage establishes a sense of direction. At this point in the project lifecycle also examines the gaps in project records and their likely effect on the project. Poor estimations are likely to have an effect on projects, especially during introduction of new ventures or use new innovative innovations or approaches. Project teams should be encouraged to explain the estimates they have come up with as well as their risk management approaches in order to eradicate unjustifiable choices.

According to Osterweil (2014), there are two types of coaching; leadership coaching and team coaching. Coaching of project teams involves working with the entire team, as whole and separately. It helps the team members to cooperate and cultivate their combined and separate leadership skills and be able to work effectively with key stakeholders (Buckle & Lines, 2012). The project manager must embrace a group approach instead of an individual one when distributing tasks (Beattie et al., 2014; Ellinger et al, 2014).

Clutterbuck (2013) noted that coaching of teams comes in handy during creation of a new team to enable it to take off well and for existing team to enable it to perform as expected. Areas in which project teams need coaching include how to relate with stakeholders, Self-confidence, dealing with individual conflict with project matters, being a first time project manager, handling pressure, Sense of being trapped and helpless, coping with contradictory priorities, Feelings of isolation and coping with very senior staff. Ramazani and Jergeas (2014) noted that coaching is vital for continuous development of the project. A study by Palm and Lindahl (2015) concludes that by coaching project teams, the stress caused by lack of continuous training and support can be avoided.

Team coaching unlocks the potential of the project team and maximizes its performance, by aiding learning by the team and its individual members (Osterwei, 2014). Team coaching depends on discretion and trust between the coach and the team between members of the team. A coaching agreement should be developed with the members of the project team but not the team leader for the project team as everybody must sign and approve of the coaching objectives.

As a coach, the project leader should identify probable weaknesses and unequivocally request the team members to defend their methodology. This provides the project team with better understanding of their tactic and any alternate choices available.

Burnes (2014) defines empowerment as the entrustment of authority and accountability to Project team members. According to Kotter, (2012) empowerment is the ability to take action on an agreed upon change vision, which involves eliminating hurdles hampering change in the project. The project leader plays an instrumental role in determining the success and the failure of project team empowerment initiatives (Hakimi et al., 2010). Askey (2017) describes empowerment as a tripartite partnership between employees, managers and the organization to ensure the success and sustainability of the organization. Members of the project team are fully responsible for their role while project managers create a conducive environment for team members to play their role and the organization supports teams exercise their responsibilities to achieve individual and the corporate performance in line with the organization's mission, strategy and plans.

A study by Tuuli and Rowlinson (2007) suggests that the creation of a conducive climate for empowerment holds the greatest potential for managers of projects to influence the perceptions of project team members of empowerment serves as a diagnostic tool for "trouble-shooting" in the empowerment process. Askey (2017) notes that project manager should create an environment that fosters and encourages their teams gain empowerment by demonstrating their faith and confidence in the team's competence by providing encouraging response, and by withdrawing from everyday tasks. According to Askey (2017) organizational factors such as performance management and project communications should encourage empowerment. Kotter (2012) noted that to empower the project team to bring change the project leader should communicate the vision to the staff which makes it easier for them to take action, make the structures compatible with the vision, provide needed training to staff, align systems to the vision and tackle head-on supervisors who are not supportive of the new vision.

For Empowerment of the project team to occur, the project manager needs to set business logic for services and change the vision for that work (Lindholm, 2017). Project teams can be empowered by adopting a Design Thinking approach which allows the

team members to build understanding of their cross-functional roles, use of innovative and motivating ways of engaging individuals in projects, emphasis on creation of value, envisioning it as a team and taking ownership of common projects while concurrently addressing any necessary change (Lindholm, 2017).

Boudrias et al (2009) classifies empowerment into empowerment practices for supervisors, empowerment for employees' conduct and psychological empowerment. Through psychological empowerment the project team discovers the importance of their role, are competent to perform that role in order to accomplish the projected outcomes and trust that they can affect the results of a project (Boudrias et al. 2009). Team members are psychologically empowered when they have the appropriate skills, a connection to the resolutions of their organization, autonomy to make decisions on what should be done, how the work should be completed and when the work should be done (Askey, 2017). Psychologically empowered project teams manage their responsibilities in the project and proactively initiate changes in the project environment (Boudrias et al, 2009). Hence, psychological empowerment is associated to efforts to bring change.

Askey (2017) documented five scopes of empowerment. The project team members should autonomously make decisions on what ought to be done, when it ought to be done and how ought to be done (Askey, 2017). The teams should also lead and self-monitor their own work while the project manager inspires and empowers them to have freedom when performing their tasks. Askey (2017) advocates for an open relationship between the project manager and members of the project teams, which explores performance progress and is initiated by the team members. The project managers in turn encourage the team members to take charge, power and authority for realizing crucial features of the project work. .The result is that the project team members feel empowered, are able to decide on their work process, can monitor their performance and are more proactive in their dealings with the project manager (Askey, 2017).

Inspiration entails emotionally supporting the project teams through stressful and uncertain moments (Muller, Geraldi, & Turner, 2012) as well as the ability to motivate the team to achieve high levels of performance (Grossman & Valiga, 2009). Working in teams requires motivation (Hütter and Diehl, 2011). The motivation of members of project teams directly affects their performance (Beel, 2007). Motivation theorists hold that people can be motivated through dress policies, which encourages them to attain individual and organizational goals (Peterson, 2007). Incentives stimulate, boost and rouse employees to realize individual and project goals. The level of motivation employees affects all aspects of an organization (Peterson, 2007).

Motivational theorists document that employees are motivated by aspects such as instincts, inducements and desires (Cherry, 2012). Motivation emboldens and boosts the project team members not only to achieve their individual goals but also the project objectives. Allowing employees to wear casual attire to work acts as a reward that increase employees' productivity. Project management practices including careful monitoring of project performance intensifies the team's enthusiasm to work together leading to assimilation (Che Ibrahim et al., 2015).

According to Peterson (2007), the four key constituents of project management practices that strengthen enthusiasm are authority, preparation and allocation of trained personnel, distribution of accurate data and accountability for completed tasks (Peterson, 2007). Active participation of the project leader motivates and inspires unreserved loyalty from project employees (Chiocchio, Kelloway & Hobbs, 2015). Rewards have also been established to be effective in motivating project team members and so Project leaders should consider rewards for positive contribution (Perterson, 2007).

Chaudhry and Javed (2012) found that contingent rewards are linked to the performance of team members. They add that team members who work hard are rewarded for their impressive work while those who are not committed to their work are punished. Odumeru and Ifeanyi (2013) submit that contingent rewards include praise.

Better working conditions also motivate workers in energy sector projects. This is aligned to the findings of Awan et al (2015) who propose that good leadership is responsible for establishing and providing apposite climate among team members which nurtures a structure for integrating and coordinating the specific members and enhancing joint contributions from the project teams. The findings are also in agreement with the results of Rao (2012) who concluded that a firm dedication of the project leader toward their word and work creates a conducive working environment. Their dedication builds durability in relations among the project team members.

Project employees are also motivated through training, reward of effort, involvement, better working conditions and supportive team. This is supported by Anantatmula (2010), who found that satisfaction of professional and personal needs had the greatest effects on team performance. Studies by Cornellius (2012) and Brenton and Levin (2012) point out that in order to motivate team members to work hard the project manager needs to identify their feelings, needs and expectations Anantatmula (2010) asserts that as leaders, project managers should put into consideration the personal aspirations for team members and support them to achieve them.

2.3.3 Communication skills and project performance.

Research indicates that efficient communication between projects' managers and team members eliminates intermediary issues that adversely affect the implementation of projects (Turaga, 2013). Effective communication leads to individual commitment to the project (Nangoli, 2010). Project managers must therefore make deliberate effort to master and use efficient communication skills strategically and in line with their organizations' strategies, missions and values while at the same time involving the project team for successful communication (Kibe, 2014).

A study by Nangoli (2010) revealed a positive association between communication and individual commitment. The results imply that if project managers are attentive communication from project teams obligation project activities would increase. Increased individual commitment leads to increased project performance. These findings make known the fact that if -individual team members on a project show dedication to the implementation of project activities, the project succeeds. According to the study, project communication and social networks are positively related. The results further indicate that both internal communication and external communication have a positive relationship to social networks. The findings indicate that if communication within the project is enhanced, faith between members of the project teams could be fortified. This includes ensuring that in-house and external meetings are held frequently for sharing of information on the various tasks. Social networks were also found to affect project performance. The study further showed that communication in projects, personal obligation and social links contribute to project performance. Awan, Ahmed and Zulqarnain (2010) also noted that the project manager's communication skills positively contribute to project success.

For effective communication, proper management, transfer and understanding of information is as it ensures that the various aspects of the project are assembled to realize the project design (Tipili et al, 2014). Philips et al (2012) affirm that, communication of project outcomes is crucial if projects are to succeed.

Cataldo and Ehrlich (2011) add that the project outcomes should be communicated to project stakeholders throughout the project life cycle. Managers of projects must therefore make a deliberate effort to control and use communication strategically to achieve the organization's values, mission and strategy while at the same time involving the project team for successful communication (Kibe, 2014).

Hill (2010) proposed that a project management office should be established for creation of feasible communication in projects and management of knowledge. Communication should be assembled and distributed successfully to all key persons as diverse stakeholders need different information and therefore the message must be tailored to meet their individual requirements (Cataldo & Ehrlich, 2011). Planning and effort make sure that every audience gets the entire information it desires, in the right format and at the right time.

Communication is successful if the communication needs of the project stakeholders are identified. Common target audiences include clients, top executives, immediate managers, team leaders, top executives, project team, participants and stakeholders (Cataldo & Ehrlich, 2011). Geographical distribution influences stakeholder identification with regard to communication (Damian & Zowghi, 2007). Sometimes, global teams may be involved in project execution. This creates distance between the team members and it calls for strategy in order for communication as well as build relationships among them. Distance creates challenges for the project team. These include inadequate communication, delay in communication, challenge in Knowledge management, Cultural diversity, is affected by time-zone differences and impedes building of trust in relationships (Damian & Zowghi, 2007).

Damian and Zowghi (2007) add that poorly managed communication causes demotivation of the project employees, errors in the design, lack of progress in the project and low production. Cataldo & Ehrlich (2011) argue that communication: must be timely, should be directed at definite stakeholders, should use carefully selected

media, and should be impartial and modest in tone. A plan should be established during the approval of the project and the process should involve the project manager, crucial executives and participants who ought to agree on the level of detail in the communication plan (Cataldo & Ehrlich, 2011).

Mochal & Mochal (2011) identify a process of creating a communication plan which involves identification of the main clientele, consumers and interested parties, determination of their communication requirements, brainstorming on how to realize the communication wishes, evaluation of the available choices to define those which offer the best value at the lowest price and impression on the project, as well as satisfying all the interested parties to a certain extent and fitting the details of communication activities into the project timetable.

Kibe (2014) proposes the use of a communication strategy to create a dependable, united voice which connects the various project activities and project goals in a way that appeals to the clients of the project. Tipili et al (2014), recognize that communication occurs in a variety of directions depending on the communicator. Upward communication comes from subordinates to superiors, lateral communication is directed at customers and also occurs amongst project employees, downward communication comes from bosses to the employees, horizontal communication occurs between colleagues.

According to Kibe (2014), downward communication is composed of policies, rules and procedures which are handed down from the administrators to the subordinates, while upward communication involves communication of performance progress reports, complaints and other relevant the team to the supervisors and project managers. Horizontal communication involves coordination between departments or divisions which are on the same level. Outward communication occurs between the project team and the various external stakeholders. Kibe (2014) further suggests the use of four communication strategies that impact project performance. These are open door policy,

team spirit, structure of the organization and formal communicationchannels. The organization structure influences effectiveness of communication and encourages responses, broad-mindedness and makes communication effective or hinders the ability of project employees to express themselves freely (Kibe,2014). In project teams where the teams are located in different geographical locations, project managers are able to identify and deal with dependencies, locate expertise and manage sharing of knowledge (Cataldo & Ehrlich, 2011).

The choice of communication tools should be according to goals and processes (Pawloski & Pirkalainen, 2012). According to Cataldo & Ehrlich (2011) communication channels vary according to the audience. For a large target audience, managers of the projects should use publications such as newsletters, magazines, newspapers or electronic files; e-mails and electronic media are excellent for the promotion of ideas and updating the team and other stakeholders on the outcomes of the project. For major projects the project manager can create a blog to display project results and provoke responses, comments and propositions. Brochures and leaflets are suitable for ongoing projects or where there is a wide audience which is changing constantly. Case studies describe situations, provide proper contextual data such as the actions leading to the venture, make available the procedures and approaches utilized during the development of the study and highlight the important matters in the project.

Milman (2011) advocates that some tools like Anymeeting and Vyew can permit project teams to debate and evaluate draft presentations or products created by the team. Milman (2011) also recommends some collaboration tools for distributed project teams that need to discuss concepts, create sketches, and draft their work. These comprise end products including conceptshare for sharing markup images, photos and videos, delicious for sharing bookmarks, flikr for sharing photos, Google docs for sharing and creating documents, pb works for sharing WIKI, slideshare for sharing slides in PowerPoint and other formats, wridea for brainstorming and idea management and Zoho which offers a "suite" of collaboration tools.

Hill (2010) suggests the use of a project team knowledge space which is a virtual center, normally embodied in a web-page established for all main projects, Product Review and Handover spaces which are online repositories of project and technical documents for easy access by accredited team members. This virtual workspace facilitates the creation and storage of project and project management deliverables. General Discussion rooms which online association features are traversing the project management environment which can be developed for large audiences. These include all the project stakeholders or for a specific audiences including the project managers.

Pawloski and Pirkalainen (2012) offer web 2.0 and social software tools for use in knowledge exchange within project teams, inter-and intra-organizational micro-blogs, social networks and organizational WIKIs. Bertram et al (2010) claim that issue tracking systems can help project managers to manage issue reporting, assignment, tracking, resolution and archiving.

Pawloski and Pirkalainen (2012) state that knowledge management is one important aspect that project teams have to tackle. According to Hill (2010), the concept of knowledge management uplifts basic communication in the project management setting from simple transfer of data to transmission of concepts, insights, experiences and clarifications that transcend the modest exchange of facts. Hill (2010) observes that when using knowledge management concepts, project reporting and project information management become well-timed, all-inclusive and extensive among interested parties and are pertinent to the interests of the project.

Hill (2010) supported the creation of an establishment's knowledge management office in order to produce a knowledgeable project management atmosphere which functions competently, communicates excellently and provides knowledgeable responses to the customer and the organization .Knowledge management involves the formation, storage, usage then sharing of data (Lidner & Wald, 2010). Types of knowledge identified by Lidner and Wald (2010) include intra-project which is carefully connected

to the project management practice, transfer of knowledge between upstream projects and downstream projects and transfer of knowledge between parallel projects.

According to Hill (2010), the project manager can use the following means of project knowledge management which are pre-established for `usage inside organizations: Project Management Information Systems; Executive Dashboard; Project management library; online project collaboration; and other knowledge management tools. Other knowledge management tools, include project management Methodology System Access which offers a linkage between sources of knowledge and procedures and techniques of ideal project management approach; Customer Information Knowledge spaces provides means for clients to own webpages on the organization's knowledge management structure in order to access information which includes project progress reports and deliverables; vendor/ contractor knowledge spaces which offers a way for chosen sellers and suppliers to own a web page containing the organization's knowledge management system so as to have access relevant information, in addition to providing information about their contribution and development as well as their contract and invoice information; project portfolio management access which make available a link between the sources of knowledge, the techniques and procedures of the chosen project portfolio management system.

The success of the projects will depend on the quality of decisions made by the project manager. To survive in addition to leading, managers of the project ought to make economic decisions (Lee et al, 2008). Decision-making is the process by which leaders such as project managers react to threats and opportunities by way of evaluating options and choosing the best courses of action (Ivancewich et al, 2011; Fulop, 2014). Project management thrives on the level-headedness of the decisions made. The four key factors that help project managers and their teams to make decisions are facts, values, means and ends (Joshi, 2014). This is because decisions that managers make have considerable impact on strategic value of the projects they manage (Eweje et al, 2012).

For quality decisions, planning, management of leading indicators and timely communication with superiors are required (Goff, 2011). Through planning, the decision-making team determines the direction and the tactical structure for a project while anticipating the risks and eventually making premeditated choices (William & Samset, 2010). To make quality decisions, project managers should have alternatives to decide upon and therefore project managers should be creative when coming up with alternatives (Townsend, 2013). The price that each choice has on each objective should also be put into consideration.

During the management of project, decision-making is a prerequisite in the process of determining project costs, schedules and scopes (Townsend, 2013). Decisions made under scope touch on functionality, quality level and number of users. Decisions on schedule include whether the activities can be crushed, whether activities are aligned differently, whether a provider can change its schedule, whether activities can be skipped, and whether milestones can be eliminated or missed altogether. Cost decisions include whether a section of work can be tolerated to come in above cost, whether segment's cost can be reduced or whether a scope change can be afforded. Decisions made during problem solving sessions affect the projects for a long time (Sommers, 2015).

Goff (2011) advises that for project managers to make quality decisions, they must plan, manage important indicators, and communicate fast with decision-making teams above them to avert adverse consequences. Through planning decision-making teams agree on the course and the strategic framework of the projects while anticipating the risks and eventually making premeditated choices (William & Samset, 2010).

Townsend (2013) notes that in order to make quality decisions, the project manager should have alternatives to decide upon and so advises project managers to be creative when coming up with alternatives. In addition the project manager should understand the price that each choice has on each objective. Consequences ought to be accurate, complete and precise to avoid making a poor choice. William & Samset (2010) warn against overconfidence noting that it shifts the project manager's attention from discovering the best solutions to problems

Lidner & Wald (2010) categorized knowledge into implied knowledge and overt knowledge. The organizational culture governs how decision-making happens and the way members respond to the environmental settings (Ajmal & Koskinen, 2008) as it symbolizes the profounder level of elementary suppositions and theories which exist between the employees in an organization.

According to Sommers (2015), the finest verdicts for tough problems are able to withstand imminent challenges as they make use of organized methods which aid the team members in generating concepts, together scrutinize the possibility of risks and weighing options. Structured decision-making keeps the project manager from retreating to old ideas, leaping to a popular verdict without taking into consideration all the options, being presented with a lot of options, being forced to make unsuitable decisions due to scarcity of time, and the existence of irreconcilable differences concerning options adopted. Scheibehenne and Helversen (2009) feel that qualitative data on a well thought out idea of a project provides consistent and valid contribution to decision-making during the planning phase. William and Samset (2010) indicate that the normative model of decision-making should follow a sound and sequential order which ultimately culminates in the choice of the ideal project devoid of unforeseen meddling or discrepancy.

Tools that project managers can use in decision-making include MACBETH, a combination tool used to examine the measures of performance in accordance with the

performance interests of the project (Marques et al, 2011) and PMIS enables project managers to make decisions which they need to plan, organize and control projects (Caniels & Bakens,2011). Other tools for decision-making include the RACI (an acronym for Responsible, Accountable, Consulted, Informed) model and Decision Threshold matrix which provide a structure to go into the analysis process to get a decision (Townsend, 2013).

Some techniques that can be used for decision-making are affinity diagram, silent brainstorming, root cause diagram and the prioritization diagram (Sommers2015). For mega-projects Systems analysis can also be used as a decision-making approach because it emphasizes the significance of careful and thorough analysis of the problem when the process begins. It also stresses the designing, creation, assessment and classification of alternate explanations and maintains that project managers who apply this technique in decision-making hardly encounter problems (Priemus et al, 2008). Joshi (2014) adds that common methods used in decision-making such as SWOT analysis, Maslow's pyramid, PARETO principle, Monte Carlo Simulation and Decision tree analysis can also assist project managers in making decisions.

Decision-making involves criteria such as principles, measures and constituents (Gurowit, 2012). Decision-making methods can be authoritative, democratic, consensus or contributive according (Gurowitz, 2012). Townsend (2013) adds that during the decision making process there is need to gather data; analyze data and assess the results.

William & Samset (2010) mentions the Habermas' theory of communicative rationality which dictates that using authority limits open communication and is an indicator of loopholes in the decision-making process and are resolute that political differences within the team affect the decisions. Gurowitz (2012) brings out the issue of delegation where the power to make decisions is handed to other persons who are enthusiastic and responsible for the decisions and who can harmonize the decisions for which they are answerable.

Pugh (2009) and Scheibehenne and Helversen (2009) advise that less information actually helps decision-makers and urge the omission of irrelevant material to avoid being stuck during analysis which occurs when decision-makers are presented with a lot of detailed material in the early stages of the decision-making process.

According to Townsend (2013), decisions are required during the threefold constraint of scope, schedule and cost. Decisions made under scope touch on functionality, quality level and number of users. Sommers (2015) is of the view that, decisions made during problem solving sessions affect the projects for a long time. According to William and Samset (2010) decision-making during the initial stages of projects helps in the development of project strategies. Scheibehenne and Helversen (2009) observe that in during periods of indecision, risk and unexpected outcomes, those who make decisions give false credibility to decisions based on detailed statistics. Marques et al (2011) focused on decision support observing that it requires the ability to describe the current state of the project and the decision-makers' views. Eweje et al (2012) perceive that the background issues that influence the project manager's decision-making depend on senior management support for the project. Goff (2011) observes that while project management decision-making is difficult, complex contexts increase the challenges. Difficult contexts include poor communication, potential for diseases, slow communication, different cultures with different language barriers, schedule and cost risks.

2.3.4 Stakeholder management skills and project performance

A research carried out by Ackel, Kidombo and Gakuu (2012) on the Human Resource factor in the triumphant implementation of World Bank's projects established that top management should carry out consultations with all project stakeholders by communicating effectively. The project employees should communicate effectively to the clients of the project about the tasks to be completed according to the project specifications. The project design should have capacity building as a constituent for the team to be effectual carrying out their tasks. The employees working on the project

ought to be committed to the goals and objectives of the project and in effect consult with other stakeholders. The project team should liaise with the top management to ensure that there are adequate resources. This will enable them to get the support of the stakeholders. Support from the stakeholders motivates the team, leading to successful project delivery. Therefore key stakeholders should be engaged truthfully during project preparation to enable them to demonstrate support for the proposed projects, which would lead to their success. According to Team FME (2014)), the process of managing stakeholders entails stakeholder analysis, planning stakeholder management, controlling stakeholders' relationship and managing their engagement. The process of analyzing stakeholder identifies stakeholders' interests, expectations and influence as they relate to project's purpose. This process is fragmented into two stages namely stakeholders' impact assessment and stakeholder identification.

Kerzner (2011) adds that as part of identifying stakeholders, project managers ought to determine whether their perceived status or authority would interfere with stakeholders. This is because some stakeholders might perceive themselves as above project manager and thereby influence interactions with project's sponsors.

The process of identifying stakeholders occurs at the planning stage when projects' members try to understand the historical, technological, social and political contexts of their projects (KPMG series, 2013). According to Tonnquist et al, (2009), recognizing the project's various stakeholders and their respective expectations is vital for the survival of the project manager. According to PMBOK for each stakeholder the project manager should appreciate the stake the stakeholders have in the project, what the project expects of the stakeholders and what the stakeholders need from the project.

According to Thompson (2011) stakeholder identification enables the project managers to identify which stakeholders are likely to be blockers or critics, and which stakeholders are to be expected to be promoters and enthusiasts of the project. For the advocates and supporters little effort is required to monitor them, blockers and critics should be kept

informed and satisfied while the rest should be managed closely (Thompson, 2011). Moore (2011) further classifies   stakeholders as Low interest –high authority stakeholders who need a simple approach that assures them that the project will meet their requirements and require the minimal supervision, Low interest-high authority stakeholders who have substantial influence over the project and should be constantly informed in order to retain the cherished backing that they offer, High interest-low interest stakeholders who hold a high stake in the project and they require high management effort. The project manager should put a lot of convince them that their wellbeing is being addressed and High interest- high authority stakeholders who need to be carefully and closely managed to ensure that they are well informed and supportive of the project's progress.

During stakeholder analysis the project manager should identify who the project stakeholders are, establish the power they wield, determine their influence and interests in order to know who to focus on develop a clear understanding of the most significant stakeholders so that they can know how to respond, and so that they towards winning their support(Thompson, 2011)

Reason et al (2016) define stakeholder engagement as the interactions an organization has and wants to have with its stakeholders. Once the stakeholders have been identified, what follows is their engagement in the project. This involves working and communicating with them so that their expectations can be met. It also involves fostering the right stakeholder engagement in implementation of various project activities and addressing issues coming from stakeholders as they arise during the course of the project. Kerzner (2011) argues that through stakeholder engagement the project manager understands each stakeholder's interest; what information the stakeholder's would like to see in performance reports.   He further adds that part of engaging stakeholders entails establishing agreements between project managers and individual stakeholders, which must be implemented throughout project's life cycle. Project

managers should have a habit of checking up stakeholders during the execution phase, as some are more critical to both progress and success (Tonnquist et al, 2009).

When managing project stakeholders the project manager must decide the level of stakeholder disaggregation (Ackerman &Eden, 2011). However, one of the challenges of managing stakeholders' relationship is that of determining how to interface with all the stakeholders on a regular basis and make decisions (Kerzner, 2011). Therefore, stakeholders should determine the way they should interact with one another because it might be crucial for some stakeholders to support and interact with each other in relation to sharing resources, intellectual property and providing financial support on timely basis (Kerzner, 2011).

The process of managing relationships among stakeholders also focuses on promoting continuous communication with stakeholders with a focus of understanding their expectations and needs, managing possible conflicts of interests, addressing emergent issues and fostering the right processes of engaging stakeholders in relation to making decisions and activities related to projects (Team FME, 2014). According to Kerzner (2011), stakeholder relationships fail when stakeholders are invited to take part in project execution too early thereby encouraging them to change projects' scopes that result to costly delays. Also, it occurs when stakeholders are invited into projects too late to the extent it becomes almost impossible to consider their views and suggestsions because they would result to delays. Relationships with stakeholders also fail when wrong stakeholdrs are allowed to participate in making critical decisions about projects thereby resulting in unnecessary criticisms and changes. In addition, it occurs when notable stakeholders become impatient with slow progress and sometimes leads to unethical leadership styles.

2.3.5 Problem solving skills and project performance

According to PM4DEV (2018), all projects run into difficulties which may not have been envisioned during the risk or scope definition of the project and which must be dealt with as a result. A problem is a discrepancy between current situation and goals (Ward, 2012). Problems are existent where there is a goal but the means of achieving it is not known (Mayer, 2013). According to Billows (2011), when solving problems, project managers must work with the conflict parties in order to find a commonly favorable way out or a win-win resolution to the problem. Mayer (2010) states that a problem consists of the existing condition, an objective and the guidelines for shifting from the present situation to a new one. A situation can be referred to as a problem when it is in one state and the problem solver desires it to be in a different state and obstacles exist between one state and the other. Problem solving can be either a unilateral process where one person makes decisions based on their goals or bilateral where two or more persons make decision-based on shared goals (Tomlinson, 2015). A very strong relationship exists between project performance and problem solving skills (Awan, Ahmed & Zulqarnain (2010). According to Heldman (2011), problems are the likely to occur during the scheduling process, when assigning resources, when handling issues regarding contracts, when dealing with issues regarding authority and responsibility, and when conducting business or technical processes.

Problem solving is a cognitive process (Mayer, 2013). This involves representation, preparation, implementing and observing. There is need for creativity in problem solving (Mayer, 2010). Issues and problems are easier to solve and with enhanced outcomes when problem solving model is which is a structured, systematic approach to solving problems and making improvements utilized (Connelly, 2015). Billows(2011) argues that problem solving is a time intensive approach which is inappropriate when there is no trust, respect or communication among participants for collaboration to occur.

The process of solving problems involves a description of the problem, fragmentation of the issue into convenient portions, isolation the origins of the problems, evaluation of the

strong points, weaknesses, openings and dangers (PM4DEV, 2018). There are five main types of information which are necessary during the resolution of problems namely realities, perceptions, processes, approaches and theories (Mayer, 2013). During problem resolution problems should be identified, sources of the problems recognized, alternative solutions acknowledged, solutions carefully chosen, solutions implemented a solution, and the results assessed (Connelly, 2015).

Heldman (2011) adds that tackling problems early ensures that they do not escalate out of control. Mobley (2015) provides daily problem solving tips for project managers which include working on small problems before they add up to become big problems, using graphic management and standard work tools to arrest problems before they escalate, building the skills, tools and systems required to solve the problems as they arise, starting the use of 5-why analysis and continue asking "why" at various levels in to enable them to deal with the root cause of the problem, using PDCA to enable the problem solvers to understand the situation in order to bring it under control.

 Bassock and Laura (2012) suggest that visual perception and background knowledge have an impact on how project teams represent problems and search for problem solutions. Mayer (2013) proposes five major kinds of knowledge required by teams for problem solving which are facts, concepts, procedures, strategies and beliefs. Ward (2012) points out that understanding problem solving entails understanding the processes used in conceptualizing the problem and in moving from the beginning to the end. According to Tomlinson (2015) problem solving can be either a unilateral process where one person makes decisions based on their goals or bilateral where two or more persons make decision-based on shared goals.

Mayer (2010) views reasoning as a type of problem solving and it is in the form of inductive reasoning tasks and deductive reasoning tasks. In deductive reasoning according to Mayer (2010), the problem solver is given a premise and must apply the rules of logic to derive a conclusion while in inductive reasoning, the problem is given a

series of instances or events or examples and must infer a rule. Mayer (2010) mentions that creative thinking is important in problem solving. This involves the generation of ideas by the problem solver and critical thinking which occurs when a problem solver evaluates them. In creative and critical thinking the ideas must be original and useful.

Issues and problems can be solved more easily and with better results by using a problem solving model which is a structured, systematic approach to solving problems and making improvements (Connelly, 2015). This is because models are consistent, manage the group process, solve the problem effectively, build a convincing case for change and present a clear and convincing basis for action. An organized and ordered approach sanctions decisions based on figures rather than intuition. Porter, Rempel & Mansky (2010), found out that problem solving should focus on solving the underlying problems, collaboration with both internal and external players, and promoting compliance by participants. Schmidt (2012) recommends the use of Red X strategies which emphasize that most issues can be corrected by finding the root cause and controlling it. Conelly (2015) and Mobley (2015) propose the use of tools such as the fishbone diagram and Pareto analysis in determining the root cause of the problem.

A study by Deloitte revealed that the leading worldwide personnel development is collaboration (Kaplan et al, 2016). Employees are usually allocated Projects to work on interdependently by employing high intensities of empowerment, communicating liberally, and may break up when the project is completed or carry on with the collaboration (Lacerenza et al, 2018).

Sometimes, project teams are called upon to find explanations to complications that arise in the course of their project work. Consequently, knowledge of how to resolve problems as a team empowers them to reach a fruitful solution. The Project manager should instill trust in their project employees and inspire team work which can be realized by aligning the interests and goals, improving communication networks in addition to using impartial employment and contractual practices (Chong, 2011).

Hamilton (2014) identified eight vital aspects that aid project teams to effectively unravel problems. One of these aspects is planning which assists the project team to unravel the problem within a structured framework. Training arms the team members with communication skills, team building skills, enables them to resolve conflicts and use of communication technologies all of which enable the project employees to work harmoniously to achieve a common goal. There is need to maximize training effectiveness (Salas et al, 2012). The goal of training teams is to foster improved teamwork, and therefore it must be custom-made for the team and assessment done for each team (Salas et al., 2015).

Open dialogue eradicates closed minded attitudes and frigid atmospheres which hinder collaboration and creativity, making it possible for members to give their thoughts openly and constructively thus enhancing successful problem solving (Hamilton, 2014). Trust makes it possible for project teams to surmount indecisiveness and bear with the weakness of the other team members thus improving team work and hence performance (De Jong et al, 2016). A thorough scrutiny of ideas improves the effectiveness of problem solving teams and enables them to consider available options, search for alternatives, contest the prevailing customs and consider several outlooks on issues as well as supporting the ideas with research, evidence and tangible examples (Hamilton, 2014)). In addition, Hamilton (2014) opines that successful problem solving teams evaluate probable solutions by weighing the benefits and consequences of probable solutions alongside predetermined standards. Emphasis on critical thinking over conflict avoidance is another key behavior which enables effective problem solving teams to reach optimal solutions to their problems. Efficient problem solving teams appreciate cultural diversity and treat each other respectfully, understand and listen to one another as they work together to get a way out. The readiness of strong problem solving teams to meet and work virtually by cooperating online using communication tools which are supportive of their goals and suit their desires.

2.3.6 Organizational environment and project performance.

An establishment's environment is composed of forces or institutions around the organization which may influence its operations, performance and availability of resources (Steward, 2016). It includes government regulatory agencies, other players in the industry, suppliers and pressure from the community. The organizational setting can be divided into internal environment and external environment. The internal set up is composed of those things, happenings and aspects inside an organization affecting options and actions within the organization (Steward, 2016). These are the strengths and the weaknesses existing in an organization such as employee behavior, organizational culture, mission statement, structure and leadership styles.

The behaviours, attitudes, beliefs, skills, perspectives, habits and prejudices of the organization's employees constitute the organizational culture. It is composed of ideals, signs, assumptions and practices in relation to behaviors of members of an organization (Schein, 2000 and Wilson, 2000 as quoted by Ajmal and Koskinen, 2008). Scantiness in organizational culture also hinders transfer of knowledge (Ajmal & Koskinen, 2008). The organizational culture is essential for the performance of an organization and places the company above its competitors (Madu, 2012). It can be used by managers to grow dynamic organizations if they are consistent, send clear indicators of their priorities, values and beliefs. A manager's success depends largely on his or her understanding of the organizational ethos.

The organizational ethos determines the way decisions are made and the manner in which team members respond to organizational environment (Ott, 1989 as cited by Ajmal & Koskinen, 2008). According to Schein (2000) as cited by Ajmal and Koskinen (2008), the culture of the company symbolizes the elementary beliefs and assumptions that the company employees share with one another. To succeed in implementing new programs, beginning of new products and services, the project team must have original ideas. Originality is the beginning of all uniqueness. The organizational culture determines whether project team members feel encouraged by their colleagues, and

whether their immediate supervisors, and senior managers encourage them to take risks in their project work. The association between the opinions of the project employees and originality affects task outcomes. Organizational culture significantly affects information filtering process.

The organizational structure is tied to its strategy (Steiger, Hammon & Galib, 2014). Organizational structure determines how fast an organization responds to the changing environment. Organizations that adopt this structure display strong senses of compliance and sense of mission. Professional bureaucracy also referred to as functional structure places much of its emphasis on employees' professional skills. This structure has the potential of creating a political environment that leads to internal conflict among employees (Steiger, Hammon & Galib, 2014). In addition employees are pigeonholed on the basis of their skills and specialization, which leads to inflexibility. Due to its democratic nature, it attracts complex and steady settings where expertise is more esteemed than authority.

The matrix structure is a mix of functional and divisional structure characteristics. It allows organizations to respond to complex and dynamic environments (Steiger, Hammon & Galib, 2014). Organizations which require both operational and professional skills and inter-organizational harmonization efforts for optimal delivery of products and services to clients require a matrix structure. A good example of such organizations includes those operating within fast and dynamic industries such as those in technology.

The organization's external characteristics are the elements, circumstances, incidents and alternatives existing outside the organization which influence its choices and activities (Njuguna-Kinyua et al, 2014). It is also known as the operating environment. Factors in the external environment include clients' opinion of the community, economic conditions, government regulations and competition.

The external environment affects the availability of resources to the organization (Njuguna-Kinyua et al, 2014). The external factors are categorized into the macro-

environmental factors, and the micro-environmental factors. The macro-environment or industry factors are those factors which originate beyond an organization's operating situations (Pearce & Robinson, 2007). These include fiscal factors, political, societal and technical forces. The micro-environment or industry factors are the factors that influence an organization's immediate competitive situation. They make up the external operating environment. Factors in the micro-environment include creditors, trade unions, suppliers, customers and labour markets. On the other hand, industry environment includes suppliers' and buyers' bargaining power, substitutes, competition between existing companies and intimidation from novel competitors. All these factors either advance or hamper the attainment of the set goals in addition to interfering with the internal functions and objectives of the organization (Gupta, 2009).

According to Tobert and Hall (2009), there are five major elements of the external environment, and they include environmental uncertainty, domain consensus, environmental concentration, heterogeneity and environment capacity. Environmental concentration refers to distribution of resources that organization uses to conduct their businesses (Aharonson, Baum & Fieldman, 2007).

Proper external environment scanning leads to improved performance by organizations by enhancing their abilities to spot opportunities that result in higher profits. It also helps the organization to understand the environment in which designed programmes will be implemented. Organization's effectiveness is the degree to which organizations achieve their goals. It refers to the optimal transformation of raw materials into products. Organizational effectiveness establishes policy objectives for organizations (Zheng, Yang & McLean, 2010). It helps to evaluate the organization's progress towards fulfilling its mission (Heilman &Kennedy-Philips, 2011). At the same time, it mirrors improvements within organizational internal processes, communities and cultures (Pinprayong & Siengthai, 2012).

2.3.6 Project performance

Project Performance management entails goal setting as well as monitoring and evaluating the projects (Poister, 2010). Performance of projects is dependent on the timely completion of projects within budget and of a quality acceptable by the users (Mbaluku & Bwisa, 2013). Ineffective management of projects leads to cost, time and schedule overruns (EC, 2012).

Project performance can typically be defined as meeting the triple constraints of time, cost and scope (Meredith, & Mantel, 2012). Muller, Geraldi, and Turner (2012) not only include the triple constraint in their definition, but they also include the various stakeholders and customers. The satisfaction of the end-user, supplier, team, and customer is paramount. Meeting the requirements of the user, project achieving its purpose, and business success form part of the definition of project performance (Muller, Geraldi, and Turner, 2012).

(Malach-Pines, Dvir, & Sadeh, 2008) use a four dimensional model to define project performance including: Efficiency (did the project meet schedule and budget); Impact on customers (benefit to the customers in terms of end products); Business success (benefit, and organizational goals obtained); and preparing for the future (creating new technology and operational infrastructure as well as new markets).

Project performance should be centered on the level to which aims of project's practical performance have been attained relative to time and within budget and the impact of the project on the organization's strategic mission (Prabhakhar, 2008). He adds that Project performance should include project management success, principally the effective accomplishment of the project on budget, time and quality; and product success which is concerned with the end product. The mission, schedule and plans, staff, consumer approval and communication should also be considered when judging project performance (Jiang, 2014). The Critical success factors are factors for projects to realize their goals (Meng et al., 2011). An example of key factors is human capital which is

crucial in projects because of the influence teams have (Chinowsky et al., 2011). Project management performance systems are set of indicators used to compute the efficiency and effectiveness of actions (Marques et al., 2011. Most indicators are based on the golden triangle namely cost, time and quality (Wi & Jung, 2010).

Barclay and Osei-Bryson (2010) came up with a project performance model involving four subjects' project management and project team, customers and other stakeholders, product or service, and preparation for the future. According to Toor and Ongulana (2010) the measure of project performance is gradually moving away from the traditional measures of cost, time and to a blend of quantitative and qualitative measures.

A Performance measurement system should apply indicators in each of the tasks ensuing from the work structure division (WBS) of the project, on topics of efficiency to measure whether the resources were well used to achieve the goals, effectiveness which measures whether the results of the activity meet the objectives and relevance to determine if the means are fit for purpose (Lauras et al, 2010).

Cao and Hoffman (2011) designed a project performance evaluation system based on project duration, effort, number of project staff , urgency of the project, number of functional area during the project and technical complexity (technical difficulty and uncertainty of project).

Bernroider and Ivanov (2011) emphasized the significance of managing the monitoring of progress of projects throughout their life cycle. According to Toor & Ogunlana (2010), Working team, Continuous improvement, Time, Budget, Specifications, Resources/Efficiency, Effectiveness, Safety, Defects, Stakeholders, Conflicts should be factored in the project performance measurement system. A performance measurement system should include

Stakeholders, Time, Cost, Monitoring of standards, Implementation, Training (Bernroider & Ivanov, 2011); Budget, Indicators of earned value management, team

project, Time of task completion, customer, cost (Barclay & Osei-Bryson,2010); Time, Effort, staff, Urgency/priority, Difficulty and uncertainty (Cao & Hoffman, 2011); Time, Cost, Quality (Wi & Jung, 2010) and Effort, Cost, mistakes, Scope, Risks, Changes (Presedo, Dolado & Aguirregoitia, 2010). This study based the measure of project performance on cost, level of completion of project) and time.

2.4 Critique of the literature

The literature reviewed shows that in various countries including Kenya, projects experience cost and time overruns, as well as quality issues (Gwaya et al, 2014). This is due to the complex environment in which project managers operate(Gillard, 2009) It also reveals that project failure is caused by unclear problem statement, failure to involve users, lack of support from executive management teams and inadequate planning(the Standish group, 2013).

The review of the literature has also revealed that although in the past technical /hard skills were viewed as the most important competencies, for project managers, today soft skills such as communication, negotiation and stakeholder management skills are the most important competencies (Robles, 2012). This is because soft skills balance the effectiveness of hard skills by enabling project managers to work with people (Gillard, 2009).

However, it has been noted that very limited research has been done on effect of employees' soft skills on project performance (Mayo, 2013). This may be due to lack of tools to measure the effect of soft skills on project performance. In addition researchers who have delved into this area tend to investigate leaders' behaviors and the impact of their leadership styles instead of the effect of the project employees' soft skills on project performance.

2.5 Summary of existing Literature

The literature reviewed shows that in various countries including Kenya, projects experience cost and time overruns, as well as quality issues(Mbaluku & Bwisa, 2013).).

It also reveals that ineffective project management leads to failed projects (EC, 2012).). This is due to the complex environment in which project managers operate. As a result, the project managers need ability and style to manage projects to their successful completion (Gillard, 2009). The review of the literature has revealed that although in the past technical /hard skills were viewed as the most important competencies, for project managers, today soft skills such as communication, negotiation, stakeholder management, decision-making and problem solving skills are the most important competencies (Robles, 2012). This is because soft skills balance the effectiveness of hard skills by enabling project managers to work with people (Gillard, 2009).

Poor or insufficient communication contributes to project failure (Tipili et al, 2014). This is because as the reviewed literature confirms, communication is necessary for securing approval for the project and its objectives, securing agreement on issues, solutions and resources, enhancing the credibility of the project, reinforcing the process used in the project leader, reinforcing the processes used in the project, driving action for improvement in the project and showing the complete results of the result (Cataldo & Ehrlich, 2011).

The stakeholder community is made up individuals and groups who influence the project outcomes positively or negatively. Therefore, project employees must manage all the stakeholders in order to gain their support (Thompson, 2011).

The literature reviewed also demonstrates that good decisions help project managers to achieve the project objectives while creating a permanent solution. Poor decision-making has lasting effects on the manager's career, on the success of the organization, on employees and can even cost the organization billions of shillings. Therefore, to succeed, project managers must ensure that quality decisions are made. The decisions made by project managers have a significant impact on the strategic value of the asset delivered (Eweje et al, 2012).

Problem solving skills ensure that problems are tacked early before they escalate out of control. Problem solving should focus on tackling underlying problems within the Project, obtain collaboration with internal and external players while promoting compliance by participants.

An organization's environment influences its operations, performance and availability of resources (Steward, 2016). Therefore, for strategic adaptations of the organization and proper understanding of the factors that hamper or promote the organization's performance, environmental scanning is necessary.

2.6 Research Gaps

Langer, Slaughter and Mukhopadhyai (2008) studied how project manager's skills affect project success in IT outsourcing in India. The study only focused on the effect of soft skills on one aspect of performance. Furthermore, it only confined itself to the project manager's skills. However, the current study tested the effect of soft skills on three aspects of project performance namely level of completion, cost and time.

A study carried out by Kuen, Zailani and Fernando (2008), on pertinent factors that influence project success among Malaysian manufacturing companies dwelt mainly on the mission. The current study focused on communication skills, leadership skills stakeholder management skills and problem solving skills.

A study on the building of jua-kali operators' capacity skills for faster economic development in Kenya by Gowland-Mwangi, Nkurumwa and Maina (2010) identified soft skills such as conflict resolution and effective communication as some of the soft skills needed by employees. However, it does not reveal their effect on project performance.

An analysis of the effect of project communication, commitment from individuals and social networks on superficial project performance by Nangoli (2010), studied only communication skills. An investigation on the impact of a project manager's leadership

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skills on projects' successes by Awan, Ahmed and Zulqarmain (2010) only focused on the project manager's soft skills.

Evidence shows that in Kenya, projects have been experiencing cost and time overruns which are further compounded with quality issues (Gwaya, Masu & Oyawa, 2014). Particularly, energy projects have not performed to their expectations in terms of completion on time, on budget and within expected quality (Kariungi, 2014). As alluded in the problem statement, a study on world bank funded projects in Kenya revealed that soft skills such as communication by top management to stakeholders and the project team are important for the project to run from design, through to implementation (Ackel, Kidombo & Gakuu, 2012). However, there are few, if any studies on the relationship between employees' soft skills and project performance in Kenya.

Watts and Watts, 2008, as cited in John (2009) found out that hard skills make up 15% of projects' managers successes whereas 85% comes from soft skills. However, due to their intrinsic nature it is difficult to estimate the effects of employees' soft skills, and hence they are often unnoticed, and fail to get due importance as it should be (Mayo, 2013). As a result the studies that measure the effect of employees' soft skills on project performance in Kenya are few if they exist at all.

Although research shows that projects managers' communication skills have great impact on team work (Shi & Chen, 2006), the impact of employees' communication skills on project performance has not been established convincingly (Yang, Huang & Wu, 2010). In addition there has been too much concentration on hard skills at the expense of the soft skills (Jetu & Riedl, 2012).

Furthermore, from the literature reviewed there are recommendations for further research. Awan et al (2010) recommended the research on other soft skills besides coordination skills, interpersonal skills, communication skills, team building skills and problem analyzing and solving skills using bigger projects. Nangoli (2010) recommends further research to test the link between individual commitment, project communication

and social networks on perceived project performance on other sectors of the economy such as the energy sector. Future research should scrutinize how communication structures change over time in response to the job demands (Cataldo & Ehrlich, 2011). Kibe (2014) recommends that further research to be conducted on communication strategies used by service industries to enhance project performance. Piyush, et al (2011), Walker and Walker (2011) and Skulmoski and Hartman (2010) recommended more research on the soft skills of leadership with greater emphasis on the employee's communication skills and relationship skills.

In addition, no study has been carried out on the effect of employees' soft skills on project performance in Kenya. Besides, although considerable research has been carried out in the area of communication in project management, very little data is available on stakeholder management. This study, through a quantified approach, assessed the link between project employees' soft skills and project performance and at the same time assessed the moderating effect of the organizational environment on the relationship between project employees' soft kills and project performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology describes the way study was conducted (Mugenda & Mugenda, 2012). This encompasses the research philosophy, hypothesis testing, research design, sample size, validity and reliability, target population, data collection instruments and procedures, ethical considerations, sampling procedure and data analysis techniques.

3.2 Research Design

This study employed a mixed method approach directed by pragmatism. Pragmatism is a philosophy based on firm judgment, the immutability of truth and the endless reality. It is a realism approach which turns its attention to research problem with its methodology giving the researcher freedom to choose methods (Creswell, 2009). Furthermore, the pragmatic knowledge base is typified by pluralism and the integration of participatory design techniques. Adherence to objectivity, neutrality and an unbiased approach was adopted during quantitative research. The objectivist/positivist approach was chosen because it relies on options such as surveys and questionnaires. According to Tashakkori and Teddlie (2010), pragmatic approach balances inductive logic normally utilized in qualitative research and deductive logic utilized in quantitative research as utilized in the present study.

The freedom of choosing theoretical perspectives and methodology was crucial to obtain varied and entire knowledge about the effect of soft skills on project performance. For that reason, the mixed method approach was favored. This method entails combining qualitative and quantitative research methods in conducting a study to understand a research problem (Creswell, 2012). It utilizes both quantitative and qualitative data collection methodologies such as questionnaires and interviews. Quantitative research

was used to test the hypotheses already derived from theory and to identify any causal relationship between soft skills and project performance (Blackstone, 2012). The qualitative approach was used to explain the perceptions, attitudes and observations with an aim of understanding and describing them from participants' viewpoints (Mutai, 2014; Kothari & Garg, 2014; Creswell, 2009). In addition to looking for solutions to the questions, qualitative methodology enabled the researcher to collect the data directly and thereby facilitated the process of developing categorical, conceptual and analytical explanation component from the data (Weingand, 1993 as cited by Obondi, et al, 2017).

Drawing from the advantages of both approaches, triangulation was used to draw inferences from qualitative and quantitative data; thus, upholding the study's focus that centered on providing knowledge that would transform the way projects are executed (Kinyili et al, 2015; Blackstone, 2012).

The researcher utilized both correlational and cross-sectional designs. The cross-sectional design was preferred because the study focused on evaluating the link between two variables at one point in time without necessarily following participants (Oso & Onen, 2011; Kothari & Garg, 2014). Based on the study's focus, the design made it possible to obtain data from a sample of respondents who represented the target population within a short time. Due to the exploratory nature of the study, project supervisors became the units of analysis.

On the other hand, the choice of correlational design was as a result of the fact that the study sought to measure the degree of relationship between different variables; thus, inferential statistics were the most suitable ones (Oso & Onen, 2011; Kothari & Garg, 2014). As a result, because the study investigated and determined the effect of each soft skill on project performance, correlational design was best design for the study. The choice facilitated efficient testing of the moderating effect of the organizational environment by employing stepwise and multiple regressions. Overall, the two designs enabled the researcher to concurrently combine inferential, descriptive and qualitative method of analyzing data so as to determine the relationships among variables with the

aim of elucidating the nature of the relationships. Thus, the purpose of this study was achieved.

3.2 Population of the study

The study's unit of analysis are the public energy sector projects. The study's target population comprised of all the ongoing projects in the energy sector. This is in accordance with Oso and Onen (2011) who define the population as a sum total of people, events or subjects about which one wants to generalize the results of their studies. According to the MOEP project implementation status report (march 2015-march 2016) projects in the energy sector in Kenya can be categorized into Generation projects, Transmission projects, Distribution projects, Oil and Gas projects, Renewable Energy Development Projects, and Nuclear Power Projects.

The study targeted the ongoing 20transmission, 10 generation, 60 distribution and 4 nuclear projects whose completion dates lie between January 2016 and December 2018. The ongoing projects were chosen because it was easy to get the employees working on the projects. The study targeted the transmission, generation, distribution and nuclear projects because of the number of ongoing projects as well as their proximity to each other.

3.3 Sampling frame

A sampling frame is a list of the targeted population from which a sample is obtained (Keraro, 2014).A sampling frame aids the process of creating a sampling unit that represents a member of a set of units under investigation that generates a random variable (Klaus & Oscar, 2008; Bailey, 2008). This study relied on a sampling frame that was obtained from the MOEP project implementation status report (March 2015 - March 2016) and the economic survey on the ongoing projects ending between January 2016 and December 2018. A total of 94 ongoing projects whose completion dates lie between January 2016 and December 2018 were identified.

3.4   Sample and Sampling Technique

Sample refers to an accurate representative of the total population to be studied (Hyndma, 2008). On the other hand, sampling is a process of selecting a pre-determined number of individuals from target population so that knowledge about the entire population can be generated from those individuals on the basis of statistical inference (Black & William, 2004). As a result, a good sample should be: representative of entire population; reduce sampling error; feasible, cost-effective, and efficient, whose outcomes can be generalized to target population with a logical level of confidence (Kothari, 2011). According to Adèr, Mellenbergh and Hand (2008), sampling ensures cost reduction, speed of data collection, accuracy of data collected and quality of the data. This study employed both stratified and purposive sampling techniques. In stage one; stratified sampling was applied to group the projects which form the unit of analysis. The projects were broken down into 20 Transmission projects, 60distribution projects, 10 Generation projects and 4 nuclear projects.

The execution teams were composed of project managers, project supervisors, engineers, land economists, surveyors, financial experts, socio-economists, legal experts and environmental experts. A total of 282 employees were working on the ongoing projects. To avoid duplication of information and to ensure representation, the project supervisors who are in charge of the project teams in the 94 ongoing transmission, distribution, generation and nuclear projects were purposively chosen as the units of observation as shown in Table 3.1.

Table 3.1: Type of Projects

Category	Number of projects
Transmission	20
Distribution	60

Generation		10
Nuclear		4
Total		**94**

The respondents were the project supervisors of the sampled projects

The sample was arrived at using the Yamane's (1989) formula for categorical data as cited by Kinyili et al (2015).

n= $\underline{N}$

$1+N+ (e)^2$

Where:

N represents population size

n represents sample size

e represents margin of error (0.05)

Therefore, with the help of the formula, a sample of 85 projects out of 94 target projects was selected as Table 3.2 depicts.

Table 3.2: Sample Size for Projects

Category	N	Formula $n= \underline{N}$ $1+N(e)^2$	n
Transmission	20	n= 20/ [1+20(0.05)²]	19
Distribution	60	n=60/[1+60(0.05)²	52
Generation	10	n=10/1+10(0.05)²]	10
		n=4/1+4(0.05)²]	4
Nuclear	4		
Total	**94**		**85**

3.5 Research Instruments

Data collection instruments are the tools and procedures used in the measurement of variables in research (Cooper & Schindler, 2011; Mugenda & Mugenda (2012). Instrument administration is a data collection method in which the sample answers questions in the questionnaires. It is dictated by the level of the respondents' literacy. The Secondary data was obtained through document analysis. Primary data was collected using a self-administered questionnaire developed for the project supervisors. The questionnaire was used because it enabled the researcher to collect data from many respondents simultaneously.

The questionnaire was utilized to collect both quantitative and qualitative data from the project supervisors. It comprised of open and closed-ended questions that included scaled responses in the format of Likert scale. The respondents answered by choosing one of the five agreement choices. This helped the researcher to get exact responses related to the study. The scaled responses also allowed the researcher to include more items on the questionnaire; more than an open-ended questionnaire would allow. In addition, they were easy and faster to administer to collect more information within a short period than open-ended questionnaires (Creswell, 2009). The scaled responses enabled the researcher to obtain the quantitative data. The background information and the open ended questions provided the qualitative information.

The projects' supervisors' self-administered questionnaire had six major parts; Section A had six questions that collected demographic information such as level of education, age and gender, the category of the project and years worked in the project. The idea was to simply obtain respondents' background information. Section B collected data on types of soft skills that employees had been trained in. The section had a table with yes/no questions and two open-ended questions; one to explain the level of training and the other to mention other skills in which the employees had been trained.

Section C sought information on leadership skills. Particularly, the indicators for transactional and transformational leadership styles were included. A Likert scale was adopted with statements which were independent of each other. Each statement in the scale was structured on a five-point scale with (5) representing strongly agree and (1) strongly disagree from which the respondents chose and ticked. One open-ended question was integrated to find out other ways in which the employees felt motivated.

Section D sought information on communication skills particularly the indicators for negotiation skills, conflict resolution skills and decision-making skills. The respondents rated each statement on five-point Likert scales ranging from (5) representing strongly agree to (1) strongly disagree. The section also contained three open-ended questions. The respondents were expected to state how they ensured that communication was effective, areas in which communication was important and the best communication channels to use for internal and external stakeholders.

Section E required information on stakeholder management skills. It consisted of indicators for stakeholder analysis, stakeholder engagement and stakeholder relationships management. The Likert scale adopted had statements that were independent from each other. Each statement in the scale was structured on a five point scale of strongly agree (5), agree (4), undecided (3), disagree (2), strongly disagree (1) from which the respondents chose and ticked. Two open ended questions requiring the respondents to state what they did to ensure that project stakeholders were satisfied and in which area of their projects it had been necessary to involve the stakeholders were also included in this section.

Section F required information on problem solving skills. It consisted of indicators for Problem solving tools and strategies and the Role of project team. The Likert scale adopted had statements that were independent from each other. Each statement in the scale was structured on a five point scale of strongly agree (5), agree (4), undecided (3), disagree (2), strongly disagree (1) from which the respondents chose and ticked. Two

open ended questions requiring the respondents to state areas in which problem solving is required in their project, What other problem solving methods they use to solve problems in your project and why they think is problem solving is necessary?

Section G of the questionnaire sought information on the organizational environment. Indicators for both internal and external environment were included. The statements in the scale were structured on a five point scale of strongly agree (5), agree (4), undecided (3), disagree (2), strongly disagree (1) from which the respondents chose and ticked. An open ended question asking respondents to suggest other factors in the organizational environment which affected their performance was also incorporated in this section.

The project manager's questionnaire was composed of a table that required them to fill in some information on projects. This included planned completion date, planned cost, actual completion date and actual cost.

3.6 Data Collection Procedure

Prior to data collection, the researcher obtained an introductory letter from the chairperson of COHRED. Authority was also sought from the Ministry of Energy to facilitate data collection. In addition, a research permit was acquired from office of the National Commission for Science, Technology and Innovation (NACOSTI).Using these letters the researcher was able to visit the ongoing projects in the energy sector. The research instruments were revised as the researcher deemed fit and final copies produced. Subsequently, the researcher visited the various project managers for familiarization and afterward for data collection.

3.6.1 Questionnaire Administration

The researcher administered questionnaires together with introductory letter to the relevant authorities and consent forms to respondents. Throughout the process of collecting the data, the researcher ensured that all questionnaires that were distributed to respondents were returned as soon as respondents completed filling them by collecting

them in person. Consequently, at the end of data collection process every questionnaire that was issued out was returned for data analysis as it had been determined right from the start of the study.

3.6.2 Document Analysis

The researcher searched databases in the Jomo Kenyatta University of agriculture and technology Library services particularly the electronic information services which provide access to a variety of scholarly journals dated between 2008 and 2015. Others included technical reports, workshops, book references, Google scholar, and articles on soft skills and project management. Reports by the MOEP such as project implementation status reports ((March 2015-March 2016)), and economic survey report (2016) were also reviewed. Others were print materials such as publications, journals, Dissertation and Theses. The secondary data informed the process of document analysis of local, global and regional literature on soft skills in project management.

3.7 Pilot Testing of Instruments

Before the actual study was carried out, a pilot study was undertaken. The essence of conducting a pilot study was to test the data collection methods, the applicability of research design, test sampling method and above all ensure that the instruments were reliable (Oso & Onen, 2011). Piloting was also conducted to review the appearance, clarity, readability, ease of understanding and wording of research questions (Campana, 2010). To achieve high precision, 10% of sample constituted the pilot sample (Lancaster et al, 2004). 10% of 85 which is 9 projects were used.

A sample of nine (9) projects was utilized to test the effectiveness of research questionnaire thereby employees from these projects were excluded from the final sample. The piloting of the questionnaire enabled the researcher to understand the challenges respondents encountered while answering questions thereby facilitating the reframing process of troublesome questions. The questions were also peer reviewed before the final questionnaire was produced. Additional help was sought from the

supervisors with the intention of improving the design. The knowledge of the supervisors was valuable in ensuring that the questionnaire was suitable for the target population in terms of wording and fitting within the standards.

3.7.1 Validity of Research Instruments.

The validity of research instruments refers to the precision with which instruments are able to measure what they are supposed to measure. The content validity refers to the way instrument's content is able to represent study's objectives. As a result, research questions ought to be clear and relevant to study's objectives (Sproull, 1995). In this study convergent and discriminant validities were both considered to establish construct validity. Statistically, factor analysis was run to test for convergent and discriminant validities. Values > 0.5 are considered suitable for conducting factor analysis. Further, the values of Bartlett's Test of Sphericity were statistically significant (<0.05), confirming suitability of the data for factor analysis.

3.7.2 Reliability of Research Instruments.

The reliability of a measurement is concerned with the extent to which a measuring procedure gives equivalent results over repeated trials (Orodho, 2005) and relates to the consistency of the data collected (Wallen & Fraenkel, 2001). The researcher judged the reliability of questionnaires using Cronbach's Alpha that does not require scales to be split or even tests to be retaken for given constructs. This eliminates the challenges inbuilt test-retest and split-half techniques (Mugenda, 2011). Reliability is very low when Cronbach's α is less than 0.3 and cannot be accepted. It is acceptable when Cronbach's α is more than 0.7 signifying high dependability of the data captured by the questionnaire.

3.8 Data Processing and Analysis.

Data analysis is a process that brings order, structure and facilitates interpretation of data that has been collected. It is an organized procedure of filtering, charting and categorizing information on the basis of pertinent issues and ideas. A mixed approach,

which involved using both qualitative and quantitative methods, was utilized to analyze the data. The approach according to Creswell (2003) allows researchers to use different forms of analyzing data by combining different statistical processes and text analysis. In this study, it allowed researcher to come up with a complete understanding of the use of soft skills in project management. Due to the nature of mixed approach, both descriptive and inferential methods of analyzing data were utilized.

Throughout the study, quantitative data was collected using numbers whereas qualitative data was obtained from open-ended research questions, content analysis of narratives, and other descriptive methods. The coding of qualitative data in some ways facilitated quantitative data analysis that was carried out using descriptive statistics; thus, the data was utilized to generate complete information on the usage of soft skills in project management. The study's findings were then compared and contrasted from empirical findings obtained from literature review.

The descriptive statistics was utilized to summarize and describe data using percentages and frequencies that were presented in form of graphs and tables. This exercise was carried out using an SPSS version 23 program. With the help of this program, frequencies were run to show data distribution and identify post entry errors. Cross tabulations, on the other hand, were utilized to depict relationship between independent and dependent variables. With regard to qualitative data, descriptive statistics were utilized to describe units of study and common phrases identified among categorical data. Also, it was utilized to determine whether differences between variables were real or they occurred by chance.

Normality test was carried out to check for the normality of the distribution (Cooper & Schindler, 2011). Factor analysis for the variables was performed to make sure the items measure the intended constructs. Reliability test was carried out on each variable to establish the degree of consistency in scores owing to random errors. Quantitative techniques like Cronbach's coefficient Alpha was used to test the validity and reliability

of data. The researcher used Durbin-Watson test to find out whether the residuals from the multiple linear regression models are independent. The identification of multicollinearity in the model was vital and was tested by evaluating tolerance and variance inflation factor (VIF) diagnostic factors.

The relationship between dependent and independent variables was determined using regression analysis, which was also utilized to determine the effect that both variables had on project implementation (Cooper & Schindler, 2011). The regression analysis inferred causal relationship between independent and dependent variables. The R^2 was used to measure the model's goodness of fit whereas F –test was carried out to evaluate the model's significance and define the relationship between the dependent and independent variables at 5% level of significance. Linear regression models were utilized to test the linear relationships between individual predictor variables and dependent variable. As a statistical procedure, linear regression is utilized to predict the value of dependent variable on the basis of independent variables when relationship between the two is presumed to be linear. In statistics, the model is utilized to approximate the expected values of y variables given the x variables. Based on this background, the following linear regression models have been used in Chapter 4 to test the linear relationships between individual predictor variables and the dependent variable, performance of public energy sector projects in Kenya.

$Y = \beta 0 + \beta_1 X_1 + \mu$... *first equation*

$Y = \beta 0 + \beta_2 X_2 + \mu$.. *Second equation*

$Y = \beta 0 + \beta_3 X_3 + \mu$.. *third equation*

$Y = \beta 0 + \beta_4 X_4 + \mu$..*fourth equation*

To examine the moderating effect of the organizational environment on the relationship between soft skills and project performance, the following equation was adopted.

$Y=\alpha+\beta 0X+\beta_1 M+\beta_2 XM+C\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$ *fifth equation*

Where:

Y= performance

X= soft skills

M=Moderator (organizational environment).

XM= Interaction effect between X(soft skills) and M(moderator- organizational environment).

The study also relied on a combined multiple linear regression model to test the significance of influence that combined independent variables had on dependent variable. From the above equations, the combined model utilized in this study was as follows:

$Y = \beta 0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\mu$.. *sixth equation.*

Where, in all the equations above,

Y = Performance of public energy sector projects in Kenya (dependent variable) and it is

Constant

$\beta 1\ldots\beta 4$ = Coefficients of independent variables

$X1$ = leadership skills

$X2$ = communication skills

$X3$ = stakeholder management skills

X_4= problem solving skills.

μ = Error term.

The qualitative data was presented using frequency distribution tables, pie charts and graphs. Frequency distribution tables were used to summarize categorical or numerical data. A frequency table shows the number of times every variable occurred in the data set; thus, percentages and frequencies were utilized to present the data. Frequency distribution tables were used to simplify the data for faster analysis and data presentation. The tables used throughout the study were numbered and given titles. The quantitative data was presented by use of tables and summarized in models.

3.8.1 Hypotheses Testing technique

Regression analysis in the form of an equation was applied to test whether or not the alternative hypotheses stipulated in the study were true. Regression analysis helps to decide whether the individual hypothesis is statistically supported or not (Cooper &Schindler, 2011). To determine whether hypotheses were supported by data or not, the researcher performed tests for all independent variables to determine the values of regression coefficients. The study's conclusion was based on p-value whereby if the null hypothesis was rejected, then the overall model was presumed to be significant and when the null hypothesis was accepted, then the model was presumed to be insignificant. Generally, when the p-value was less than 0.05, the researcher concluded that the model was significant and was a good predictor for dependent variable. The assumption was that the results obtained were not based on chance. On the other hand, when the p-value was greater than 0.05, then the model was presumed to be insignificant thereby could not be utilized to explain variations identified on dependent variable. The decision rule is summarized in Table 3.3.

Table 3.3: Decision Table

Hypothesis	Test	Decision
Ha$_1$: the project employees' leadership skills significantly	Linear regression	Reject Ha1 if P-value >0.05 otherwise fail to reject Ha1 if P-

affect project performance of energy sector projects in Kenya.	analysis.	value ≤0.05.
Ha_2: the project employees' communication skills positively affect project performance of energy sector projects in Kenya.	Linear regression analysis.	Reject Ha2 if P-value >0.05 otherwise fail to reject Ha2 if P-value ≤0.05.
Ha_3: the project employees' stakeholder management skills positively affect project performance of energy sector projects in Kenya.	Linear regression	Reject Ha3 if P-value >0.05 otherwise fail to reject Ha3 if P-value ≤0.05
Ha_4: the project employees' problem solving skills positively affect project performance of energy sector projects in Kenya.	Linear regression	Reject Ha4 if P-value >0.05 otherwise fail to reject Ha4 if P-value ≤0.05

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the data using three major sections. The first section focuses its attention on respondents' demographic data whereas the second section focuses its attention on descriptive analysis of the study variables. The third is regression analysis and statistical modeling.

Overall, the data was analyzed to identify, describe and explore the relationship between employees' soft skills and performance of public energy sector projects in Kenya. The significance level was set at 0.05, and the data was collected exclusively using the questionnaire that was designed to establish the effect of various soft skills on project performance.

4.2 Response Rate

The sample comprised of a total of 76 project supervisors drawn from transmission, generation, distribution and nuclear projects. Out of the 76 questionnaires distributed, 63 questionnaires were collected; thus, the response rate was at 83 %, which according to Mugenda and Mugenda (2003) was adequate for data analysis to be conducted. For this analysis, the high response rate could be explained by continuous contact between researcher and respondents as well as efficient follow ups.

Table 4.1: Response Rate

Target Groups	Sample Size	Response	Percentage Response Rate
Transmission	18	14	22.2
distribution	45	40	63.6

generation	9	5	7.9
nuclear	4	4	6.3
Total	**76**	**63**	**100**

4.3 Results of the Pilot Study

Factor loadings were used to demonstrate discriminant validity while Average Variance Explained (AVE) was calculated from the rotated component matrix of the factor analysis to demonstrated convergent validity. Table 4.2 shows that the `19 items in the leadership skills' scale loaded on two uncorrelated factors. This confirmed discriminant validity as one set of measures had higher loadings (>0.5) on one sub construct (transactional leadership skills) while the other set had higher loading on the other sub construct (transformational leadership skills. That is, measures not related were separated (discriminated). Average variance explained (AVE) figures greater than 0.5 for transactional and transformational confirmed convergent validity as more than 50% of the variance of each sub construct was due to indicators in that sub construct. Hence, the evidence of both convergent and discriminant validities demonstrates construct validity for the measurement scale. Convergent and discriminant evidence is key to the empirical evaluation of test validity, According to Carlson and Herdman (2012) Convergent validity reflects the extent to which two measures capture a common construct and that results differ and the likely extent of disparity for convergent validities range from r= 0.10 to r =0.95. They add that Convergent validities above r = .70 are recommended, whereas those below r = .50 should be avoided.

Table 4.2 shows that the 16 items in the communication skills' scale loaded on three uncorrelated factors, which confirmed discriminant validity as measures not related were separated (discriminated). The sub scales were coded as coaching and mentoring, empowering the project team and inspiring the project team. Average variance explained (AVE) figures greater than 0.5 for the three sub scales confirmed convergent validity in each sub scale.

Table 4.2: Validity Test for Leadership Skills' Construct

Measure	Coaching and mentoring	Empowering the team	Inspiring the team
Eigenvalue	8.926	1.547	7.926
Average Variance Explained (AVE)	0.510	0.593	0.592
Square root of AVE	0.714	0.734	0.714
Composite Cronbach's α	0.827	0.887	0.827
N	5	6	5

Table 4.3 shows that the 12 items in the communication skills' scale loaded on three uncorrelated factors, which confirmed discriminant validity as measures not related were separated (discriminated). The sub scales were coded as decision making, conflict resolution and negotiation skills. Average variance explained (AVE) figures greater than 0.5 for the three sub scales confirmed convergent validity in each sub scale.

Table 4.3: Validity Test for Communication Skills Construct

Skills	Decision Making	Conflict Resolutions	Negotiation
Eigenvalue	4.260	1.296	1.151
Average Variance Explained (AVE)	0.593	0.518	0.537
Square root of AVE	0.770	0.719	0.660
Composite Cronbach's α	0.878	0.731	0.874
N	5	4	3

Table 4.4 shows that the 19 items in the stakeholder management skills' scale loaded on three uncorrelated factors, which confirmed discriminant validity as measures not related were separated (discriminated). The sub scales were coded as stakeholder relationship, stakeholder engagement, and stakeholder analysis skills. Average variance explained (AVE) figures greater than 0.5 for the three sub scales confirmed convergent validity in each sub scale.

Table 4.4: Validity Test for Stakeholder Management Skills' Construct

Skills	Stakeholder Relationship	Stakeholder Engagement	Stakeholder Analysis
Eigenvalue	10.162	1.903	1.414
Average Variance Explained (AVE)	0.550	0.5915	0.623
Square root of AVE	0.741	0.769	0.789
Composite Cronbach's α	0.897	0.851	0.867
N	9	6	4

Table 4.5 shows that the 10 items in the problem solving skills' scale loaded on three uncorrelated factors, which confirmed discriminant validity as measures not related were separated (discriminated). The sub scales were coded as Areas that require problem solving, Problem solving tools and strategies and Role of project team.

Average variance explained (AVE) figures greater than 0.5 for the three sub scales confirmed convergent validity in each sub scale.

Table 4.5: Validity Test for Problem Solving Construct

Measure	Problem solving strategy	Problem solving tools	Role of project team

Eigenvalue	4.238	2.668	1.852
Average Variance Explained (AVE)	0.881	0.651	0.594
Square root of AVE	0.939	0.807	0.771
Composite Cronbach's α	0.957	0.878	0.810
N	3	4	3
Total Reliability Cronbach's α	0.954	0.808	0.772

The results of the reliability test are as shown in Table 4.6.

Table 4.6: Reliability of the Constructs

Variable	Cronbach's Alpha	N	Comment
Leadership Skills	0.930	12	Accepted
Communication skills	0.847	12	Accepted
Stakeholder Management Skills	0.944	12	Accepted
Problem solving skills	0.844	12	Accepted
Organizational Environment	0.786	12	Accepted

Construct reliability of the scales was measured and evaluated using Cronbach's Alpha values. The results in Table 4.6 show that the Cronbach's alpha values for leadership skills, communication skills, stakeholder management skills and organizational environment were more than 0.7. Thus, the scales were considered as reliable in terms of internal consistency of the conceptual construction that was composed for the leadership skills, communication skills, stakeholder management skills and organizational environment.

4.4 Background Information

The background information gathered in this study includes gender of the respondents, age of the respondents, education level, experience and level of soft skill training.

4.4.1 Distribution of Respondents by Gender.

The distribution of the respondents by gender was as Table 4.7 depicts and it was at 75% male and 25% female.

Table 4.7: Gender of Respondents.

Gender	Number	Percentage
Male	47	75
Female	16	25
Total	**63**	**100**

The results reveal that there are more male employees in the energy sector than the female employees. This could be due to the fact that the energy sector requires Professionals such as legal experts, land economists, surveyors, financial experts, engineers, socio-economists, designers and environmental experts. These are fields in which there are still very few women because traditionally they were viewed as fields for men. However, the staff mix depicts that gender distribution in the sector is in line with what the Kenyan constitution requires, which asserts that no gender should occupy more than two-thirds of employment positions in public sector.

4.4.2 Distribution of Respondents by Age.

The study sought to find out the distribution of respondents by age. This is summarized in figure 4.1
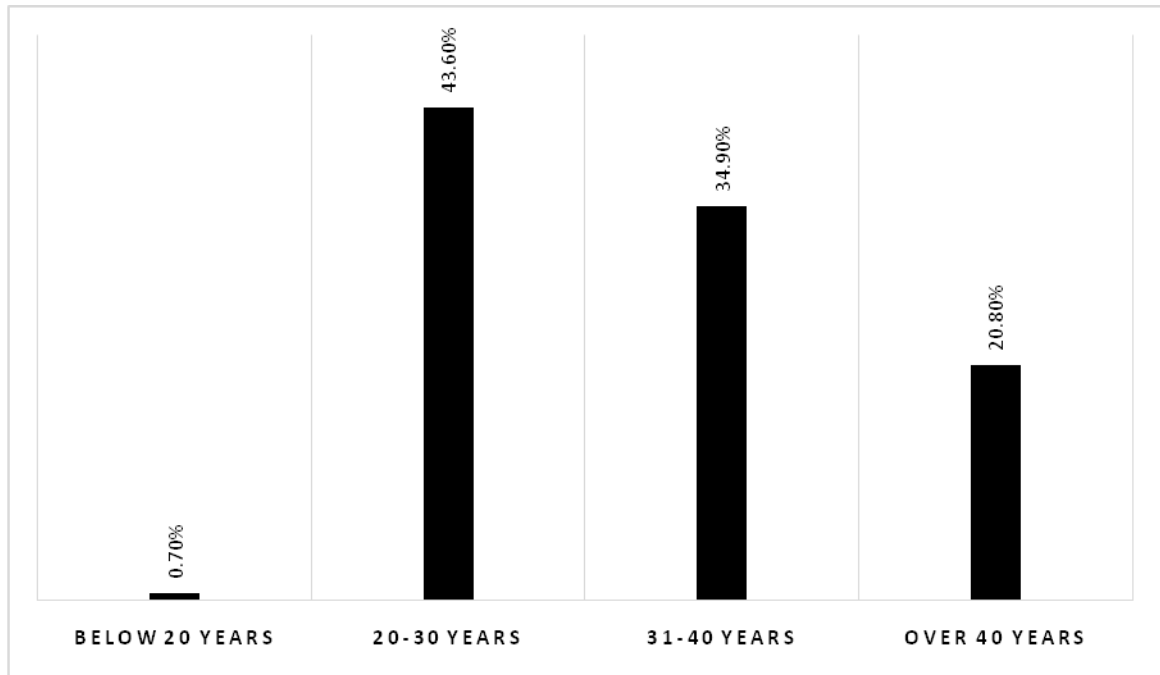
Figure 4.1: Age of Respondents

The findings show that most of the respondents were between the age of 20 and 30 years (43.60%) followed by those between the age 30 and 40 years (34.90). Those aged over 40 accounted for 17.1% of the respondents whereas those aged below 20 years were the minorities (1.6%). Several factors might be utilized to explain the age trend found in the sector. First, most of the young people join the energy sector as degree holders and they graduate in their early twenties. This accounts for the small number of employees before the age of twenty. In addition, due to the nature of the projects in the energy sector a more young and energetic workforce is required. Thirdly, majority of those aged above 40 years of age are in senior management and may not be actively involved in project work. Furthermore, the relatively low number of employees aged over forty years could be as a result of departure from service due to factors such as resignation to join private practice and other engagements once they attain sufficient experience from public service.

4.4.3 Education Level of the Respondents

The researcher also sought to find out the academic qualification for the respondents. Figure 4.2 gives a summary of respondents' levels of education.
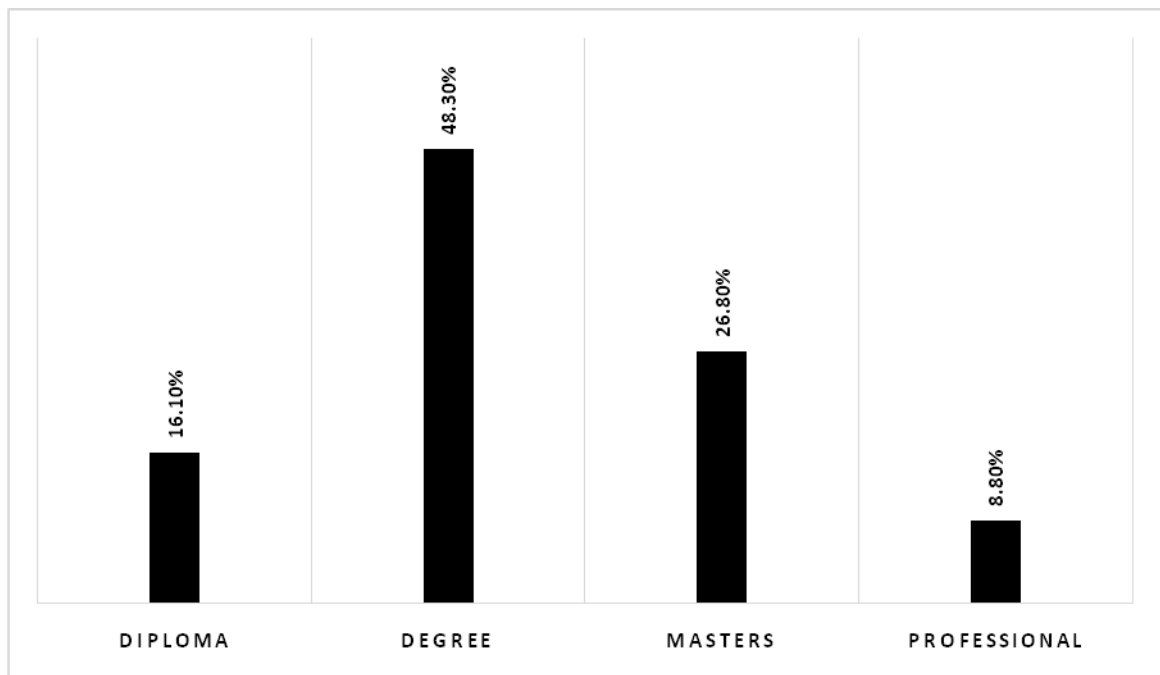
Figure 4.2: Education Level of Respondents

The figure shows that out of those who responded, 16.10% had diploma, 48.3% had degrees, 26.80 % had masters while 8.8% had professional qualification. This is because the projects in the energy sector require professionals in various fields. Professionals in the energy sector include legal experts, land economists, surveyors, financial experts, engineers, socio-economists, designers and environmental experts. It could also be attributed to the fact that majority of those involved in projects are aged between 20 and 40 and therefore are likely to seek career progression. This explains why a relatively big number has attained masters degrees.

4.4.4 Project Category

The study also sought out the project categories on which the project respondents worked. Table 4.8 provides a summary of the projects on which the respondents worked.

Table 4.8: Project Category

Project category	Number	Percentage
Generation	5	7.9
Nuclear	4	6.3
Transmission	14	22.4
Distribution	40	63.4
Total	**63**	**100**

Table 4.8 shows that 22.44% of the projects studied were transmission projects while 63.4% were distribution projects with 7.9% being generation projects and 6.3% nuclear projects. Nuclear projects are still very few. Some of the respondents intimated that the slow take-off of nuclear projects was due to the presence of safer methods of generating energy such as wind and geothermal energy. As a result, most are still at the initial stages. The distribution projects were more mainly due to the electrification of public schools and the last mile connectivity. Transmission projects are also many due to increase in the distribution projects. These require more transmission lines and substations.

4.4.6 Category of roles

The study also sought to find out the roles played by the respondents in the project. Figure 4.3 provides a summary of the roles played.
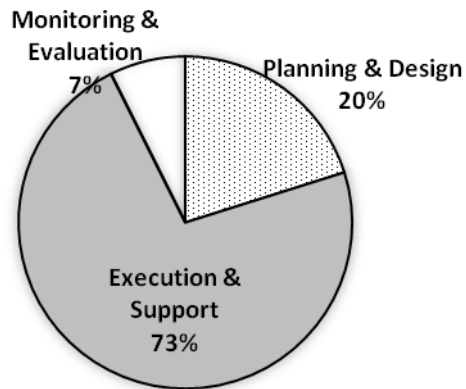
Figure 4.3: Role Category

As depicted by figure 4.3 above, 73% of the respondents were involved in project execution while 20% were involved in project planning and design. Only 7% were project monitoring and evaluation officers. This is because the projects in the energy sector are many and they require more personnel on the ground. The execution team is composed of project managers, engineers, land economists, surveyors, financial experts, socio-economists, legal experts and environmental experts.

4.4.6 Experience of Respondents.

Figure 4.4 shows a summing up of the experience of the respondents.
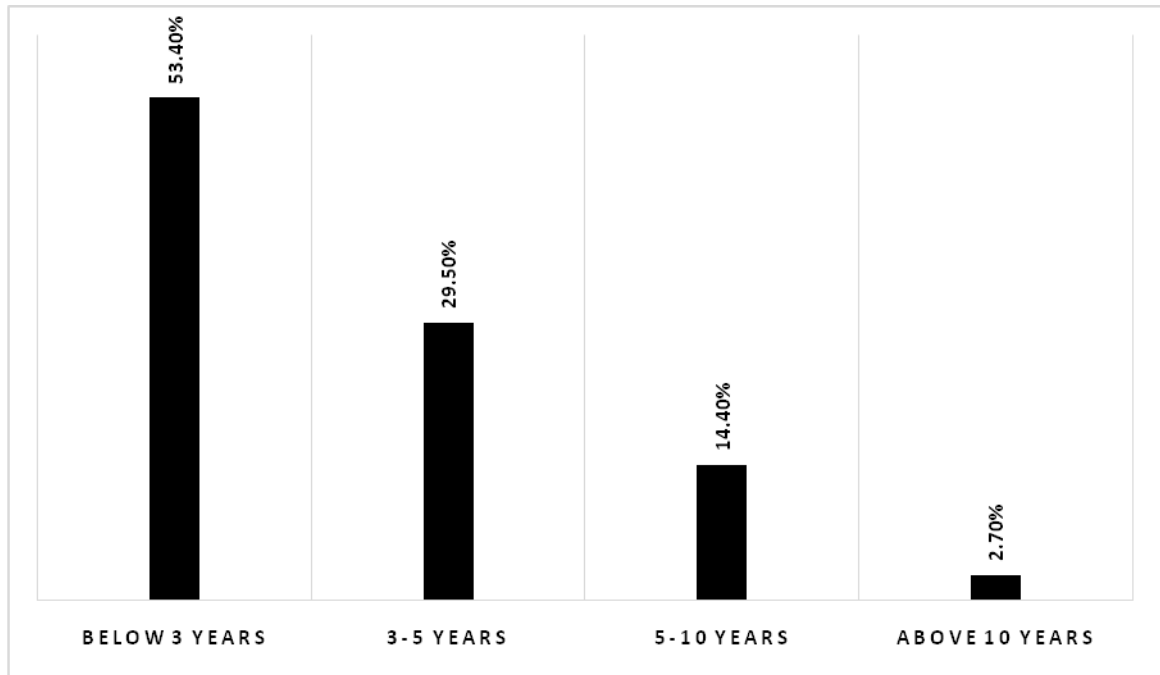
Figure 4.4: Experience of the Respondents

Figure 4.4 demonstrates that 53.4% of the respondents have less than three years' experience, 29.5% 3-5 year experience, 14.4% % 5-10 years' experience and 2.7% above ten years' experience. Majority of the project executioners are aged between 20 and 30 and have just joined the workforce and hence the little experience. Those with over ten years of experience are very few due to natural attrition factors such as retirement, resignation to look for greener factors and even death.

4.4.6 Soft Skills Training Undertaken by the Respondents

Table 4.9 gives a summary of the soft skills in which the employees are trained.

Table 4.9: Soft Skills Training Undertaken by the Respondents

Soft Skills	Number Trained	Percentage (N=63)
Leadership Skills	22	34.9
Communication Skills	25	39.6
Stakeholder Management Skills	14	22.2

Decision Making Skills	22	34.9
Problem Solving Skills	24	38.0

Table 4.11 shows that 34.9% of the respondents had undertaken leadership skills training while 39.6% had been trained on communication skills; 22.2% on stakeholder management; 34.9% on decision making skills; and 38.0% on problem solving skills. This has been done mainly through workshops and seminars. Others learned the same skills as units in courses they had undertaken.

4.4.7 Level of Soft Skill Training.

Figure 4.5 demonstrates the level of soft skill training of the respondents.

Figure 4.5: Level of soft skill training

Although the study targeted the project supervisors, the level of soft skill training is low. 59% of the respondents have been trained up to certificate, 37% had basic introduction while 4% achieved diploma qualifications on the skills. This is because promotions to supervisory roles are based on years served on project work and the level of training in hard skills such as engineering, surveying and land economics but not on the level of

training in soft skills. Those trained up to basic and certificate level acquired the skills through seminars, workshops and as part informal training in the course of the project work. Those trained up to diploma acquired the skills as part of courses they had undertaken.

4.5 Descriptive Analysis of Variables

A descriptive analysis of the variables was carried out on all variables. This section presents descriptive analysis on the basis of findings and results obtained from the study. Descriptive statistics allowed the researcher to present data in a meaningful way for easier interpretation in any form (Kothari, 2011; Sekaran, 2008; Cooper & Schindler, 2011). The study used percentages to present most of the data used to investigate the effect of employees' soft skills on performance of public energy sector projects in Kenya. Results from questions asked during data collection have been corroborated with the literature reviewed in chapter two.

4.5.1 Leadership Skills

The study's first objective was to find the effects of leadership skills on project performance in the public energy sector in Kenya. Using a Likert Scale, the respondents were asked to provide their levels of agreement on the statements on the role of project manager as a leader. Tables 4.10 illustrates the results obtained.

Table 4.10: Roles of project manager as leader

Role of project manager as a leader	SD (1)	D(2)	U (3)	A (4)	SA (5)	Mean	SD
Coaching and mentoring	0.7%	2.1%	12.1%	58.6%	26.4%	3.79	0.705
Empowering team	3.4%	8.3%	12.4%	42.1%	33.8%	3.52	0.936
Inspiring team	2.1%	6.3%	12.3%	50.4%	30.1%	3.66	0.821

85% of the respondents agreed that the project managers should coach and mentor their project team members. 75.9% of respondents concurred that their project managers should empower them while 80.5% indicated that the project leaders should inspire the team members. This is corroborated by Lee (2009) who highlighted the four key roles of a project manager as leader, manager, facilitator, and mentor/coach. It is upheld by Hakimi et al (2010) who stated that the project leader plays a key role in determining the success, as well as the failure of project team empowerment initiatives.

A further Analysis of the Mean Scores and Standard Deviation was carried out as shown in Table 4.11.

Table 4.11: Role of project manager in Coaching and mentoring, empowering and inspiring

Statement	N	Mean	SD
Employees should receive individualized attention from our superiors	62	3.3387	1.2406
Roles and processes within the project should clearly defined	62	3.3548	1.14658
Employees should have a sense of belonging when I am in the team	62	3.5645	1.09576
Employees should receive communication promptly and regularly	62	3.6129	1.06131
The project mission should be clearly defined and broken into measurable outcomes	62	3.6129	1.06131
There is need for a positive attitude towards project work	62	3.6290	1.10489
Employees should get support and inspiration from their leaders	62	3.6613	1.02339
Employees should be made to feel valuable and important to the project.	62	3.7419	.84805
Employees should have the drive to achieve the project goals	62	3.7581	.89964

Statement	N	Mean	SD
positive outcomes should recognized	62	3.76	1.250
Employees should be motivated to bring in new ideas	62	3.8226	.93255
There is need for teamwork in project	62	3.8871	.81190
Employees should be allowed to do their work without interference from their superiors.	62	3.9194	.94606
Employees should get enriched job information from their superiors	62	3.9355	.95593
Superiors should only intervene in case of any errors	61	4.0164	.74144
Employees should be empowered to develop to our fullest potential	62	4.0968	.80388
Laid down procedures should be followed in the course of our work.	62	4.1774	.55881
Undesirable behaviour within the project should penalized.	62	4.21	.750

The respondents concurred that there is need for employees to receive individualized attention from their s superiors (MS=3.3387, SD=1.24062). They agreed that the roles and processes within the project should be clearly defined (MS=3.3548, SD=1.14658). The respondents felt that employees should feel a sense of belonging when in the project (MS=3.5645, SD=1.09576) and should also feel valuable and important to the project (MS=3.7419, SD=0.84805). They agreed that communication should be prompt and regular (MS=3.6129, SD=1.06131) and that the project mission should be clearly defined and broken into measurable outcomes (MS=3.6129, SD=1.06131). The respondents also agreed that a positive attitude towards project work is needed (MS=3.6290, SD=1.10489) and that support and inspiration from project leadership is imperative (MS=3.6613, SD=1.02339). The respondents also indicated that there is need for project employees to have the drive to achieve the project goals (MS=3.7581, SD=.89964) and that positive outcomes are recognized (MS=3.76, SD=1.250). The

respondents also agreed that teamwork is important in project work (MS=3.8871, SD=0. 81190) and that they should be allowed to do their work without interference from their superiors (MS=3.9194' SD=0.94606) except where there are errors (MS=4.0164, SD=.74144). Respondents also agreed that there is need for project employees to get enriched job information from their superiors (MS=3.9355, SD=.95593) and be empowered to develop to their fullest potential (MS=4.0968, SD=0.80388). They agreed that laid down procedures should be followed in the course of project work (MS=4.1774, SD=.55881). They also felt that undesirable behaviour within the project should be penalized (MS=4.21, SD=.750).

It is supported by Ellinger, Beattie, and Hamlin (2014) who explain that the use of coaching for developing employees has long been a core managerial activity. Osterweil (2014) noted that, Mixed with formal training over a period of months, coaching and mentoring consistently improve a project team's functional project management scale of the project that they are working on, Whether they are starting afresh or taking over from someone else and how improvement will be measured. It is further affirmed by Tuuli and Rowlinson (2007) whose study advocates that the creation of a conducive climate for empowerment holds the greatest potential for project managers to influence team members' perceptions of empowerment and can serve as a diagnostic tool for "trouble-shooting" in the empowerment process. It is also validated by Muller, Geraldi and Turner (2012) who noted that through Inspiration through leadership the project manager supports and motivates the project team through times of stress and uncertainty to achieve top performance (Grossman & Valiga, 2009). Chiocchio, Kelloway and Hobbs (2015) support the findings when they indicate that if the project team members view the project leader as an active participant, their motivation and loyalty develops unreservedly.The respondents were asked to indicate how they get motivated to give more to the projects they work on. Table 4.12, illustrates the responses to the question.

Table 4.12: Motivation

	Frequency	Percent

Adequate pay	4	6%
Better terms of employment	1	2%
Better working conditions	1	2%
Effective communication	2	3%
Incentives	1	2%
Involvement	14	22%
Supportive team (and Management)	5	8%
Personal drive	1	2%
Project success	11	17%
Reward	6	10%
Trainings	16	25%
Work life balance	1	2%

The results in Table 4.12 confirm that 25% were motivated through training, 22% through involvement in project activities, 17% by project success, 10% through reward of effort, 8% by supportive team, 6% by adequate pay, 3% through effective communication, 2% by offering better terms of employment, 2% are motivated by better working conditions, 2% by provision of incentive, 2% by personal and 2% by work life balance.

This is linked to findings by Cherry (2012) who noted that people can be motivated by several factors including instincts, incentives, arousal, and needs.

This is further upheld by Chaudhry and Javed (2012) and Peterson (2007) whose findings indicate that contingent rewards are linked to the performance of team members. They add that team members who work hard are rewarded for their impressive work while those who are not committed to their work are punished. Odumeru and Ifeanyi (2013) submit that contingent rewards include praise while Peterson found out that casual dress can be a motivating factor for project teams.

Better working conditions also motivate workers in energy sector projects. This is aligned to the findings of Awan et al (2015) who propose that good leadership is

responsible for establishing and providing apposite climate among team members that fosters a system for integrating and coordinating the individual members and enhancing collective contributions from team members. The findings are also in agreement with the results of Rao (2012) who concluded that a firm dedication of the project leader toward their word and work creates a conducive working environment. Their dedication builds durability in relations among the project team members.

Project employees are also motivated through training, reward of effort, involvement, better working conditions and supportive team. This is supported by Thamain (2004a, cited by Anantatmula 2010), who found that satisfaction of professional and personal needs had the greatest effects on team performance. Studies by Cornellius (2012) and Brenton and Levin (2012) point out that in order to motivate team members to work hard the project manager needs to identify their feelings, needs and expectations Anantatmula (2010) asserts that as leaders, project managers should put into consideration the personal aspirations for team members and support them to achieve them.

4.5.2 Communication Skills

The second study's objective was to determine the effects of communication skills on project performance in the public energy sector in Kenya. The respondents were asked to indicate how much they agreed that communication skills were used in projects in the energy sector in Kenya. Table 4.13 gives a summary of the responses.

Table 4.13: Use of Communication Skills in project management.

	SD (1)	D (2)	U (3)	A (4)	SA (5)	Mean	SD
Decision making	3.6%	9.3%	9.3%	45.7%	32.1%	3.48	0.917
Strategic Communication of results	0.0%	7.2%	9.4%	60.4%	23.0%	3.72	0.733
Knowledge management	2.1%	13.9%	13.2%	43.1%	27.8%	3.51	0.961

77.8% of the respondents agreed that communication skills are used in decision making

These results are confirmed by Goff, (2011) who wrote that for quality decisions, planning, management of leading indicators and timely communication with superiors are required. This is further supported by Eweje et al (2012) who noted that the decisions that managers make have considerable impact on strategic value of the projects they manage.

83.4% of the respondents indicated that communication skills are used in strategic communication of results. This is affirmed by Philips et al (2012) whose study established that communicating results is critical for project success. Cataldo and Ehrlich (2011) further acknowledged these findings by adding that the results achieved must be conveyed to stakeholders throughout the duration of the project.

70.9% of respondents felt that communication skills are used in knowledge management.
 Pawloski & Pirkalainen (2012) add that knowledge management is one important aspect that project teams have to tackle. Hill (2010) also agreed with the findings by writing that the concept of knowledge management uplifts basic communication in the project management environment from simple data transfer to conveyance of ideas, perceptions, experiences and interpretations that go beyond the simple exchange of information.
A further Analysis of the Mean Scores and Standard Deviation was carried out as shown in Table 4.14.

Table 4.14: Role of communication in the project

Statement	N	Mean	SD
Project information should be largely shaped by preferences of the communities it serves.	61	3.4754	1.08944
Information concerning project activities should be widely availed to the public.	62	3.4839	1.00396
The language that project stakeholders understand well should	62	3.6613	.95717

be used when communicating with them.			
information received from supervisors should be satisfactory	62	3.6613	.97415
Communication influences behavior of the team members	62	3.6613	1.00725
Timely communications with external stakeholders should be maintained throughout the project lifecycle	62	3.6935	1.01769
A communication policy should guide the interactions between project employees and the project stakeholders.	62	3.7581	.98656
The external stakeholders should be reliably informed of the progress of our projects	62	3.8548	.97252
Feedback from stakeholders should be acted upon Without hesitation.	61	3.8689	.99122
The media we used when communicating with stakeholders should be those they like	62	3.9677	.92271
project results should be communicated to stakeholders on time	62	4.5000	.37300

The respondents agreed that information is largely shaped by preferences of the communities served by the project (MS=3.4754, SD=1.08944) and that Information concerning the project activities should be widely availed to the public (MS=3.4839, SD=1.00396). Language that the project stakeholders understand should be used when communicating with them (MS=3.6613, SD=.95717). Respondents agreed that information received from the supervisors should be satisfactory (MS=3.6613, SD=.97415) and that Communication influences behavior of the team members (MS=3.6613, SD= 1.00725). Timely communications with external stakeholders is maintained (MS=3.6935, SD=1.01769). The respondents also agreed that a communication policy should guide interactions between the project employees and the project stakeholders (MS=3.7581, SD=.98656) and that the project's external stakeholders should be reliably informed (MS=3.8548, SD=.97252). They also agreed that there is need to act on the feedback received from project stakeholders without hesitation (MS=3.8689, SD=.99122). They also agreed that the media used for communication should be what the stakeholders like (MS=3.9677, SD=.92271) and that results should be communicated to stakeholders on time (MS=4.5000, SD=37300).

These findings are in line with Kibe (2014) whose study established that Project managers should make an intentional effort to master and use communication skills strategically and in line with the organization's values, mission and strategy while at the same time involving the project team for successful communication. Tipili et al (2014) also affirm that for communication to be effective, information must be properly managed, transferred and understood so that the various aspects of the project can be assembled to realize the design. Hill (2010) observes that when using knowledge management concepts, project reporting and project information management become more timely, comprehensive and widespread among stakeholders and relevant to the interests of the project. The results are further corroborated by Pawloski and Pirkalainen, (2012) who wrote that the choice of communication tools should be according to goals and processes. Cataldo and Ehrlich (2011) also affirmed that that communication must

be timely; target a specific audience, should use carefully selected media, modest in tone and unbiased. Kibe (2014) further corroborates these findings by proposing the use of a communication strategy should create a consistent, unified voice that links different activities and goals in a way that appeals to project partners or stakeholders.

Respondents were also asked to indicate how they would ensure that communication is effective. Table 4.15 gives a summary of the responses.

Table 4.15: Ways of making Communication Effective

	Frequency	**Percentage**
Access to information	2	2%
Clear communication plan	25	24%
Proper feedback system	23	22%
Open communication	3	3%
Participatory communication	18	17%
Timely communication	4	4%
Prompt feedback	4	4%
Regular communication	21	20%
Clear communication	3	3%

From the Table 4.15 it can be concluded that there are many ways in which effective communication can be achieved. These include the use of a clear communication plan with simple and collaborative channels (24%), having a proper feedback systems (22%); regular communication (20%), two way participatory communication (17%), prompt feedback (4%), timely communication (4%), clear communication (3%), open communication (3%), and free access to information (2%).

The study's findings are in line with the findings of Tipili et al (2014) that for communication to be effective, information ought to be managed, understood and transferred effectively so that the various projects' aspects can be amassed to realize the

design. They further add that using the right communication medium and methods helps to resolve problems in projects leading to improved project performance.

The respondents were then asked to indicate the best channels of communication with both internal and external stakeholders. Table 4.16 provides the outcome.

Table 4.16: Communication Channels

	Frequency	Percentage
Public Barazas	9	4.1%
Email	24	37.4%
Letters and circulars	19	8.7%
Mass media	4	1.8%
Meetings	34	15.5%
Memos	9	4.1%
Phone calls	31	14.2%
Radio	2	0.9%
Workshops/Seminars	4	1.8%
Print media	4	1.8%
Road shows	1	0.5%
Text messages	1	0.5%
TV documentaries	1	0.5%
Websites	2	0.9%
Advertisements	1	0.5%
Newsletters and Brochures	2	0.9%
Social media	13	5.9%
Total	**158**	**100.0%**

The most preferred communication channels are, emails (37.4%); meetings (15.5%); phone calls (14.2%); letters and circulars (8.7%); social media (5.9%); and public barazas (4.1%). This is in agreement with findings by Cataldo & Ehrlich (2011) who established that communication channels should vary according to the audience. For a wide audience the project manager can use internal, routine publications such as newsletter, magazine, newspaper or electronic file; e-mails and electronic media are excellent for promoting ideas and informing employees and other target groups of project results Cataldo & Ehrlich (2011). For major projects the project manager can

create a blog to present results and elicit reactions, feedback and suggestions. They also add that Project brochures and pamphlets are appropriate for a project conducted on a continuing basis or where the audience is large or continuously changing. Case studies describe the situation, provide appropriate background information such as the events that led to the project, presents the techniques and strategies used to develop the study, and highlight the key issues in the project.

Milman (2011) advocates that some channels such as Anymeeting and Vyew can allow members to discuss and critique a draft presentation or product they have created. Milman (2011) also recommends some collaboration tools for project teams that work at a distance and need to brainstorm ideas, produce outlines, and drafts of their work. These include final products such as conceptshare for sharing markup images, photos and videos, delicious for sharing bookmarks, flikr for sharing photos, Google docs for sharing and creating documents, pb works for sharing WIKI, slideshare for sharing slides in PowerPoint and other formats, wridea for brainstorming and idea management and Zoho which offers a "suite" of collaboration tools.

Hill (2010) also affirms the results by suggesting the use of a project team knowledge space which is an online center, often represented in web-page format that is established for every major project, Product Review and Handover spaces which is an online repository of project and technical documentation for access by authorized project team members. This online workspace is where project and project management deliverables are created and stored. General Discussion rooms which is an online collaboration feature that traverses the project management environment is another important tool in the management of projects. It can be developed for a wide audience, such as all stakeholders in the project management environment or for a specified user group such as all project managers.

The results are further supported by Pawloski and Pirkalainen (2012) who offer web 2.0 and social software tools for use in knowledge exchange within project teams, inter-and intra-organizational micro-blogs, social networks and organizational WIKIs. Bertram et

al (2010) add that issue tracking systems can help project managers to manage issue reporting, assignment, tracking, resolution and archiving.

4.5.3 Stakeholder Management Skills

The third study objective was to ascertain the effects of stakeholder management skills on project performance in the public energy sector in Kenya. These results are found in Table 4.17.

Table 4.17: Use of Stakeholder Management Skills

	SD (1)	D (2)	U (3)	A (4)	SA (5)	Mean	SD
Stakeholder analysis	0.0%	3.0%	20.0%	60.0%	17.0%	3.91	0.696
Stakeholder engagement	0.0%	9.6%	20.0%	60.7%	9.6%	3.70	0.773
Stakeholder relationship	0.0%	4.3%	23.4%	61.7%	10.6%	3.79	0.685

According to the results, in the public energy sector projects, stakeholder management skills are applied during stakeholder analysis (77.0%), Stakeholders engagement in the projects (69.6%); and in building stakeholder relationships (72.3%). This is in tandem with the findings by Team FME (2014) that stakeholder management process includes stakeholder analysis, managing stakeholder engagement and control of stakeholder relationship. It involves the establishment of agreements through individual stakeholders and the project manager and among the stakeholders as well. The findings also corroborate with those of Ackerman and Eden (2011) that when managing projects, the project manager must decide the level of stakeholder disaggregation

A further Analysis of the Mean Scores and Standard Deviation was carried out as shown in Table 4.18.

Table 4.18: Mean and standard deviation results of specific responses on Stakeholder management skills

Statement	N	Mean	SD
A conducive environment should be created for stakeholders to	61	3.5738	1.00762

Statement	N	Mean	SD
interact with each other and support one another by sharing resources and intellectual property.			
Agreements should be signed between individual stakeholders and the project manager and among stakeholders themselves.	61	3.6230	1.00273
Issues should be addressed as they arise and conflicting interests dealt with	60	3.6833	1.06551
Project employees should strive to meet the expectations of the stakeholders	61	3.6885	.99232
Project employees should identify and incorporate stakeholders at every phase of the project.	62	3.7258	1.05845
All the stakeholders should be encouraged to agree on a uniform set of key performance indicators.	61	3.7541	.94262
Project employees should communicate continuously with stakeholders in order to understand their needs and expectation	61	3.7705	1.00654
There is need for a stakeholder management plan to monitor stakeholder engagement	61	3.7705	1.02296
Project employees should plan their project activities based on the careful analysis of the project stakeholders and their interests	61	3.7869	1.00191
Project employees should monitor stakeholders' interests throughout the execution phase to ensure progress and success	61	3.8197	.92210
There should be a communications plan to keep project stakeholders interested in the project throughout all the project phases	61	3.8361	.95185
Project employees should Encourage and Motivate project Stakeholders to participate in the project	61	3.9508	.92062
Project employees should find out what the expectations of our stakeholders are.	61	3.9836	.88491
Project employees should encourage project stakeholders to air their views and support their expectations.	61	4.0328	.70633
Project employees should always request for the support of key	61	4.0820	.75928

Statement	N	Mean	SD
stakeholders in the course of our work			

The respondents agreed that a conducive environment should be created for stakeholders to interact with each other and support one another by sharing resources and intellectual property (MS=3.5738, SD=1.00762) and ensure that agreements are signed between individual stakeholders and the project manager and among stakeholders themselves(MS=3.6230, SD=1.00273). Issues should be addressed as they arise and conflicting interests dealt with(MS=3.6833, SD=1.06551). Respondents also indicated that employees should strive to meet the expectations of the project stakeholders (MS= 3.6885, SD=.99232). Respondents concurred that project employees should identify and incorporate stakeholders at every stage(MS=3.7258, SD=1.05845) as well encourage all the stakeholders to agree on a uniform set of key performance indicators(MS=3.7541, SD=.94262). They should also communicate continuously with stakeholders in order to understand their needs and expectations (MS=3.7705, SD=1.00654) and also have a stakeholder management plan to monitor stakeholder engagement(MS=3.7705, SD=1.02296). The respondents also indicated that project employees should plan their project activities based on the careful analysis of the project stakeholders and their interests(MS=3.7869, SD=1.00191) and also monitor stakeholders' interests throughout the execution phase to ensure progress and success(MS=3.8197, SD=.92210). They also indicated that there is need to have a communications plan to keep their stakeholders interested in the project throughout all the project phases (MS=3.8361, SD=.95185), besides encouraging and motivating the project stakeholders to participate in the project (MS=3.9508, SD=.92062,). The respondents also indicated that project employees should find out what the expectations of the stakeholders are (MS=3.9836, SD=.88491) and encourage their stakeholders to air their views and their expectations (MS=4.0328, SD=.70633). They also indicated that project employees should request for the support of key stakeholders in the course of their work (MS=4.0820, SD=.75928).

These findings are in line with findings by Eskerod and Jepsen (2013) that Stakeholder management contributes to successful project performance. Moore (2011) also confirms

that management of stakeholder expectations is a practice that involves working and communicating with stakeholders with an aim of addressing the issues they raise and meeting their needs. Team FME (2014) also affirm that through effective stakeholder management, project employees can align project's requirements, fix issues that might undermine project implementation, understand risk tolerance from stakeholders' perspective and prevent scope creep. (Moore (2011) adds that active stakeholders' expectation management reduces the risks of project failure due to unsettled issues and minimizes project disruptions. Thompson (2011) also corroborates the findings by writing that project managers can utilize opinions from influential stakeholders to shape the implementation of projects and secure support from authoritative stakeholders. Tonnquist et al, (2009) adds that recognizing the project's various stakeholders and their respective expectations is vital for the survival of the project manager. Thompson (2011) ratifies that stakeholder identification enables the project manager to see which stakeholders are expected to be blockers or critics, and which stakeholders are likely to be advocates and supporters or your project. This enables the project manager to manage the project stakeholders. For the advocates and supporters little effort is required to monitor them, blockers and critics should be kept informed and satisfied while the rest should be managed closely (Thompson, 2011). Kerzner (2011) also validates the findings by argueing that through stakeholder engagement the project manager understands each stakeholder's interest; what information the stakeholder's would like to see in performance reports.

The respondents were also asked to indicate what they do to ensure that project stakeholders are satisfied. Results in Table 4.19 demonstrates the results.

Table 4.19: Stakeholder Satisfaction Methods.

	Frequency	Percentage
Adequate compensation	2	2.3%
Completing projects on time	4	4.7%
Follow ups on affected persons	8	9.3%

Corporate Social Responsibility	14	16.3%
Innovativeness	1	1.2%
Open and regular communication	6	7.0%
Post project audits	1	1.2%
Presenting project benefits to affected persons	1	1.2%
Prompt payment of compensation	6	7.0%
Prompt redress of customer concerns	1	1.2%
Proper documentation	1	1.2%
Public sensitization	3	3.5%
Adhering to quality and safety	3	3.5%
Stakeholder involvement	34	39.5%
Timely communication	1	1.2%

Table 4.19 shows that most respondents use stakeholder involvement (39.5%); corporate social responsibility (16.3%); and follow ups on affected persons (9.3%) as ways of ensuring that project stakeholders are satisfied. The results of the study agree with findings by Tonnquist et al, (2009) that recognizing the project's various stakeholders and their respective expectations is vital for the survival of the project manager. It is further supported by Kerzner (2011) who adds that through stakeholder engagement, the project manager understands each stakeholder's interest, and what information the stakeholders would like to see in performance reports.

4.5.5 Problem solving skills

The fourth study objective was to discover the effects of employees' problem solving skills on project performance in the public energy sector in Kenya. These results are found in Table 4.20 below.

Table 4.20: problem solving skills

Problem Solving	SD (1)	D (2)	U (3)	A (4)	SA (5)	Mean	SD
Problem solving Strategy	1.6%	1.6%	14.3%	27.0%	55.6%	4.33	.890
Problem solving tools	1.6%	1.6%	12.7%	36.5%	47.6%	4.29	.865
Role of team	3.2%	12.7%	0.0%	22.2%	61.9%	4.55	.895

According to the results in Table 4.20, 82.6% of the respondents agreed that problem solving strategy is imperative in solving problems in the public energy sector in Kenya. 84.1% agreed that problem solving tools should be used in solving problems in the public energy sector projects in Kenya.84.1% also consented that the project team plays a major role in solving problems in the public energy sector projects in Kenya.

These findings are affirmed by Mayer (2013) who found out that one of the five major kinds of knowledge required for problem solving is strategy. Schmidt (2012) recommends the use of Red X strategies which emphasize that most issues can be corrected by finding the root cause and controlling it. The results are further validated by Kaplan, Dollar, Melian, Van Durme, & Wong, (2016) who revealed that the leading worldwide workforce trend is teamwork and by Lacerenza et al (2018) who wrote that Projects are allocated to teams of employees who work interdependently, employ high levels of empowerment, communicate freely, and either disband following project completion or continue collaborating. The Project manager should step by step establish a sense of trust in the project team members mind and encourage collective responsibilities and these can be achieved through alignment of interest and goals, improved communication channels and as well as using equitable employment and contractual practices (Chong, 2011).

Connelly (2015) also upholds the results by arguing that Issues and problems can be solved more easily and with better results by using a problem solving model which is a structured, systematic approach to solving problems and making improvements. Conelly (2015) and Mobley (2015) propose the use of tools such as the fishbone diagram and Pareto analysis in determining the root cause of the problem.

An additional Analysis of the Mean Scores and Standard Deviation was carried out as shown in Table 4.21.

Table 4.21: Mean and standard deviation of specific responses on problem solving skills

Statement	N	mean	Standard deviation
When issues arise project employees should be allowed to give our views	62	3.6774	1.00448
Project employees should tackle problems early so that they don't get out of control	62	3.6935	1.19547
Project employees should establish the root cause of the problem	61	3.7541	1.22005
Project employees should implement the solutions obtained and assess results	63	3.7619	1.07335
Conflict resolution helps to form strong relationships within the project team.	62	4.1129	.70373
Project employees should identify the problem first.	62	4.1613	.85303
Project employees should be creative when generating ideas to ensure that they come up with original and useful ideas	62	4.2258	.79793
Project employees should constantly communicate with each other on issues affecting us	62	4.2258	.79793
Project employees should come up with alternative solutions	62	4.2419	.96980
Project employees should make plans on how to solve the issues that arise.	62	4.2581	.90419
Project employees should research on issues in order to understand them	62	4.4355	.84195
Project employees should solve problems as they arise to ensure that they do not become bigger	62	4.6129	.70953
Project employees should prioritize the issues at hand to ensure order	62	4.7903	.44857

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The respondents agreed that when issues arise in the project, employees should be allowed to give their views (M=3.6774, SD=1.00448) and that they should tackle problems early so that they don't get out of control (M=3.6935, SD=1.19547). They also concurred that project employees should first establish the root cause of the problem (M=3.7541, SD=1.22005) and also implement the solutions obtained as well as assessing results (M=3.7619, SD=1.07335). Conflict resolution helps to form strong relationships within the project team (4.1129, SD=.70373). Problems should be identified first (M=4.1613, SD=.85303) and creativity employed when generating ideas to ensure that the team comes up with original ideas (M=4.2258, SD=.79793). The team members should communicate with each other on issues affecting them (M=4.2258, SD=.79793) as well as coming up with alternative solutions (M=4.2419, SD=.96980). The respondents also agreed that project employees should plan on how to solve the issues that arise (M=4.2581, SD=.90419) and also research on issues in order to understand them (M=4.4355, SD=.84195). They also concurred that project employees should prioritize the issues at hand to ensure order (M=4.7903, SD=.44857).

These findings are corroborated by Billows (2011), who indicated that during Problem solving the project manager works with the parties in conflict to find a mutually beneficial solution or a win-win solution to the conflict. The results are further supported by Bassock & Laura (2012) who suggest that visual perception and background knowledge have an impact on how project teams represent problems and search for problem solutions. Ward (2012) points out that understanding problem solving entails understanding the processes used in conceptualizing the problem and in moving from the beginning to the end. Heldman (2011) and PM4DEV (2018) uphold the outcomes by adding that tackling problems early ensures that they do not escalate out of control. Hamilton (2014) adds that planning assists the project team to unravel the problem within a structured framework. Connelly(2015) further affirms the findings that When solving problems there is need to identify the problem, establish the origin of the problem, come up with alternative solutions, select solutions, implement a solution, and assess the result.

The respondents were also asked to indicate which areas require problem solving skills in their respective projects. The responses are shown in figure 4.6 below.

Figure 4.6: Areas which require problem solving skills.
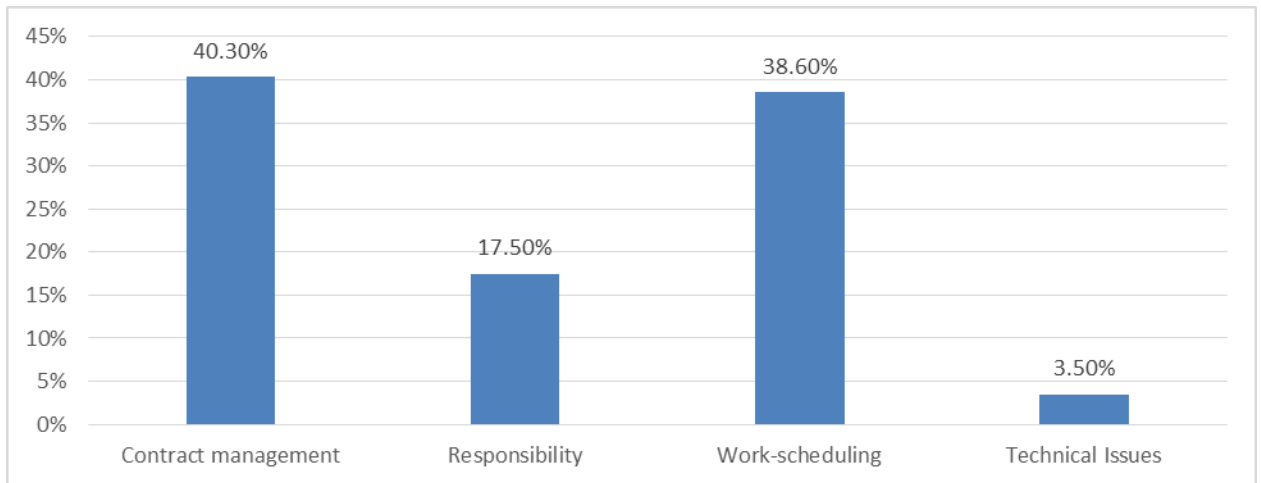
57 of the respondents answered the question. 40.3%   indicated that they employ problem solving skills in contract management, 17.5% in responsibility, 38.6% in work scheduling and 3.5 % I technical issues. This is supported by Heldman (2011) who revealed that the most likely areas that require problem-solving skills are the project schedule, resource assignments, issues regarding contract elements or price, issues regarding authority and responsibility, and problems surrounding the use of business or technical.

The respondents were also required to indicate what methods they used to solve problems within their projects. The responses are indicated in figure 4.7.

Figure 4.7: Methods used in problem solving.
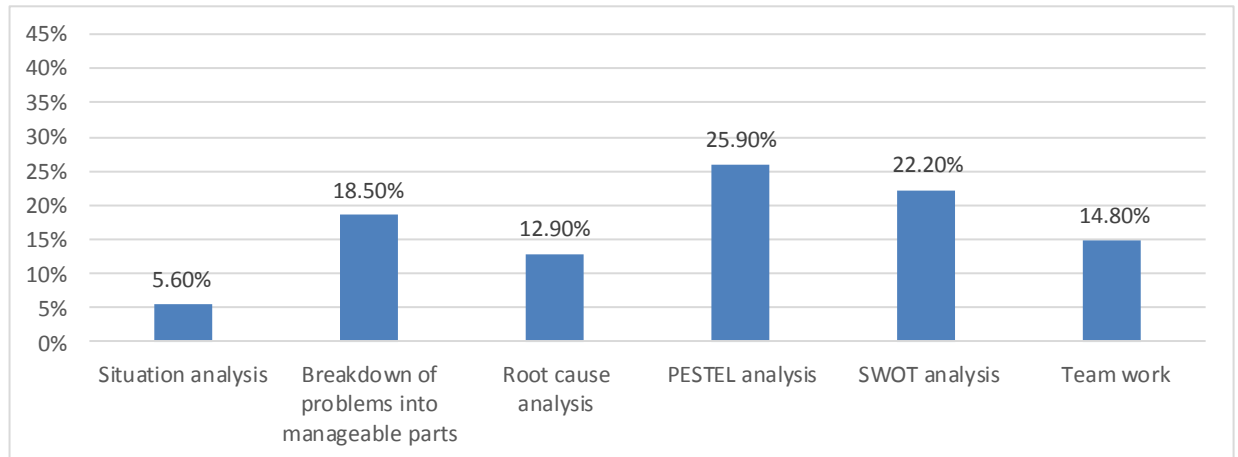
Of the 54 respondents who replied, 5.6% indicated that they use situation analysis, 18.5% indicated that they breakdown the problems into manageable parts, 12.9% find the root cause of the problem, 25.9% use PESTLE analysis, 22.2% use SWOT analysis and 14.8% employ teamwork.

This is in line with findings by PM4DEV (2018) that Problem solving involves a definition of the problem, breaking down the problem into manageable parts, identifying root causes of problems, analyzing strengths, weaknesses, opportunities & threats, must be mastered in order to solve problems.

4.5.6 Organizational Environment

The fifth study objective was to verify the impact of the organizational environment on the relationship between soft skills and the project performance in the public energy sector in Kenya. The respondents were asked to indicate whether they agreed with statements that measured the suitability of the internal and external environments for project performance. The results are shown in Table 4.22.

Table 4.22: Organizational Environment

	SD (1)	D (2)	U (3)	A (4)	SA (5)	Mean	SD
External Environment	3.0%	12.0%	48.1%	32.3%	4.5%	3.23	0.834
Internal Environment	6.1%	21.2%	37.9%	28.8%	6.1%	3.08	0.993

Of the respondents, 36.8% felt that a favourable external environment is imperative for project performance. This could be due to inadequacies in management, lack of transport and delay in way leave acquisition as well as political interference. 34.9% of the respondents indicated that the internal environment should be favourable for projects to operate optimally. These study findings are in agreement with findings by Njuguna-kinyua et al (2014). According to Njuguna-Kinyua et al (2014) the external environment affects the availability of resources to the organization. Lack of infrastructure such as roads, electricity and communication lines hamper performance (Lusthaus et al, 2002).

The respondents were asked to indicate other environmental factors that affect project performance in their organizations. Table 4.23 provides the results.

Table 4.23: Environmental Factors that Affect Project Performance

	Frequency	Percentage
Inadequate and delayed funding	12	13.5%
Physical environment challenges	3	3.4%
Corruption	3	3.4%
Delays in way leave acquisition	10	11.2%
Delay in material delivery	4	4.5%
Inadequacies in management	20	22.5%
Lack of appropriate Equipment and Transport	11	12.4%
Lack of right materials	3	3.4%
Inadequate staff	6	6.7%
Lack of right skills	4	4.5%
Lack of stakeholder involvement	2	2.2%
Low staff morale	4	4.5%
Political interference	7	7.9%

The study identified inadequacies in management (22.5%); lack of appropriate equipment and transport (11.2%); inadequate and delayed funding (13.5%); and delay in way leave acquisition (11.2%) as some of the main factors that affect project performance. These results go against findings by Thompson, Strickland & Gamble (2005) that allocating an organization's resources in an equitable manner improves the operational efficiency, increases organizational values and leads to customer satisfaction (Thompson, Strickland & Gamble, 2005).

4.6 Diagnostic Tests

These are the test for normality, multicollinearity and Levene's test.

4.6.1 Tests for Normality

The test for normality was conducted using Shapiro-Wilk test (SW-test). It was meant to determine whether the data followed or did not follow a specific distribution, in our case normal distribution. During the testing process, the null hypothesis presumed that sample population did not come from a normal distribution. The Shapiro-Wilk test was utilized to test this and it detected departures from normality either due to kurtosis or skewness or both (Rizali & Wah, 2011). Normally, under this test, the null hypothesis is rejected when SW-test's value is too small. If the P-value is less than zero then the data is not normally distributed. The Shapiro-Wilk's test values for leadership, communication, stakeholder management skills and combined soft skills is 0.964, 0.978, 0.945 and 0.922 respectively. The p-values are 0.074, 0.398, 0.013 and 0.001 in that order. The p-values for leadership, communication and stakeholder management are greater than 0.05 indicating that data is normally distributed.

Table 4.24: Shapiro-Wilk Test

	Statistic	P-value
Leadership skills	0.964	0.074
Communication skills	0.978	0.398
Stakeholder management	0.945	0.13
Problem solving	0.938	0.435

The results from Table 4.24 indicate that the p-values for variables under consideration were greater than 0.05. Therefore, the researcher rejected the null hypothesis and concluded that the sample came from a normal distribution. For this reason, it was concluded that the target population from which the sample came from was distributed normally.

4.6.2 Test for Multicollinearity

The data was also subjected to a multicollinearity test using the VIF and the results were as Table 4.25 depicts. The VIF values ranged from 1.407 to 2.090. The values are within the Myers (1990) criterion that suggests that VIF values should be less than 10. This suggests that there was no multicollinearity.

Table 4.25: Test of Collinearity

Factor	Collinearity test VIF
Leadership skills	2.006
Communication skills	2.090
Stakeholder management skills	1.670
Problem solving skills	1.407

4.6.3 Test for Homogeneity (Levene's test)

The data was subjected to Levene's test. The results are displayed in Table 4.26.

Table 4.26: Test for Homogeneity

Factor	Homogeneity test	p-value
Leadership skills	0.195	0.823
Communication skills	0.544	0.655
Stakeholder-management skills	0.954	0.422
Problem solving skills	0.925	0.435

Levene's test statistic at 5% level of significant is 0.195 for leadership, 0.544 for communication, 0.954 for stakeholder management and 0.925 for problem solving skills. The p values for leadership, communication, stakeholder management and problem solving skills; 0.823, 0.655, 0.422 and 0.435 respectively are greater than 0.05 showing that Levene's test is not significant at 0.05 alpha levels; thus, the homogeneity of

variance assumption is met. The satisfaction of the pre-estimation diagnosis implies that the model can be specified from the findings.

4.7 Inferential Tests

Inferential statistics are used to help researchers to make general statements from what they can see from data (Osborne & Waters, 2002). Thus, they are utilized to test hypotheses and draw conclusions from sample data. The inferential analysis in this study was carried out using regression and correlational analysis to determine the relationships between dependent and independent variables.

4.7.1 Leadership Skills

The study sought to determine the effect of employee's leadership skills on project performance in the public energy sector projects in Kenya. To test the null hypothesis that employee's leadership skills do not have a significant effect on project performance in the energy sector projects in Kenya (H_0: $\beta=0$), a simple linear regression analysis was used. The results are as shown in Table 4.27.

Table 4.27: Effect of Leadership Skills on Project Performance

Goodness of Fit	df	Test Statistics	P-value	
R-Squared		0.668		
Adjusted R-Squared		0.662		
F-Statistic	(1,57)	114.566	0.000**	
		Linear Regression Results		
Dependent Variable=Performance		**Coefficient**	**t-statistics**	**p-value**
Constant		12.999	2.223	0.030
Leadership Skills		16.782	10.704	0.000

The results of the simple linear regression analysis indicated that the employees' leadership skills explained 66.8% of the variance in project performance (R^2 =.668, F (1, 57) = 114.566, p<.05). The standardized coefficients indicate that the effect of employees' leadership skills is positive and significant (β = 16.782, p<0.05). Implying

that one unit increase in employees' leadership skills leads to 16.782% increase in project performance. Therefore, the null hypothesis was rejected. The predictive model of project performance from employee leadership skills is thus;

Project Performance = 12.999 + 16.782 * Employees' leadership skills + μ…….. Equation1.

This is upheld by Awan et al (2015) who argue that through proper leadership, the project manager can get the best out of the project team on which he/she is dependent for successful implementation of the project. The findings are further corroborated by Anantatmula (2010) who affirms that the project leader can provide direction by clearly defining the project mission, enabling him/her to translate it into measurable project outcomes. Anantatmula (2010) adds that in order to achieve stability and order among team members, the project manager should carefully define the roles and processes clearly. The results are further sustained by the findings of McDonough (2000) and Thamhain (2004a) as mentioned by Awan et al (2015) that Project leadership provides direction, clarity, purpose, motivation and above all integrates team members. Further, Anantatmula (2010) agrees that Top management support is critical for projects' successes and so project leaders must aim at earning support from top management.

4.7.2 Communication Skills

The study sought to establish the effect of employee's communication skills on project performance in the energy sector projects in Kenya. To test the null hypothesis that employee's communication skills do not have a significant effect on project performance in the energy sector projects in Kenya (H_0: $\beta=0$), a simple linear regression analysis was employed. The outcome of regression analysis is shown in Table 4.28.

Table 4.28: Effect of employees' Communication Skills on Project Performance

Goodness of Fit	df	Test Statistics	P-value	
R-Squared		0.344		
Adjusted R-Squared		0.332		
F-Statistic	(1,57)	28.355	0.000**	
		Linear Regression Results		
Dependent Variable=Performance		**Coefficient**	**t-statistics**	**p-value**
Constant		7.958	0.633	0.530
Communication Skills		18.134	5.325	0.000**

The outcome of the simple linear regression analysis points out that the employees' communication skills explicate 34.4% of the variance in project performance (R^2 =.344, F (1, 57) = 28.355, p<.05). The standardized coefficients indicate that the effect of employees' communication skills is positive and significant (β = 18.134, p<0.05). This implies that one unit increase in employees' communication skills leads to 18.134% rise in project performance. Consequently, the null hypothesis was rejected. The predictive model of project performance from employees' communication skills is thus;

Project Performance =7.958+18.134*Employees' communication skills+ μ……..Equation 2.

This supports an earlier study by Tipili et al (2014) that, effective communication is the key to project performance as it plays a key role in all stages of a project. Magano (2008) also corroborates this by adding that use of communication skills improves teamwork and efficiency in project management. The findings of Cataldo and Ehrlich (2011) and Tipili, Ojeba and Ilyasu (2014) assert that effective communication is essential for productivity, profitability and repeat working opportunities in projects. The results are further supported by Kibe (2014) who observes that Good communication, keeps everyone glued to the goals and priorities of the project while providing feedback on progress.

4.7.3 Stakeholder Management Skills

The study also sought to find out the effect of employee's Stakeholder management skills on project performance in the energy sector projects in Kenya. To test the null hypothesis that the employee's stakeholder management skills do not have a significant effect on project performance in the energy sector projects in Kenya (H_0: $\beta=0$), a simple linear regression analysis was used. The outcome of the analysis is summarized in Table 4.29.

Table 4.29: Effect of stakeholder management skills on project performance

Goodness of Fit	df	Test Statistics	P-value
R-Squared		0.444	
Adjusted R-Squared		0.434	
F-statistic	1,54	43.178	0.000
		Linear Regression Results	
Dependent Variable=Performance		**Coefficient**	**t-statistics**	**p-value**
Constant		11.160	1.137	0.261
Stakeholder Management Skills		17.144	6.571	0.000**

The results of the simple linear regression analysis showed that the effect of employees' stakeholder management skills explained 44.4% of the variation in project performance (R^2 =.444, F (1, 54) = 43.178, p<.05). The standardized coefficients indicate that the effect of employees' stakeholder management skills is positive and significant (β = 17.144, p<0.05). The implication is that one unit increase in employees' stakeholder skills leads to an increase of 17.144% in project performance. Thus, the null hypothesis was rejected. The predictive model of project performance from employees' composite soft skills is thus;

Project Performance = 11.160 + 17.144 * Employees' stakeholder management skills + μ……….Equation 3.

The outcome is confirmed by Eskerod and Jespen (2013) who concur that stakeholder management contributes to successful project performance. The findings are also in

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agreement with findings by Team FME (2014) that through effective stakeholder management, project employees can prevent scope creep, understand tolerance risks, align projects' requirements to the right standards and fix issues that might undermine project implementation. Moore (2011) corroborates this by adding that the exercise of managing stakeholders' expectations is able to decrease the risk of project failure that might result from unresolved issues and limit possible disruptions to project implementation. The results are further supported by Thompson (2011) who argues that by managing stakeholders, project managers can use opinions and suggestions from authoritative stakeholders to guide project implementation at an early stage and gain support from those stakeholders.

4.7.4. Effect of problem solving skills on project performance

The study also sought to find out the effect of problem solving skills on project performance in the energy sector projects in Kenya. To test the null hypothesis that the problem solving skills do not have a significant effect on project performance in the energy sector projects in Kenya (H_0: $\beta=0$), a simple linear regression analysis was used. The results of the regression analysis are summarized in Table 4.30.

Table 4.30: Effect of problem solving Skills on Performance

Goodness of Fit	df	Test Statistics	P-value
R-Squared		0.218	
Adjusted R-Squared		0.204	
F-Statistic	(1,56)	15.620	0.000

Dependent Variable=Performance	Linear Regression Results		
	Coefficient	t-statistics	p-value
Constant	23.310	2.428	0.018
Problem solving Skills	12.162	3.952	0.000*

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The results of the simple linear regression analysis showed that the effect of employees' problem solving skills explained 21.8% % of the variation in project performance (R^2 =.218, F (1, 56) = 15.60, p=.0.0). The standardized coefficients indicate that the effect of employees' stakeholder management skills is positive and significant (β = 12.162, p=0.00). The implication is that one unit increase in employees' problem solving skills leads to an increase of 12.162% in project performance. Thus, the null hypothesis was rejected. The predictive model of project performance from employees' problem solving skills is thus;

Project Performance = 23.310 + 12.162 * Employees' problem solving skills + μ……….Equation 4.

This is also in line with findings by PM4DEV (2018) that all projects encounter problems which may not have been identified in the risk or scope definition of the project and which have to be managed accordingly. A problem exists when someone has a goal but does not know how to achieve it (Mayer, 2013). This outcome is in line with the assertion by Awan, Ahmed & Zulqarnain (2010) that Porter, Rempel & Mansky (2010) problem solving should focus on solving the underlying problems in collaboration with both internal and external players, and promoting compliance by participants.

Connelly (2015) further affirms that issues and problems can be solved more easily and with better results by using a problem solving model which is a structured, systematic approach to solving problems and making improvements.

4.7.5 Moderating effect of the Organizational Environment

Nonetheless, the organizational environment does not have a noteworthy moderating effect on the link between employees' soft skills and project performance. The R² change=0.00, F=0.00, P=0.36. These results are portrayed in table 4.31.

Table 4.31: Effect of organizational Environment

Model Summary						
R	**R-sq**	**MSE**	**F**	**df1**	**df2**	**p-value**
0.82	0.68	80.74	23.36	3	58	0.00
Model Coefficients						
	Coefficient	se	t	p	LICI	ULCI
Constant	72.45	1.18	61.54	0.00	70.09	74.80
Environment	-4.31	1.29	-3.33	0.00	-6.90	-1.72
Soft Skills	23.18	3.00	7.74	0.00	17.18	29.18
Interaction Term (Soft Skills x Environment)	2.68	2.89	0.93	0.36	-3.11	8.46
Re-square increase due to interaction						
	R^2 Change	F	df1	df2	p-value	
Interaction Effect	0.00	0.00	1	58	0.36	

Using the values provided in table 4.28, the model equation:

$Y=\alpha+\beta0X+\beta_1M+\beta_2XM+C$ becomes:

Performance= 72.45+23.18soft skills + (-4.31) organizational environment + 2.68(soft skills x organizational environment) +C…………***Equation 5***

P=0.36 indicates that the moderating effect of the organizational environment on the relationship between employees' soft skills and project performance is insignificant, thus confirming the null hypothesis.

This goes against the findings of Steiger, Hammon and Galib (2014) that the structure of the organization is tied to its strategy as it determines how fast an organization responds to the changing environment. It also goes against findings by researchers such as Wendy (2016) who posits that an organization's environment influences its operations, performance and availability of resources. It also opposes findings by Njuguna-Kinyua et al (2014) that the external environment affects the availability of resources to the organization.

The study therefore affirms that:

Ha_1: The project employees' leadership skills positively affect project performance in the energy sector projects in Kenya is confirmed.

Ha_2: The project employees' communication skills positively affect project performance in the energy sector projects in Kenya is confirmed.

Ha_3: The project employees' stakeholder management skills positively affect performance of project in the energy sector projects in Kenya is confirmed.

Ha_4: The project employees' composite soft skills positively affect project performance in the energy sector projects in Kenya is confirmed.

Ha_5: The organizational environment does not have a moderating effect on the relationship between soft skills and project performance in the energy sector projects in Kenya is rejected.

4.8. Optimal Model

Since organizational environment does not have a significant moderating effect on the relationship between employees' soft skills and project performance, the study dropped it but retained all the other variables. Consequently, the study adopted the results of the multiple linear regression as the optimum model. The results are indicated in Table 4.32.

Table 4.32: Multiple Regression

Goodness of Fit	df	Test Statistics	P-value	
R-Squared		0.723		
Adjusted R-Squared		0.705		
F-Statistic	(3,48)	41.709	0.000**	
		Linear Regression Results		
Dependent Variable=Performance	**VIF**	**Coefficient**	**t-statistics**	**p-value**
Constant		13.419	1.619	0.112
Leadership Skills	2.006	17.668	7.770	0.000*
Communication Skills	2.090	7.937	2.604	0.012*
Stakeholders Management Skills	1.670	6.878	2.987	0.004*
Problem solving skills	1.281	8.639	2.641	0.011*

Soft skills explain 70.5% variance in project performance.

Using the values provided in Table 4.32 a multiple regression equation of the form:

$Y=\beta0+\beta X_1+ \beta X_2+ \beta X_3+\mu$ can be fitted as follows:

Performance=13.419+17.668Leasership skills +7.937Communication skills +6.878Stakeholder Management skills + 8.639 problem solving skills+μ.…………………*Equation 6*

Thus from the optimal model equation it can be deduced that:

If all the other independent variables are kept constant, a unit change in the use of leadership skills leads to 17.668% change in the level of performance. Studies on leadership have shown that strong leadership is key to the accomplishment of projects (Mascia, 2012).

By holding leadership skills, stakeholder management skills and problem solving skills constant, a unit increase in the use of communication skills causes 7.937% change in project performance.

Communication is essential for securing projects' approvals, enhancing leaders' credibility, securing consensus on pertinent issues, resources and solutions, reinforcing processes, promoting actions aimed at improving projects and showing the complete results of the project (Cataldo & Ehrlich, 2011). The process of communication in project management entails activities that create, distribute and disperse information relating to project implementation and identifying responsibilities that team members and other stakeholders play in project implementation (Hill, 2010). Tipili et al (2014), and Cataldo and Ehrlich (2011) add that project communication links the right people, information and ideas that are relevant for the successful project implementation. Poor or insufficient communication is a contributor to project failure (Tipili et al, 2014).

When leadership skills, communication skills and problem solving skills are held constant, a unit increase in the use of stakeholder management skills leads to a 6.878% improvement in project performance. Project employees must manage the projects' stakeholders in order to win their support (Thompson, 2011). Stakeholders can include those who approve the project, the project financiers, those who provide resources such as labour, equipment, materials and facilities, as well as the beneficiaries of the project (KPMG, 2013). The stakeholder community is comprised of groups and individuals that have potential influence on projects' outcomes and who can influence those outcomes either positively or negatively (Bourne, 2006).

When leadership skills, communication skills and stakeholder management skills are held constant, a unit increase in the use of problem solving skills leads to a 8.639% improvement in project performance. This outcome is confirmed by the findings of Awan, Ahmed & Zulqarnain (2010) that there is a very strong relationship between project performance and problem solving skills. Problem solving is the process of

eliminating discrepancies (Ward, 2012). Awan et al (2015) corroborate the findings by insisting that Project managers who possess problem solving skills are able to influence the project team and achieve project performance.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings. It also concludes the study and makes recommendations to industry players and other beneficiaries, as well as what future studies should do based on the findings.

5.2 Summary of the Findings

The broad study's objective was to examine the effect of employees' soft skills on project performance. To achieve the objective, a target population, consisting of project supervisors working on various projects in the Kenyan energy sector, was identified and utilized throughout the study. Then five specific objectives were developed and addressed using five hypotheses each for each objective. The instrument utilized to collect the data was developed based on mixed method approach and utilized to collect both qualitative and quantitative data.

The five hypotheses developed were tested using simple, stepwise and multiple linear regression models. The simple model was utilized to determine the effect of individual independent variable namely; leadership skills, communication skills and stakeholder management skills on project performance, which was the dependent variable. On the other hand, stepwise and multiple regression models were utilized to determine the composite effect of employees' soft skills on project performance and whether the organizational environment had a moderating effect on the relationship between employees' soft skills and project performance. The results both hold and work against some of the hypothesis.

5.2.1 Employees' leadership skills

The first study's objective was to establish the effect of the employees' leadership skills on project performance in the Kenyan energy sector. The null hypothesis tested was that employees' leadership skills have no significant effect on project performance in the energy sector in Kenya. The researcher concluded that employees' leadership skills have a significant positive effect on project performance in the energy sector in Kenya.

The study established that the project managers should coach and mentor, empower and inspire the project team members. It also found out that Employees should receive individualized attention from their superiors. Most of the respondents agreed that the roles and processes within the project should clearly defined. The respondents also concurred that Employees should have a sense of belonging when I am in the team. The research further established that Employees should receive communication promptly and regularly and that the project mission should be clearly defined and broken into measurable outcomes. The respondents also agreed settled on the fact that there is need for a positive attitude towards project work and that Employees should get support and inspiration from their leaders.

Further, the study recognized that Employees should be made to feel valuable and important to the project and positive outcomes recognized. Employees should have the drive to achieve the project goals and should be motivated to bring in new ideas. According to the study, there is need for teamwork in projects and Employees should be allowed to do their work without interference from their superiors except when there are errors. Employees should get enriched job information from their superiors and be empowered to develop to our fullest potential. Laid down procedures should be followed in the course of project work and undesirable behaviour within the project penalized.

The study also established that project employees can be motivated through training, through involvement in project activities, by project success and through reward of effort. A supportive team, adequate pay, effective communication and better terms of

employment also motivate employees. Other sources of motivation are better working conditions, provision of incentives, as well as personal and by work life balance.

5.2.2 Employees' communication skills

The second study's objective was to examine whether employees' communication skills significantly affect project performance in the Kenyan energy sector. The null hypothesis tested was that employees' communication skills do not have a significant effect on performance of projects in the energy in Kenya. The researcher concluded that employees' communication skills significantly affect performance of projects in the energy sector in Kenya.

The study also established that communication skills are necessary in projects for Decision making, Strategic Communication of results and for knowledge management. It also proved that Project information should be largely shaped by preferences of the communities it serves and that Information concerning project activities should be widely availed to the public. The language that project stakeholders understand well should be used when communicating with them and that information received from supervisors should be satisfactory. The study also demonstrated that Communication influences behavior of the team members and showed that timely communications with external stakeholders should be maintained throughout the project lifecycle. The study also revealed that a communication policy should guide the interactions between project employees and the project stakeholders. The research further found out that the external stakeholders should be reliably informed of the progress of our projects and that Feedback from stakeholders should be acted upon without hesitation. Furthermore, the media used when communicating with stakeholders should be those they like. In addition, project results should be communicated to stakeholders on time.

The study also found that effective communication can be achieved through use of a clear communication plan with simple and collaborative channels, having a proper feedback systems, regular communication, two way participatory communication, prompt feedback, timely communication, clear communication, open communication,

and free access to information. The study also demonstrated that the most preferred communication channels are emails, meetings, phone calls, letters and circulars, social media and public barazas.

5.2.3 Employees' stakeholder management skills

The third study's objective assessed the effects of employees' stakeholder management skills on projects' performance in the Kenyan energy sector. The null hypothesis tested was that employees' stakeholder management skills do not have a significant effect on the performance of projects in the energy sector in Kenya. It was concluded that employees' stakeholder management skills have a significant effect on performance of projects in the energy sector in Kenya.

The results of the study also revealed in projects, stakeholder management skills are applied during stakeholder analysis, Stakeholders engagement in the projects, and in building stakeholder relationships. The study also established that a conducive environment should be created for stakeholders to interact with each other and support one another by sharing resources and intellectual property. It also proved that agreements should be signed between individual stakeholders and the project manager and among stakeholders themselves. The research revealed that Issues should be addressed as they arise and conflicting interests dealt with. According to the findings of the study, Project employees should strive to meet the expectations of the stakeholders.

The study also showed that Project employees should identify and incorporate stakeholders at every phase of the project. The results of the study indicate that all the stakeholders should be encouraged to agree on a uniform set of key performance indicators. In addition, it reveals that Project employees should communicate continuously with stakeholders in order to understand their needs and expectation. According to the findings of the study, there is need for a stakeholder management plan to monitor stakeholder engagement. Furthermore, the study confirmed that Project employees should monitor stakeholders' interests throughout the execution phase to

ensure progress and success. The study further evidenced that there should be a communications plan to keep project stakeholders interested in the project throughout all the project phases. Additionally, Project employees should encourage and motivate project Stakeholders to participate in the project. Moreover, Project employees should find out what the expectations of our stakeholders are, encourage project stakeholders to air their views and support their expectations. Likewise, Project employees should always request for the support of key stakeholders in the course of our work.

The results also show that that some of the ways of ensuring that project stakeholders are satisfied include stakeholder involvement, corporate social responsibility and follow ups on affected persons.

5.2.4 Problem Solving Skills

The fourth study's objective sought to determine the effect of the employees' problem skills on performance of projects in the Kenyan energy sector. The null hypothesis tested was that the employees' problem solving skills did not have a significant effect on projects' performance in the sector. It was then concluded that the project employees' problem solving skills have a significant effect on performance of projects in the energy sector in Kenya.

The findings of the study also show that to solve problems in projects, a problem solving strategy and problem solving tools are required. The project team also plays a major role in solving problems in the project.

The results also indicated that when issues arise project employees should be allowed to give our views and that Project employees should tackle problems early so that they don't get out of control. Furthermore, Project employees should establish the root cause of the problem and implement the solutions obtained and assess results. The study results further proved that Conflict resolution helps to form strong relationships within the project team. Also, Project employees should identify the problem first and be creative when generating ideas to ensure that they come up with original and useful

ideas. In addition, Project employees should constantly communicate with each other on issues affecting them. Additionally, Project employees should make plans on how to solve the issues that arise and come up with alternative solutions. Project employees should also research on issues in order to understand them and solve problems as they arise to ensure that they do not become bigger. Project employees also need to prioritize the issues at hand to ensure order.

The study also indicated that the areas where problem solving skills are employed are in contract management, in issues of authority and responsibility, in work scheduling and in technical issues.

According to the research findings some of the methods of solving problems are use situation analysis, indicated that they breakdown the problems into manageable parts, find the root cause of the problem, use PESTLE analysis, use SWOT analysis and employ teamwork.

5.2.5. Moderating Effect of the Organizational Environment

The fifth objective was to establish the moderating effect of the organizational environment on the relationship between employees' soft skills and project performance of projects in the energy sector in Kenya. The null hypothesis tested was that the organizational environment does not have a significant moderating effect on the relationship between employees' soft skills and performance of projects in the energy sector in Kenya.

The study established that for projects to perform well the internal and external organizational environments must be favourable. The results also indicated that adverse environmental conditions such as inadequate and delayed funding as well as physical environment challenges hinder project performance. According to the study findings, corruption and delays in way leave acquisition also hamper project performance. Delays in material delivery and inadequacies in management derail projects. Further, the study found out that lack of appropriate equipment and transport, as well as lack of right

materials delay projects. The study also established that lack of the right skills, inadequate staff and failure to involve Stakeholders works against performance of projects. Poor staff morale and political interference are other factors that were also found to affect project performance.

5.3 Conclusions

The study concludes that leadership skills positively affect project performance. The project managers should coach and mentor, empower and inspire the project team members so that they can perform to their fullest. This is in line with findings by Mascia (2012) that leadership skills are critical for project performance.

It can also be concluded that communication skills significantly affect project performance. Communication skills are necessary in projects for Decision making, Strategic Communication of results and for knowledge management. This is corroborated by Tipili et al (2014) and Cataldo and Ehrlich (2011) that communication skills provide vital links among ideas, people and information required for project performance.

It can also be concluded that employees' stakeholder management skills significantly affect project performance. Stakeholder management skills are applied during stakeholder analysis, Stakeholders engagement in the projects, and in building stakeholder relationships. This is affirmed by Thompson (2011) who posits that project employees must manage the projects' stakeholders in order to win their support.

In addition, the study concludes that Problem solving skills significantly affect project performance. To solve problems in projects, a problem solving strategy and problem solving tools are required. The project team also plays a major role in solving problems in the project. The findings are supported by Billows (2011) who noted that during Problem solving the project manager works with the parties in conflict to find a mutually beneficial solution or a win-win solution to the conflict.

It can also be concluded that the organizational environment does not significantly moderate the relationship between employees' soft skills and project performance. It can be concluded that for projects to perform well the internal and external organizational environments must be favourable. Adverse environmental conditions such as inadequate and delayed funding as well as physical environment challenges hinder project performance. This is confirmed by Steward (2016) who writes that the internal environment is made up of those things, happenings and aspects within an organization which affect choices and activities within the organization.

5.4 Contribution to Knowledge

TABLE 5.1 GIVES A SUMMARY OF THE CONTRIBUTION OF THE STUDY TO KNOWLEDGE.

Table 5.1: Contribution to Knowledge

Objective	Findings	Conclusion	Contribution to Knowledge
Establish the effect of employees leadership skills on projects' performance in the Kenyan energy sector	Employees' leadership skills have a significant effect on project performance	Effective use of leadership skills during the project life cycle can improve project performance	The project managers should coach and mentor, empower and inspire the project team members so that they can perform to their fullest.
Examine effects of employees' communication skills on projects' performance in the energy sector	Employees' communication skills significantly affect project performance	Effective use of Communication skill significantly enhances decision-Making, negotiation and conflict resolution processes which in	Communication skills are necessary in projects for Decision making, Strategic Communication of results and for

		turn affect project performance.	knowledge management.
To assess the effect of employees' stakeholder management skills on projects' performance in the energy sector	Employees' stakeholder management skills have a significant effect on project performance	Use of stakeholder management skills helps the employees to carry out stakeholder analysis, engage the stakeholders in the project and establish stakeholder relationships. This improves project performance	The results provide evidence of the role that stakeholder management skills play in increasing project performance.
To determine the effect of employees' problem solving skills on projects' performance in the energy sector	The employees' problem solving skills has a significant effect on project performance	To solve problems in projects, a problem solving strategy and problem solving tools are required. The project team also plays a major role in solving problems in the project.	The results prove that use of problem solving skills by project employees' enhances project performance.
Establish the moderating effect of the organizational environment on the relationship between employees' soft skills and performance of projects.	The organizational environment does not have significant effect on relationship between employees' soft skills and project performance.	It can be concluded that for projects to perform well the internal and external organizational environments must be favourable.	Adverse environmental conditions such as inadequate and delayed funding as well as physical environment challenges hinder project performance.

5.5 Recommendations

This section recommends what should be done to improve the Kenyan energy sector with regard to project implementation. The recommendations could be utilized by policy makers and those in the sector especially supervisors and managers.

5.5.1 Leadership skills

Based on the findings of the study and for performance of projects to be enhanced, the study recommends that the project managers should coach and mentor, empower and inspire the project team members. It also recommends that Employees should receive individualized attention from their superiors; roles and processes within the project should clearly defined. Employees should also be made to have a sense of belonging when I am in the team. Project employees should receive communication promptly and regularly and that the project mission should be clearly defined and broken into measurable outcomes. Project managers motivate the project employees to develop a positive attitude towards project work besides providing them with support and inspiration.

The project employees should be made to feel valuable and important to the project and any positive outcomes recognized. Project Employees should be motivated so that they can have the drive to achieve the project goals and bring in new ideas. Teamwork should be encouraged in projects and Employees allowed to do their work without interference from their superiors except when there are errors. Employees should get enriched job information from their superiors and be empowered to develop to their fullest potential. Laid down procedures should be followed in the course of project work and undesirable behaviour within the project penalized.

The study also recommends the motivation of project employees through training, involvement in project activities, successful project implementation and through reward of effort. A supportive team, adequate pay, effective communication and better terms of employment also motivate employees. Other sources of motivation which should be

provided are better working conditions, provision of incentives, as well as personal and work life balance.

5.5.2 Communication skills

Based on the research findings, the study recommends that information should be largely shaped by preferences of the communities served by the project and that information concerning project activities should be widely availed to the public. The study further recommends that the language that project stakeholders understand well should be used when communicating with them and that information received from supervisors should be satisfactory. The study also recommends that timely communications with external stakeholders should be maintained throughout the project lifecycle. It also recommends that a communication policy should guide the interactions between project employees and the project stakeholders. The external stakeholders should be reliably informed of the progress of our projects and that Feedback from stakeholders should be acted upon without hesitation. Furthermore, the media used when communicating with stakeholders should be those they like.

The study also endorses that that for effective communication to be achieved, the following should be put into place: use of a clear communication plan with simple and collaborative channels, having a proper feedback systems, regular communication, two way participatory communication, prompt feedback, timely communication, clear communication, open communication, and free access to information. The study also proposes the use of communication channels such as emails, meetings, phone calls, letters and circulars, social media and public barazas.

5.5.3 Stakeholder management skills

On stakeholder management the study recommends that a conducive environment should be created for stakeholders to interact with each other and support one another by sharing resources and intellectual property. It also endorses that agreements should be signed between individual stakeholders and the project manager and among stakeholders

themselves. The research proposes that Issues should be addressed as they arise and conflicting interests dealt with. It also ratifies that Project employees should strive to meet the expectations of the stakeholders. The study also further ratifies that Project employees should identify and incorporate stakeholders at every phase of the project. Further, the study recommends that all the stakeholders should be encouraged to agree on a uniform set of key performance indicators. In addition, it offers that Project employees should communicate continuously with stakeholders in order to understand their needs and expectation. In addition, there is need for a stakeholder management plan to monitor stakeholder engagement. Furthermore, Project employees should monitor stakeholders' interests throughout the execution phase to ensure progress and success. The study further recommends that there should be a communications plan to keep project stakeholders interested in the project throughout all the project phases. Additionally, Project employees should encourage and motivate project stakeholders to participate in the project. Moreover, Project employees should find out what the expectations of the project stakeholders are, encourage project stakeholders to air their views and support their expectations. Likewise, Project employees should always request for the support of key stakeholders in the course of our work.

To ensure that project stakeholders are satisfied the study recommends include stakeholder involvement, corporate social responsibility and follow ups on affected persons.

5.5.4 Problem solving skills.

Based on the findings on problem solving skills the study recommends that that to solve problems in projects, a problem solving strategy and problem solving tools are required. The project team also plays a major role in solving problems in the project.

The study also recommends that when issues arise project employees should be allowed to give their views and tackle problems early so that they don't get out of control. Furthermore, Project employees should establish the root cause of the problem,

implement the solutions obtained and assess results. The study further proposes that Conflict resolution helps to form strong relationships within the project team and so conflict resolution measures should be put in place. Also, Project employees should identify the problem first and be creative when generating ideas to ensure that they come up with original and useful ideas. In addition, Project employees should constantly communicate with each other on issues affecting them. Additionally, Project employees should make plans on how to solve the issues that arise and come up with alternative solutions. Project employees should also research on issues in order to understand them and solve problems as they arise to ensure that they do not become bigger. Project employees also need to prioritize the issues at hand to ensure order.

The study proposes that problem solving skills be employed in areas such as contract management, in issues of authority and responsibility, in work scheduling and in technical issues.

Some of the recommended methods of solving problems are situation analysis, breakdown the problems into manageable parts, find the root cause of the problem, PESTLE analysis, SWOT analysis and teamwork.

5.5.5 Organizational environment

On organizational environment, the study recommends creation of a favourable internal and external organizational environments for projects to perform well. The also endorses adequate and timely funding; favourable physical environment ; corruption free environment; timely way leave acquisition; timeliness in material delivery; good management practices; provision of appropriate equipment and transport, as well provision of right materials. The study also recommends the acquisition of the right skills, adequate staff and involvement of Stakeholders. The morale of the project employees should be boosted and political interference dealt with to ensure that it does not derail the project.

5.5.6 Recommendations for policy

Projects play a major role in economic growth in Kenya. Recognizing the commitment of the Government of Kenya to economic growth and development as shown in its Vision 2030 blueprint, the study has apt implications. Therefore, the following recommendations can benefit government, agencies that implement its agendas and citizens as a whole. The study has established and identified statistically significant relationships between employees' soft skills and project performance. The end result of this is the possibility that if employees working on projects utilize soft skills, then projects would be completed on time and on budget. The study therefore provides a stimulus and framework for policy makers to review the education ACT and to ensure that soft skills form part of the training especially in middle level colleges and universities. This would ensure that all employees are well equipped not only with hard skills but also with soft skills both of which are necessary in the workplace.

Based on the findings, it is imperative to incorporate soft skills into the academic curriculum as they form a fundamental component in making prospective employees to perform better in their project work. Since the study has established that employees' soft skills are necessary for project performance and by extension business, they present a business opportunity for both public and private universities.

5.6 Suggestions for further study

Besides soft skills, other factors affecting project performance were noted in the course of the study. These include fitting projects into already existing budgets, poor scope planning, quality of staff who constitute project teams, cases of project teams modifying projects to stay in business, inaccurate feasibility studies, poor financing and political issues. The study recommends that investigations should be carried out to ascertain their effect on project performance.

It was noted that stakeholders can be a major stumbling block to project performance. This study may not have been exhaustive enough. The study therefore recommends

more in depth research in this area in order to address the stakeholder issues affecting project performance.

The study concentrated on the public energy sector in Kenya and therefore recommends a study in other sectors and other countries.

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APPENDICES

Appendix I: Letter of Transmittal

Annastacia K. Kavita-Musembi

P.O Box 187-90100

Machakos.

15th June 2016

To

…………………………………………………

…………………………………………………

…………………………………………………

RE: LETTER OF TRANSMITTAL

My name is Annastacia K. Kavita-Musembi. I am a PhD student at Jomo Kenyatta University of Agriculture and Technology. I am undertaking a research on the effects of employees' soft skills on performance of public energy sector projects in Kenya. I am kindly requesting you to provide the required information by ticking as appropriate. The information you will provide is strictly for academic purposes and will be treated in confidence.

Yours faithfully,

Annastacia K. Kavita-Musembi.

Appendix II: Questionnaire for the Project supervisors.

Dear Respondent,

You have been chosen to take part in this study, which seeks to establish, the effect of Leadership skills, Communication skills, and stakeholder management skills on performance of public Energy sector projects in Kenya. The study is purely academic and any information provided will be treated with utmost confidentiality.

A: BACKGROUND IFORMATION

1. Gender

   ☐ Male

   ☐ Female

2. Age bracket:

   ☐ Below20 years

   ☐ 2 0-30 years
   ☐

   31-40 years

   ☐ Over 40 years

3. Highest education attained

   ☐ Diploma

   ☐ Degree

   ☐ Professional

   ☐ Masters

   ☐ Other (Specify)……

4. Name the project in which you are involved.

………

………

……

5. How long have you worked with the project

☐ Below 3 years

☐ Between 3 and 5 years

☐ Between 5 and 10 years

☐ Above 10 years

SECTION B: TYPES OF SOFT SKILLS. (Yes=1, No=0)

6. Have you been trained in any of the following soft skills.

Skill	Yes	No
Leadership skills		
Communication skills		
Stakeholder management skills		
Decision making skills		
Problem solving skills		

If yes, to what level. Explain.

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7. Please mention other skills in which you have been trained

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SECTION C: LEADERSHIP SKILLS.

8. With reference to your project, indicate how much you agree with the following statement on leadership. Use the following scale: **1= strongly disagree (SD), 2= disagree (D), 3=Undecided (U), 4= Agree(A) and 5= strongly Agree(SA)**

	SD	D	U	A	SA
Any positive outcomes of our work are recognized and rewarded					
Undesirable behaviour within the project is penalized.					
We follow laid down procedures in the course of our work.					
We correct any deviations that occur in the course of the project.					
We do our work without interference from our superiors.					
Our superiors only intervene in case of any errors					
We are empowered to develop to our fullest potential					
we get support and inspiration from our leaders					
We have a positive attitude towards our work					
we receive individualized attention from our superiors.					
I agree that the roles and processes within the project are clearly defined					
I agree that the project mission is clearly defined and broken into measurable outcomes					
We are motivated to bring in new ideas					

I feel valuable and important to the project.					
I agree that there is teamwork in what we do					
I feel a sense of belonging when I am in the team					
I have the drive to achieve the project goals					
I agree that we get enriched job information from my superiors					
I agree that we receive communication promptly and regularly					
I agree that our suggestions and feedback are appreciated by our supervisors					

9. Suggest any other ways in which you feel motivated to give more to the project.

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SECTION D: COMMUNICATION SKILLS.

10. Indicate how much you agree with the following statement with regard to Communication within your project team. Use the following scale: **1= strongly disagree (SD), 2= disagree (D), 3=Undecided (U), 4= Agree(A) and 5= strongly Agree(SA)**

	SD	D	U	A	SA
We have a policy on communication that guides our interactions.					
Information concerning our project activities is widely availed to the public.					
Our information is largely shaped by preferences of the					

communities we serve.					
We always use the language that our stakeholders understand well when communicating with them.					
The media we use when communicating with stakeholders are those they like					
Without hesitation we act on the feedback that we receive from our stakeholders					
Our external stakeholders are reliably informed of the progress of our projects					
We have always maintained timely communications with external stakeholders					
Am satisfied with the amount of information I receive from my supervisor					
I believe that Communication influences behavior of the team members					
We communicate project results to stakeholders on time					
We discuss costs, completion time, budget and quality of work with our superiors.					

11(a) How do you ensure that communication is effective within your project?

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(b). In what other areas of the project is communication important?

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(c) From your experience which are the best channels of communicating with both internal and external stakeholders?

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SECTION E: STAKEHOLDER MANAGEMENT SKILLS.

12. Indicate how much you agree with the following statement regarding stakeholder management within your team.. Use the following scale: **1= strongly disagree (SD), 2= disagree (D), 3=Undecided (U), 4= Agree (A) and 5= strongly Agree (SA)**

	SD	D	U	A	SA
We identify and incorporate stakeholders at every phase of the project.					
We always request for the support of key stakeholders in the course of our work					
We find out what the expectations of our stakeholders are.					
We Encourage and Motivate Our Stakeholders to participate in the project					
We encourage our stakeholders to air their views and support their expectations.					
We plan our project activities based on the careful analysis of the project stakeholders and their interests					
We create an environment for stakeholders to interact with each other and support one another by sharing resources and intellectual property.					

We communicate continuously with stakeholders in order to understand their needs and expectation				
We address issues as they arise and deal with conflicting interests				
we strive to meet the expectations of the stakeholders				
We monitor stakeholders' interests throughout the execution phase to ensure progress and success				
We encourage all the stakeholders to agree on a uniform set of key performance indicators.				
We have a stakeholder management plan to monitor stakeholder engagement				
We have a communications plan to keep our stakeholders interested in the project throughout all the project phases				
We ensure that agreements are signed between individual stakeholders and the project manager and among st akeholders themselves.				

13(a). What else do you do to ensure that your project stakeholders are satisfied?

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(b). In which areas of the project has it been necessary to involve the stakeholders?

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SECTION F: PROBLEM SOLVING SKILLS.

14. Indicate how much you agree with the following statement with regard to problem solving within your project team. Use the following scale: **1= strongly disagree (SD), 2= disagree (D), 3=Undecided (U), 4= Agree (A) and 5= strongly Agree (SA)**
. Problem solving skills.

	SD	D	U	A	SA
We tackle problems early so that they don't get out of control					
Conflict resolution helps to form strong relationships within the project team.					
We usually identify the problem first.					
We establish the root cause of the problem					
When issues arise we are allowed to give our views					
We constantly communicate with each other on issues affecting us					
We make plans on how to solve the issues that arise.					
We come up with alternative solutions					
We solve problems as they arise to ensure that they do not become bigger					
We research on issues in order to understand them					

We prioritize the issues at hand to ensure order					
We are creative when generating ideas to ensure that we come up with original and useful ideas					
We implement the solutions obtained and assess results					
We collaborate with both internal and external stakeholders when solving issues.					
we are trained on how to resolve issues					

15 (a). In which areas is problem solving required in your project?

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(b) What other methods do you use to solve problems in your project?

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(c). why is problem solving necessary?

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SECTION G: ORGANIZATIONAL ENVIRONMENT.

16. Indicate how much you agree with the following statement with regard to organizational environment. Use the following scale: **1= strongly disagree (SD), 2=disagree (D), 3=Undecided (U), 4= Agree(A) and 5= strongly Agree(SA)**

	SD	D	U	A	SA
I agree that the roles and processes within the project are clearly defined					
I agree that the project mission is clearly defined and broken into measurable outcomes					
We are motivated to bring in new ideas					
I feel valuable and important to the project.					
I agree that there is teamwork in what we do					
I feel a sense of belonging when I am in the team					
I have the drive to achieve the project goals					
I agree that our suggestions and feedback are appreciated by our supervisors					
My colleagues and supervisors motivate me to take risks in my project work					
Differences between various departments/divisions in the organizations hamper project performance					
There is open interaction between the superiors and the project team					
There mutual openness to ideas within the project team					
We constructively challenge each other's ideas					
There is shared commitment towards the project					

We have adequate resources to implement the project					
The project work is challenging enough					
We are overworked and this hampers creativity					
There is equiTable distribution of organization resources among the various projects					
There are clear indicators of the organizational priorities					
We have the necessary technology to carry out the project					
The political climate within the organization is conducive for project performance					
The political climate within the country promotes the project work					
The social climate within the organization supports innovation					
The organization is economically able to carry out the project					
We have enough and affordable workforce to do the project work					
We face interference from trade unions					
Our suppliers supply quality materials on time					
Our creditors are friendly and supportive					

17. Suggest any other factors in the organizational environment which have affected your performance in the course of the project.

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QUESTIONNAIRE FOR PROJECT MANAGERS

Dear respondent,

You have been chosen to provide information on project performance. The study is purely academic and any information provided will be treated with utmost confidentiality.

With reference to your project fill the following table

		Completed projects				Ongoing projects			
Proje ct name	Curre nt status	Planne d compl etion date	Actual comple tion date	Plann ed cost	Actu al cost	Planned %completion (level of completion)	Actual % completion(level of completion)	Original completio n date	Project ed complet ion date

1.What other measures of project performance do you use?

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2.In cases where delays have been noted, what are the likely causes of the delays?

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Appendix III: List of projects

1) Rea Coast Region
2) Rea Mt.Kenya Region
3) Rea Central Rift
4) Rea North Kenya
5) Rea Nyanza Region
6) Rea Eastern Region
7) Nairobi City Center Network Upgrade
8) Construction Supply To SGR
9) A36a
10) Last Mile connectivity
11) Grid Study
12) Nuclear electricity project (NEP)
13) SEA (strategic environmental assessment).
14) Siting
15) Mombasa-Nairobi Line
16) Kisii-Awendo Line
17) Turkwel-Ortum-Kitale
18) Nanyuki-Meru-Isiolo
19) Olkaria-Lessos-Kisumu Line
20) Ethiopia-Kenya (Eastern Africa electricity highway project)
21) Kindaruma-Mwingi-Garissa Line
22) Loiyangalani-Suswa Line
23) Eldoret-Kitale Line
24) Sondu-Homabay-Ndhiwa-Awendo
25) Kenya Power Transmission System Improvement Projects
26) Nairobi Ring And Substations – Isinya –Ssuwa Line
27) Isinya-Suswa
28) Olkaria-Suswa
29) Olkaria V
30) 105mw Menengai I Geothermal Project
31) 360mw Menengai Iii Geothermal Project
32) 300mw Baringo-Silali Geothermal Project
33) 300mw Suswa Geothermal Project
34) A39-Kplc E
35) Kiringiti
36) Kenya electricity expansion program

37) Kenya-Tanzania
38) Temporary Supply To Tatu City
39) Kirimoni Oldonyiro Market
40) Power to Public Institutions
41) High voltage lines – 66Kv
42) Medium voltage lines - 33kV and 11kV
43) Low voltage lines - 415V.
44) Kipevu Substation Reinforcement .
45) Mishomoroi substation
46) Voi –Taveta
47) Isinya-Namanga
48) Sotik-Bomet
49) Ishiara-Kieni
50) L.Turkana Windpower
51) Mombasai Coal Plant – Mariakani Line
52) Mariakani Substation
53) Menengai Soilo
54) Rabai-Malindi-Garsen-Lamu
55) Mwingi-Wote-Kitui
56) Lamu-Nairobi East Tl
57) Nanyuki-Rumuruti   (Nyahururu)
58) Lessos-Kabarnet
59) Olkaria-Narok
60) Rabai-Bamburi-Kilifi
61) National Load Dispatch Centre
62) Zambia-Tanzania-Kenya
63) Lessos-Tororo transmission line
64) Solar and grid
65) Mwingi-Wote-Sultan Hamud
66) Jomvu substation
67) Kenya electricity modernization program(KEMP)
68) 132/33 kV substation
69) 66/11 kV substation
70) 33/11 kV substation
71) Bogoria - Silali Geothermal development block
72) Suswa – ngong line
73) Ngong 220 kv substation
74) Athi River Substation

75) Komorock Substation
76) Suswa 400 Kv Substation
77) Isinya 400 Kv Substation
78) Sangoro-Sondu.
79) Konza-Kajiado-Magadi- Namanga
80) KONZA-Machakos

81) Mwea 33/11/kV substation
82) Kangema (Murang'a) 33/11kV substation

83) Tala 33/11kV substation
84) Kisumu Substation Reinforcement
85) Rumuruti 400/132 Kv Substation
86) Eldoret Substation Reinforcement
87) Lessos –Kapsabet Line
88) Kapsabet Substation
89) Suswa – Thika Road Line
90) Nakuru West (Rongai) 220/132/33 Kv S/S
91) Kipevu – Mbaraki Line
92) Mbaraki Substation

93) Shimoni
94) Athi River And Thika Road Reactive Compensation

Appendix IV: Introduction Letter from Jomo Kenyatta University of Agriculture and Technology
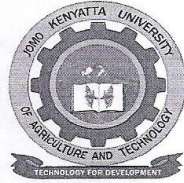
JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
KQ PRIDE CENTRE
P.O. Box 62000-00200 CITY SQUARE, NAIROBI, KENYA. TELEPHONE: 0719828131/0735015175/0206422832
Office of the Associate Chairperson
Email: **chairjkuat-kqpridecentre@jkuat.ac.ke**

Our Ref: JKU/16/006   Date: 7th September, 2015

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: ANNASTACIA KATUMBI KAVITA – MUSEMBI REG. No. HD417-2235/2014

The above subject refers.

This is to confirm that Annastacia Katumbi Kavita-Musembi is a bonafide student of Jomo Kenyatta University of Agriculture and Technology pursuing a Doctoral degree (PhD) in Project Management at our centre at the KQ Pride Centre.

She has successfully completed her course work, a mandatory three (3) semesters of class attendance, assignments, sitting of CATs and examinations and passed. She is now proceeding on to her thesis which should take twenty four (24) months.

Any assistance accorded to her will be highly appreciated.

For any further enquiries, please do not hesitate to call us.

Thank you.

Yours faithfully

DR. JANE W. GATHENYA
ASSOC. CHAIR, KQ PRIDE CENTRE
JWG/cak

JKUAT is ISO 9001:2008 and ISO 14001:2004 Certified
Setting Trends in Higher Education, Research and Innovation

Appendix V: Research Clearance from The Ministry of Energy and Petroleum

REPUBLIC OF KENYA
MINISTRY OF ENERGY & PETROLEUM

RECEIVED
2 0 APR 2017
MANAGER

Telegrams: "MINPOWER" Nairobi
Telephone: +254-20-310112
Fax: +254-20-240910
Telex: 23094 MINERGY
Email: ps@energymin.go.ke
When replying please quote

NYAYO HOUSE
P. O. Box 30582-00100
NAIROBI

22nd June, 2016

REF. No. MOE&P/CONF/13/1/1A

Annastacia K. K. Musembi
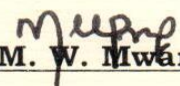JKUAT KQ Pride Centre
P.O. Box 62000-00200
NAIROBI

RE: RESEARCH CLEARANCE

This is to inform you that the Principal Secretary State Department of Energy has authorised you to conduct research in the Ministry on **"effects of employees soft skills on performance of public energy sector projects in Kenya".**

You are therefore requested to contact the Chief Executive Officers/Managing Directors of our State Coorporations and Heads of Directorates in the Ministry with a view to workout the programme of research at their convinience due to their tight schedules.

We take this opportunity to wish you success in your research and your academic progress.

We assure you all our support.

M. W. Mwangi, MBS, OGW

Copy To: Principal Secretary
State Department of Energy

Principal Secretary
State Department of Petroleum

Appendix VI: Research Authorization Letter from NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email:dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

NACOSTI/P/16/65085/12638

26th July, 2016

Annastacia Katumbi Musembi
Jomo Kenyatta University of Agriculture
And Technology
P.O. Box 62000-00200
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *"Effects of employees' soft skills on performance of public energy sector projects in Kenya,"* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **26th July, 2017.**

You are advised to report to **the Chief Executive Officers of selected government agencies, the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The Chief Executive Officers
Selected government agencies.

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

Appendix VII: Research Permit

THIS IS TO CERTIFY THAT:
MS. ANNASTACIA KATUMBI MUSEMBI
of JKUAT, 0-90100 MACHAKOS, has been
permitted to conduct research in
Nairobi County

on the topic: **EFFECTS OF
EMPLOYEES'SOFT SKILLS ON
PERFORMANCE OF PUBLIC ENERGY
SECTOR PROJECTS IN KENYA**

for the period ending:
26th July,2017

**Permit No : NACOSTI/P/16/65085/12638
Date Of Issue : 26th July,2016
Fee Recieved :Ksh 2000**

....
**Applicant's
Signature**

....
**Director General
National Commission for Science,
Technology & Innovation**